AMERICAN REFUGEE COMMITTEE

TETE PROVINCE

MOZAMBIQUE

FINAL EVALUATION REPORT

SEPTEMBER 1996

Partially funded by USAID/Mozambique under "PVO Support Project, 656-0217, grant #656-0217-G-00-5009-00, "Integrated Health, Water, and Sanitation Project in Tete Province"

Teju Alakija

Martin Taremba

A

ACKNOWLEDGEMENTS

The evaluation team would like to give their sincere thanks to everyone who contributed to the successful completion of this report. We would especially like to thank the following groups and individuals without whose support this assignment would not have been possible.

* The ARC Director and management team for their openness and for the many days they spent assisting us in gaining a full understanding of the programme.

* The ARC office staff in Tete for their support with logistics, transport and translations.

* The Secretarios, Presidents, community leaders, Activistas and other community members of the villages and bairros where ARC has had program activities, who gave so generously of their time and knowledge.

* The ARC field and support staff for the information shared and their assistance in locating the people in the villages we wish to interview.

* USAID, UNHCR, SV, PRM, and DANIDA for their support throughout the evaluation and their financial assistance to the programme.

* The government of Mozambique and the respective Ministries for their support and willingness to share information with us.

* The Survey Consultants for their excellent job of data entry and analysis for the fianl KAP survey.

* A special thanks to the ARC Evaluation Coordinator for her continued support throughout the evaluation process.

* The office staff at ZIM DEV for their logistical support, assistance with proof reading and secretarial services.

Teju Alakija, MPH
C/O Dept of Haematology
University of Zimbabwe
P.O. Box A178, Avondale
Harare, Zimbabawe

Martin Taremba
Zimbabwe Development
Consultancy
(Zim Dev) Ltd
P. O. Box 6490
Harare, Zimbabwe

CONTENTS

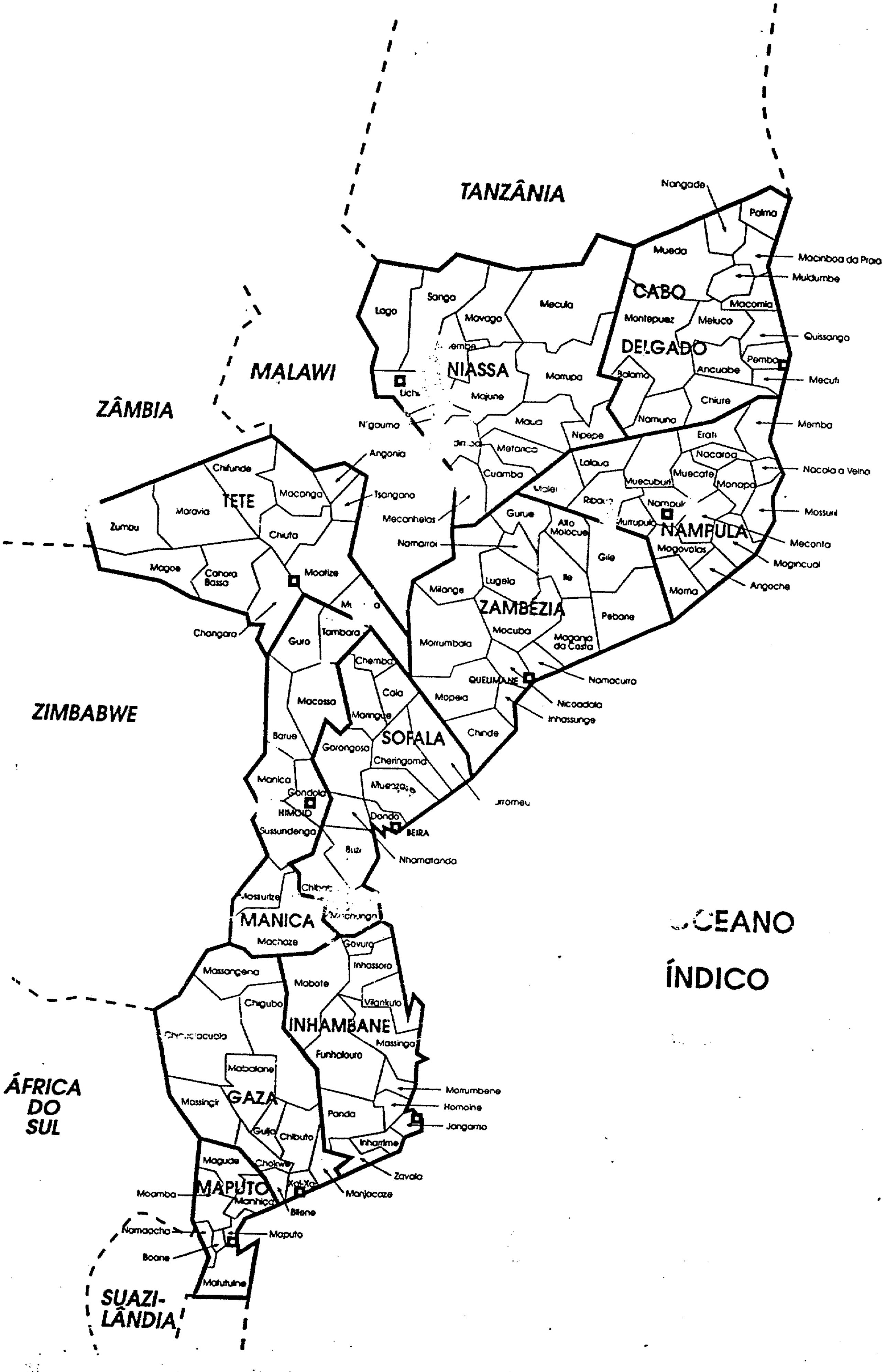
C

APPENDICES:

GLOSSARY OF TERMS

Activista	Unpaid health volunteer from community who provides health education and promotion of good health behaviours; but no curative care.
AC	Activista Coordinator; an ARC paid employee who trains and supervises Activistas
ARC	American Refugee Committee
Bairro	Portuguese term for Neighbourhood
CVM	Mozambique Red Cross
DANIDA	Danish International Development Agency
DPE	Direccao Provincial de Educacao Provincial Office of Education
DPOPH	Departmento Provincial de Obras Publicas e Habitacao Provincial Office for Public Works and Housing
DPS	Direccao Provincial de Saude Provincial Office of Health
ECMEP	Empresa da Construccao e Manutencao de Estradas e Pontes Industry of Construction and Maintenance for Roads and Bridges
EOPS	End of Project Status
GRM	Government of the Republic of Mozambique
HEC	Health Education Coordinator; oversees the Activista program
HELP team	Health Education and Latrine Promotion team
HH	Household
HPM	Health Program Manager; oversees all health program activities
KAP	Knowledge, attitudes and practices
NAR	Nucleo de Apoio aos Refugiados
NGO	Non Governmental Organisation
PHC	Primary health care
PRM	US State Dept. Bureau of Population, Refugees, and Migration
PTA	Parent Teacher Association
SA	Sanitation Assistant; ARC paid employee: member of HELP team. Provides health education and mobilises community
SC	Sanitation Coordinator; ARC paid employee: member of HELP team. Supervises the activities of the HELP team
SV	Stichting Vluchteling (a Dutch donor NGO)
TBA	Traditional Birth Attendant
UNHCR	United Nations High Commissioner for Refugees
USAID	Unites States Agency for International Development
VIP Latrines	Ventilation Improved Latrines
VLOM	Village Level Operation and Maintenance

LIST OF TABLES


TANZÂNIA
MALAWI
ZÂMBIA
ZIMBABWE
ÁFRICA DO SUL
SUAZI-LÂNDIA
ÍNDICO
NIASSA
CABO DELGADO
NAMPULA
TETE
ZAMBÉZIA
SOFALA
MANICA
INHAMBANE
GAZA
MAPUTO
Nangade
Palma
Mueda
Macinboa da Praia
Muidumbe
Macomia
Montepuez
Meluco
Quissanga
Pemba
Ancuabe
Mecufi
Chiure
Namuno
Memba
Erati
Nacaroa
Nacala a Velha
Muecate
Monapo
Mossuril
Meconta
Mogincual
Angoche
Moma
Mogovolas
Ribaue
Lalaua
Malema
Lago
Sanga
Mavago
Mecula
Marrupa
Majune
Maua
Nipepe
Metarica
Cuamba
N'gauma
Mecanhelas
Chifunde
Macanga
Angonia
Tsangano
Maravia
Zumbo
Chiuta
Magoe
Cahora Bassa
Moatize
Changara
Gurue
Alto Molocue
Namarroi
Gile
Ile
Lugela
Milange
Pebane
Mocuba
Maganja da Costa
Morrumbala
Namacurra
QUELIMANE
Nicoadala
Inhassunge
Mopeia
Chinde
Guro
Tambara
Chemba
Caia
Macossa
Maringue
Barue
Gorongosa
Cheringoma
Manica
Gondola
Muanza
Dondo
BEIRA
Nhamatanda
Sussundenga
Buzi
Machaze
Govuro
Inhassoro
Mabote
Vilankulo
Massangena
Chigubo
Funhalouro
Massinga
Mabalane
Massingir
Morrumbene
Homoine
Jangamo
Panda
Inharrime
Zavala
Guija
Chibuto
Chokwe
Magude
Manjacaze
Moamba
Manhiça
Bilene
Namaacha
Maputo
Boane
Matutuine

EXECUTIVE SUMMARY

In August 1996 a team of two consultants was hired to conduct an independent evaluation of the American Refugee Committee Programme in Tete Province, Mozambique. The programme started in 1993 and ran for a period of three years. The overall goal of the programme was to improve the health of approximately 140,000 residents, returnees and displaced persons in the target areas of Moatize, Changara, Chifunde and Mutarara districts of Tete Province. The objectives of the programme are:

1) 80% of households living within 750 m radius of an ARC water point get their drinking water from that protected source.

2) 20% increase in Primary Health Care (PHC) knowledge among adult target population.

3) 70% of households in target areas have and use family latrines.

4) 50% of births in target area are attended by a trained health worker.

5) ARC trainees show a 25-50% increase in knowledge for each training.

6) 33% of adults in target areas report practising appropriate health behaviours.

7) Provide health facilities in areas where sufficient population warrants cost.

8) Provide educational facilities in areas where sufficient population warrants cost.

The evaluation took place in August/September 96 and involved the following activities: 1) a review of documents, 2) interviews with ARC programme managers and staff, 3) field visits/inspections to ARC programme sites 4) a PHC knowledge, attitudes and practices (KAP) survey and 5) a water observation and utilization survey.

