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**WATER AND SANITATION
FOR HEALTH PROJECT**

Operated by
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**AN EVALUATION OF
THE PARTICIPATORY PROCESS
IN CARE/RWANDA
BYUMBA SOUTHEAST
WATER SYSTEMS PROJECT**

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WASH FIELD REPORT NO. 267

SEPTEMBER 1989

Prepared for
CARE/Rwanda under the auspices
of the USAID Mission to Rwanda
WASH Activity No. 524

824-RWBY-6163



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of the USAID Mission to Rwanda
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by

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with the collaboration of
Katharine Burns, Simon Ndutiye, and Chantal Muhawenimana

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PREFACE

Responding to a request for technical assistance from CARE/Rwanda, Byumba Southeast Water Systems Project via USAID/Rwanda, the Water and Sanitation for Health (WASH) Project implemented the evaluation presented in this report.

The evaluation was conducted by two expatriate social scientists, Jeannine Coreil and Jean Beaudoin; the latter led the 1987 midterm evaluation for UNDP/PROWWESS. Other team members included Katharine Burns, the CARE Regional Technical Advisor for Primary Health Care, East Africa; Simon Ndutiye, Secrétaire d'Administration for COR/MINITRAPE (Ministère des Travaux Publics et de l'Energie); and Chantal Muhawenimana, a Rwandan sociologist. In addition, the evaluation team collaborated with the project extension and technical staff. The field-based assignment took place April 10 through May 6, 1989, and included a two-day orientation meeting at the WASH office in Arlington, Virginia.

ACKNOWLEDGMENTS

This evaluation was truly a collaborative effort with significant input from project staff, GOR representatives and local officials. We first wish to thank the coauthors of this report and to acknowledge the assistance of Christof Scheiffele, Mike Godfrey, Pamela Husain, Isabelle Nybakure, Veneranda Nikwigize, Albert Ndayisaba, Luc Puyguiraud, Andre Bihibindi, Barbara Howard, and the CARE/Rwanda office staff.

We also greatly appreciate the time and suggestions given us by the water users and elected representatives of Byumba prefecture water system. Equally generous with time and insights were numerous officials, government employees, and volunteers of Muhura, Murambi, and Giti--bourgmestres, ECFP, fountain technicians, and others.

We are grateful as well to the sisters and priests of the Muhura Catholic Mission, who sustained our field work with their kind hospitality.

Finally, we thank the WASH staff for the arrangements, preparation, and advice that helped us conduct this evaluation.



ACRONYMS AND TERMS

AFVP	<u>Association Française de Volontaires du Progrès</u> (French Association of Volunteers for Development)
AIDR	<u>Association Internationale de Développement Rural</u> (International Association for Rural Development)
BF	Standpipe
CCDFP	<u>Centre Communal de Développement et de Formation Permanente</u> (Communal Center for Continuing Development and Education)
CIR	Care International in Rwanda
ECFP	<u>Equipe Communale de Formation Permanente</u> (Communal Continuing Education Team (ref. CCDFP))
GOR	Government of Rwanda
MINITRAPE	<u>Ministère des Travaux Publics et de l'Énergie de Rwanda</u> (Ministry of Public Works and Energy in Rwanda)
NGO	Non-Governmental Organization
PROWESS	Promotion of the Role of Women in Water and Environmental Sanitation Services (UNDP)
SA	Developed Spring
SNV	Dutch Association for Development Assistance
UNDP	United Nations Development Programme
WASH	Water and Sanitation for Health Project
Bourgmestre	Mayor
Bureau de la Regie Associative	Board of Directors
Cellule	Local committee or community-level committee
Conseil Communal	Municipal Council
Regie Associative	Users' Association
Umuganda	Community Volunteer Labor



EXECUTIVE SUMMARY

Since February 1986, CARE/Rwanda has been implementing a rural water supply project in three communes of the Byumba prefecture: Murambi, Muhura, and Giti. The project's main purpose is to develop functional, self-managing water user associations for sustained operation and maintenance of the new systems. The community management design of the project follows guidelines established by the Government of Rwanda (GOR) rural water supply policies and legislation. A large part of the project dealt with constructing reliable water supply systems to serve as a basis for developing the community organization model.

The Byumba evaluation took the form of a field-based study involving team members from WASH, CARE, and GOR. The methodology was developed on-site, using a group process approach in collaboration with project extension and technical staff. Data collection procedures included a review of documents; interviews with government administrators, community officials, and representatives of water user associations; and group interviews with users. All team members had input in data collection and analysis, interpretation of findings, and formulation of recommendations.

The team's principal conclusions follow:

- Implementation of the project's model of community participation, self-management, and financing has proceeded through two phases: organizing local governance structures and collection of user fees. However, the full transition to community responsibility for self-management and autonomous financing has not yet been completed.
- Water users express a sense of ownership and responsibility for the water system but perceive decision-making authority and procedures as originating outside the community (i.e., GOR or CARE).
- Consensus exists on the principle of the user fee system, but the issue of uniform vs. variable fee basis (e.g., according to distance from water source, ability to pay, or access to a fountain vs. capped spring) remains unresolved and of significant concern to users.
- Administrators, user committees, and beneficiaries recognize the need for some type of compensation for the time that some representatives devote to management activities; however the type, amount, and source of funds for remuneration remain uncertain.
- Project implementation has closely followed GOR policy regarding development of community management organization, collaboration with commune administrative structures and

technicians (extension staff and fountain technicians), and involvement of all water users (male and female) in the management process.

- The participatory process of forming user associations with elected representatives is a new approach to development in this setting, and departs significantly from the existing political system. The viability of such an approach will be measured by demonstrated sustainability in the years to come.
- Women's participation in local management of the water system represents a significant milestone for their involvement in national development and implementation of government policy in this area. Yet the time demands of family responsibilities, fee collection, and changes in water collection patterns limit women's potential participation in management.
- The project's cooperation with existing local extension services has been good. These services have been integrated in the training of user associations and local committee representatives. Education and training activities have been primarily limited to management and maintenance of the gravity-fed standpipe system (not the capped springs), with only very general emphasis on health-related aspects.
- A participatory evaluation methodology was developed that strengthened the evaluation outputs and provided indicators of the participatory process.

Based on these findings, the team recommends the following:

For the Project Staff

1. Obtain funding to complete current implementation and mobilization activities and allow the self-management system to follow through a complete cycle; in this way, the full transition to community responsibility can take place.
2. Conduct a project evaluation after one full year of autonomous management and financing has been achieved. The projected time for this evaluation is two years hence.
3. Expand the educational component to include the relationship between water use and health, hygiene, and sanitation.
4. At the commune level, give greater attention and resources to the logistical implementation of the project's technical and extension components, such as those related to transportation, office facilities, supplies, maintenance and repair of the water system, etc.

5. Adjust the project extension and training coordinator's title, job description, and associated terms of employment to attain greater consistency with her current role and responsibilities.
6. Allocate staff time and resources to analyze, document, and disseminate the project experience, thus ensuring the institutional memory of the approach, processes, lessons, and implications of this project.
7. Seek technical assistance to assess the extension and training methods/materials used to date in the project. The animation techniques could benefit by incorporating innovative communication strategies; also, current instructional materials may need improvement.

For the Community Management System

1. Resolve the central issues of uniform vs. adjustable user fee rates, and the extent and manner of compensation for user association representatives. Alternative options for resolving these issues are discussed.
2. Develop a plan as soon as possible for how the money collected from users will be spent. This plan should include specific elements on mechanisms for allocating a portion of the money to MINITRAPE's national rural water fund, and for paying expenditures for maintenance and repair costs and salaries or compensation to Regie personnel.
3. Strengthen women's participation in decision-making management positions at different levels of the Regie Associative (e.g., board of directors and Bureau).
4. In resolving the question of how to collect fees from noncompliant users, employ sanctions only after participatory negotiation and social pressure has proved unsuccessful.

For Government Rural Water Activities

1. Take steps to extend national policy implementation in community-managed water supply systems by making the current project training staff available to national and regional program coordinators. Apply project lessons and experience gained to date.
2. Take care that, in their continual support for the self-management process, sector or cellule officials do not, through their involvement, assume the responsibilities of elected representatives.

3. Augment specific training components for the board of directors (Bureau de la Regie Associative), fountain technician, and extension coordinators in each commune.
4. Retain community volunteer labor service (Umuganda) as an essential component of water development projects, in order to promote the sense of user ownership and facilitate participation in self-management.

Chapter 1

INTRODUCTION

1.1 Scope of Work

Since February 1986, CARE/Rwanda has been implementing a rural water supply project in three communes of the Byumba prefecture: Murambi, Muhura, and Giti. The Water and Sanitation for Health (WASH) Project provided technical assistance to the design of the multiyear project plan in July 1985.

At that time, GOR had just reviewed policy in the rural water supply sector and had formulated new policies and legislation that guide the Byumba project's community activities. The project's main purpose is to develop functional, self-managing water user associations for sustained operation and maintenance of the new systems.

Much of the Byumba project focused on constructing reliable water supply systems to serve as a basis for developing the community organization model. The project was the subject of a mid-term evaluation (February 1987), sponsored by UNDP/PROWESS that assessed the initial stages of the extension program.

The present evaluation results from a request for technical assistance from CARE/Rwanda. The request focused on three procedures: assessing the project's extension and training component to measure progress toward specific goals; determining the appropriateness of the present model in terms of local capacity for sustainable self-management and compatibility with GOR development and water policies; and making recommendations on future orientations of CARE/Rwanda's extension and training activities in the rural water supply sector.

The Byumba project is considered an important pilot effort in CARE's program to develop water supply projects founded upon strong community participation and self-management. This evaluation is important in several ways:

- It helps CARE evaluate progress made toward achieving behavioral change in water use and sanitation practices.
- It develops a process for evaluating participatory water projects, including the identification of specific indicators of community participation and realization of project objectives.
- It develops a methodology for conducting participatory evaluations.
- It carries implications for the applicability of the project's self-management model for other rural water supply programs.

