

CARE International in Rwanda
Byumba Water Supply Project

824 RW92

PROJECT IMPLEMENTATION AND MONITORING REPORT

FY 92 Second Half: January - June 1992

Prepared by Susanne Niedrum - Submitted by Steve Wallace

1. INTRODUCTION

The Project began in 1985 with a first phase of five years (1985-90). The second five-year phase is now being implemented over the period 1990-95. The Project aims to reduce the incidence of water and excreta related diseases within the rural population in the communes of Muhura, Murambi, Giti and Rutare in the prefecture of Byumba. This aim is to be carried out through hygiene education and participative construction of potable water supply systems subsequently maintained by elected Water Associations in each commune on a self-financing basis.

Originally the Project was working only in the communes of Giti, Muhura and Murambi. It has now agreed to help establish a Water Association and to carry out hygiene education in the neighbouring commune of Rutare. Construction of water systems in Rutare is carried out by AFVP (Association Française des Volontaires pour le Progrès). In return for this, AFVP have extended their technical training component to also cover the communes of Muhura, Murambi and Giti. The main objective of this component is to provide continuous training of site foremen, fontainiers (technicians employed by the Water Association, responsible for maintenance of the water supply system), members of the Water Associations and pompistes (watchmen employed by the Water Association to run the pumping stations) in the project area.

Phase 2 is currently funded by: CARE Austria in collaboration with the Austrian Government; CARE USA; and the IBM Corporation. Additional funding from CARE Britain in collaboration with ODA has just been confirmed and funding from CARE Deutschland in collaboration with the German Government is being negotiated.

The Project works closely with: the Ministry of Public Works and Energy; the Administration, Water Associations and population of the Communes concerned; and AFVP.

During the last six months the structure of the project has evolved considerably. Four separate components have been defined, each directed by an assistant project manager:

- hygiene education
- community participation
- construction
- technical training

Seven new staff members have been employed, bringing the total number of permanent staff to 12. The new staff include the assistant project manager for hygiene education and three animators, two animators for the community management component and an assistant project manager for construction.

The hygiene education component started up in January and a preliminary study of the communes has been carried out. On the construction side, work continues with construction of extensions to existing systems and studies and designs of two new systems. The community management component continues to support the

existing Water Associations and has begun the programme of setting up the new Water Association for Rutare.

The delay in receiving funds which hampered progress in the previous six months has now been remedied. The major problems during these last six months have been caused by a weakening of the administrative structures during the current transition to multiparty democracy. There has been decreased community participation in construction and in maintenance of hygiene at water points. Collection of water fees by the Water Associations have reduced dramatically. The increased war effort by the rebels in the north is again beginning to affect the project.

2. PROGRESS TOWARD ACHIEVEMENT OF PROJECT GOALS

2.1 Intermediate Goal 1 - Water consumption

The average quantity of potable water consumed by 70,400 people is increased from 10 to 20 litres/person/day with the maximum distance to the nearest reliable water source reduced to 500 metres for 28,000 of these people by the end of the project period.

Achievement of this Intermediate Goal depends on the construction of new systems, their handover to the population and on the success of the hygiene education component.

Two additional water points serving about 250 families have been constructed on a 2 km extension of System 4 and handed over to the Giti Water Association in June. Another extension to System 4 (4 water points over 4.5km) and one each on Systems 1 (3 water points over 4.2 km) and 2 (2 water points over 1.7 km) are under construction and will be handed over to the water authorities in October, July and December respectively. The completed extension has led to an increase of about 1250 people living within 500 metres of a water source. The extensions under construction will lead to an increase of about 3400 people living within 500 metres of a water source. Major increases will, however, only be achieved with the construction of the two large gravity Systems (5 and 9) in the next two years (19,000 beneficiaries estimated).

All the major systems constructed in the first phase, except the pumped system have now been handed over to the Water Associations. Extensions to these systems are handed over directly as construction finishes.

It is estimated that System 5 will comprise 47 water points serving a population of about 17,000 in the commune of Muhura (and a small part of Murambi). The topographical survey has been carried out and the preliminary design has been submitted to the Ministry of Public Works for approval. Construction for this system has already started with the capping of the spring and the digging of 5 km of trench by the population. An order has been placed for the main pipeline.

System 9 is estimated to have 30 water points serving a population of 11,000. The topographical survey has been carried out and the preliminary design is scheduled to begin in July.

The inventory of springs in the three communes of Muhura, Murambi and Giti has been finalised and the preliminary maps showing the level of service have been completed.

The project has played an advisory role to the Direction Hydraulique (DH) of the Ministry of Public Works in the preparation of a Rwandan Design Manual for Gravity Water Supply Systems. This manual is now almost finished and should be

finalised in October 1992. Work has also just begun on the preparation of similar manuals for latrines and spring protection. The project has also recently been asked by the DH to join committees for the development of national policies on rural water supply, sanitation and latrines.