Main Findings of Surveys and Observations of Consultants

Water

* 93.8% of households surveyed living within 750 m of an ARC functioning water point collect their water from that protected source.

* Of those surveyed, 96% of respondents obtain their drinking water from the closest water source.

* 92% of aprons were clean and free of debris.

* 42% of pumps were fenced although animals were still able to get into 37.5% of those fenced.

* 44% of pumps had broken down since ARC completed the water points and in 91% of cases, someone in the community had been able to repair the pump.

* Water point committees have been trained and are capable of maintaining the pumps and of carrying out minor repairs in most cases provided they are able to collect money from the community to purchase the spare parts.

* Major repair work is beyond the capacity of the water point committees and unlikely to be undertaken by the Ministry of Water (DPOPH).

Construction

* Sites for construction of schools and health facilities were selected by the Ministries of Education (DPE) and Health (DPS) respectively. At the time of the evaluation all construction had been completed with the exception of Thequesse, Luia, Amose/Ngwenya and Marara which will be completed by October 96.

* Although not part of ARC's objectives, many of the schools and health facilities already completed by ARC have not yet been utilised.

* Maintenance of the schools and health facilities is now the responsibility of the Ministries who have confirmed that they do not currently have the capacity to carry this out.

Health Education and Hygiene Promotion/Activista Volunteer Programme

* The survey showed an increase in knowledge in the target population in the following topics since the baseline survey was conducted:

  Benefit of using pump water increased from 33% to 72%
  Benefit of using a latrine increased from 39% to 72%
  Knowledge of diarrhoea transmission increased from 38% to 65%
  Age at which baby should be weaned increased form 23% to 46%
  Malaria transmission increased from 14% to 30%

* The number of adults that reported practising appropriate health behaviours increased in the following areas:

Reported Behaviours	
Potable water	70%
Adults and children using a latrine	43%
Adults only using a latrine	75%
Correct treatment of diarrhoea	89%
Mosquito prevention	55%
AIDS prevention	95%

Observed Behaviours	
Correct water storage	59%
Clean latrine and lid in place	66%
Proper rubbish disposal	97%

* From a record review, an average of 76% latrine coverage was recorded in the villages where ARC had a sanitation programme.

* The survey revealed 66.1% latrine coverage with 14.8% of the respondents still constructing latrines at the time of the survey. When completed, this should bring the total coverage to 80.9%.

* The survey revealed that only 21% of those households with a latrine had water for handwashing within 5 m of the latrine.

* Only 12% of children between the age of 1 and 2 years ate a balanced diet the day before the survey.

* Increase in knowledge of ARC trainees ranged from 14-58% points depending on the training.

Summary of Achievement of Objectives

ARC achieved the majority of its objectives and outputs as stated in the end-of-project status indicators and outputs in the programme logframe.

Water
The objective addressing water has been achieved but it does not address the functionality or breakdown time of the water pumps. Out of the 20 pumps randomly selected for the survey, only one (5%) was not working. During the field visits by the consultants, 6/15 or 40% of the randomly selected pumps were not functioning. This figure excludes Kaphiridzanje where 6/11 or 55% of pumps were out of order.

PHC Knowledge
Greater than a 20% increase in knowledge was recorded for 5 out of 12 of the knowledge questions asked in the survey. Other questions such as when to wash hands, how to make leftover food safe and AIDS transmission were high in the baseline and so a 20% increase could not be expected.

Latrines
Records show that latrine coverage has reached 76% in all target villages. The survey revealed a coverage of 80.9% when latrines currently under construction are completed.

Appropriate Health Behaviours
More than 33% of adults reported practising or were observed practising appropriate health behaviours for 9 out of eleven of the behaviours examined in the survey.

Births attended by a Trained Health Worker
The objective of ensuring that 50% of births in target areas are attended by a trained health worker was not addressed as originally planned as only 10 TBAs were trained. However, the number of births assisted by a trained health worker increased from 45% in the baseline survey to 61.8% in the final survey. ARC adc essed this issue through the community health volunteer (Activista) programme although it is not possible to say to what extent this increase

is due to the work of the Activistas.

Schools and Health Facilities
Some of the schools and health facilities constructed by ARC are in use and the maintenance of these structures is now the responsibility of the Ministries. It is not certain whether these structures will be staffed and maintained by the Ministries.

Sustainability
Given the nature of the programme, (emergency/resettlement) and the limited time frame. the issue of sustainability was not fully addressed and many of the assumptions made in the logframe were not held.

RECOMMENDATIONS

* ARC Mozambique may have benefited from a more integrated programme. Health programme should establish stronger links with water and construction programmes. In particular water and health could have worked more closely on the training and follow up of the water point committees.

* Regular management meetings and joint management/inspection visits should be held to strengthen links between the programmes.

* Outside technical support should be sought earlier on in a programme from independent consultants or staff from other ARC country programmes.

* The programme should focus on one district with one local language or two contiguous districts with the same language.

* All programme activities (health, water and construction) should start at the same time in one village or location to ensure integration and to present the ARC programme as a package to the community.

* Managers should all be involved in the development of the logframe and have the opportunity to revise the objectives and outputs after the baseline survey has been conducted. Flexibility from the donors would be required for this.

* Corrective action should be taken when assumptions no longer hold.

* Time should be spent at the beginning of the programme familiarising staff with the relevant Ministries and the way they operate so that ARC staff can identify areas of cooperation.

* Future construction programmes must consider support for maintenance and use eg teachers and educational materials, health facility staff, medical equipment and supplies.

* A resettlement programme is not the same as an emergency programme and sustainability issues need to be addressed

Programme specific Recommendations can be found in the report.

ARC should address the following issues before completing it's programme in Mozambique:

1) Ensure a smooth handover of the programme activities.
2) Repair water points that are not functioning.
3) Deepen wells that were dug in the rainy season.
4) Ensure that each well has a trained and active water point committee.
5) Review the water problems in Kaphiridzanje and pilot test an alternative deep bore hole pump in collaboration with DPOPH.
6) Together with DPOPH, survey all water points constructed or rehabilitated by ARC to assess their functionality, yield, and presence of a water point committee. Ensure that all interested parties have this information when ARC leaves.
7) Mobilise communities to start a preventive maintenance programme for schools and health facilities.
8) Liaise with UNHCR to ensure that a maintenance programme is in place for the schools.
9) Liaise with DANIDA and DPS to ensure that a maintenance programme is in place for the health facilities.
10) Seek further dialogue with DANIDA and the DPS to clarify issues of staffing, supervision, equipment and supplies of health posts and maternity units constructed by ARC.
11) Establish closer linkages with the health facilities and DPS to increase the likelihood of sustainability of the Activista programme.

INTRODUCTION

A. PURPOSE OF EVALUATION

The purpose of the evaluation is to provide ARC management staff, Ministries, donors and communities with an assessment as to the extent that the programme objectives have been achieved and recommendations on how the programme activities could be achieved for possible future replication. The entire ARC programme, from October 1993 to July 1996 in the three districts of Moatize, Changara, and Chifunde was to be evaluated. The programme included community health education and promotion, latrine promotion, water point construction and rehabilitation, construction and rehabilitation of schools and health facilities and road rehabilitation. The programme has been funded primarily by the United States Agency of International Development (USAID), and the United Nations High Commissioner for Refugees (UNHCR), along with the Danish International Development Agency (DANIDA), Stichting Vluchteling (SV), and the US State Department Bureau for Population, Refugees, and Migration (PRM).

B. COUNTRY PROFILE

Mozambique has suffered from over twenty years of war, causing extensive destruction and displacement. The war situation had also been aggravated by successive years of drought. Tete Province, which lies in the North Western part of Mozambique was the geographic area of intense fighting between Frelimo and Renamo during the 16 years of civil war, resulting in the disintegration of the once solid but old infrastructures in many parts of the province.

Prior to the start of repatriation in 1992, the population of Mozambique was estimated to be sixteen million. According to NAR, the government agency responsible for refugee/returnee affairs, 820,553 Mozambicans have repatriated to Tete Province from October 1992, to the end of June 1995. The United Nations High Commissioner for Refugees (UNHCR) estimated that more than 80% of the health, educational and water/sanitation infrastructures were destroyed or made non-functional in areas where refugees have returned and will continue to return by the end of 1996.

In 1993, the National Reconstruction Plan (PRN) was prepared to reactivate social and economic life in the immediate post war period. At the same time, the government confirmed the policy on decentralisation of both sectorial programmes and administrative structures, which was initiated by a constitutional amendment passed in 1990 whereby priority was given to the decentralisation of governance to the provincial and district levels. The government has naturally concentrated on rebuilding social and economic infrastructure and reintegrating returning populations ensuring the first phase of reconstruction, before embarking on longer term development ventures.

C OVERVIEW OF ARC

The American Refugee Committee is a non governmental organization based in Minneapolis and founded in 1979. Its mission statement is as follows:

" The American Refugee Committee (ARC) is a non-profit, non-sectarian, humanitarian organization working for the survival, health, and well-being of refugees and displaced people affected by war. ARC works with uprooted people to rebuild productive lives of dignity, purpose, and self sufficiency, while striving always to respect their values."

During 1995, ARC provided primary health care, self-help training and related assistance to more than one million refugees, most of them women and children, in 11 countries in Africa, Europe, and Southeast Asia.

ARC started its programme in Mozambique in 1993 soon after the peace accord was signed in October 1992 at the request of UNHCR Mozambique and the Government of the republic of Mozambique (GRM) to assist in Tete Province with the resettlement and reintegration of returning refugees and the internally displaced. In September 1993, ARC signed a cooperative agreement with the Ministry of Cooperation. In October 1993, ARC signed a triparthied agreement with UNHCR Mozambique and the GRM Department of Refugee Affairs (NAR) to provide non clinical preventative health services and rehabilitate schools, health posts and water points in Tete Province.

ARC's goal in Tete Province as defined in the programme logframe is to improve the health of approximately 140,000 residents, returnees and displaced persons in the target areas of Moatize, Changara, Chifunde and Mutarara districts. The target population would have access to clean drinking water, adequate sanitation and basic health care. ARC's objectives can be found in the ARC logframe in appendix A. The management team of ARC Mozambique is made up of a Director, a Regional Health Advisor, and 4 programme managers. They include the Construction and Operations Manager, the Water Manager, the Health Programme Manager (HPM) and the Health Education Coordinator (HEC). The organisational chart can be found in appendix B.