In keeping with the participatory nature of the evaluation, the goals, clients, outputs, and methodology of the assignment were determined on-site through a

group process with team members at the CARE/Rwanda office in Kigali. The team agreed on the following goals:

1. Assess project achievements toward developing local self-management capacity.
2. Assess project success in meeting beneficiary expectations (users and GOR).
3. Increase team knowledge of the participatory process within two contexts: water project implementation and evaluation methodology.
4. Provide CARE and GOR staff with experience in evaluating projects founded upon community management.
5. Draw out lessons from the Byumba Southeast Water Systems Project for
 - improving the project in this region
 - extrapolating generalizations for other rural water projects in Rwanda and Africa
 - making design and implementation recommendations for participatory development projects elsewhere

Four primary and four secondary clients were identified for this evaluation. Primary clients include CARE/New York, CARE/Rwanda, USAID/WASH, and GOR (central and commune). Secondary clients include water users, user association representatives ("committees"), local extension coordinators (CCDFP--Centre Communal de Développement et de Formation Permanente), and the non-governmental organizations (NGOs) in Rwanda.

In addition to goals and clients, five anticipated evaluation outputs were identified at the team planning meeting:

1. Identify changes in project management and functioning since both midterm evaluation and project start-up.
2. Identify the indicators of the participatory process in water projects.
3. Assess community progress in self-management of water systems.
4. Determine target population's current perceptions and practices regarding water supply.
5. Give team members training and experience in participatory evaluation.

1.2 Project Background

1.2.1 The Setting

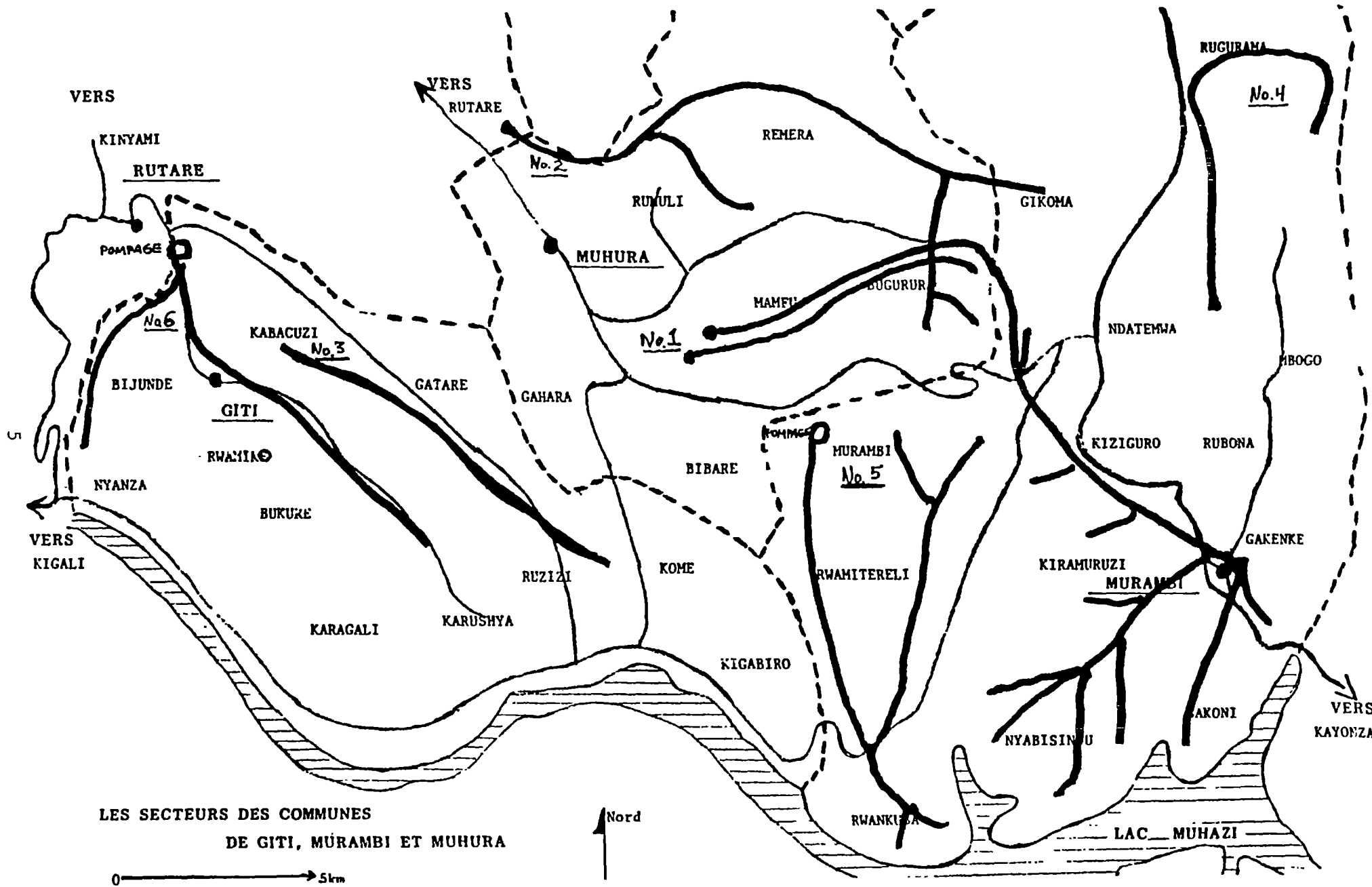
Reacting to a series of technical and sociohealth problems, the GOR decided to transfer responsibility for water systems to the respective local populations. This orientation is based primarily on two considerations: political, because the Rwanda administration is highly decentralized, and economic, because the cost of water system maintenance has become too great for the central government. In May 1987, these orientations were finalized by a presidential decree setting forth the framework and legal statutes of water management organizations. These laws confirm user responsibility for the management and maintenance of water systems: first at the user group level (by watering place), then by delegation in the associative authority committee, and, in turn, its board (the authority's executive and administrative unit).

Development concerns and CARE's participatory philosophy are totally in keeping with GOR's orientations. In the same vein, instead of hiring a community development team, the CARE project opted to use the resources existing within the communes, i.e., Communal Centers for Continuing Education and Development (CCDFPs). In addition to preventing the juxtaposition of organizations, this formula has the great benefit of helping to strengthen local teams in the specific project area.

1.2.2 Project Chronology

1.2.2.1 Historical Benchmarks

September 1984	Outline agreement between GOR and CARE/Rwanda.
July 1985	Study by CARE before heading the project development.
January 1986	Sectorial consultation of financing sources for water supplies and sanitation by GOR
February	Project agreement between GOR and CARE/Rwanda relating to the project concerning water systems in the southeast region of Byumba.
March	Begin animation/awareness component
April	Project visit by Mr. Charles Sykes of CARE (Assistant Executive Director, CWHQ, and Director of Washington Liaison Office).
June	First meeting of the Project Management Committee.
July	Adoption by the Project Management Committee of a Plan Director for planning the water systems.



LES SECTEURS DES COMMUNES
DE GITI, MURAMBI ET MUHURA

0 —————> 5km

September	Begin construction of the first water adduction system. Project visit by Mr. Rudy Ramp (Regional Program Manager, East Africa, NYHQ) of CARE.
February/March 1987	Creation of the first water user association.
April	Report of the Process Evaluation Mission in connection with UNDP/PROWWESS.
May	Presidential decree setting forth the framework and legal statutes of the water management association.
August 1988	MINITRAPE publication of the awareness program on rural hydraulics.
July 1989 (estimate)	Complete work on water adduction no. 6 (the third to be completed).
September (estimate)	Complete work on water adduction no. 2 (the fourth and final one to be completed during the three-year plan).

1.2.2.2 UNDP/PROWWESS Mission

This mission, created during the project, concentrated on the following tasks:

- to review and examine the practicability of the hypotheses;
- to identify significant achievements and deficiencies;
- to examine in particular the influencing factors in the participation process;
- to determine the existing similarities or differences between the national politics, the project's philosophy, and the field work;
- to examine the lessons drawn from this experience so they may be used by CARE;
- to emphasize the common denominators and key elements which appear to be essential to the success of such a project.

The mission recommends pursuing these activities as established by CARE to assure

- that the technical operations accelerate in order to adjust to the dynamic issue of animation; and

- the coordinator of the animation component be supported by an assistant.

1.2.2.3 UNDP/PROWESS Evaluation

Community Development Program. The creation of the Assistant Coordinator position has enhanced this program: user groups and committees for each associative authority and their respective boards have been organized and member training is in progress.

Water adduction system construction has clearly accelerated: the adjustment between technology and community development has been made and has allowed complementary progress. Although Giti was considerably behind at the time of the PROWESS-UNDP mission, it has reached an equally advanced stage of project implementation.

Thanks to her personality and skill, the community development program coordinator has assumed an increasingly important role in the execution of this project. Although relieved of certain tasks through the hiring of an assistant, she has at the same time been called upon by expectations from the institutional environment. In this way, she was the trustee of CARE experience when asked to serve in the following capacities:

- Member of the evaluation committee for the Dutch rural hydraulics program (SNV);
- MINITRAPE Consultant;
- Trainer for spring catchment specialists connected with the Canadian project Club 2/3;

Because of the experience CARE/Rwanda has acquired and the information-gathering demands of the environment, this coordinator seems now to be recognized as one of the primary national resources for implementing Rwanda's overall rural water policy.

Nonetheless, with no access to budgetary information (despite repeated requests), she cannot quantify the resources needed for each phase of community development undertaken. Because she directed but did not manage her community development program, the Rwanda community is indeed being deprived of expertise in this realm--particularly since the CARE project is the main point of reference because of its advanced state of popular participation in the country's rural water management. The project director's recent departure amplified the rupture between CARE/Rwanda management and the Community Development Program Coordinator because he served as a bridge between them.

Participatory Policy. Deficiencies of information access go hand-in-hand with CARE/Rwanda officials' shortcomings in sharing information. For example, none of the three mayors knew about information published in the previous mission's

report (PROWESS-UNDP), although they are actually members of the Project Management Committee. Another fact to point out: even MINITRAPE's delegate to the current mission was uninformed about the content of this primary reference document for the present evaluation team.

It is also surprising that CARE/Rwanda administration, responsible for public relations, distributed absolutely no quarterly analytical capsule presentation documents on acquired experience. We now find only summaries written for internal purposes. Thus, CARE could not benefit from the visibility and merit it deserved by virtue of the quality of its technical and community development accomplishments.