During this semester, a third phase was identified extending the project area to the communes of Gituza, Ngarama and Bwisige to the North of the present project area. The communes in question had made repeated requests to CARE for a water project and Danida (through CARE Denmark) have shown an interest in providing the funding. A concept paper has been written accompanied by terms of reference for preparing the water supply development plans for the communes (including budget). A CARE Denmark project appraisal mission is scheduled to visit the new project area towards the end of the calendar year to write the project proposal for submission to Danida.

This semester also saw the start of the technical training component in January. The main objectives of this component are the following:

- Provide continuous technical training to site foremen (4 no.), fontainiers (8 no.) and members of the Water Associations (15 no.) in the project area, involving the following steps:
 - . assess the training needs of each person
 - . identify the existing training facilities in Rwanda
 - . define a training programme
 - . develop/select pedagogical methods and materials, identify trainers
 - . carry out training, follow-up and evaluation
- Review standard system designs with a view to minimizing operation and maintenance problems.
- Eventually produce a replicable technical training package containing:
 - . a training syllabus for each type of personnel
 - . educational materials/literature for use in training
 - . simple technical notes for use by field personnel in their every day work
- Develop a training programme for project staff
 - . evaluate training needs
 - . evaluate possibilities for training/visits to other projects in Rwanda and elsewhere

Training programmes have now been defined, contact has been made with the major training institutions in Rwanda and a counterpart has been identified within the DH of the Ministry of Public Works.

2.2 Intermediate Goal 2 - Personal and household hygiene

Personal and household practices associated with water use and excreta disposal are improved amongst 70,400 people by the end of the project.

The target group of the health education component will be the families served or to be served by a potable water supply. In January and February, preliminary meetings were held in each commune with the objective of presenting the component, exchanging points of view, discussing the content, deeply involving the community, trying to impart a sense of responsibility and developing a strategy. Present at the meetings were representatives from the commune administration, the health centres, the Water Associations, the schools, the adult education centres (CCDFP) and other organisations working in the area. A

document presenting the discussions held and the conclusions reached was produced and presented to all the participants in March.

In May and June three animators were recruited. Two will be responsible for supervising the hygiene education of the population in general and one for supporting the local institutions who currently carry out some form of hygiene education. In May the methodology and questionnaire for the KAP study was completed. This will act as a baseline for designing the programme and for future evaluations. The actual survey will be carried out in August and the results should be available in December.

In June a preliminary study of the communes was started by the animators with the following objectives:

- making contact with the local authorities, institutions and the population
- becoming familiar with the different authorities and with the population
- identifying and evaluating the existing hygiene education activities undertaken by local institutions
- collecting any necessary basic information relevant to the KAP survey
- collecting and summarising data on water related diseases in the area

The main behaviours to be addressed by the hygiene education component will be:

- the use of a sufficient quantity of water
- transport and storage of water
- hand washing
- use and maintenance of latrines

2.3 Intermediate Goal 3 - Community management

CCG's forgotten

Elected Water Point Committees and Water Associations are properly managing water systems and points, and collecting sufficient user fees for this purpose at the end of the Project.

The Water Association of Giti continues to function autonomously both in terms of management and maintenance of the water supply systems. The projet continues to offer support and training.

In Muhura and Murambi, the situation is very different with both Water Associations failing to maintain receipts from water fees at a level higher than expenditure. Despite the low water fee collection rates, they are still, however, able to maintain their water supply systems using surplus receipts from previous years.

The preliminary study for the creation of the Water Association in Rutare has been carried out and a plan of action has been developed. It is envisaged that the Water Association will be autonomous by the beginning of 1995.

The project has assisted in setting up Community Management Committees in each commune which meet every trimester. The aim of these meetings is to coordinate the activities of the different organisations intervening in the water supply sector in the communes (projects, commune administration, water authorities and representatives of the population).

The user lists for all the water points in the three communes of Muhura, Murambi and Giti have in this semester been brought up to date. The budgets of all three Water Associations have been developed and approved. Trials on the design of accounting documents for water sellers of the pumped system continue.

An evaluation of the training needs of the members of the Water Associations has been carried out and a training programme covering the period until the end of 1993 developed. Training covers accounting, conducting meetings, filing, administration, budgeting, preparation of cost estimates and stock control and is carried out by animators of the CCDFP and the Project.

As a method of encouraging the water committees in their (unpaid) work the Project decided to organise a water point competition (with significant prizes) in each commune. The competition covers hygiene, maintenance, registration of users and payment of fees. The first competition took place in Muhura and proved successful. The Water Association of Muhura found the competition to be cost effective and decided to continue with trimestrial competitions based on continual assessment. Competitions will be held in the other communes in the near future.

The Project has assisted in the preparation and production of a Community Management Guide (in French and Kinyarwanda) which deals with community participation and setting up of Water Point Committees and Water Associations. It has participated in the scripting and production of radio plays underlining the importance of community participation in water supply. Model accounting documents have been developed by the Project for use on the national scale.

For the new gravity Systems (S5 and S9) and for extensions to existing systems meetings were held with the population of each sector concerned to discuss their felt need for potable water points, their willingness to participate in construction, the location of the water points, to make preliminary lists of users and to begin elections of water committee members.