ARC Mozambique started in Moatize district of Tete province with water point rehabilitation and the construction of VIP latrines. Priority was given to this area as a large number of returnees were in transit in this area and the need for water immediate. The construction of health posts and schools and the rehabilitation and digging of new wells took place in Changara district and these activities were expanded to Chifunde district later in 1994. The hygiene education and latrine promotion programme (HELP) started in Moatize in June 1994 and expanded to Changara in September 1994 and Chifunde in March 1995. A community health education volunteer programme began in June 1995 in all three districts. Roads in Chifunde and Changara were rehabilitated to ensure access for the duration of the programme. In Changara and Chifunde districts both construction and rehabilitation of new water points took place from 1993 until the end of the programme in 1996.

The health education programme consists of two major components: hygiene education and latrine promotion (HELP) and community health volunteers (Activistas). The Health Programme Manager (HPM) oversees all the health programme activities and is directly

responsible for the HELP component. The Health Education Coordinator (HEC) manages the Activista programme and reports to the HPM. There are two Supervisors who supervise the 14 HELP teams and 12 Activista Coordinators. At a typical site the HELP team consists of one Sanitation Coordinator, two Sanitation Assistants, one Lead Producer, two Assistant Producers and one guard. For the Activista programme, the Health Education Coordinator assists with trainings and supervises the Activista Coordinator. The Activista Coordinators train and supervise from five to ten Activistas at their site. The staff of both health programme components work together to mobilize and educate the people in their communities.

The health education and hygiene promotion (HELP) teams were trained and instructed to provide focused health education mainly on disease transmission, importance of latrines, importance of handwashing, oral rehydration, and latrine maintenance. Each household with a latrine is to receive at least those five messages. The HELP teams have also received some training on general hygiene (personal, household, food and water), malaria and the importance of colostrum.

The HELP teams also provide interested families with concrete dome slabs for their latrines. The family digs a latrine pit, provides sand, water and gravel for the slab, and constructs the superstructure of the latrine once the slab is in place. ARC provides the cement, tools, and the skilled labour to construct the slabs. HELP teams conducted periodic follow-up visits to check on the utilization and maintenance of latrines, handwashing, etc and to provide further education, as necessary.

The Activista programme consists of approximately 118 community volunteers spread over 12 sites who provide health education about 4 hours a week. The volunteers were selected by the community and trained by ARC. The Activista Coordinators (ACs) were paid staff whom ARC and Mozambican Red Cross (CVM) trained to act as supervisors and trainers for the Activistas. The Activistas were selected in April and May 1995, were trained in June 1995, and began transmitting health education messages in June as well. The ACs and Activistas attended monthly training seminars until January 1996 to enhance teaching methodologies as well as knowledge on other health topics.

Primary Health Care topics for which the Activistas were trained and provide health education include mainly: AIDS/STDS, water treatment, hygiene (personal, household, water, and food), diarrhoea transmission and prevention, family planning, nutrition, safe motherhood, and child health. Activistas received concentrated training on malaria, oral rehydration and respiratory illness in 1996.

ARC's aim has been to build upon and model its programme after the functioning CVM Activista programme. ARC has changed the focus of the trainings, however, from first aid, which occupied 70% of the Activistas' training, to preventive and promotive health.

The main activities of the construction programme were the construction and rehabilitation of schools and health facilities. The health facilities included basic health posts or health centers (health post and maternity ward). The plans used were provided by the Ministry of Education (DPE) and the Ministry of Health (DPS) who were both involved in the actual site selection. Preliminary assessments of the needs in respect of school and health infrastructure

were carried out in 1994. The assessments, which were based on population size formed the basis for the ARC's project proposal.

A typical school and health facility constructed by ARC is shown in appendix C.
The construction programme also undertook the rehabilitation of roads to ensure access to the project sites.

An initial water assessment was conducted in 1994 and based on the findings, which included a review of population data, recommendations were made on the number of water points to be established. The actual siting of the water points was done by ARC, with DPOPH and the communities. ARC procured a manual drilling rig (Vonder Rig) for well construction. Local labour was engaged to dig or drill and cast the wells and to install the hand pumps. An Afridev pump was fitted to each. The water programme employed a total of six teams to carry out the construction and rehabilitation work.

The water programme involved the construction and rehabilitation of water points in the 3 districts of Changara, Chifunde and Moatize. New wells were either hand dug or drilled with a Vonder Rig. The rehabilitation component involved the rehabilitation of boreholes that had been drilled by other parties. ARC cleaned the boreholes and fitted each one with an Afridev pump.

Each water point was inspected by DPOPH upon completion. Tests including temperature, pH, electrical conductivity, residual chlorine, nitrate, and nitrite were also carried out. At each water point constructed or rehabilitated by ARC, a water point committee of 4-7 persons was established. It comprised of men and women in the community. Each committee was trained to maintain the pump and carry out simple repairs. They were given a set of tools and expected to collect money from the community for spare parts. They were also to mobilize the community to keep the pump area clean and build a fence around it to keep out animals. The wells were handed over to the communities by ARC 6 months after completion when the water point committees were fully trained.

D DONOR AGREEMENTS

ARC-Mozambique overall received a total of 4 million US Dollars for the funding of its projects in Tete Province from October 1993 to September 1996. Five major donors sponsored ARC and they include the United States Agency for International Development (USAID), the United Nations Commission for Refugees (UNHCR), The Bureau for Population, Refugees and Migration (PRM), Stichting Vluchteling (SV) and DANIDA. The activities sponsored by each donor are described briefly below.

USAID

An agreement was signed with USAID in early 1995 and a total of 1.5 million US Dollars was promised for project activities from 1 December 1994 to 30 September 1996. The grant activities would lead to an increase in 1) access to clean drinking water, 2) access to adequate sanitation, 3) access to improved basic health care, 4) the number of trained health personnel and 5) knowledge of improved health and sanitation practices in Moatize, Changara and Chifunde districts of Tete Province.

Approximately 60 water points were to be established or rehabilitated in Chifunde district and each would be sealed and equipped with an Afridev pump. Hand dug wells would also be fitted with a hatch and access door to ensure that the communities would still have access to the well if they were unable to repair the pump. At each water point, a water point committee was to be established and trained in the necessary village level operation and maintenance (VLOM) skills and knowledge. These VLOM committees would be able to carry out maintenance and simple repairs of the pump and collect money from the communities for the purchase of spares.

Communal latrines were to be established at all the health centers constructed. A community sanitation programme would begin and the production of dome slabs would take place in the communities. The sanitation team would focus on the importance of hygiene and proper sanitation and mobilise the communities to dig their own family latrines. ARC would provide the latrine slabs to interested villages who would in exchange provide quarry stones, sand and water, dig the latrine and construct the superstructure. A total of 5,000 family latrines were to be constructed.

Three health posts were to be constructed by ARC. Each would be equipped and furnished by ARC. Staff houses would also be constructed for the Ministry of Health (DPS) personnel. DPS would then be responsible for staffing the health posts and further medical supplies.

Approximately 76 km of roads associated with the target communities were to be improved through the construction of drainage ditches, culverts and small bridges where necessary. Local labour and simple tools would be used. The roads were selected by ARC's construction manager during an original assessment of the districts. The purpose of rehabilitating the roads was to provide access to the target area for the duration of the programme. All rehabilitated roads were to be on existing compacted roads. No new roads were to be constructed. ARC was not responsible for the maintenance of the roads after the completion of the project.

Village health volunteers were to be trained to provide health education in a number of areas

including sanitation and clean water, immunisation, nutrition, maternal and child health, and AIDS/STDS awareness. ARC was to train 90 TBAs and 110 village health workers. 5 drama groups were to be established and 75,000 health eduction messages delivered.

The end of grant indicators are found in the USAID logframe (see appendix D). ARC's goals in the proposed logframe to USAID became the End of Grant impact Indicators in the Grant Agreement and were to be measured in the following three ways:

1. A measurable decrease in diarrhoeal disease for children under five.

2. Infant and maternal mortality due to poor birthing care reduced by a measurable amount.

3. A measurable reduction in infants and children under five mortality.

UNHCR

ARC Mozambique also received a total of approximately $ 1.5 million US Dollars from UNHCR from 1993 - 1996 to assist Mozambican returnees in Tete Province. The grant agreements supported the following ARC's activities in the districts of Changara, Chifunde and Moatize. They included water supply development/construction, health facility construction, rehabilitation of access roads, construction and rehabilitation of schools and the promotion of health education and sanitation.

In 1993, ARC was to contribute to the improvement of health, water and sanitation facilities in Changara district by rehabilitating the health post and health staff housing at Chioco. Construction and rehabilitation of boreholes was to take place and limited emergency repairs of the road from Chipembere to Chioco were to be undertaken.

In 1994/95 activities funded by UNHCR expanded to include further construction and rehabilitation of health posts and also the construction and rehabilitation of primary schools and staff houses in Changara district. ARC planned to construct a health post and maternity ward at Chipembere and rehabilitate the health post at Goba. Activities expanded in 1995 to include the construction of school blocks and staff houses in the Chifunde district. The Ministry of Health was expected to adequately staff these posts upon completion.

ARC agreed to construct a community center at Amose/Ngwenya which is a joint project with UNHCR and UNESCO. This would include 3 classrooms, one staff house, a teachers office, a radio room, a generator room, 13 latrines and a general use community center. The 158 km Furcungo to Villa Mualadzi access road was to be partly rehabilitated by ARC.

Stichting Vluchteling

Stichting Vluchteling (SV) started to fund ARC's activities in 1993 in Moatize district. A total of approximately 435,000 US dollars was provided for ARC Mozambique's activities. SV has been the primary supporter of the Kaphiridzanje and Mazoe Ponte sites and activities include: health, infrastructure rehabilitation, water and sanitation programmes in Changara and Moatize districts. The existing structures in Kaphiridzanje were minimal in 1993 and there were 12

boreholes which required rehabilitation. ARC was to rehabilitate 11 of the boreholes using SV funds. In 1994, ARC would also start a sanitation programme in the area and produce a total of 1,500 slabs to serve approximately 7,500 beneficiaries.

SV also funded ARC's activities in the Mazoe Ponte area. Here the activities included the construction of a health post and maternity ward and the supply of basic medical equipment. An existing 2 room school block was to be rehabilitated and a new 3 room school constructed. ARC would also construct staff housing.