1.2.2.4 Second 18-Month Period

The nine-point project plan has been largely completed:

1. developing the project agreement with MINITRAPE
2. presenting project to local authorities
3. carrying out technical studies
4. preparing the Master Plan
5. promoting population awareness
6. establishing user associations
7. preparing an engineering design
8. building the system or systems
9. continuing education

However, two comments are merited:

- At the end of the three-year plan, two water adduction systems (Nos. 4 and 5, Commune of Murambi), will not have moved past the technical study phase, possibly due to insufficient financing;
- Sustained awareness and continuing education efforts were made and the results are already evident. However, these activities will have to be pursued to ensure continuation of the current process of turning over responsibility.

1.3 Methodology

1.3.1 The Participatory Approach

One goal of this assignment was to develop a methodology for conducting a participatory evaluation. The team understood such an approach to involve the major stakeholders in the planning phase, and particularly in formulating evaluation objectives and expected outputs. As the process evolved, the team broadened its view of the participatory approach and arrived at the following definition: At each phase, a participatory evaluation involves representatives of primary and secondary client groups wherever appropriate, practical, and beneficial.

The evaluation process can be segmented into seven phases:

1. Preparation--identification of goals, outputs; team planning; logistics; development of tools
2. Data collection--field work; document review
3. Data analysis--tabulation; statistics; interpretation
4. Formulation of recommendations
5. Circulation of results--first draft; debriefing; feedback
6. Final report
7. Publication/distribution of final report

Although clients should participate in as many of these phases as possible, it would be inappropriate for them to take part in certain aspects. For example, it is rarely appropriate for project staff to collect first-hand data for assessing project performance; the reliability of such results would be questionable. Likewise, it is impractical for beneficiaries (i.e., water users in this case) to actually take part in writing the final report.

But by involving clients wherever possible, the evaluation can better provide useful results and recommendations that stakeholders will support and endorse.

1.3.2 Indicators of Participation

During this assignment, the team identified the following indicators of client participation:

- The project manager took part in the initial team planning meeting at WASH prior to departure for the field.

- Project staff members, the CARE regional advisor, GOR/MINITRAPE representatives, and a national social scientist joined team planning meetings in Rwanda.
- The CARE regional advisor, GOR/MINITRAPE representative, national social scientist, and expatriate social scientists assisted with data collection, analysis, formulation of recommendations and report writing.
- Questions from an instrument being developed by MINITRAPE's Direction Generale de l'Eau appeared in our survey of user association representatives.
- Explicit procedures were developed to directly elicit viewpoints of beneficiaries (users and GOR officials), local management personnel (user association representatives, Bureau de la Regie Associative), local extension workers (CCDFP, project extension field assistant) and local political authorities (bourgmestres) regarding their assessment of project performance; other procedures drew out their suggestions and interests for this evaluation.
- The team presented major findings and recommendations to primary clients in Rwanda before completing draft report for circulation.
- The executive summary was translated into French and distributed to primary clients before leaving Rwanda. Arrangements were made to have a final, revised summary translated into Kinyarwanda at a later date. Having learned that the midterm evaluation report never reached key government officials and communal authorities, the team hopes to avoid that problem in this evaluation.

1.3.3 Team Organization and Field Work Design

After completing the planning phase, the team organized data collection into two main components: the institutional aspects (project management, harmonization with national policy, involvement of local government) and the community involvement aspects (views of users and user association representatives). In order to maximize team members' time and expertise, evaluation participants were assigned to one or the other component. Three teams carried out data collection: Team 1 took on the institutional interviews; Teams 2 and 3 conducted the community-level interviews.

Team 1 interviewed project staff and national and regional government officials; the bourgmestres and members of the Bureau de la Regie Associative; and the extension coordinators for each of the three communes. An open-ended interview guide, developed during the team planning process, helped structure the interviews (see Appendix II).

Teams 2 and 3 divided up the sample of water points where users and user association representatives (committee members) were interviewed. The teams conducted group interviews, with users invited to meet with the team at the water point. Individual interviews were conducted with the three committee members (president, vice president/fee collector, guardian) at each water point sampled. A discussion guide for users and a questionnaire for committee members, developed during the team planning process, were used for these interviews (see Appendix II).

The community-level data collection instruments and procedures were pretested at two sites in Giti: the questionnaire with four committee members, the group interview guide with two user groups. The instruments needed only minor modifications. The pretest user group interviews were subsequently included with the other group interviews in the data analysis; the pretest committee member questionnaires, however, were excluded.

1.3.4 Sample Selection

Initially, the selection of water points for community-level data collection was limited to those within the first two completed water systems. Those within the third and fourth lines, still under construction, are not yet developed to the stage where self-management could be assessed. Within the completed lines, 65 gravity-fed, suction flow standpipes operate across the three communes. In addition, eight capped springs are included in the self-management system. A 20 percent sample of standpipes was chosen (N=14), and two capped springs were selected for purposes of comparison.

Sites were selected using a trait-contrast procedure, by identifying the main variables which differentiate water points and might influence the local management process. The evaluation team used a nominal group process to identify site selection criteria. Within this process, team members first listed the 10 most salient variables which might be considered, for which information was available on all sites. Next, each team member independently ranked (1 to 3) the most important criteria, according to his/her estimate of their potential impact upon the self-management process. Using composite scores, the two most important selection criteria were identified: number of water users per standpipe, and percent of fee contributions collected.

Using these two criteria, 14 sites were selected that represented four combinations of traits:

- High number of users/high fee collection rate
- High number of users/low fee collection rate
- Low number of users/high fee collection rate
- Low number of users/low fee collection rate

Both capped spring sites visited had low fee collection rates but differed in number of users.

The team used a third criterion, distance from home to the standpipe, to select water users to invite to the group discussion. At half of the sites, users residing far from the standpipe were invited; at the other half, users residing close to the standpipe were invited. However, because of limited time and field personnel for participant recruitment, the team was unable to fully implement the user-distance selection criteria. Groups interviewed included both invited participants and others who came on their own; users who lived close to the standpipe were overrepresented in the groups. Also, although recruiters tried to have equal numbers of male and female users represented in the groups, men outnumbered women by about 60 percent.

The number of users in group interviews ranged from 4 to 35, with an average of 14 per group. The total number of discussion participants was 242: 90 women and 152 men.

1.3.5 Analysis of Field Data and Formulation of Findings and Recommendations

Field Team 1 (institutional component) analyzed its interview data and presented it to the entire evaluation team for discussion and formulation of recommendations. Questionnaire results for all committee members interviewed were compiled and summarized by the bilingual interviewers (French/Kinyarwanda) who had administered them. User group interview notes were coded by the two persons who had recorded the notes for Field Teams 2 and 3, following a standardized procedure. The coders synthesized these results and shared them with the entire evaluation team.

After data analysis was complete, the evaluation team met to share and discuss the findings and to begin formulating major recommendations. Based on these data, team feedback, and information gathered from documents, Jeannine Coreil and Jean Beaudoin prepared overviews of the community and institutional components, respectively, then met to share their conclusions. A draft summary of the major findings and recommendations was prepared and discussed with project staff and MINITRAPE officials. Feedback from the latter was incorporated into the report presented to CARE/Rwanda before the consultants left the field.

Chapter 2

FINDINGS

2.1 Project Design and Approach

2.1.1 Successful Elements

Overall the Byumba project design and approach have functioned effectively in this setting. Users, community managers, government officials, and project staff express both satisfaction with technical and organizational aspects of the system and a general optimism regarding its sustainability.

Communal authorities attribute project success to the demonstrated accomplishments in the technical domain, as well as to the soundness of the extension component underlying the capacity for self-management. These officials expressed confidence in CARE's approach to water systems development and would support having this NGO take the lead in future water supply projects in their respective communes.

Numerous respondents and observers affirmed that the success of the project's extension and training program rests upon the availability of resources (e.g., vehicles and funding) and the autonomy of CARE/Rwanda and its extension coordinator, but above all upon the coordinator's professional and personal qualities.

One indicator of project success is the fact that only a few isolated incidents of user fee misuse have been documented. These rare occurrences of fee collectors "borrowing" money have been strongly denounced by local authorities, and measures to enforce restitution have been devised that apply communal law enforcement.

2.1.2 Tension Points

Aside from the inevitable frictions created by contrasts between the traditional pyramid model of development and this project's participatory approach, current tension points relate to monetary matters: the fee determination system, compensation of committee members, and the question of imposing sanctions on users who have not paid their fees. No consensus exists on these issues at present, but at the management level there is growing agreement that at least the Regie treasurer should be remunerated.

To date, more than half the water users have paid their annual fees. However, it has been much more difficult to collect fees from capped springs users than from standpipe users. Communal authorities express willingness to enforce sanctions, not only to pressure users to pay their annual fees, but also to discourage people who continue to use unclean water sources despite the availability of potable water.

2.2 The Self-Management System

2.2.1 First Management Cycle Incomplete

The project has not yet fully implemented the basic elements necessary for sustainability. For example, at the Bureau de la Regie level, the budget remains unformulated, no money has been withdrawn or spent, no repairs of the water system have taken place, accounting documents are unsecured, and so forth.

More than half of users whose representatives serve on the Regie have paid their annual fees; however, it should be noted that capped spring users are not well represented on this body, and fee payment rates at these water points are very low. Although families considered indigent have been exempted from the fee, some users complained that their amount was excessive. Several women married to men who support more than one family complained that their husbands had paid the fees for other families but not their own. Nevertheless, the general consensus of the communal authorities, extension workers, fountain technicians and Bureau members was that the fee rate was entirely affordable, noting that in this region the soil is very fertile, and many families own livestock. In addition, the net cost for water is less when compared with the previous period in which people often had to pay others to collect water for domestic use as well as for banana beer production.

The first self-management cycle will be completed at the time of the first annual report made by the Bureau de la Regie Associative. If CARE withdraws from this experience before the process of self-management is fully achieved, it will be generally viewed as a premature weaning of the project.

2.2.2 Comparison with Situation at Midterm Evaluation

Two years ago, Giti had fallen far behind the other two communes in project implementation. At present, however, all three communes are at comparable stages of implementation and self-management.

At midterm, the project's technical component lagged behind the extension program, but the two dimensions are coordinated and function in a complementary fashion.