3. PROBLEMS, CONSTRAINTS AND SOLUTIONS

The commune authorities (Bourgmestre, Commune Council etc.) have an important role to play both in supporting the Water Associations and in the construction of new systems. The Bourgmestres, however, were all appointed under the one-party system and have consequently lost much of their authority during the transition period. Due to non-payment of local taxes and wages of commune personnel the Communes have difficulties in providing the transport and local materials for new systems. The Project is thus beginning to work more directly with the Commune Council, which is an elected body.

Increased rebel activity in the North of the country (including a major attack on Byumba town) has begun once again to hamper project progress since May. Bombings have led to large internal displacement with people fleeing South to the project communes in addition to the 3000 Burundi refugees already in Muhura. Violence, armed robbery and pillage by marauding groups of uniformed and armed men continue in the project communes and people are very frightened, not daring to sleep in their houses in some areas. It is unclear whether these uniformed men are deserters from the Rwandan army or terrorists taking advantage of the situation and the large number of weapons and uniforms which are in free circulation.

Terrorist activity, crime and civil unrest have also intensified in Kigali with incidences of car bombings, land mines and armed robbery. The randomness of the attacks and the uncertainty as to who is responsible contribute to an atmosphere of growing anxiety in the country.

An epidemic of bacillary dysentery (shigellosis) has just broken out in Muhura and Murambi and CARE is looking into ways of offering assistance.

The imminent arrival of multi-party politics, the war and the civil unrest all combine to draw the concentration of the population away from project activities.

Participation at meetings has been low. This is thought to be due to the fact that invitations have not been well distributed and that those distributed have not specified the subject of the meeting. In the current political climate local leaders have also lost much of their power to command an audience. New strategies are under discussion and include the use of videos for awareness raising and radio broadcasts for announcing meetings.

Water fee collection by the Water Associations has reached an all-time low and is especially difficult in areas where the new water systems do not reduce the distance travelled. The Water Associations themselves blame the political and war situation. The Project has however carried out a questionnaire survey on willingness and ability to pay which is currently being analysed. Meanwhile, meetings have been held in every Sector to discuss the importance of water fee payment as well as the accounts for the last year and the forecasts for the new year. These meetings also suffered from low participation. Solutions to this problem are currently being discussed at all levels and will be aided by the results of the survey. One solution currently being exploited is to involve local opinion leaders (such as leaders of political and socio-economic groups, teachers and other important people) in the awareness raising programme. Meetings have been held with these people and the results are awaited.

There are often problems with misappropriation of water fees by collectors, but during the course of repeated awareness raising and punitive action by the Water Authorities this is being reduced.

Due to the political upheavals, the system of communal labour "Umuganda" has collapsed and therefore the population's contribution to new systems is far more difficult to organize. The strategy of the project in response to this problem has been to work with the population directly benefitting from a particular system to organize their labour contribution. This solution, although being more time consuming may, in the long-term, prove more effective than the former reliance on the authority of the Bourgmestres.

Since its installation in 1991, there have been many technical problems and repeated breakdowns of the motor and the pump of System 3. These breakdowns continue to result in long periods without water as there exists in Rwanda no maintenance infrastructure. Skilled mechanics and spare parts are extremely difficult if not impossible to find. Another major problem with the pumped system is that the price of diesel has risen to the extent that the cost of operating the system is now beyond the means of most of the population. The design of the distribution system was such that a large percentage of the water pumped up to the hill top flows by gravity to water points **below** the pump station. These water points are currently unused as the population at this low level are not prepared to pay the high cost of pumped water.

The current project manager feels that a pumped water supply is not yet appropriate for village level operation and maintenance. As there are high level springs nearby with a large flow, a solution could be to supply the flanks of the hill with a gravity system, using the existing water points. Without pumping, however, it would be impossible to supply the hill tops and people would have to descend (although the descent would be considerably less). Solutions to this problem are currently being discussed with the Water Association and Commune of Muhura. The problem is a difficult one.

Progress of the technical training component has been hampered by difficulties in communication over the large project area and with the training centres. In

response to the war situation, the French volunteer has been relocated to Kigali several times by the French Embassy, making it impossible to continue effective work.

4. MAJOR FOCI FOR THE NEXT PERIOD

With the arrival of the new project manager, a slight change in direction of the project is envisaged and will be discussed at all levels at the beginning of the next semester. Firstly, as the project is now well established, well known and well trusted in the project communes it is hoped that it will be easier to take a more community-led approach. It is felt that this approach of responding more to the felt needs of the population may help to solve the problems of lack of motivation in construction, operation and maintenance of water supply systems. Secondly, and also as a result of being more population-led, the project will aim to proceed at a slower, more manageable pace. Thirdly the technologies used will be as "low" and appropriate as possible. Thus the project will concentrate on capping all springs before adding any new gravity systems. Only when all the springs are capped and the Water Point Committees and Water Associations have proven themselves capable of managing their existing assets will new gravity systems be discussed with the population. No pumped systems are envisaged.