At the time of the agreement with SV, the residents of Mazoe Ponte had no safe drinking water and so ARC proposed to rehabilitate the 5 existing boreholes which did not have handpumps and also to install an additional 10 water points in the area. Water point committees would also be trained to maintain the pumps. No improved sanitation facilities existed at the time and so ARC proposed to produce approximately 2,000 dome slabs to serve 8-10,000 residents. Latrines would also be constructed at the schools, health posts and staff houses. SV also provided funds for the rehabilitation of a large boarding school in Marara, Changara district.

DANIDA

An agreement was made between Danida and ARC in 1994 to carry out construction activities in order to improve the health, water and sanitation facilities in Nsadzu area of Chifunde district. ARC was to construct a health post, maternity ward, and three staff houses at Nsadzu Sede. In addition, ARC would construct improved communal latrines at the health facilities and staff houses. Danida provided 80,000 US dollars for the completion of this project. In a second agreement, signed between ARC and Danida in 1995, ARC agreed to construct a new health center and two staff houses at Luia, Chifunde district. 10 latrines would also be constructed. A total amount of $91,025 was provided by Danida for project activities in Luia.

Bureau For Population, Refugees, Migration

The Bureau for Population, Refugees, Migration (PRM) provided a total of 360,000 US dollars to the ARC-Mozambique programme. This amount was provided for institutional support for activities funded by other donors.

E OVERVIEW OF BASELINE AND MID-TERM SURVEYS

Before the implementation of the community health volunteer (Activista) programme ARC conducted a baseline knowledge, attitudes and practices (KAP) survey to determine the current knowledge and practices of the target communities. The baseline data would assist in identifying the needs in health education and would also serve as a basis on which to evaluate the Activista programme with respect to ARC's goals and objectives. In May 1995, a PHC KAP survey was conducted which focused on maternal and child health issues such as prenatal care, breastfeeding, weaning, nutrition family planning and also STDS, AIDS, immunization, malaria and care of wounds. 423 households were randomly selected and an adult member from each household was interviewed. Approximately half of the respondents (210) were women of reproductive age who were married or had been pregnant.

The baseline survey revealed that knowledge and use of safe health practices was slightly higher than 50% for many of the PHC topics including prenatal care, AIDS transmission, family planning, wound care and immunizations. Lower level of knowledge existed for malaria, weaning, the importance of colostrum, nutrition and condom usage.

45% of deliveries were assisted by a trained health worker. Based on the findings of the baseline survey, ARC implemented the Activista programme and focused on primary health care topics where knowledge and good health practices were low. These included: safe motherhood, breastfeeding and weaning, family nutrition, family planning, AIDS and condoms, malaria and immunization.

Before the implementation of the hygiene education and latrine promotion (HELP) activities, ARC conducted baseline water and sanitation surveys in Kaphiridzanje in March 1994, in Changara in July/August 1994 and in Chifunde in February 1995. The main purposes of the surveys were to gather information on the target population to be used in the project design and implementation and also to collect baseline data so that any increase in knowledge or changes in behaviour with respect to drinking water, hygiene and sanitation during the programme could be measured.

In the water and sanitation survey, overall, 38% of respondents collected their drinking water from a pump or protected source. 10% treated their water and 33% knew that getting water from a pump was good for their health. 15% of the households had a latrine and 18% of those households were using the latrine. 39% of adult knew that using a latrine was beneficial to their health. 44% of the latrines were clean and only 2% of them had water for washing hands nearby.

97% of respondents were able to state when it was important to wash their hands (at least one correct response). The most common response was before eating (82%). 95% of respondents knew how to make their food safe. 66% covered their drinking water and 44% disposed of their rubbish correctly by keeping it in a pile or burning it.

ARC conducted a mid term monitoring survey in November 1995 in all 3 districts to assess ARC's progress in affecting changes in knowledge, attitudes and practices within the target population.

The mid-term survey revealed that:

* There was not a great increase in knowledge on the importance of colostrum, and the transmission of AIDS and malaria.

* The water points constructed or rehabilitated by ARC were being used by over 80% of the population living within 750 meters of the water point.

* The percentage of adults practising appropriate behaviours greatly surpassed 33%.

* The overall percentage increase in PHC knowledge among the targeted population , 19 %, had almost reached the objective of 20%.

* Latrine coverage was 38%.

METHODOLOGY

A EVALUATION METHODOLOGY

The final evaluation was conducted by two independent consultants with the assistance of a survey consultant and the ARC Evaluation Coordinator. The main purpose of the evaluation was to provide ARC management staff, Ministries, donors and communities with an assessment of the extent to which the programme objectives had been achieved and recommendations on how the programme could be improved if replicated in the future. Factors facilitating or hindering the attainment of these objectives would be identified and the benefits of each programme activity to the target population would be assessed. The sustainability of the overall effects from ARC's water, sanitation and health education activities without continued ARC support or other international assistance would also be assessed.

The detailed scope of work, terms of reference and schedule of activities are found in appendices E and F. The evaluation focused on the following main activities:

The evaluation team became familiar with the programme through document reviews. These included monthly and annual reports, programme proposals, grant agreements, programme logframes and project logframes, implementation plans, surveys (baseline and mid term), records and budgets, training manuals, educational materials, maps and population data.

The evaluation team firstly interviewed the ARC management staff to get an overview of the programme and to gain an insight into the programme's strengths and weaknesses, the staff's level of satisfaction, headquarter's institutional support, lessons learned and recommendations for improving the programme. Discussions were held with representatives of collaborating Ministries including the Ministry of Health (DPS), Education (DPE) and Water (DPOPH) to obtain information on their level of satisfaction with the ARC projects, the benefits of the programmes to the target communities, the impact of the programme and the potential for sustainability after the end of the ARC programme.

Field visits were made to the programme target areas to assess the current condition of randomly selected latrines, water points, schools, health facilities and roads. During these visits to the villages, the team interviewed community leaders and members of the community to gain their impressions of the ARC programme and its perceived impact and benefits to their communities. Members of the HELP teams and Activistas were also interviewed to gain further knowledge of their work and the extent to which it will continue. School teachers and health facility staff were interviewed to obtain more information on the use of the facilities constructed by ARC. Members of water point committees were also interviewed to assess the extent of their training and their ability to repair and maintain the pump.

12 villages in Chifunde, Changara and Moatize districts were visited by the evaluation team (see appendix G for details of ARC activities in each village visited.) In order to reach Chifunde East the team had to travel through Malawi and gained and understanding of the difficulties in reaching the project sites and the distances involved. Some of the villages were more than 500 km from Tete. The team visited the villages of Bulimo, Kaputo, Namiramba, Villa Mualadzi and M:cantha in Chifunde East. To proceed from Chifunde East to West, the team had to travel through Malawi and Zambia. In Chifunde West, Nsadzu, Amose/Ngwenya,

Thequesse and Luia were visited. Four days were spent in Chifunde district. The team then proceeded back to Tete and onto the villages of Marara, Matambo and Mazoe Ponte in Changara district. A day was spent in Kaphiridzanje in Moatize district. On some of the visits the team were accompanied by ARC managers while on others they acted independently.

At each village the team attempted to meet with the Secretario and members of the communities. Schools and health facilities were inspected and the staff interviewed. The team asked to be shown some of the water sources used by the villagers and inspected the pump and surroundings. Usually, members of the water point committees accompanied the team to the water points and supplied more information on the activities of the committees and the procedure for obtaining spare parts. Women collecting water from the pumps (and rivers) were also interviewed independently. In the villages, a random inspection of latrines was carried out including the handwashing system to assess whether they were in good condition and being used. Household members were also interviewed. Any members of the HELP team that were still in the villages were interviewed as well as Activistas.

A final household knowledge, attitude and practice (KAP) survey was conducted by ARC-Mozambique health project staff in July/August 1996 to determine the extent of change in knowledge, attitudes and practices of the target community over the duration of the project with regard to primary health care. The survey used similar questions to those posed in the baseline so that changes over time, as specified by the objectives, could be measured. The survey instrument and methodology were reviewed by the evaluation team and the survey consultant and the data collected by ARC staff. The survey consultant was responsible for data entry and analysis and comparison with baseline surveys, while the evaluation consultants interpreted the data and incorporated the results into the final report.

Water observation and utilization surveys were also conducted by ARC-Mozambique water programme staff in July 1996. The surveys were conducted in order to assess the percentage of functioning and well maintained water points and to determine the utilization of ARC constructed or rehabilitated water points. The information would help to measure the water related end of project status indicators and give an indication of quality and sustainability of water points and water point committees. Data was analyzed by the Evaluation Coordinator and interpreted by the Evaluation team.

The environmental impact of ARC's activities was also assessed through document review, site visits and interviews to address concerns outlined on pages 37-40 of the USAID grant agreement.

B SURVEY METHODOLOGY

Within ARC's target areas of Changara, Chifunde and Moatize districts of Tete province, 30 randomly selected clusters were sampled for the primary health care (PHC) KAP survey. In each cluster, 12 households were randomly selected using bairro household listings comprised by ARC health staff. An adult member of the household was randomly chosen to be interviewed. At least one call back was made if no adult respondent was found at home. If an adult was still not at home at the time of the call-back, then the next closest household was interviewed. If 6 or more households had to be replaced with neighbouring households, then an additional 3 randomly selected households were to be interviewed from an alternate list.

The questionnaire was translated into Portuguese, Chinyungwe and Chichewa and then back-translated into English or compared to the English to check the accuracy of the translation by another person. The survey questionnaire consisted of approximately 50 questions and took about 30 minutes to administer (see appendix H). Only the questions were read out and the respondents' answers marked in the appropriate box. Prompting only occurred where particular questions required it.

In the water observation and utilization surveys, 20 ARC water points were randomly selected: 10 of these were new and 10 were rehabilitated. Out of these, one was not functioning at the time of the survey, at four of the water points no households were found within 750 meters, and at 2 water points, fewer than 24 households were found within 750 meters of the water point. Six alternate water points were then selected to be surveyed in addition to the original 20 in order to provide sufficient utilization data.

A water observation form was filled in for each water point (see appendix I). In addition, adult household members were interviewed using the utilization survey (see Appendix J) where the pump was functioning. Where the water point was currently functioning and there were households within 750 meters of the water point, 24 households were interviewed. If fewer than 24 households were located within 750 meters of the water point, then all the households were interviewed. A total of 484 households were interviewed about where they obtain their drinking water and why they use that source. 6 respondents were selected in each of 4 directions at varying distances up to 750 meters from the pump.