Tensions noted in 1987 between communal authorities and the project have lessened greatly. Several factors have contributed to this change. First, the communal authorities's formal role in rural water activities has been legally defined; for example, bourgmestres now serve as honorary presidents of the Regie Associative with authority to cosign bank withdrawals. Second, the three bourgmestres have regularly attended planning meetings of the Project Management Committee. Third, local political-administrative officials have actively participated in user association meetings. Fourth, local authorities and project management personnel share an important goal: solving the problem of nonpaying users.

It should be noted, however, that some friction persists at the cellule level where the role of the political-administrative representative remains somewhat

unclear. In some cases, these officials have tended to usurp the responsibilities of the elected water user committee members. This condition may reflect an eagerness to show Conseil command for project activities, or it may indicate a lag in the transition process from old patterns of authority to the new participatory model.

2.3 User Perceptions of Water System

2.3.1 Sense of Ownership and Self-Management

Water users expressed a clear sense of both ownership of the water system and responsibility for its maintenance and management. Users know the proper procedures for use and upkeep of the standpipe and surroundings. They also know that users themselves elected their local committee members. Users perceive definite advantages of the new water supply over the old and are in the main willing to pay the fees necessary to support the system. They are optimistic that after CARE withdraws from this area's water sector, the community management system can sustain itself.

The sense of community self-management does not, however, extend to most matters of authority, decision making, and problem solving. Users view their committee as an informational liaison between themselves and external authorities (i.e., CARE and the bourgmestre/Conseil Communal). Respondents stated that decision making and procedures (e.g., standpipe location, rules for facility use) came from outside the community. Although most users favored some type of compensation for the time committee members spent in management activities, opinion strongly opposed community responsibility for this. Respondents stated that CARE or GOR should provide the support.

Most community interviewees responded positively to questions about collaboration with communal and local government. They cited specific ways in which the bourgmestre or councilmen had aided water management, such as by helping to enforce fee payment. Overall, users and their representatives believed water system management depended on government support.

2.3.2 Response to Perceived Needs

It is generally assumed that community participation in development projects is higher when beneficiaries believe the project responds to their felt needs. Also, projects responding to higher-priority needs usually achieve greater involvement than projects that overlook more pressing needs.

In this case, the water supply project responded to a need given high priority by the rural population. Access to a reliable, nearby water source is a strongly felt need, and clearly the most important perceived benefits of the new standpipes are those associated with decreased distance to the water point. One indicator of the strength of this perception is the people's willingness to give part of their small landholding for construction of the standpipe and surrounding yard. Users cite time savings as a very important benefit, as is the fact that now all family members can fetch water. Formerly, men procured

a large share of the water because the sources (river, lake, marsh) were distant and the task arduous. Children needed several hours to make the trip; therefore families tried to avoid sending them. Now mainly women and children draw water from the standpipes. The men say this is the way things should be, and the women like the fact that men can now devote more time to farming.

Users reported a secondary benefit: access to cleaner water and thereby improved health of family members. In particular, users noted a decrease in intestinal parasites; some respondents also reported a reduction in diarrheal diseases. These perceived impacts received indirect support from reports of local health care professionals, who believed that parasite morbidity had decreased among standpipe families.

Respondents did not make an association between health-related benefits and increased availability of domestic water quantity or changes in water use patterns in the home, which partly reflects the project's lack of a hygiene education component. They cited being able to wash more often and keep cleaner houses as general benefits not specifically linked to health.

In addition to accessibility and health advantages, users cited the aesthetic benefits such as cleaner clothes and better-tasting drinks. Moreover, some evidence suggests that these secondary effects have created social distinctions among rural dwellers, such that people who live near standpipes are viewed as more fortunate and are attributed higher status. For example, people notice that some families wear cleaner clothes to church.

Users' acute awareness of the social advantages of ample clean water leads them to voice strong feelings that the water system should be made available to all area families, not just to the current privileged few. Due to construction delays, only part of the initial target population has been served. Across the three communes, only about 20 percent of the population has access to the new water system. Although one commune's bourgmestre reported that 33 percent of the population was served, this figure falls short of the 45 percent originally anticipated.

Despite an overall perception of advantages attached to the new water supply, however, participation in use and self-management is significantly constrained by distance and location factors. Users who live relatively far from the water point feel they should pay a smaller fee than those who live closer. The fee/distance disparity problem was voiced repeatedly in group interviews with users. Fee collectors have difficulty getting the distant users to contribute the standard amount. In some places, users feel that the standpipe location was poorly chosen because it either was not central to the population being served or was unsuitable for another reason.

Thus, fee determination continues to be a source of user dissatisfaction. While national policy favors a uniform contribution rate for each commune, many users favor an adjustable rate that varies by type of water point (gravity-fed standpipe vs. capped spring), distance from the source, and socioeconomic factors of relative wealth, household composition, and handicapped status. (Indigent families are exempt.)

The question of net time savings for household water collection achieved by the new water supply system cannot be answered in this evaluation. However, changes in time allocation for water collection appear to affect men and women differently, since women do more collection with the new system than before. Added to an already heavy domestic work load, this additional task may place greater constraints on women's participation in community management because they have less time available to attend user meetings. Despite deliberate efforts to encourage women's participation in all aspects of self-management, extension workers and committee members noted difficulties in getting women to attend meetings. Interview teams faced the same problem in recruiting equal numbers of male and female participants for the group interviews. Despite attempts to have equal representation, males outnumbered women about two-to-one among interviewees.

2.4 User Education Component

The term "user education," as used here, includes a broad range of promotion-extension activities, and is sometimes referred to as the animation/awareness component (Fr. animation/sensibilisation). At the local level, the CCDFP extension coordinators are responsible for user education. Our data indicates that the level of involvement of these coordinators (who work in all development sectors) in water-related education varies markedly across water points. Users and committee members from different water points report varying degrees of contact with CCDFP workers. Furthermore, in over 50 percent of the water points surveyed, the users stated that they had limited contact with the CCDFP or none at all. In some communities, users reported having attended an orientation session by a CARE agent (the extension coordinator or her assistant).

User education has been limited mainly to collection and maintenance procedures, and establishment of the local management structure. This in itself has been a major accomplishment for the project, considering the users' lack of experience with this type of water supply, and especially the newness of the participatory approach to management (e.g., democratic election of user association representatives by secret ballot, ensurance of female representation, voluntary contribution system, and the creation of a organizational structure outside the established local government).

Nevertheless, it is noteworthy that the project's user education component has not addressed hygiene, sanitation, water use, or specific health topics in any depth. For example, users received no education on proper transport of water to the home. Generally, they use an open pot with leaves immersed in the water to prevent spilling; jerry cans observed were extremely dirty. Thus, water that is potable upon leaving the standpipe probably arrives home contaminated. Although people cite the advantages of cleaner water and better health, more rigorous hygiene education could strengthen these views.

Some beneficiaries living closer to traditional water sources are reluctant to pay fees for clean water at greater distances and continue to use poorer quality water without cost. Their behavior provides further indication that the project's lack of hygiene education represents a missed opportunity to enhance community participation.

Extension and training techniques primarily feature group presentations with poster graphics. The graphics were pretested and revised before adoption; however, the poster scenes have some outdated elements, such as depiction of rural houses as exclusively in the traditional round design with thatch roof, when the majority of present-day rural homes are of a more modern architecture. Other aspects of the graphics may also need improvement.

2.5 Structure and Function of User Association Committees

Almost all committee members were elected by the users, but in a number of cases committee members were actually nominated by some of the lower-level communal authorities. Indications of an evolving self-management process are seen in the fact that when several committee members had to be replaced, this was handled at the local level without recourse to outside guidance.

Users expressed conviction that they had themselves decided upon the appropriate criteria for selecting representatives. The most commonly reported criteria were intelligence, literacy, trustworthiness, and proximity to standpipe. Often, users indicated that different criteria applied to different offices: literacy and intelligence for president, trustworthiness for the vice-president/fee collector, and proximity for the guardian. Women are considered more trustworthy in matters of money handling, and this partly accounts for the fact that female committee participation is mostly restricted to fee collection.

Like the rest of the rural population, almost all elected representatives make their living by farming. However, they tend to have had more education than the general rural population, with the majority having attended school more than four years.

Of the 36 committee members interviewed, 9 (25 percent) were females. These included 2 of 10 presidents, 5 of 13 vice president/collectors, and 1 of 11 guardians. Our sample of female officers interviewed underrepresents the total number of women representatives, particularly among fee collectors, because fewer female committee members were available for interviews. Project records indicate that women make up 35 percent of all committee members and 70 percent of fee collectors.

The fact that women were elected to management positions in significant numbers represents a noteworthy project achievement, since women have traditionally been rarely appointed to local government positions. Furthermore, that some women serve as presidents of user associations and even serve on the board of directors (Bureau de la Regie Associative), defeating male candidates represents an important advancement for women's role in rural development.

However, it should be noted that most female committee participation consists of fee collection, a time-consuming responsibility with little attendant authority. Although our data cannot document actual time devoted to fee collection, it is possible that women carry a disproportionate share of the work involved in the community management system (going from house to house to encourage reluctant contributors to pay their fees, keeping records,

transferring money to the treasurer of La Regie, etc.), and a comparatively much smaller share of decision-making roles (i.e., as president and Bureau members). The project's training component for committee members appears to be well established. All representatives interviewed indicated they had received some formal training for their roles, consisting on the average of one to two days of instruction. CARE extension agents and the fountain technician are most often cited as the persons actively involved in training committee members. There seems to be uniformity of subject matter in the training, that is, it is limited to organization and function of the self-management system. The training program does address the elements of hygiene and the importance of clean water, but not in depth.

All committee members report doing some awareness/promotion work, but the amount varies. The education usually takes place at water point user meetings. In addition to animation, committee members spend significant amounts of time collecting fees, transferring fees to the La Regie treasurer, and attending La Regie meetings. At present, all the representatives' work is considered voluntary and benevolent, but they are exempted from the weekly half-day *umuganda* service. Some community members interviewed thought that the service dispensation was a fair exchange for the time spent on committee duties. Others felt this was not enough. In any case, the issue of compensation caused strong dissatisfaction among many committee members, particularly those elected to the Bureau, who must spend significant amounts of time away from home and their usual income-generating activities without even token compensation for meals and drinks purchased. Some fee collectors maintain that they cannot possibly continue their jobs without remuneration. Many committee members expected to be paid for their work before agreeing to take on the task. If this problem is not solved, people may be unwilling to run for office at election time.