The major foci for the next period are the following:

- KAP survey
- Launching of the hygiene education component
- Construction of System 5
- Completion of all extensions to existing Systems
- Preparation of study for System 9 and submission to the Ministry of Public Works for approval
- Capping of the spring for gravity supply to the water points of S3
- Analysis of study underlying reasons for weakness of the Water Associations in Muhura and Murambi communes. Discussion of appropriate corrective action with all concerned.
- X - Move of project office to Muhura
- X - Design of latrine component
- X - Design of new and more hygienic water point technology
- Preparation of water supply development plans outlining priority areas for intervention together with the communes (based on updated level of service maps and analysis of the spring data).
- *starting spring capping*

CARE International in Rwanda

Byumba Water Project

PROJECT IMPLEMENTATION AND MONITORING REPORT

FY 93 First Half: July - December 1993

Prepared by Susanne Niedrum - Submitted by Steve Wallace

1. INTRODUCTION

The Project began in 1985 with a first phase of five years (1985-90). The second five-year phase is now being implemented over the period 1990-95. The Objective of the Project is to permanently improve the quality of life of the rural population in the communes of Muhura, Murambi, Giti and Rutare in the prefecture of Byumba by a reduction in the incidence of water and excreta related diseases and by a reduction in the time and energy spent walking to fetch water. The Objective is to be reached through hygiene education and participative construction of potable water supply systems subsequently maintained by elected Water Associations in each commune on a self-financing basis.

Phase 2 is funded by: CARE Austria / Austrian Government; CARE USA; CARE Britain / ODA and the IBM Corporation. Funding from CARE Deutschland in collaboration with the German Government is presently being negotiated to finance the construction of system 9 in Giti. This funding is urgently needed as construction work is soon to begin.

The Project works closely with: the Ministry of Public Works and Energy (MINITRAPE) which is the Project's primary counterpart; the Ministry of Health (MINISANTE); the Ministry of Education (MINIPRISEC); the local Administrations, Water Associations and population of the Communes concerned; and the French Association of Volunteers for Progress (AFVP).

The Project has four components, each directed by an assistant project manager and with the following staff:

- hygiene education (3 extensionists)
- community participation (2 extensionists)
- technical training
- construction (2 site managers, 2 stockmen, 100-200 construction workers)

The Hygiene Education Component has finished its orientation phase and is currently finalising its plan of action. The latter has been delayed due to the dysentery epidemic in the Project area. Construction of extensions to existing systems has been completed and three new systems are under construction. The Community Management Component continues to support the existing Water Associations and to set up the new Water Association for Rutare. The Technical Training component is fully under way with training of communal water technicians, site managers and water association staff being carried out on a regular basis. The Project Manager is now living in the Project area.

During the first half of this year, in order to better achieve its objective, the Project expanded considerably adding two new components and 10 new staff. The second half of the year has therefore been a time of consolidation and establishment of the new project identity. There is an excellent team spirit and

everyone is very motivated. Now that new staff have found their feet, an accent is being placed on staff development at all levels. The assistant project managers are being encouraged to take responsibility for the management of their components and develop project management skills.

In December, a meeting of the Project Coordination Committee was held, uniting representatives from the concerned ministries, the local administrations and the Project staff. The purpose of this meeting was to bring all parties up to date with Project progress and to discuss the problems of non-payment of water fees and the inability of the commune administrations to supply local materials for construction. The meeting was very much appreciated and all parties agreed that it should continue to be held semestrially. It was agreed that a national workshop should be held as soon as possible to work on the water fee problem, but that in the short term nothing could be done to alleviate the financial crisis of the commune authorities.

The problems during these last six months continue to be the non-payment of water fees and decreased community participation in construction, in meetings and in water point committees. A new problem this semester is that due to lack of tax revenue the commune authorities have not been able to supply or transport local materials as agreed in the Protocol Agreement. The war in the north has calmed down and is not really affecting the Project at the moment.

Funding for a new water project for the communes of Gituza, Ngarama and Bwisige to the North of the present project area is still under consideration by Danida, through CARE Denmark. An 8 month feasibility study is scheduled to be carried out by the Project starting in February. This study would be managed by an expatriate consultant familiar with the Rwandan water situation and staffed by Rwandans. Based on the results of this study a CARE Denmark/Danida project appraisal mission will visit the new project area to write the project proposal for submission to Danida.

2. PROGRESS TOWARD ACHIEVEMENT OF PROJECT GOALS

2.1 Intermediate Goal 1 - Construction

To bring potable water closer to its consumers or more specifically to reduce to 500 meters the maximum distance to the nearest reliable water source for 28,000 people by the end of the project period.

Progress towards achieving this goal is proceeding as planned, with the majority of water points coming into service in 1995.

In this semester all the extensions to the existing systems have been completed and handed over to the water authorities. Nine additional water points have been constructed since July 1992, bringing 600 families (3400 people) within 500m of their water source. 4 water points were added to System 4 over an extension of 4.5 km, 3 water points were added to System 1 over 4.2 km and 2 water points were added to System 2 over 1.7 km.