Supervisors and enumerators for all of the surveys were ARC staff, most of whom had previous survey experience. The fact that ARC field staff were used to essentially evaluate the effectiveness of their own programme does introduce a certain amount of bias as they have a vested interest in the results. The consultants however, recognise that it would have been logistically very difficult to employ external supervisors and enumerators to conduct the survey and therefore agreed to the methodology employed.

The following objectives were addressed in the final survey:

1. **80% of HH living within 750m radius of an ARC water point get their drinking water from that protected source.**

2. **20% increase in PHC knowledge among adult target population.**

3. **70% of HH in target areas have and use family latrines.**

4. **50% of births in target areas are attended by a trained health worker.**

5. **33% of adults in target area report practising appropriate health behaviours.**

RESULTS

A SURVEY RESULTS

Water Collection

The water utilization survey showed that 93.8% of households living within a 750m radius of an ARC water point get their drinking water from that source. Overall, 95.2% of households interviewed get water from any pump. The majority, 70.5% of respondents stated they collected their drinking water from the stated source (95% of which used a pump) because it was clean, good or better for their health. 96% of all the households interviewed said they obtained their drinking water from the closest source. The survey data show that, in general, if a pump is working and it is the closest available water point, then it will be used.

The water observation survey found that the majority of the water points were in good condition. 92% of the aprons surveyed were clean and free of debris and 81% of the aprons were in good condition, that is free from cracks or holes. The majority (88.5%) of water points were free of animal faeces.

42% of the water points were fenced and in 3/8 cases (37.5%), animals were still able to get inside the fence.

60% of the pumps had no stagnant water within 10 meters and in 92% of the cases there were no latrines within 30 meters. No one was observed washing clothes or dishes within 5m of the pump at 76% of the pumps surveyed.

88.5% of the water points have a community member who can fix the pump. 44% (11/26) of the pumps had broken down since ARC completed the water point. Four of the water points were new and 7 had been rehabilitated. In 91% of the cases, someone in the community had been able to repair the pump. All respondents questioned at the water points stated that their community contributes towards buying the spare parts.

Table 1: Summary of Water Utilization Survey

A. Water Utilization (n = 484)

SOURCE FOR DRINKING WATER	CONSUMPTION LEVELS	
ARC Pump	93.8%	(454)
Other Pump	1.4%	(7)
None Of The Above	4.8%	(23)

B. Reason For Using Water Source

REASON	UTILIZATION LEVELS	
Closest Source	8.3%	(40)
Water good/clean/better for health	70.5%	(341)
Broken Pump	0.4%	(2)
Other	19.0%	(92)
DK/NR	1.9%	(9)

C. Distance Between Household and Drinking Water Source*

Not Closest	3.8%	(17)
Closest Source	95.7%	(423)
DK/NR	0.5%	(2)

* Where reason for not using the water source was NOT "it's the closest source"

Table 2: Summary of Water Observation Survey

Observation	# observed	Frequency	%
Pump ···rking	26	25	96
Apron clean/free of debris	25	23	92
Apron in good condition	26	21	81
No stagnant water within 10 m	25	15	60
Fence around pump	26	11	42
Animals able to get in fence	8	3	37.5
No animals or animal faeces within 10 m	26	23	88.5
No latrines within 30m	26	24	92
No people washing clothes/dishes within 5 m	25	19	76
Water salty but drinkable	25	5	20
Someone in community able to fix pump	26	23	88.5

Increase in PHC Knowledge

The greatest increase in knowledge occurred with regard to the benefits of drinking pump water (33% in baseline survey to 72% in final survey), the benefits of having a latrine (39 % to 72%), diarrhoea transmission (38% to 65%), malaria transmission (14% to 30%) and when to wean the baby (23% to 46%). Some knowledge questions had a high percentage of correct responses during the baseline and so little change in knowledge was observed. These included when to wash hands (97% to 92%), how to make leftover food safe (95% to 88%) and AIDS transmission (82% to 80%). Knowledge of family planning methods remained the same (66%) and the importance of early prenatal care decreased slightly (56% to 51%). People's knowledge of time between pregnancies increased from 57% to 63% and knowledge of the importance of colostrum increased from 38% to 45%.

Table 3 shows a comparison of the results of the baseline and final surveys. The percentage point gain and the percentage gain are also presented.

Latrine Coverage

Records show that latrine coverage exceeded the 70% target and that an average of 76% of households in target villages had dug a family latrine. 66.1% of households interviewed in the survey currently have a latrine and 14.8% reported that they were in the process of constructing one which will bring the total coverage to 80.9%.

Health Behaviours Reported

The survey revealed that the majority of the adult population report practising or were observed to be practising appropriate health behaviours (see table 4). The reported behaviours include drinking potable water (70%), adults using the latrine (75%), correct treatment of diarrhoea (89%), mosquito bite prevention (55%) and AIDS prevention (95%). The observed behaviours included storing water correctly (59%), having a clean latrine with the lid in place (66%), proper rubbish disposal (97%) and the presence of water for hand washing near the latrine (21%). Lower scores were recorded for family usage of latrines including children aged 1-4 years (43%), and young children eating a balanced diet the previous day (12%).

Births attended by a trained health worker

The number of births assisted by a trained health worker was 45% in the baseline survey. In the final survey, a total of 61.8% of births were assisted by a trained health worker, either at a health facility or by a trained TBA. 35% of births were assisted by health facility staff and 58% were assisted by a TBA. 45% of the TBAs were trained.

Other tables presenting survey data can be found in Appendix K

Table 3: Comparison of PHC Knowledge Scores between Baseline and Final Surveys

		Baseline Results			Final Results			% Pt Gain or Loss	95% CI	% Gain or loss
Survey Q		Corr Rep	# Resp	% Corr	Corr Resp	# Resp	% Corr			
303	Benefit of pump water*	127	386	33	110	152	72	39	31,48	118
309	Benefit of latrine	398	1015	39	262	363	72	33	27,39	85
310	When to wash hands*	642	663	97	334	363	92	-5	-8,-1	-5
311	Leftover food	317	334	95	320	363	88	-7	-11,-2	-7
403	Diarrhoea transmission*	252	663	38	235	363	65	27	18,30	71
501	Importance of early prenatal care	234	421	56	131	258	51	-5	-13,3	-9
504	Importance of giving colostrum	161	422	38	163	363	45	7	-1,14	18
505	When to wean baby	98	422	23	118	258	46	23	15,30	100
601	Methods of family planning*	281	423	66	241	363	66	0	-7,7	0
602	Time between pregnancies	242	423	57	230	363	63	6	-1,13	11
604	AIDS transmission*	332	403	82	289	362	80	-3	-8,3	-3
701	Malaria transmission	58	423	14	110	362	30	17	11,22	114

* = Able to mention at least one correct response

Table 4: Percent Practising Appropriate Behaviours

Survey Q		Corr resp	# resp	% corr	95% CI
301/302	Drink potable water	253	362	70	65,75
901	Water container covered*	185	314	59	53,64
304/305/ 306/308	Use latrine (including children)	100	233	43	37,49
304/305/ 308	Use latrine (no children)	98	130	75	68,83
1003/1004	Clean latrine and lid covering hole*	151	229	66	60,72
1005	Water for handwashing within 5 m of latrine*	48	229	21	16,26
401	Appropriate treatment of diarrhoea	285	321	89	85,92
902	Proper disposal of rubbish*	353	363	97	96,99
702	Mosquito prevention practised	201	363	55	50,60
603	AIDS prevention practised	296	312	95	92,97
507	1-2 year olds eat well balanced diet	9	77	12	5,19

* = Observed behaviour (others are reported behaviours)

B FINDINGS FROM FIELD VISITS

I. CONSTRUCTION

Schools

At Bulimo, Kaputo, Namiramba and Macantha, classrooms and staff houses had just been completed. They were awaiting the arrival of desks. At Villa Mualadzi, the 2 roomed school was in use. Oil paint was used on the walls but they were not being washed. Amose/Ngwenya was still under construction at the time of the visit.

Thequesse had a 6 roomed classroom. Only two out of six classes were being used and the teachers were sleeping in the other rooms. At Marara, the rehabilitation of the old mission school was still underway and work was in progress on the boarding school dormitories. There were some complaints by the teachers about the cooking area in the kitchen and this was being attended to. At Mazoe Ponte, where the school had been completed in 1994, the doors and trusses were in need of attention as they had been attacked by termites.

Health Facilities

In Villa Mualadzi, a health post and maternity ward had just been completed and so was not yet in use. At Nsadzu, the clinic was locked up and the nurse told us that nobody was sick that day. However, the records showed that the clinic was in use. In May '96 when it opened, 308 outpatients attended, 139 in June, 52 in July and 36 by the 14th of August. The nurse observed that many people came when the clinic first opened but now not so many people were sick. The facilities at Thequesse and Luia were still under construction at the time of the visit.

In Marara, the clinic and maternity had been rehabilitated and was run by a nurse, midwife and an orderly. The clinic was very much in use with 829 outpatients in May '96, 597 in June, 648 in July and 377 by 16 of August. The general ward was being used as the mortuary. Patients did not feel comfortable about staying in the ward and so those admitted preferred to stay outside under a tree. Two of the health staff were staying in the two staff houses. The clinic stopped vaccinating in February '96 when the solar panels of the fridge donated by World Vision were stolen. Staff here confirmed that they knew the Activistas who often came to talk to the outpatients.

At Mazoe Ponte, the clinic was in use but the maternity wing was not yet operating. The outpatients records showed 146 visits in June, 160 in July and 97 by 19 of August. An immunization team come once a month from Changara to vaccinate. The clinic did not have a safe water supply as the pump on the nearby borehole had been removed and stones thrown into the borehole by the community. The clinic therefore was fetching water from the river.

Roads rehabilitated by ARC were opened up to provide access for the duration of the programme. However parts of the roads are likely to become impassable during the next rainy season.

The condition of the school and health facilities was generally very good given the limited skills of the workforce and the many constraints the programme faced. Some attention to

drainage was required in some cases. The community appeared to have no sense of ownership of the structures and did not see maintenance as their job. Earlier built schools required some maintenance already. These were not being attended to by the Ministry of Education or the communities. the staff houses appeared to be a good practical design. The team observed several designs of schools that had been modified and improved as the programme progresses. The breeze blocks were a practical alternative to glass windows.

The team inspected some of the VIP latrines constructed by ARC at the schools and health facilities. In general, quality of latrines was good although the foundations of some of the VIP latrines constructed in 1994 were exposed and this could have been avoided by some preventative maintenance by the community. Those in use at the schools were not clean, and the team felt that more were required at some of the schools.