2.6 Collaboration with Local Government

Recognizing project successes and also that their communes have advanced greatly in implementing national water policy goals, the bourgmestres expressed complete willingness to facilitate the use of this experience as a demonstration laboratory for other projects.

Water point committee members recognize local cellule and sector officials as their immediate supervisors and perceive ultimate authority and control as coming either from CARE or the commune government. Local government generally plays a key role in the success of the water user associations. Without this support, the system would not work. Local government helps to exert pressure for collection of funds and for providing some status to the committee members. It is through the sector/cellule meetings that information about the water system is shared with users.

Although most people understood that collected fees were to be used for water system maintenance and repair, some communal authorities favor allocating a portion of the money to planning how the remainder of the population could be served. However, such an appropriation was not included in the original calculation of funds necessary to cover each commune's recurrent maintenance costs.

2.7 Harmonization with National Policy

Project implementation has closely followed national rural water policies. Moreover, CARE has devised concrete strategies for attaining the objectives stated in the presidential decree. For example, management responsibilities have been divided and assigned among the three elected representatives at each water point and the vocabulary used to describe Regie Associative roles and functions has been standardized.

The project employs procedures to ensure that women are elected to user committees as well as to the Bureau de la Regie.

In order to maximize communication between user associations and the Regie Associative, the intermediary "sector" division was bypassed, so that a direct link exists between the water points and the Regie, and all of the representatives on the latter association participated in the election of its board of directors (the Bureau).

After the failure of the AIDR water project, the CARE project, widely regarded as one of the most successful in the country, was viewed as the best alternative for serving as a general model. The project's demonstrated achievements, as well as the good interpersonal relations between MINITRAPE officials and the project extension staff, are given credit for the central role this project has played in the development of national rural water policy.

2.8 The Participatory Process

2.8.1 Transition from Initiation to Responsibility

Community participation in water sector development has been defined as "the learning process by which communities control and deal with technology, change, and development. It is a necessary component of every water supply project that has maintenance and long-term sustainability as its objective."¹ This definition reflects a focal shift from earlier emphasis on project initiation to one that emphasizes responsibility. Evaluation of a project's initiation phase focuses on inputs and outputs and the efficiency of delivering tangible projects. In contrast, evaluation of the responsibility phase focuses on the problem-solving capacity of the community: management, maintenance, and sustainability.

Evaluation of the initiation phase of the Byumba Southeast Water Systems Project is documented in the 1987 UNDP/PROWESS evaluation report (Beaudoin and Fillion, 1987). The major participatory processes addressed at that point included the use of voluntary community labor for construction, involvement of local political leaders in planning and management, organization of water point committees, and user, government, and project staff satisfaction with the progress toward technical and organizational implementation.

¹Donnelly-Roark, Paula, New Participatory Frameworks for the Design and Management of Sustainable Water Supply and Sanitation Projects. WASH Technical Report No. 52, November 1987, p. 7.

The current evaluation focuses on the transition from initiation to responsibility phases in project evolution. The main finding here is that the project is undergoing a critical shift from community mobilization to control and problem-solving capacity. The project's long-term success hinges on successfully completing this transition, which evaluators have termed "completion of the management cycle." It will take about two years to complete the transition. The following developments indicate the project's current transition to community responsibility.

2.8.2 Integration with Local Political System

The Byumba project has achieved a high level of integration with the local political-administrative system, as evidenced by communal leader involvement in planning decisions, financial management, and support for water committee activities. Because the project organization is closely aligned with national policy and backed by government legislation, local leadership is actively involved in the transition to community management. In addition, indigenous extension groups have been central to the user education component.

2.8.3 Two-way Information Systems

Project-community communication has been structured through the various levels of the Regie Associative, from the lowest level of the water point committee, through the board of directors made up of committee presidents (Comite de la Regie), and the Regie's executive committee (the Bureau). Informational flow has occurred in both directions. However, the general local perception is that decisions are made externally (i.e., by CARE, the government or communal authorities) and directives communicated down to the community. Users perceive their committees as transmitters of information from above, not as a means for passing user feedback. The board of directors is increasingly vocal in communicating needs and priorities, such as the formal request for a mechanism to compensate Bureau members for their services.

2.8.4 Problem-solving Capacity

The first step in developing problem-solving capacity is local definition of problem areas. Water user communities have taken this step by questioning the acceptability of a uniform fee system that makes no allowance for type of water source, variable household socioeconomic statuses and differing levels of user accessibility. Local political leaders made the decision to adopt the uniform fee basis in the three project communes, with little input from the users themselves. Community resistance is evident in the reluctance of disadvantaged users (distant, poor, traditional source) to contribute financial support. Although the problem-identification step has been taken, users do not view the local management and communication structure as a means to negotiate a change; they look, instead, to external leadership to solve the problem.

2.8.5 Involvement of Women in Community Management

The project has developed and implemented innovative strategies to achieve women's participation in community management. These tactics include using an electoral process that ensures that at least one woman serves on each user association committee and at higher levels of the Regie Associative, and actively promoting female attendance and input in user meetings. Consequently, women participate in water system management to an unprecedented degree for this setting. However, the predominance of women in fee collection, women's increased involvement in water collection under the new system, and traditional domestic responsibilities constrain female participation in management activities.

2.8.6 Local Control

One way that communities exercise control is by refusing to use project inputs. A local example of this form of negative control is some families' refusal to walk farther for water (at the new source) and pay for it as well, when they live near a traditional water source. These families continue to use water from the lake, river, or marsh. In this and other ways, the community has indicated that accessibility is critical to their water use decisions. Political and water management leaders have responded by considering sanctions against noncompliant households. This negative response to a negative control strategy illustrates the complexity of "local control" processes operating where community consensus is lacking and the behavior changes required are great. How such control strategies are managed will have important implications for project sustainability.

Chapter 3

RECOMMENDATIONS

3.1 For the Project Staff

1. Obtain funding to complete current implementation and mobilization activities and to allow the self-management system to follow through a complete cycle; in this way, the full transition to the responsibility phase of community participation will take place.
2. Conduct a project evaluation after a full year of autonomous management and financing has been achieved. The projected time for this evaluation is two years hence. In addition to the self-management component, this evaluation should address the project's socioeconomic impact (i.e., health, gender roles, time savings, etc.).
3. Expand the educational component to include the relationship between water use and health, hygiene, and sanitation.
4. Give greater attention and resources to the logistical implementation of the project's technical and extension components, such as those related to transportation, office facilities, supplies, maintenance and repair of the water system, etc.
5. Adjust the project extension and training coordinator's title, job description, and associated terms of employment to attain greater consistency with her current role and responsibilities.
6. Take rapid steps to assure a reliable supply of replacement parts available to the commune fountain technician, who should keep a record of stock received and taken out. However, CARE should not provide funds to purchase these parts; such purchases should rely exclusively on the community self-financing system.
7. Seek technical assistance to assess the extension and training methods/materials used to date in the project. The animation techniques could benefit by incorporating innovative communication strategies; current instructional materials may need improvement.
8. Allocate staff time and resources to analyze, document, and disseminate the project experience, thus ensuring the institutional memory of the approach, processes, lessons, and implications of this project.

3.2 For the Community Management System

1. Resolve the central issues of user fee basis and compensation of user association representatives. The question of uniform vs. adjustable fee rates must be thoroughly discussed and negotiated at all levels of the Regie Associative. Likewise, acceptable methods for compensating

representatives must be negotiated for various management roles. Compensation methods may include salaries, honoraria, gifts, per diems, special privileges and other means, as well as the existing *umuganda* dispensation depending on the time, effort and duties involved in the role.

2. Strengthen women's participation in decision-making management positions at different levels of the Regie Associative (e.g., board of directors and Bureau).
3. Develop a plan as soon as possible for spending the money collected from users. This plan should include specific elements on mechanisms for allocating a portion of the money to MINITRAPE's national rural water fund and for paying maintenance and repair costs and salaries or compensation of Regie personnel.

Possible options for other uses of the money include establishing local credit unions for financing cooperative projects; paying salaries or other compensation of selected water system workers (e.g., the fountain technician and Bureau treasurer); constructing laundry facilities at water points; adding collection pipestems at existing standpipes; and providing materials and work tools for system maintenance.

4. In resolving the question of how to collect fees from noncompliant users, use sanctions only after participatory negotiation and social pressure has proved unsuccessful.

3.3 For Government Rural Water Activities

1. Augment specific training components for the board of directors (Bureau de la Regie Associative), fountain technician, and extension coordinators in each commune.
2. Take steps to extend national policy implementation in community-managed water supply systems by making the current project training staff available to national and regional program coordinators. Apply the lessons and experience gained from the project.
3. Retain community volunteer labor service (Umuganda) as an essential component of water development projects, in order to promote the sense of user ownership and facilitate participation in self-management.
4. Take care that, in their continued support for the self-management process (organization of user associations and meetings), sector or cellule officials do not through this involvement assume the responsibilities of elected representatives.

Chapter 4

LESSONS LEARNED

4.1 Community Self-Management of Water Systems

4.1.1 Use of Voluntary Community Labor for Construction

The use of voluntary community development labor for construction greatly facilitated users' sense of owning standpipe facilities. Users have carefully maintained the premises; they have not damaged the hardware, either intentionally or accidentally, and all indications suggest they will protect the installation from vandalism. In contrast to former water systems constructed by outsiders, which were subsequently dug up to hunt for possible buried treasure, no one has attempted to tamper with or dig around the new standpipes.

4.1.2 Involvement of Local Authorities and Nationals

The communal government is responsible for all local development interventions (a fact recognized in the presidential order on rural water supply, which states, for example, that the Conseil Communal must approve internal rules of La Regie Associative). Thus, it was very important in this project that communal authorities participated in planning, policy formulation, and work involving of government employees (i.e., extension workers and fountain technicians).

Ministry officials expressed appreciation for CARE's innovative approach, which incorporated the three bourgmestres in the Project Management Committee. These officials maintain that this reflects a participatory approach that has fostered integration of the various operations and actors involved and has thereby maximized the success of the project.

Furthermore, national and regional officials strongly support CARE's approach in having its entire extension and training component implemented exclusively by Rwandan nationals. This approach reconciles social and cultural realities with the intervention context.