The preliminary design for System 5 was approved by the Ministry of Public Works after their comments had been incorporated. The system will comprise 46 water points serving a population of about 17,000 (3770 families), a health center, a tannery and a veterinary dispensary in the communes of Muhura and Murambi. The population continue to dig the pipe trenches and have now completed 19km out of the total 65km. The pipes ordered from Europe arrived and 6.5km have been laid, 2 reservoirs constructed (out of a total of 6).

A major problem for construction of this system has been that the commune authorities, as a result of the non-payment of taxes, became unable to provide local materials or transport them as agreed in the Protocol Accord. A temporary solution has been found in which the Project agreed to assure the transport of the materials (80% of the commune contribution) until June 1993, when the situation will be reviewed. Construction progress has also slowed down due to a reticence of the population to participate.

System 9 is estimated to have 32 water points serving a population of 11,000 (2000 families). The System will be supplied by 3 springs linked to a common collection chamber. The preliminary design document for submission to the Ministry of Public Works is scheduled to be finished and submitted in March 1993. Meanwhile, the springs have been capped and construction of the water points for the users of the springs is underway. The Protocol Accord between the communes, the population, the Water Associations and CARE has been prepared and submitted to the relevant parties for signature. Some difficulties are however anticipated bearing in mind the current poverty of the communes and the fact that the springs are some 14km distant from the benefiting population.

Design of another system (System 10) is underway. This system aims to supply some yet unserved parts of Muhura as well as much as possible of the population currently served by the pumped system (System 3) which has never functioned correctly and is far too expensive in running costs for the population to pay. The spring for this system has already been protected and harnessed and the topographical study is due to begin in February. If the System is successful in supplying the majority of the System 3 population, it is envisaged that the pump system will be dismantled. In this case, the large spring supplying System 3 could possibly be used to supply another system for a part of Murambi with an urgent need for water. If the topographical study shows that the population of System 3 really cannot be served by System 10, then a feasibility study will be done on the sustainability of an electrical pump system using the electricity line which may possibly be installed to Muhura. This study will cover ability and willingness to pay for pumped water and maintenance possibilities.

In keeping with the new Project philosophy of exhausting all the simplest solutions for water supply before seeking more complicated ones, the Project has this semester set about to help the water associations to ensure that all springs having a flow of over 0.2 l/s or serving more than 10 families are protected. Using the spring inventory, the community water technician of each commune supplied a list of the relevant springs. Agreements were thus signed last trimester between CARE and each water authority to the effect that CARE would supply the non-local material (cement) and any necessary technical advice, and the water authority would organise the population to elect the water point committee, supply the local materials and to provide the labour for construction. The communal water technician is in charge of the work and only when the population has upheld its part of the bargain does CARE deliver the cement.

As a reminder, the Project, in its first phase, constructed 98 water points serving a total of 7186 households (approximately 36,000 people). The extensions to these phase one systems, finished this semester, provided another 11 water points serving another 823 households (approx. 4,200 people). The following table gives a summary of the current level of service in the Project area.

	Muhura	Murambi	Giti	Total
Area (km ²)	117	292	115	525
Population (1991)	46,956	85,807	45,271	178,034
Pop. density/km	401	294	390	339
Protected springs	10.8%	16.3%	44.3%	21.9%
CARE water points	22.3%	37.7%	25.1%	30.5%
Other water pts.	10.8%	-	2%	3.4%
Level of coverage	43.9%	54.0%	71.4%	55.8%

The Water Development Plans (WDP) for the communes of Muhura and Murambi are being prepared and should be finished in May 1993 (that for Giti has already been finished). The first chapter of the WDP provides a general picture of the commune. The second chapter details the existing situation of water supply and its management - inventory of springs and water points, level of coverage and maps and the management structures. The third chapter details the water supply needs of the commune and priorities (based on the 500m radius criterion), preliminary designs of the possible solutions, their capital and maintenance costs and management needs. Possible donors are also indicated. Once they are fully independent/ autonomous, these documents will be used by the water associations to plan future water supplies.

Publication of the Design Manuals for Gravity Water Supply Systems and Latrines is still awaited. Work continues on the preparation of the Spring Protection Manual and the Water Development Plan Manual. The Project continues to contribute to the development of national policies on rural water supply and sanitation and to collaborate with other NGOs and operators in the field of rural water supply.

Construction of the new Project Headquarters (offices and stock) in Muhura began in November and is scheduled to finish in March. The building, using almost entirely local materials will be integrated with the existing building of the CARE Muhura Agroforestry Project. The two projects will share all administrative functions.

2.2 Intermediate Goal 2 - Hygiene Education

To improve the knowledge, attitudes and practices (of the population benefitting from a potable water supply) regarding hygiene and its relation to disease

Progress towards this objective has been slower than planned due to the dysentery epidemic and due to the fact that the Assistant Project Manager has suffered recurring fatigue and has not been able to work at full speed. The staff of the component and the personnel of local institutions have received training from CARE in how to conduct a KAP survey, in how to conduct FGDs, in training of trainers and in the functioning of a gravity water system. Training is also planned to be given by the Regional Health Authority in January on the relevant medical aspects of dysentery. It is envisaged that the Regional Health Authority and CARE will continue reciprocal training.