II. WATER POINTS

A total of 23 water points were inspected during our visit to the villages. 21 of these were ARC water points and they are discussed further. Excluding Kaphiridzanje which is a separate case, 15 water points were inspected in the districts of Changara and Chifunde. A summary of the observations is found in table 5. In some cases the wells were poorly sited and inaccessible in the rainy season. 6/15 or 40% were not functional at the time and an additional two were in need of attention. 4/15 were fenced but animals could still get in. Seven needed attention to the spillway and one was incomplete. Likewise, 3 needed attention to the apron and one was incomplete. Our findings differ slightly to the survey where only 1/20 randomly selected water points was not working and this was in Kaphiridzanje.

Two of 6 non functional pumps observed by the team had been made non functional by ARC and the water point committees in an effort to persuade the communities to build a fence and clean the surrounding area. At Matambo Ponte near the cattle dip, the hanger pin had been removed and is replaced twice a week for cattle dipping. It could also be replaced if one of the other pumps broke down. (This is not ideal as it puts pressure on the other functioning pumps.) At Macantha, where the hanger pin had also been removed, the water point committee had removed the hatch and so people were fetching water with several dirty buckets which they left on the ground after using.

Members of the water point committees were interviewed and information was obtained on their activities and the procedure for obtaining spare parts. In Chifunde East, spares are available just across the border in Malawi where they are cheaper than those available in Tete. People in Chifunde West, Moatize, and Changara districts obtain their spares from Tete. The commitment of committees and their communities varied a great deal. In some villages the committees were able to collect money and repair minor faults. However, this is not always the case. In all cases the water point committee knew what the problem was but some had difficulty in collecting the funds from the community.

At Kaphiridzanje, the team had a discussion with a group of 12 Secretarios and leaders. They informed us that only 5/11 of the pumps were working. The team inspected 4 ARC pumps here and only found one to be working. One water point committee with 2-3 members in each bairro, was in charge of all the pumps. The pumps were continuously breaking down and they had become very discouraged. They also had difficulties collecting money as it was not

always clear which members of the community were currently using a specific pump. For example, people from Benga bairro were using pump number 7 as their closest pump (number 5) was broken.

On the whole, the condition of the water points constructed was good. However, the following observations were made in some cases. Some wells were dug in rainy season and hence require deepening and the head works were not up to standard in some cases. Siting criteria could have been improved to ensure that the wells were away from river channels and maximum yield of the pump was obtained. Coordination between schools and health facilities could have been better to ensure that they had a good water supply wherever possible

Table 5: Water Points Inspected By The Evaluation Team 13/08/96 to 18/08/96

NAME OF THE WATER POINT VISITED	DATE	DISTRICT	TYPE OF WATER POINT	COMMENTS	PUMP FUNCTIONING		STRUCTURES IN EXISTENCE		
					YES/NO	REMARKS	APRON	SPILLWAY	FENCE
1. Bulimo Sede	13/08/96	Chifunde East	H/Dug (new)	Poorly sited	Yes		Yes	Yes But needs attention	Yes
2. Kaputo	13/08/96	Chifunde East	H/Dug (new)	Poorly sited	Yes		Yes	Yes, but needs attention	Yes needs attention
3. Vila Mvaladzi I	14/08/96	Chifunde East	H/Dug (new)	Too far away but working	No		No	Yes, but needs attention	No
4. Vila Mvaladzi II	14/08/96	Chifunde East	H/Dug (new)	Too far away	No	Not installed	Not completed	Not completed	No
5. Vila Mvaladzi III	14/08/96	Chifunde East	H/Dug (new)	Too far but good site	Yes	But needs attention, pump slipping	Yes	Yes	No
6. Vamiramba	13/08/96	Chifunde East	H/Dug (new)	Too far away	Yes	But needs attention, pump slipping	Yes	Yes, but heavily chocked	Broken
7. Macantho I	14/08/96	Chifunde East	H/Dug (new)	Good site but too far away	No	One month on break down	Broken	Broken, 3m long	No
8. Nzadzo	15/08/96	Chifunde East	H/Dug (new)	Although close to clinic - Poor site within water channel. A new borehole was recently drilled.	No	Well dry	Yes eroded away	Yes but eroded	Yes But poor
9. Thequesse	15/08/96	Chifunde East	H/Dug (new)	Done by Geomoc but pump fitted by ARC	Yes		Yes	Yes	No
10. Lviya	15/08/96	Chifunde East	B/Hole (Rehab)	Borehole not filled with stones by community	Yes		Control Yes	No	No
11. Mazoe Ponte I	16/08/96	Changara	B/Hole (Rehab)	Geomoc drilled	No		Yes	Yes	No
12. Mazoe Ponte II	18/08/96	Changara	B/Hole (Rehab)	Not functioning 6 months ago	No		Yes	Yes	No
13. Matambo Ponte I	17/08/96	Changara	B/Hole (Rehab)	Good site but 1km away from school and health post	Yes		Yes But poor	Yes But poor	No
14. Matambo Ponte II	17/08/96	Changara	B/Hole (Rehab)	Functioning parts (hanger pin) removed	No		Yes	Yes	No Diptank site
15. Mazoe Ponte III	18/08/96	Changara	B/Hole (Rehab)	Good Site but not within 750m	Yes		Yes	Yes	No
16. Nsadzo Clinic	15/08/96	Chifunde East	B/Hole (Rehab)	Good location but dry site. Site was abandoned.	No		Yes	Yes	No

III. HEALTH

HELP Programme and Latrines

Since most of the HELP teams had completed their work, it was not possible to interview many of them. However, some of the Sanitation Coordinators and Assistants were still in the villages and the team interviewed them. Sanitation Coordinators had a plan based on household listings. They reported monthly progress on health education and latrine construction to the HPM. A competition was held among bairros in each village. When the target was met by the winning bairro, all families who had completed a latrine received an ARC cap. All others families who completed a latrine received a bar of soap.

Randomly selected latrines were inspected as well as handwashing facilities. Most of the latrines appeared to be used but this was not the case with the handwashing facilities. Many of the tins were either empty or missing altogether. Some of the HELP team members and community members observed that small children do not use the latrines and but defecate near the house.

The team identified some family latrines that had collapsed and felt that this may become more of a problem in the rainy season. The mid term assessment of slab production revealed quite a variation in the thickness of the slabs but they were still considered safe to use.

Activista

Interviews with Activistas included questions on their training, messages delivered, materials used and methods. Also their record books were examined. The majority of Activistas were men although we did interview three women. Activistas pointed out that it was sometimes difficult to talk to the opposite sex about sensitive issues such as family planning, AIDS/STDS and the importance of colostrum.

All Activistas interviewed were committed to continuing their work but expressed disappointment that they would no longer be receiving incentives and that there would be no coordinator to report to. Some Activistas had stopped recording their activities in their notebooks saying that there was no longer anyone to supervise them and the books would eventually run out and would need to be replaced. They did not appreciate that keeping records was useful for them to plan their activities. The consultants noted that at the current rate of use, they are unlikely to run out of paper in the next couple of years.

All Activistas interviewed had certificates to show that they had worked with ARC as Activistas. They also had training materials, and those in Kaphiridzanje were all wearing their T shirts and name badges which identify them as Activistas.

Several record books were examined. The quality of record keeping was generally poor, mainly due to the limited literacy of some of the Activistas. They had the option of using their record books or a non formal technique but most opted for using the record books. In most cases, Activistas would focus on one or two messages, quite often malaria or diarrhoea. In some cases, the dates were obviously just filled in as the Activista appeared to have completed too many visits in one day. For example, 60 households visited in one day in Kaphiridzanje and two messages transmitted to each household.

It was not possible for us to witness any songs or dramas at the time of our visit so it is difficult for us to assess some of the methods used. When asked to see the educational materials provided by ARC, only one Activista showed us the handmade puppets and she appeared shy and uncomfortable using them. This may have been because we were strangers and puppets are unfamiliar in their culture. However, she noted that they were popular.

In Mazoe Ponte, the Activistas told us that they were chosen by the Secretario because no-one had volunteered. They said they would continue to work and hoped that another NGO would come to work in their village soon. They expressed some resentment that the HELP teams were paid while they were not.

DISCUSSION

A SUMMARY OF ACHIEVEMENT OF ACTIVITIES

ARC achieved the majority of its objectives and outputs as stated in the end-of-project status indicators and outputs in the programme logframe. ARC also carried out some other objectives not included in the logframe but agreed to in the grant agreements, for example, the community center at Amose/Ngwenya. The water sector objectives and outputs were met. The construction objectives and outputs were mostly met, although 4 facilities are not expected to be completed until October 96. The health sector objectives and outputs were almost all met. There were only a few topics for which the increase in knowledge and percentage of people practising appropriate behaviours were less then expected.

A number of factors facilitated the execution of programme activities in general. These included: the fact that experience and resources from Malawi were used in Mozambique; UNHCR provided support and advice in which districts to work; the government of Mozambique gave approval for the projects proposed and the donors proved to be flexible in their agreements. The management team were also dedicated and determined to achieve the objectives.

Factors which hindered the execution of the programme activities, in general, included the lack of qualified staff and the lack of coordination between the different programmes. Working in several different districts far from one another, with different languages also proved to be difficult. Management staff's large workload and lack of support and commitment from the government at times were also hindrances to programme progress.

B DISCUSSION BY SECTOR

I. CONSTRUCTION

ARC appeared to meet its end-of-project status indicator of providing health and educational facilities in areas where sufficient population warrants costs. However, the end-of-project status indicator in the programme logframe is too vague to measure. Instead, we can look at the outputs. ARC planned to construct or rehabilitate 6 health center/posts and 32 classrooms. A total of 9 health facilities and 44 classrooms were built as agreed to in donor agreements and specified in ARC's programme logframe. (Additional school and health facilities were taken on later in the programme and agreed upon by the relevant donors.) Two health facilities and two schools are still under construction and are expected to be completed by October 96.

Health facilities constructed by ARC are summarised in appendix L. The table shows the type of health facility, the number of staff houses and the number of VIP latrines constructed. DANIDA funded the construction of the health facilities in Nsadzu and Luia as agreed. USAID funded health facilities in Thequesse, Villa Mualadzi and the maternity unit at Mazoe Ponte. UNHCR funded the construction and rehabilitation of health facilities in the following villages in Changara district: Chioco, Msaua, Matambo, Marara, Goba and Chipembere. SV funded the construction of a new health post in Mazoe Ponte.