4.1.3 Importance of Technical Successes

Partly as a result of the disastrous AIDR project, in which the population invested much time and labor with disappointing results, this project's strong credibility rests upon its technical achievements. The suction action standpipes are a great success: they are technically simple, they reduce water wastage, and they cannot be tampered with easily.

This demonstrated technical success has motivated community participation in management, which in turn has increased local sense of ownership.

The technical side functions so smoothly in part because the system is new: problems with technical operations, maintenance, and repairs will likely arise in the years to come. For example, the fountain technicians will be very busy as the water system ages and requires more upkeep. Whether increased technical demands and maintenance costs will significantly affect the participatory process remains to be seen.

4.1.4 Intensity of the Extension Component

Requirements for a project extension and training component were underestimated in terms of both the logistics for covering a large territory, with little aid from the communes, and the political challenge posed by a radically new management approach. Despite the bourgmestres' support for the decentralized, participatory approach, some tensions remain between the cellule officials and water user association representatives.

4.1.5 The Self-Financing System

The notion of having to pay for clean water is not unlike developments in other sectors in Rwanda. In recent years, due to budgetary constraints, the government has had to ask the population to pay for various social services that were formerly free (e.g., school construction and books and medicines). These changes are fairly recent, and the public still has not totally adjusted to the idea of self-financing in these areas.

Although some water supply projects have collected fees before construction to show users that their money was put to visible ends, the Byumba approach--delaying collection until two months after water service became functional--worked well because users noted the reliability of the water supply before they had to pay for it.

The project's method of transferring fees from contributors to a central depository was very good because it used a minimum of intermediaries, passing from individual contributor, through the committee fee collector, and to the Bureau treasurer, who deposits them directly in the local bank. No other committee member or political-administrative official can intervene in this sequence. Additionally, a double system of receipt documentation (at the user level and when the collector transfers to the treasurer) facilitates accounting and control of funds.

The current policy, whereby water users contribute uniform maintenance fees regardless of water source (e.g., gravity-fed standpipes and capped springs) creates an unequal cost/benefit burden among beneficiaries. Two factors may explain the dissatisfaction surrounding this issue: the lack of extension work with capped spring users to increase their understanding of the rationale behind uniform fees and the inherent conflict between the government's policy of uniform, middle-range fees for all and the users' belief that it is unfair to impose the same fees for a less-advantageous water supply.

Until it is demonstrated that the fees will actually finance essential parts of the water system (whether for management or maintenance functions), the fee will be viewed as a new traditional tax.

4.1.6 Motivation of User Association Representatives

The low motivation among many user association representatives stems largely from the fact that their work demands substantial time, and they compare their role to that of the local political-administrative officials who receive either honoraria or salaries. Two possible solutions include either providing some type of remuneration system or promoting representatives as volunteers comparable to other benevolent community workers (e.g., the volunteer family planning agents).

4.1.7 Future of the Project

In view of the limited time remaining in the current funding period, the project's future is uncertain. Regional and communal authorities foresee no other funding source to complete current activities. Furthermore, these officials strongly request that CARE continue to build new water systems, or at least complete the current plan of construction. They further emphasize that government support to the project can encompass technical and organizational advice alone, and this only to the extent that logistical supports are made available.

4.1.8 Applicability to Other Areas

As previously noted, the project's self-management model has not yet completed a full cycle. Because its viability in this region has yet to be demonstrated, assessments about the model's applicability to other areas cannot be determined. It would appear, however, that three essential elements of this project's success include harmonization with national policy, strong legislative support for community management, and a well-developed societal ethic of community participation.

4.1.9 Indicators of Community Participation

Our evaluation of the CARE Byumba Southeast Water Project identified several indicators of community participation in the planning, implementation, and management of water systems. The most important ones are listed below, followed by (+) or (-) signs to reflect whether each had or had not been attained. In some cases the indicator varied by site; these are identified by both signs (+/-).

- Involvement in locating the standpipe (+/-)
- Participation in developing procedures and rules for system use and maintenance (-)
- Responsibility for significant functions in the organization and duties of the local management structure (+)
- User involvement in electing representatives (+)
- Autonomy in replacing and training new representatives (+)
- Awareness and use of local management structure for problem-solving and decision-making (-)
- Expressed sense of ownership of the water system (+)
- Confidence in autonomous sustainability of system (+)
- Communication of desires to make changes in management or financing system (+)
- Participation of women in management functions (+)
- Completion of one entire management cycle (-)

4.2 The Participatory Evaluation Process

4.2.1 Assessment of Its Utility

A participatory methodology can be used most effectively when evaluating projects that are themselves designed and implemented through participatory processes. Traditional vertical development projects do not lend themselves to the participatory evaluation approach.

As defined here, participatory evaluations involve all primary clients in as many phases as appropriate. Most importantly, the principal clients should participate both in the team planning process and formulating the recommendations. For the data collection phase, it is often most practical to delegate tasks according to background, experience, competencies, and logistics. There are tradeoffs to this approach; not everyone shares equally in first-hand exposure to information and insights. Therefore, it is very important in such cases to share findings completely and involve all team members in analyzing and interpreting results.

Limitations of team members' time circumscribe the participatory process; conversely, lack of time restrictions facilitates movement from one phase to the next.

The experience can provide team members with training in participatory evaluation. However, the training function should not demand so much team effort that it detracts from the project evaluation. One way to help avoid such a situation is to give adequate attention at the start to the necessary requirements for team members and the setting.

4.2.2 Requirements of the Team and Setting

To participate effectively in the planning process, team members should have experience with development-project evaluations. Because the group process method is used to focus and design the evaluation, team members must be able to function in a fluid situation during the initial planning phase. The group must reach consensus on the goals of the evaluation before proceeding to subsequent phases. Time availability is vital to successful participation.

Questions such as which client organization will cover various expenses or handle different logistics should be clearly answered at the start. Such issues should not be allowed to divert members' attention away from the assignment and/or interfere with the group process.

Effective communication is fundamental to the participatory process. Two important bases for effective communication are shared terminology and uniform fluency in the common language. Varying levels of fluency in the work language can constrain the group process. Development of a shared vocabulary for discussing evaluation concepts, methods, and procedures should be built into the team planning meeting.

4.2.3 Indicators of the Participatory Process

The following are indicators of the participatory evaluation process:

- involvement of primary clients in different phases
- degree of preparedness of participating organizations (e.g., commitment of resources and staff release time)
- participants' assessment of their own contribution to the evaluation process
- clarity on who the main clients are and their stakes in the evaluation
- full endorsement by team members of the findings and recommendations

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APPENDIX A
SUMMARY OF NATIONAL POLICY ON
WATER WORKS MANAGEMENT



Appendix A

SUMMARY OF NATIONAL POLICY ON WATER WORKS MANAGEMENT

History

During the preindependence period (especially around 1950), the Fund for Indigenous Well-Being (FBEI) began to supply Rwanda with drinking water by building adduction systems, developing springs, and handling related maintenance.

Around 1964, FBEI was replaced by the International Association for Rural Development (AIDR). Unlike FBEI, AIDR was involved in the maintenance and operation of existing water adduction systems and developed springs as well as in building new water works under the AIDR - Rwanda Republic contract on payment for services rendered.

In the 1980s, water works grew at such a rate that the government could no longer afford maintenance costs. To the growing infrastructure was added beneficiary vandalism; for example, several developed springs were destroyed by people seeking precious metals allegedly used in the development work. The offenders also broke faucets and cut pipes. The growth in water works, combined with certain beneficiary actions, led the government to review its water works policy.

Thus, in October 1984, the Mayors' Conference in Kabusunzu (Kigali) issued a series of recommendations, which primarily concern turning responsibility over to users and charging them for water.

Studies were conducted to determine how to involve users in managing the water works stock. According to these studies, management will still be handled by authorities (either the associative authority or administrative authority); however, the associative authority will be the normal method for managing water supply services and facilities for rural communes. Users must thus organize to manage their works.

Water Works Management

Associative Authority

Associative authorities include two primary levels of organization: the watering place and the commune.

First level: Watering place. The watering place group is composed of all families using the same watering place. Members elect a watering place committee among themselves to handle the following responsibilities. (One person can be responsible for more than one task.)

- Take overall responsibility for the watering place (manager)
- Collect fees (collector)
- Guard the watering place (guard)
- Represent users on the Authority Committee (representative)

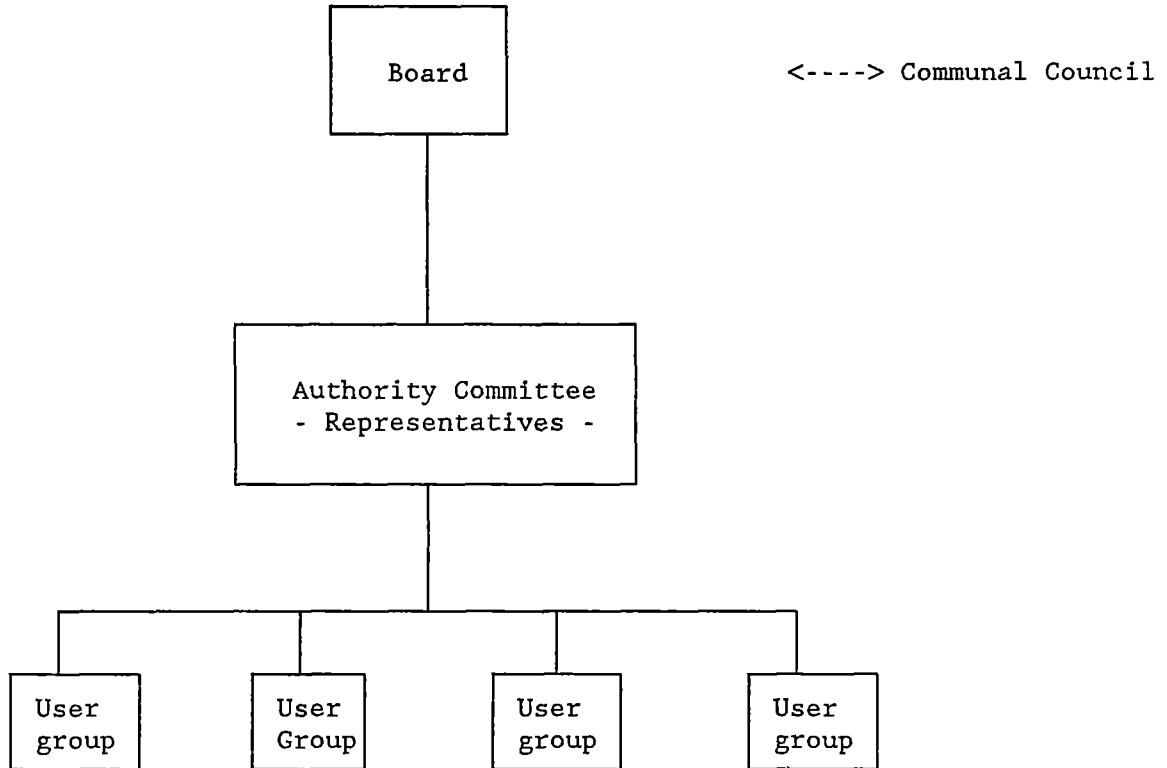
Second level: Commune. All users of watering places within the same commune belong to the associative authority. An authority committee, comprising all representatives of the various watering places, is established to represent users. This committee selects the board, composed of chairman, vice chairman, and secretary, from among its members; the mayor acts as honorary chairman. The board serves as the management organ of the associative authority, while the committee serves as its deliberating organ.