Efforts during the first half of the semester were concentrated on the Preliminary Study (*étude du milieu*) of the communes. The extensionists are now familiar with the local authorities, institutions and population. They have

between them visited all the water points. Existing hygiene education activities undertaken by local institutions have been identified and evaluated. Information has been collected from health centres regarding water related diseases in the area. The report is currently being finalised.

In August, an epidemic of dysentery broke out in the Project area. The precise cause of the epidemic is unknown but it is obviously linked to absence of hygiene and the use of polluted water. Efforts were therefore concentrated on dealing with this epidemic. In conjunction with the regional health authority, the local administrations and local health centres, household visits and follow-up visits were made and meetings held by the 2 extensionists to explain emergency hygiene measures and the importance of going to the medical center as soon as the first symptoms appear. Meetings were also held in each of the 60 sectors of the Project area for the population to elect 2 volunteer extensionists in each cellule. Hygiene committees were likewise elected in the 2 displaced camps in the Project area. The volunteers were elected from leaders in the cells who could read and write, who were already good examples of hygiene and were well accepted by the community. The meetings were in general a great success and people were keen to participate in most areas. This is encouraging. These volunteers will later form part of the Project education programme. Training and regular contact meetings will be held for these people by the Project in conjunction with MINISANTE.

In addition to preventative methods of coping with the epidemic and due to requests from the commune administrations and MINISANTE, CARE sought funding from CARE USA to buy the much needed antibiotics which the MINISANTE could not supply. These medicines were then distributed by CARE to the health centres. The Project is monitoring distribution.

The KAP survey was completed. One person was interviewed from each of 360 families well spread out amongst the target group of the component. 53% of those chosen were mothers, 24% fathers and 23% young people in order to get representative replies taking into account the subject. 8 temporary surveyors were recruited and much help was received from the Project Evaluation Department at CARE headquarters in design, execution and analysis of the survey.

The survey confirmed the homogeneity of the population, the majority being subsistence farmers with similar family structures and levels of education. 52% are illiterate. In general hygiene is deplorable. The water source of more than half those questioned is less than 30 minutes walk. Only 16% have to walk for more than an hour. 79% are happy using a quantity of between 2 and 8 litres of water per person per day. More than 90% had a latrine of sorts (at least a hole in the ground) although they were rarely well maintained or clean. The population do not have any felt need to improve their latrines. Malaria and worms are the most common water/excreta related diseases. 50% had received some hygiene education (health center, radio, school, water association) but knowledge on methods of preventing water/excreta related diseases was very low.

Focus group discussions (FGDs) were held with the staff of 16 representative schools in the Project area with the aim of gathering data on their and their students' knowledge, attitudes and practices regarding hygiene and water/excreta related diseases and also on the education given on this subject in the schools. It is envisaged that the schools will form an important part of the hygiene education programme as it is thought that at least 80% of children attend primary school. Most schools have a form of water supply although this is rarely adequate. Nearly all schools have latrines although their condition and number (an average of 1 for 100 children) are almost always deplorable. Hygiene of the children is controlled to a certain extent but this is difficult with such limited access to water and the poverty and ignorance of their parents. About half an hour of hygiene education is given per week to children age 7 to 9. None

is given to ages 11 to 12 or those at secondary level. The teachers had a fairly good knowledge of hygiene-related subjects and were keen to learn more and augment their teaching of the subject. The latter could however be difficult to implement as the national curriculum is very strict.

FGDs are also planned for January, to be held with groups of women, young people and men respectively to complement the KAP survey. Meetings will be held with the population to disseminate the results of all the studies.

A two day Planning Workshop was held in October bringing together CARE, the Ministry of Health, the Regional Health Authority and representatives of local institutions in the Project area (schools, health centres, local administration and adult education centres). A classification of water/excreta related diseases in relation to hygiene education was discussed, linking the relevant local diseases to their methods of transmission. The Workshop then went on to look at the behaviours to be changed and the messages to be given for each method of transmission, to identify the target groups, the transmitter of the message, the methodology, the educational materials and training required and some indicators. The results of this workshop will be prioritised and refined during the final design phase of the component in March.

Based on the results of the studies carried out on sanitation during the first year of the Hygiene Education Component, it was decided not to run a separate latrine component. The studies show that nearly all families have a latrine of some sort, that they are used but that they are usually badly maintained and very unhygienic. It was therefore decided to concentrate on education and training on how to construct and hygienically use a latrine to prevent transmission of excreta related disease. This will form part of the Hygiene Education Component. The Project is however currently considering the possibility of helping local institutions (schools, health centres, adult education centres etc) to construct appropriate latrines. This work would follow the same policy as construction of water systems (ie that the institution would have to present a written justification of its need for support and provide local materials and labour) and would be run by the construction component.

During the last semester investigations have been carried out to try to find a new and more hygienic water point technology. However, after comparison with various different designs it became obvious that the existing innovative CARE system was far superior to the others in all respects.