The school construction programme is summarised in appendix M. Construction and rehabilitation of schools was funded by both UNHCR and SV. In Marara, an old mission school was rehabilitated. This work included rehabilitation of the kitchen and staff houses and construction of dormitories and bathrooms for both girls and boys. This activity was funded by SV who also funded the rehabilitation of 2 schools in Mazoe Ponte. The remaining 14 schools, staff houses and VIP latrines were all constructed and rehabilitated using funds from UNHCR.

76 km of road in Chifunde district was rehabilitated as agreed. The road from Chipembere to Chioco was also cleared. The 158 km Furcungo to Villa Mualadzi access road was to be partly rehabilitated by ARC and later a contractor GT, was commissioned to complete the road. ARC felt it was a duplication of efforts to commit UNHCR resources to this road and so the resources were reallocated to other construction activities with the approval of UNHCR.

Parts of the roads cleared by ARC are likely to become impassable during the next rainy season. This makes supervision and maintenance of schools and health facilities by relevant Ministries less likely. However, it was not the objective of ARC to maintain these roads after the completion of the programme.

The activities of the construction programme were facilitated by several factors. These included: the original assessment conducted in Chifunde and Changara which provided a basis for planning; design standards were made available by Ministries; the Ministries and communities were involved in selection of sites and to some extent, materials not available in Mozambique could be brought in from Malawi or Zimbabwe.

Several factors hindered the construction programme. These included: the narrow skill base and inexperienced supervisory staff. Some of the sites were inaccessible and so ARC had to open up the access roads to reach them. The long distance form Tete to the sites plus the fact that international borders had to be crossed to reach some of them created transport and logistical problems. Although there was a need for constant supervision, this was difficult as too many sites were established at the same time. Theft of materials was also a big problem. The "just in time" delivery of materials made it difficult to complete work on time and the quality of some of the building materials was poor, for example, timber. Import restrictions and bureaucratic processes also hindered the programme as did the limited coordination of interested sector agencies.

Sustainability

The issue of maintenance of schools was discussed with the Ministry of Education who are still holding discussions with UNHCR. Some of schools that have already been handed over to Ministry of Education are in need of some minor maintenance work but no plan is yet in place to carry this out. The Ministry is committed to staff schools recently completed by ARC next year. Ministry is also supposed to formally allocate the staff houses to the teachers. However, some houses at schools that have been open for over a year are still not occupied by any staff. They are still waiting to hear from the Ministry. The schools were designed to require as little maintenance as possible so they may be somewhat s stainable.

Discussions with the Ministry of Health (DPS) focused on staffing of clinics, medical supplies and supervision. DPS acknowledged that is it now their responsibility to address these issues but expressed the need for more funds to take care of them. DANIDA is involved in capacity building of the Ministry, but the extent to which these issues are addressed is not known.

Out of the four completed health facilities inspected by the Evaluation team, none were able to provide us with a list of the equipment that was supplied to them by ARC and so it is unclear how the inventory of equipment is monitored.

II. WATER

The target of "80% of households living within 750 meters of an ARC water point get their drinking water from that protected source" was met. It was found that 93.8% collect their drinking water from a functioning water point.

The objective, however, does not take into account the percentage of pumps which are not functioning. During the water observation survey, 5% of pumps were found to be broken, and 40% were observed to be non functional during site visits (Two of these had been made non functional by ARC and the water point committees). This figure excludes Kaphiridzanje.

A total of 157 water points were constructed or rehabilitated by ARC. A summary of the type of water points established by donor is provided in appendix N. The water programme was funded by USAID, DANIDA and SV.

In Changara, the water programme was funded mainly by SV and UNHCR. 29 new hand dug or Vonder Rig water points were established. 5 hand dug water points and 33 boreholes were rehabilitated. In Chifunde, 56 new hand dug water points were established (1 DANIDA and 55 USAID). 6 boreholes were also rehabilitated. In Moatize district which was funded by SV and USAID, 5 hand dug wells and 23 boreholes were rehabilitated.

Water point committees were established and trained for each water point but the exact number of water point committees currently functioning is not known as some of the committees are in charge of more than one water point.

The water programme succeeded in establishing water points in areas of urgent need in the shortest possible time and managed to keep many water points running by responding to reports of difficulties. This has facilitated the return of refugees and the establishment of infrastructure. Factors facilitating this included: the support of communities, DPOPH and Agua Rural; the water programme used a low tech approach where possible; drilling equipment for boreholes was supplied by UNHCR; selection of water points was done in consultation with beneficiary communities and DPOPH; where possible, communities provided locally available materials; communities were encouraged from the start, to contribute money to buy spare parts instead of ARC simply providing them and water point committees were established and the communities are now responsible for their own water supply.

Factors hindering the water programme included the lack of a hydrogeological study to guide ARC operations. A study of this type should cover a description of the geology of the area

including the ground and below ground formation. There was a lack of adequate data to manage the rehabilitation programme. Details of each bore hole need to be assessed. These include the original borehole construction design, the borehole yield, the original depth against the current, the static water level when the borehole was drilled against the current static water level and the recommended pump setting depth. This information could have been used to better apply the low tech approach. Also, the government requirement that an Afridev pump be fitted to all water points was a restrictive regulation which created problems in deep well situations such as Kaphiridzanje.

There was also a lack of coordination with the health programme, in particular with regard to the establishment and training of water point committees at the onset of the programme. The water programme suffered from a lack of balance between construction of the water points and their future maintenance. This was probably due to the number of water points established being too ambitious for the timeframe.

Sustainability

Water point committees have been trained to maintain the pumps, collect money for spares from the communities and mobilise them to keep the area clean and fenced. All wells were fitted with a hatch so that if the committee was unable to repair the pump, the community would still have access to a semi-protected source. The commitment of committees and their communities varied a great deal. In some villages the committees were able to collect money and repair minor faults. However, this is not always the case.

Trained water point committees have also undergone refresher courses. This should lead towards increased sustainability since community members know how to repair the pumps and they have the tools required to do so. However, obtaining the spare parts is definitely a problem. Although communities are already used to collecting money to purchase the spare parts, availability of spares varies from district to district.

In the survey, a member of the community at each water point was asked if there was someone in the community who could repair the pump when broken. The response was positive in all communities interviewed. During the consultants field visits, members of the water point committees were interviewed and questioned on their ability to fix the pumps. Particular attention was paid when the pump was not working. In all cases the water point committee knew what the problem was but some had difficulty in collecting the funds from the community.

In Chifunde East, spares are available just across the border in Malawi where they are cheaper than those available in Tete. People in Moatize and Changara districts obtain their spares from Tete. Chifunde West is an area of concern as they are up to 400km away from Tete. The concern also arises when the problem is beyond the water committee to repair. The assumption that Agua Rural will take the responsibility to fix these pumps is optimistic, particularly in Chifunde East which is 400km away from Tete.

Some water committees said that it was not clear that ARC had handed over the pump to the community although this may just have been a convenient excuse if there were problems. Others were not clear that they should report major problems to Agua Rural once ARC had

Ohanded over the well which was 6 months after completion.

In Kaphiridzanje, ARC's task was to rehabilitate boreholes drilled by GEOMOC and fit Afridev pumps. The Afridev pump is not suitable for the deep boreholes found in this area and the pumps are continually breaking down. The water committee and the community were very discouraged. There is one committee in charge of all the pumps and it was not functioning well. They were unable to carry out appropriate repairs and complained that when they did fix the pumps they would break down again very soon after. ARC has offered assistance wherever possible but the situation can only deteriorate when ARC leaves.

III. HEALTH

ARC met the objective of "70% of households in target areas have and use family latrines". A total of 8,655 san plat latrines were completed in the 4 districts (including Doa, Mutarara district) and the numbers are summarised in table 9. This represents a total coverage of 76% of the households in the target areas. The total number of families with a latrine is 8,195 (some families have 2 latrines). Only Kaphiridzanje fell short of the 70% coverage target. All other villages surpassed the target. The HELP team did not reach the village of Cadzongue as originally planned due to time constraints. The list of villages where the HELP and Activista programmes were active is found in appendix O. The HELP programme was active in 19 villages.

At the time of the survey, 3 HELP teams were still active which explains why so many latrines were under construction. 98% of households with a latrine reported that all adults and older children usually use the latrine, but only 58% reported that children under 4 years use it as well as adults. However, when including families without latrines, the percentage of adults and older children using a latrine drops to 75% and if children under 4 are included, the percentage was 43% who regularly use a latrine.

ARC met its target of "20% increase in PHC knowledge among adult target population for 5/12 (20% increase) or 4/12 (20 percentage point increase). Knowledge of 3 topics was already high in the baseline so a 20% increase could not be expected.

The greatest increase in knowledge occurred with regard to the benefits of drinking pump water (118% or 39 percentage points), the benefits of having a latrine (85% or 33 percentage points), diarrhoea transmission (71% or 27 percentage points), malaria transmission (114% or 17 percentage points) and people's knowledge of when to wean the baby (100% or 23 percentage points). Some knowledge questions such as when to wash hands, how to make leftover food safe and AIDS transmission had a high percentage of correct responses during the baseline and so little change in knowledge was observed and a 20% points increase could not be expected. Knowledge of family planning methods and time between pregnancies only showed a slight increase and the importance of early prenatal care decreased slightly.

The midterm evaluation revealed poor knowledge on the importance of colostrum and also malaria transmission and so these topics were focused on thereafter. Although there is an 17 percentage point or 114% increase in knowledge of malaria transmission, the final survey showed that only 30% of people interviewed knew that malaria was transmitted by

mosquitoes.

The objective " 33% of adults report practising appropriate behaviours" was also met for 9/11 of the behaviours. Four of these behaviours were observed and the rest were reported practised by the respondents.

It is interesting to note that even though most respondents were aware of the importance of washing hands after using the latrine (72%), it appears that not many people are actually practising this. Having the knowledge does not appear to be sufficient to change this behaviour; other factors must come into play such as availability of water. It is also an extra responsibility for the women of the households as they are usually the ones who fetch water.

It is also important to note that during the survey, respondents were sometimes asked about behaviours that they reported practising. They were not actually observed practising all of the behaviours. Asking a person if they practice a certain behaviour may give a more positive response than if the behaviour is actually observed. People have a tendency to give the correct answer even if they are not actually carrying out the behaviour.