Intermediary organs can be created between the two levels. Thus, when one commune has many works, making it difficult for the committee to monitor them all, it is recommended they have subauthorities. These must be created only for operational reasons, and not to provide a role for communal council members. In this way, several minor problems can be solved at the subauthority level. The subauthority is organized like the associative authority, i.e., it has a committee of representatives and a three-person board (chairman, vice chairman, and secretary). The associative authority committee makes the decision to create subauthorities.

The associative authority is financially and technically autonomous, while the commune, as implementing agency, is responsible for supervision alone.

The communal council institutes the associative authority by virtue of a law that sets forth its powers. It also has the right to dissolve the authority should problems arise. Cooperation between the Commune and the Authority must be based on the respect of each party's powers.

ORGANIZATIONAL CHART OF THE AUTHORITY



Administrative Authority

This mode falls under the communal administration: in this case, all management, both technical and financial, is handled by communal staff. However, this must be only a temporary situation, brought about when the commune acknowledges that its population is not yet sufficiently informed to handle management, or that existing authority is inadequate. However, the commune must expedite establishment of a real associative authority.

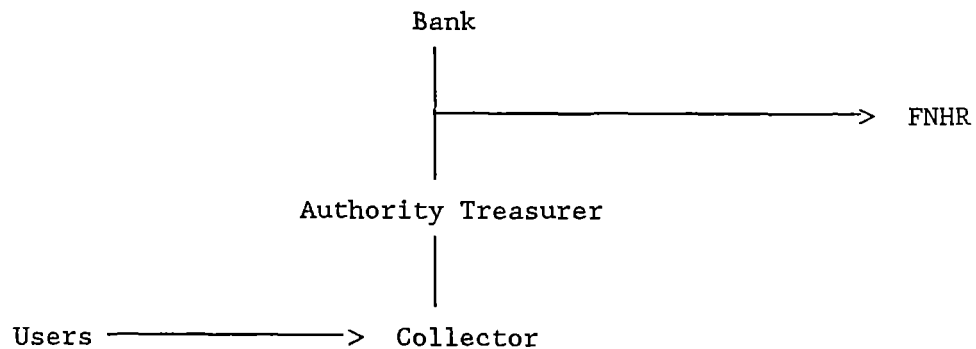
Professional Authority

The professional authority is authorized only when complex water works require high levels of technical skill to maintain them (e.g., pumping and treatment). In such a case, the commune or authority signs a maintenance contract with a professional.

Financing System

Payments are collected by a collector (watering place) who remits them to the treasurer (board). The treasurer in turn deposits the fees in the bank, sending a portion to the "National Rural Water Works Fund" for repairs and major replacements.

Diagram



APPENDIX B
SUMMARY OF USER COMMITTEE SURVEY RESULTS



Appendix B

SUMMARY OF USER COMMITTEE SURVEY RESULTS

Questionnaire Item	President	Collector	Guardian	Total
	(N=12)	(N=13)	(N=11)	(N=36)
1. <u>Age</u> : Range	21-48	23-48	22-89	21-89
Mean	34	34	42	37
2. <u>Sex</u> : Males	10	8	10	28
Females	2	5	1	8
3. <u>Married</u> : Yes	11	12	10	33
No	1	1	1	3
4. <u>School</u> : 0-4 years	4	6	5	15
5-6 years	6	4	3	13
> 6 years	2	3	3	8
5. <u>Occupation</u> : Farming	11	11	10	32
Other	1	2	1	4
6. <u>Was he/she elected?</u> Yes	11	11	9	31
No	1	2	2	5
7. <u>Elected by whom?</u>				
Users	10	12	9	31
Local authorities	1	1	2	4
CARE	1	0	0	1
8. <u>How long ago?</u>				
Less than 1 year	4	2	7	13
One year	6	6	2	14
Between 1 and 2 years	1	4	0	5
No answer	1	1	2	4
9. <u>Did he/she receive training?</u>				
Yes	12	13	11	36

<u>Questionnaire Item</u>	<u>President</u>	<u>Collector</u>	<u>Guardian</u>	<u>Total</u>
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10. By whom? (Note: more than 1)

CARE	10	12	9	31
CCDFP	6	2	4	12
Bureau de la Regie	0	4	3	7
Communal authorities	2	2	3	7
Fountain technician	4	6	3	13

11. Training Length:

Once a month	0	1	0	1
3 times a month	0	1	3	4
3 months	0	1	3	4
1 day	4	3	4	11
2 days	0	4	0	4
3 days	2	2	0	4
6 days	0	1	0	1
3 times a year	1	0	0	1
4 times year	2	0	1	3
No response	2	0	0	2

12. Training Content:

Clean water benefits	2	2	4	8
How to organize meetings	6	2	0	8
Standpipe maintenance	2	2	3	7
Fee collection and use	8	6	0	14
Accounting	2	13	1	16
Water system management	1	0	0	1
Extension/animation	1	0	0	1
General hygiene	0	0	7	7

13. Activities and Role:

Oversee fee collection	0	12	1	13
Supervise standpipe use	2	5	6	13
Notify when repairs needed	2	1	2	5
Participate in meetings	5	4	1	10
Account for fees contributed	3	6	1	10
Replace other committee members	0	1	0	1
Supervise work of committee	6	0	0	6
Prepare reports	1	0	0	1
Keep water point clean	0	0	8	8
No response	0	0	1	1

<u>Questionnaire Item</u>	<u>President</u>	<u>Collector</u>	<u>Guardian</u>	<u>Total</u>
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14. Who supervises his/her work?

Bureau de la Regie	2	4	2	8
CARE	3	4	0	7
Local authorities	5	2	2	9
Fountain technician	5	7	4	16
User committee	1	5	8	14
Users	1	0	0	1

15. Supervisor reports to:

CARE	5	4	4	13
Local authorities	3	5	5	13
Users	0	0	2	2
Bureau de la Regie	1	3	0	4
Don't know	2	1	0	3
No response	0	1	0	1

16. Does user education:

Yes	10	11	9	30
No	0	1	1	2
No response	2	1	1	4

17. If yes, when and where?

At user meetings	10	6	4	20
At time of fee collection	0	4	1	5
During community service	0	0	1	1
At water point	0	0	2	2
No response	2	3	3	8

18. Advantages perceived by users:

Access to clean water	9	13	9	31
Less distance to water point	7	5	3	15
Health benefits	6	3	1	10
Specific diseases reduced	0	3	3	6
Reliability of water	1	0	0	1

<u>Questionnaire Item</u>	<u>President</u>	<u>Collector</u>	<u>Guardian</u>	<u>Total</u>
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19. Problems encountered:

Work not compensated	0	0	1	1
Some users walk long distance	1	2	0	3
Lack of facility for dishwashing	1	0	0	1
Some fee payers have no access	2	1	0	3
Fees too high	2	1	0	3
Difficulty collecting fees	1	1	0	2
Users reluctant to pay fees	3	4	1	8
Users do not understand need for fees	0	2	0	2
Women not represented at meetings	1	0	0	1
Users unreceptive to education	1	1	0	2
Users close to standpipe favored	1	0	0	1
Not available to attend meetings	0	1	0	1
Users damage fence enclosure	0	1	0	1
Lack a replacement when absent	0	0	1	1
Lack work materials	0	0	2	2
Children abuse standpipe	0	0	1	1

20. Changes desired:

Provide facility for dishwashing	1	0	0	1
Increase number of water points	6	7	2	15
Strengthen user education	3	4	1	7
Compensation for committee	1	2	2	5
Application of sanctions	0	3	1	4
Support of local authorities	0	2	0	2
Reduce number of meetings	0	1	0	1
Elect women and men equally	0	1	0	1
Add another spout	0	1	1	2
Provide a backup replacement	0	0	1	1
Provide gravel for maintenance	0	0	1	1
No response	1	1	2	4

21. Collaboration with local authorities:

Collaboration good	10	10	10	30
No collaboration or poor	2	2	0	4
With fountain technician	0	1	0	1
No response	0	0	1	1

<u>Questionnaire Item</u>	<u>President</u>	<u>Collector</u>	<u>Guardian</u>	<u>Total</u>
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22. Use work tools/supplies:

Yes	8	13	7	28
No	2	0	2	4
No response	2	0	2	4

23. Which tools/supplies:

Notebooks	5	5	1	11
Receipt book	0	7	0	7
Accounting book	0	5	0	5
Pens/pencil	5	9	1	15
Shovel	1	2	3	6
Hoe	1	2	3	6
Machete	1	2	5	8
Hose	1	1	0	2
Boots	0	1	0	1
Broom	0	0	4	4
No response	0	0	3	3



APPENDIX C
DISCUSSION GUIDE - USERS

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Appendix C

DISCUSSION GUIDE - USERS

(Identify the participants)
(Utility level)

Group A: Degree of Cooperation

1. Suggestions for improvement
2. Rules and standards for use
 - recognized
 - payment procedure
 - involvement in development
3. Cooperation among users and local authorities
4. Perception of CGDFP's role

Group B: Responses to Needs

1. Perceived advantages
2. Their expectations met/not met - Why?
3. Suggestions for improvement
4. Water supply system
 - before project
 - distance from watering place
 - responsible members of the family
5. Changes in time spent