2.3 Intermediate Goal 3 - Community management

To sustain the benefits of water supplies by:

- a) Setting up and developing the capacity of elected Water Point Committees and Water Associations
- b) Help communities define their water supply needs and encourage/help them to participate in decision making and construction

Progress towards fulfilling this objective has been hindered more than the other components by the political turmoil in the country which occupies the minds of the population and is resulting in an erosion of law and order and a loss of administrative power.

The staff of this component have been trained on the job by the Assistant Project Manager in charge of this component who has been with the Project for over 4 years and is one of the leading figures in community management in the country. They also joined the workshop on training of trainers.

The formation of a water authority in Rutare continues to go according to plan. The report on the existing situation regarding management of water supply and the Action Plan for setting up the Water Association were presented to the leaders of the commune and a training session was then held. It is envisaged that the Water Association will be autonomous by the beginning of 1995.

The Water Association of Giti continues to function autonomously both in terms of management and maintenance of the water supply systems. The Project continues to offer support and training. In Muhura, the Water Association still requires much support from the Project and in Murambi it depends almost entirely on the presence of the Project extensionist. The water associations have this semester been affiliated to the national social security system, which means that their staff (the water technicians) can benefit from the national system.

Once autonomous, it is the task of the water associations to continue to sensibilise the population regarding the national policy of self management of water supply by the population. During this difficult political period however, the Project is heavily supporting the association in this work. Participation of the population in meetings continues to be extremely low. Sensibilisation meetings with local opinion leaders have covered the history and functioning of the self-management system, the importance of water fees and methods to increase their payment. People do not however seem to be very interested.

The Project has helped the water associations with the redynamisation or re-election of faltering water point committees, which in Giti represent 7%, in Murambi 35% and in Muhura 50%. The water point competitions are proving very effective in motivating committee members. Monthly planning of the work of the water associations and the community water technicians remains an activity heavily supported by the Project.

Embezzlement of water fees by water point fee collectors continues to be a problem. 10% of the total fees collected in Giti have been embezzled, 24% in Muhura and 20% in Murambi. If social pressure does not work the water association submits the problem to the local administration. The penal process is however long and does not seem to be a priority for the administrations in these times of political strife. The Project has supported the water associations by discussing the problem with the offenders and with the commune administration. None of the money has yet been recovered.

The trimestrial verification of the accounts of the water associations is the job of the commune administration. However, the personnel elected to do this job have never done it despite training received from the Project. The Project has worked with the commune authorities and with the water associations and new people have been elected, but as yet, the Project continues to fulfil this function. Strategies for overcoming this problem will be discussed at the Project Planning Workshop in January. The budgets for each water association have been finalised and agreed.

Training of the Water Association committee members continues with a weekly session for each committee according to the training programme elaborated last semester. Training covers accounting, conducting meetings, filing, administration, budgeting, preparation of cost estimates and stock control and is carried out by animators of the CCDFP and the Project.

The trimestrial Community Management Committees in each commune have proved to be successful and popular. A protocol has been developed and agreed by all parties.

Following the success of the water point competition in Muhura last semester, competitions are currently being organised in Giti and Murambi. The competition covers hygiene, maintenance, registration of users and payment of fees and will be held trimestrially, based on continual assessment.

For the new gravity Systems (S5 and S9) and for extensions to existing systems meetings were held with the population of each sector concerned and the water association to discuss their felt need for potable water points, their willingness to participate in construction and later payment of water fees, the location of the water points, to make preliminary lists of users and to begin elections of water committee members.

The Project arranged a professional visit for the Water Association of Giti and its supporting actors (bourgmestre and his assistant for water, members of the adult education center) and the supporting actors for Rutare. Visits were made to other water associations and water point committees in the country to exchange ideas.

A study was scheduled to analyse the economic viability of system 3 but there were too many break downs of either the pump or the motor so that it could not be carried out. The water sellers decided that they were no longer prepared to hold their positions as water was rarely available and the Water Authority of Muhura decided that they were not prepared to accept hand over of the system.

Lack of water fee payment continues to be the biggest problem facing the Project, as can be seen by the table below which shows the percentage of fees collected.

Year	Giti	Muhura	Murambi
1989	-	75%	-
1990	83%	62%	12%
1991	78%	11%	0%
1992	50%	25%	13%

Both water authorities of Muhura and Murambi are still failing to maintain receipts from water fees at a level higher than expenditure. Maintenance of water supply systems is carried out using surplus receipts from previous years, but the bank balances are now almost at zero. The water authorities and the Project continue to sensibilise the population and local leaders to very little effect. The main reasons for non-payment continue to be the eroding of law and order (alias democracy) prevailing which means that no taxes are paid, the absence of any measures against offenders and the general mentality that water is free. The results of the 1990 ability on willingness to pay survey will be available in January but may be out of date as the survey was carried out before the war and before advent of multi-party democracy. A new survey will probably be carried out early next year. Meanwhile the Project plans to hold a national workshop in March where the problem will be debated in the hope of finding solutions. Participants will be recruited from the relevant ministries, prefecture and commune administrations, water associations, Project staff and other relevant actors. Results of this workshop are eagerly awaited countrywide.

The assistant project managers for community management and hygiene education participated in the production of radio sketches organised by the Ministry of Public Works to promote the Government policy of community management of water supply. The Project also contributed financially to this.

2.4 Intermediate Goal 4 - Technical Training

To increase the technical knowledge of the community water technicians and site managers

This component is well on target for achieving its objectives despite the time lost when the rebels took Byumba in June/July.

With the termination of its initial 6 month planning phase last semester, this semester saw the start of the training programme proper. For each training session, training materials were developed and produced which the students take away with them for reference in their daily work. Minutes are taken of each training session and each student is followed up individually in his commune within 2-3 weeks to make sure he has understood the session. The students requested that at the start of a new session, an exam, resulting in the presentation of some kind of certificate, be sat covering the last session. The sessions are conducted in Kinyarwanda by a trainer chosen for the particular subject for example the Prefecture Water Engineer or the Director of the Construction Component of the Project. Efforts were made by the Project and by MINITRAPE to find a suitable counterpart for this component, to help with the training and also to act as an information bank for MINITRAPE to facilitate replication in other areas of the country. Despite a severe staff shortage MINITRAPE was eventually able to find a counterpart but unfortunately he proved not have the necessary technical knowledge nor the available time for the Project.

For the 4 site managers and the 10 community water technicians, training covering basic knowledge was carried out together as one group. As abilities vary widely, however, it was decided to split the students into 2 groups for the remainder of the training. Three training sessions of 3 days each were held this semester. These covered basic knowledge (units of measurement, reading of plans and reading and use of maps), spring capping and planning/organisation of work. Each session involved a substantial part of practical work in the field.

Technical training of the 12 members of the water association boards was carried out separately for each water association. Two one-day training sessions were carried out in each commune covering how a gravity water supply system works and knowledge of materials in the stock.

After a year of getting to know and working in the communes, the Director of this component only now feels that he has their confidence, so that they feel free to discuss their real problems and needs.

A major problem for this component has been that due to the non-payment of taxes some communes have been obliged to stop paying their community water technicians. Only in some cases the water association is able to intervene in their payment.

3. PROBLEMS, CONSTRAINTS AND SOLUTIONS

As the Project works directly with the population, the disorder caused by the transition period to multi-party politics has had the effect of slowing down progress towards its objectives. The commune authorities have lost much of their authority and their financial situation is dire, due to the refusal of the population to pay taxes. Many commune personnel have been laid off and the adult education centres no longer function.

The fundamental reason behind the non-payment of water fees and decreased community participation in construction, in meetings and in water point committees is that the authorities are no longer able to exert pressure on the population. Until very recently, during one party rule, the Project worked through the Communes and used the system of forced communal labour (Umuganda). Attendance at meetings was compulsory. This gave an impression of participation, although in reality, real participation was rather limited. This reality is manifesting itself now that people are free to choose. Not only were people forced to participate, but they were not consulted for the decision to have water (and thus to pay for it later), in the choice of technology (hence the cost to them), and were not asked to take part in planning or organisation. Although the people obviously very much appreciate the new closer and potable water supply, they see it as a resource which has been provided for them by CARE/the Government/the Commune and is thus do not feel a sense of ownership towards it.

With the evolution of the political system, the Project is now working directly with the population and strategies are being sought to encourage participation at all levels of decision making. An evaluation survey of the Project will be carried out with the population, designed to find out their thoughts on the Project and how/if they would like to participate. The Project's extension approach will be examined and revamped. Unfortunately, at this stage in the Project, all the schemes to be constructed (and therefore the beneficiaries) have already been designated and construction has already started, such that true participation from the beginning will not be possible. A real community lead approach will be followed in the new Project for Gituza, Ngarama and Bwisige.

Rebel activity in the North of the country has significantly decreased this semester to the extent that the war is not directly affecting progress of the Project. Displaced people (and some Burundi refugees) are however still very much in evidence in the Project communes. Ethnic persecution, armed robbery, mass demonstrations and terrorist activities continue throughout the country, but have as yet not directly affected the Project or its staff.

4. MAJOR FOCI FOR THE NEXT PERIOD

A Project Planning workshop will be held in January. The aim of this workshop is to work on solutions to Project problems and to bring the Project Document up to date reflecting the expansion of the Project, setting down the new approach and providing the programme of work until the end of the Project in 1995. The new document will be available in March and will become the new reference document.

The major foci for the next period are the following:

- Project Planning Workshop in January
- Visit of hygiene education consultant in February/March to help finalise the Component design
- Workshop to try to solve water fee problem in February
- Move of project office to Muhura in March
- Preparation of study for Systems 9 and 10 and submission to the Ministry of Public Works for approval in March
- Questionnaire survey evaluation of the Project by the beneficiaries
- Launching of the hygiene education component in April
- Mid-term Project evaluation in May
- Continuing construction of Systems 5, 9 and 10