Group C: Self-Management Capability

1. Sense of belonging
2. Suggestions for improvement
3. Acceptance of charge conditions
 - utility
4. Opinion on payment of Authority elected officials
 - perception of role
 - reason for elections



APPENDIX D

QUESTIONNAIRE FOR WATERING PLACE COMMITTEE MEMBERS



Appendix D

QUESTIONNAIRE FOR WATERING PLACE COMMITTEE MEMBERS

INTERVIEWER: _____ DATE: ____/____/____

COMMUNE: _____ NAME OF WATERING PLACE: _____

POSITION(S) OF THE WATERING PLACE COMMITTEE MEMBER ANSWERING THIS QUESTIONNAIRE:

MANAGER _____ GUARD _____ COLLECTOR _____ REPRESENTATIVE _____

WHAT IS HIS/HER NAME? _____

1. AGE _____ 2. SEX _____ 3. CIVIL STATUS _____

4. EDUCATION LEVEL _____

5. JOB/TRADE _____

6. WAS HE/SHE ELECTED? _____ APPOINTED? _____

7. BY WHOM? _____

8. FOR HOW LONG? _____

9. WAS HE/SHE TRAINED FOR CURRENT POSITION? _____

10. BY WHOM? _____ 11. LENGTH _____

12. TRAINING SUBJECTS _____

13. WHAT IS HIS/HER ROLE (ACTIVITIES, DUTIES, ETC.)? _____

14. WHO SUPERVISES HIS/HER WORK? _____

15. HE/SHE IS PARTICIPATING AT THE REQUEST OF WHOM? _____

16. HOW DOES HE/SHE PERCEIVE THE SELF-MANAGEMENT SYSTEM (EVALUATE MEETINGS, HIS/HER ACTIVITIES, THE DECISION MAKING PROCESS)

17. DOES HE/SHE PARTICIPATE IN AWARENESS ACTIVITIES?
YES _____ NO _____

18. IF SO, HOW? _____

19. [SIC] ACCORDING TO HIM/HER, WHAT ADVANTAGES DO PROJECT USERS PERCEIVE?

20. [SIC] WHAT PROBLEMS DOES HE/SHE ENCOUNTER? _____

21. WHAT IMPROVEMENTS WOULD HE/SHE LIKE TO SEE? _____

22. HIS/HER EVALUATION OF THE COOPERATION WITH LOCAL AUTHORITIES (DEPENDENCE/INDEPENDENCE)? _____

23. USES TOOLS IN HIS/HER WORK? YES _____ NO _____

24. IF SO, WHICH ONES? _____

APPENDIX E
WATER EVALUATION



Appendix E

WATER EVALUATION

Surveyed Water Points

Commune	Water Point	Group Discussion			Comite			Users	#Paid	Percent
		Women	Men	Total	Resp	Surv	VP			
Giti	Munini	4	8	12	M	F	M	189	124	66%
	Kabuga	3	4	7		M		64	49	77%
	Tanda	4	5	9	F	M	M	140	125	89%
	Gatare/ Kamatonga	4	9	13		M	F	83		
	Cyivugiza	10	20	30	M	M	M	?		
Total		25	46	71				476	298	76%
Muhura	Iteme Barage	3	5	8	M	M	M	81	43	53%
	Nyirambabzi	7	7	14		M		87	??	
	Cyahafi	3	7	10			F	86		24%
	Rugenge	10	18	28	M	M		94		60%
Total		23	37	60				348		
Murambi	Kiziguro/ Secteur	2	2	4	M	M		72	67	93%
	Byimana	6	4	10	M		M	180	29	16%
	Chez Ruzindena	1	3	4	M	M	F	103	24	23%
	Ku Ishanti	5	7	12	F	M	M	37	37	100%
	Kagwene	3	18	21	M	M	M	143		12%
	Gasekurume	7	9	16	M		M	30		47%
	Kabarinda	5	4	9	M	M	F	56		66%
	Akaraba	13	22	35	F		M	110		44%
Total		42	69	111				731	157	
Grand Total		90	152	242						



APPENDIX F
RESEARCH TOPICS - INSTITUTIONAL COMPONENT



Appendix F

RESEARCH TOPICS - INSTITUTIONAL COMPONENT

- Open-ended Questions -

MAYORS

1. Knowledge of the organization for managing structures.
2. Fee management: Are people able to pay? Is training necessary?
3. The Commune's role with respect to the role of self-management by the Authority (collection of money, role of the spring catchment specialist).
4. Expectations with respect to CARE, CCDFP, Authority Board, MINITRAPE.

SPRING CATCHMENT SPECIALISTS

1. Stability of self-management system.
2. Issue of spare parts.
3. His/her analysis of the situation with respect to the single fee: developed sources versus standpipes.
4. Training/mutual contribution between spring catchment specialists and CARE.

CCDFP

1. Their role in the self-management process.
2. Mutual contribution between CCDFP and CARE.
3. Who makes their assignments for communal personnel.
4. Community development activities.
5. Involvement in the fee collection process.
6. Training received and desired.
7. Capacity to complete the community development process.

AUTHORITY BOARD

1. Issues of fee payment.
2. Impression of playing an important role in project self-management.
3. Authority budget.

4. Prestige granted board members.
5. Accounting.
6. Wages and compensation for representatives.

APPENDIX G

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Appendix G

REFERENCES

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APPENDIX H
SCHEDULE OF ACTIVITIES



Appendix H

SCHEDULE OF ACTIVITIES

April 10-12

Travel to Arlington, VA. WASH orientation; USAID debriefing.

April 12-14

Travel to Rwanda; arrival of Jeannine Coreil and Jean Beaudoin. Informal orientation with Christof Scheiffele and Pamela Husain, CARE/Rwanda.

April 15

First team planning meeting at CARE Office, with Jeannine Coreil; Jean Beaudoin; Kate Burns, CARE Regional Technical Advisor for PHC; Pamela Hussein, CARE/Rwanda Project Coordinator; Nybakure Isabelle, CARE/Rwanda W&S Project Animation Coordinator; Luc Puyguiraud, Technical Advisor, Direction Generale de l'Eau; Nsengimana Gaspard, Chef de Division Entretien-Exploitation, MINITRAPE; Muhawenimana Chantal, Rwandan sociologist.

Luncheon reception at Scheiffele residence: TPM participants and Barbara Howard, USAID/Rwanda Program Director; Jacques DeCuyper, CARE/R Forestry Project Director.

April 16

Planning meeting, Jeannine Coreil and Jean Beaudoin.

April 17

Second team planning meeting at CARE Office with Jeannine Coreil, Jean Beaudoin, Nybakure Isabelle, Pamela Husain, Kate Burns, Muhawenimana Chantal, and Nduziye Simon, Secretaire d'Administration, MINITRAPE.

April 18

A.M.

Team visit to Giti Commune to meet the Bourgmestre, arrange for interviews with Le Bureau de la Regie Associative, the CCDFP, selected Comites des Points d'Eau and user focus groups. Bourgmestre M. Sebushomba Edouard and local Volontaire Francais Bruno Deseze, who works with the water system, took the group to observe and ask questions about two water lines, one under construction, the other in full operation.

P.M.

Team work in two groups: Jean Beaudoin and Ndutiye Simon on strategy, interview guide, and activity schedule for institutional component of evaluation; Jeannine Coreil, Kate Burns, Pamela Husain, and Muhawenimana Chantal on sample selection of water points, activity schedule, and interview guide for community and user component of evaluation.

Group process problem-solving meetings with Jeannine Coreil, Jean Beaudoin, Kate Burns, and Pamela Husain.

April 19

Team visit to Murambi Commune to meet with the bourgmestre, CCDFP Director (Nikuze Afisla), fountain technician (Gasawa Celestine), and a member of the Bureau de la Regie Associative (Nutikiri Nathias, treasurer), to arrange for field data collection, interviews with administrators, sample selection and invitations for group interviews, and individual interviews with user association representatives.

Meeting with Jean Beaudoin and Nybakure Isabelle on project update and current activities.

April 20

Team meeting to develop interview guides for bourgmestres, CCDFP, members of the Bureau de la Regie Associative, and fountain technicians; discussion guide for group interviews with users; and questionnaire for user association representatives.

Interview with Luc Puyguiraud from Project BCEOM, the World Bank.

April 21

Pretest data collection instruments in Giti: 2 focus groups, interviews with 5 committee members; interviews with communal authorities and employees (bourgmestre, Bureau de la Regie Associative, fountain technician, CCDFP).

Revision of data collection instruments.

April 22

Two field interview teams collect data in Giti: 3 group interviews with users; interviews with 9 water user association representatives.

Jean Beaudoin works with Nybakure Isabelle and Ndutye Simon on institutional aspects of project, schedule of interviews with officials, and data analysis from Giti.

April 24

Three field teams collect data in Muhura: 4 group interviews with users; interviews with 7 water point committee members; interviews with communal authorities and employees.

April 25

Three field teams collect data in Murambi: 4 group interviews with users; interviews with 10 user association representatives; interviews with fountain technician, members of the Bureau de la Regie Associative, and CCDFP; interview with Bihibindi Andre, project extension assistant.

April 26

Completion of data collection in Murambi: 4 group interviews with users; interviews with 10 water point committee users; interview with bourgmestre.

April 27

Transcription, coding, and tabulation of interview data.

April 28

Evaluation team meeting to discuss participatory and field methodology, preliminary findings, observations, and recommendations. Completion of data transcription and tabulation.

April 29

Review and analysis of data. Interview with Nybakure Isabelle.

May 1

Data analysis and interpretation. Meeting between Jeannine Coreil and Jean Beaudoin.

May 2

Interview with Kagame Desire, Chef de service charge de l'hydraulique rurale, Prefecture de Byumba. Report preparation. Translation of report summary into French.

May 3

Interview with Nirere Beatrice, sous-préfet chargé des affaires politiques, Prefecture de Byumba; telephone interview with Mukandekezi Verene, directrice de l'hydraulique rurale, MINITRAPE (she was on holiday).

Debriefing with Pamela Husain, acting project manager, CARE.

May 4

Polishing of report. Discussion of findings with Nybakure Isabelle and Muhawenimana Chantal.

May 5

Debriefing with Barbara Howard, Program Director, and Joan LaRosa, Health Officer, USAID/Rwanda. Travel.