It is of interest to note that while only 30% of respondents knew that malaria is caused by mosquitoes, 55% of respondents were able to name a method of protecting themselves from mosquito bites. People are obviously protecting themselves from mosquito bites without realizing that mosquitoes are the malaria vector. If the association could be made more clear, then people may be more likely to take precautions to avoid being bitten.

The objective "50% of births in target areas are attended by a trained health worker" was achieved. The number of births assisted by a trained health worker was 45% in the baseline survey. In the final survey, a total of 61.8% of births were assisted by a trained health worker, either at a health facility or by a trained TBA. It is not possible to say to what extent this increase is due to ARC's activities as the training of TBAs did not take place as originally planned (only 10 were trained in the Western villages of Chifunde district). However, Activistas were to encourage women to seek the assistance of TBAs when delivering and TBAs were included in the Activista trainings wherever possible.

At the time of the evaluation, 122 trained Activistas were currently active in 12 villages. ARC had trained more but some of them were no longer working as Activistas. A total of 9,781 households had been visited by either ARC paid staff or volunteers during the programme and 216,455 individual health messages had been delivered.

11 school based AIDS clubs were formed; three of these were in ARC's target districts and the rest were in Tete City or other districts.

The activities of the health programme were facilitated by the following factors: former camp staff that worked with ARC in Malawi were initially hired by ARC; people in the camps had already been exposed to hygiene and sanitation programmes and so these programmes were not new to them when they returned home; HELP production sites were established right in community and 85% of the HELP team members came from the communities where they lived and worked; the Activistas also lived in the villages and were not paid and these people should be a continued resource even after ARC has left. Also, a low tech approach to the

construction of latrines using locally available materials was applied.

The Evaluation team which was in Tete at the end of the programme, witnessed a rush to reach the latrine coverage target in Kaphiridzanje. The original Sanitation Coordinator in Kaphiridzanje falsified figures and caused a setback to the programme. By the end of July 1996, 64% latrine coverage had been reached. There was pressure to reach the target of 70% before the end of the programme and 3 HELP teams were still working at the time of the survey in Marara and Kaphiridzanje. Hence, 14.8% of respondents surveyed were still constructing their latrines in July/August 1996.

The evaluation team did not get a good idea of health education and follow up activities from the members of the HELP team interviewed, as their discussions focused mainly on the actual construction of latrines. The Activistas were overwhelmed by the number of messages at the beginning of programme but this was later reduced. The need to collect information for measuring the objectives and outputs proved to be a hinderance as it was difficult to measure the number of health education messages delivered because of the low level of literacy of Activistas. While it is important to have incentives and training materials, Activistas had expectations that incentives would continue and expressed disappointment that this was not the case.

As previously stated, the Activistas experienced difficulties with the number of messages at the beginning of the programme. The recording system was beyond most of the activistas and hence the validity of the number of health education messages collected was questionable. While it is important to have some record of what the Activistas are doing, too much time and attention may have been dedicated to collecting this data. It is more important to focus on the training and quality of education.

Quality of Health Education

The simplicity of the health education messages was good and they were consistent with those of DPS. The messages were appropriate to the target audience. The evaluation team did not see many of the health education activities in action so it is difficult to comment on the actual quality of their presentations.

The KAP survey shows that several areas of knowledge and behaviour increased so it appears that the programme was effective. Good emphasis was placed on non formal education methods such as drama, song, puppets.

Sustainability

The construction of latrines by the community is theoretically a sustainable activity but in practice most households have not reached the third year when they are likely to have to build a second latrine on their own. 85% of the HELP teams were from the communities in which they worked: they are a source of knowledge and should be able to assist the community even though they are no longer ARC paid staff. It is hoped that they will be able to assist the community in properly siting the latrine and measuring the diameter of the pit. The slabs are designed to be reused which should increase the likelihood of sustainability.

The handwashing system was a simple and practical idea and the survey showed that 21% of people with latrines had water for washing hands within 5m of their latrine. The idea has not yet been fully embraced by the communities and this will probably require more followup and health education. Many handwashing stations were obviously not used: the large tin had little or no water and in some cases one or both tins had been removed. People said that tins had been removed by children or knocked down by animals. In some cases they said they were told to put up the system by the HELP team. Others said they did not have enough water to fill the tins. It may be useful to look further into the reasons why people do not wash their hands. Many of the schools did not have handwashing facilities and perhaps the hygiene programme could have focused more on school children.

The idea of training Activistas that live in the community and are respected is recommendable and potentially sustainable. However, there are some difficulties. Although the activistas were volunteers, they did receive incentives in the form of training materials, notebooks, T-shirts, etc. ARC was careful not to present these incentives on a regular (monthly) basis to avoid appearing like a form of payment. They were sporadic and practical for work purposes so that the Activistas would be less likely to expect continued incentives. However, many of the Activistas had the expectation or hope that the incentives would continue. This, coupled with the fact that they will no longer be able to report to their supervisors, the Activista Coordinators, may discourage them from continuing their work. Many Activistas interviewed told us that they had stopped recording household visits in their notebooks as there was no-one to report to. They did not appreciate that the records would be of use to them to plan their weekly household visits and activities.

Even if the Activistas do not maintain their records they are still a source of knowledge in the community. Many of them observed a decrease in the number of illnesses in particular diarrhoea. Some Activistas expressed an interest in reporting to the nurse at the health facility; and perhaps further linkages could be explored to improve collaboration between health facility staff and the Activistas.

C OVERVIEW OF PLANNING WITH LOGFRAMES

ARC originally developed a programme logframe for it's proposal to USAID in mid-1994. This logframe along with grant agreements were used as planning tools for ARC's programme. In October 1995, ARC managers revised the USAID proposal logframe to incorporate other activities funded by other donors, and to modify the objectives to make them more specific. The revised programme logframe, along with separate project logframes (water, construction, HELP, Activistas, TBAs, School based AIDS clubs, and administration)' allowed managers to take greater ownership of the objectives.

Although in the original grant agreement with USAID morbidity and mortality indicators were agreed to as end-of-grant indicators by ARC, it was not ARC's intention, nor was it feasible to measure them. As stated in the original USAID proposal logframe, "it is beyond the scope of this project to measure a reduction in infant and maternal mortality. CDC cites significant decreases of morbidity and mortality from similar interventions."

Although the Ministry of Health collects annual data on infant and maternal mortality at the district level, it is not possible to use this data since ARC has only been active in a few locations in the 3 districts and for a short period of time. It is therefore unlikely that the programmes would yet have had any impact on mortality. Also, it would not be possible to claim that any reductions or changes were a result of ARC's programmes as the programme did not cover the entire districts of Changara, Chifunde and Moatize.

While the construction and rehabilitation of water points has been in process for approximately 3 years, ARC's health/ hygiene education and latrine promotion programme was only 15-28 months in duration. Secondly, the investment of resources required to measure infant and maternal mortality and the large sample size required to conduct an accurate survey, made this activity impractical for ARC.

D ANALYSIS OF PROGRAMME OBJECTIVES, OUTPUTS AND ASSUMPTIONS

1. 80% of Households living within 750 m radius of ARC water point get their drinking water from that protected source.

It is not always possible to site a hand dug water point within 750 m of a village or bairro and a water point is often sited on the edge of a village. This objective does not address the functionality and breakdown time of the pumps since it is only looking at functioning water points. If, for example 50% of ARC supported water points were not functioning, this would not be reflected in the end of project indicator. New and rehabilitated water points should have been covered in separate objectives if the current objective is to be used. ARC did not "site" rehabilitated water points and many of the water points inspected by the team were more than 750 m from most households.

An alternative objective could have been:
80% of households in the target programme area have access to an ARC protected water point.

Two separate outputs could have been:
X number of new water points established by ARC and
Y number of non-functioning water points within the target area are rehabilitated by ARC.

2. 20 % increase in PHC knowledge among adult target population.

This objective is not specific enough and is therefore difficult to measure. Also PHC knowledge should have been defined at project onset. There was some discussion among the managers whether a percentage point increase or a percentage increase was to be measured. Finally ARC managers decided to use both percentage and percentage point increases when measuring change. The consultants felt that a percentage point increase would be more meaningful. A 20% increase in PHC knowledge is reasonable if percentage point is considered but the actual percentage increase should be higher.

3. 70% of Households in target areas have and use family latrines.

This was a good objective and easy to measure at the end of the programme as long as household data is accurate and complete. The number and percentage of households having latrines can be measured both through ARC records and the PHC survey. The survey also revealed whether both adults and children are using the latrines.

4. 50 % of births in target areas are attended by a trained health worker.

The baseline survey showed that 45% of births were already attended by a trained health worker so a target of 50% would not have been very ambitious.

5. ARC trainees show a 25-50 % increase in knowledge for each training.

This objective should clearly state who ARC trainees are s that pre and post tests can be administered for the appropriate trainings. Eg Sanitation Coordinators, Activista Coordinators,

Water Point Committee Members, Activistas etc.

6. 33% of adults in target area report practising appropriate health behaviours.

Appropriate health behaviours should have been defined and agreed upon at the beginning of the programme. The actual percentage of adults practising appropriate behaviours should have been revised after the baseline survey so that a realistic objective was set. It would also be useful to separate observed and reported behaviours.

7 Provide health facilities in areas where sufficient population warrants cost.

8 Provide educational facilities in areas where sufficient population warrants cost.

Indicators 7 and 8 are not measurable and were modified in July 96. While it is understood that the primary aim of ARC was to increase access to education, the current objective is not measurable. However, the output of 32 classrooms is measurable. The bulk of this programme's resources were most likely spent on schools and health facilities and so these objectives should have been clearly defined in a measurable way at the start of the programme. Using the current objectives 7 and 8, the plan for the allocation of schools and health facilities was based on a preliminary assessment which considered both population data and Ministry guidelines.

An alternative objective could have been:
" X% of children of primary school age within 5km walking distance of an ARC constructed/rehabilitated primary school, have access to (and attend) that school.

(It could be argued that all children within 5km of the school would have access to the school. Also, ARC had no influence over whether the children attend the school or whether it was staffed.)

Outputs/Indicators

Most of the output indicators chosen were considered clear and measurable indicators, a few were not so clear or useful and are discussed below:

The number of new and rehabilitated water points could have been split into two separate outputs.

"X number of water point committees trained", ie, each water point to have their own water point committee. There may be occasions where several water points may have one committee but this may present problems when collecting money for spare parts.

The outputs, 9,375 HH visited at least once by ARC trained village-level health worker and 150,000 health education messages delivered are not useful measures of the programme's impact. They detract from the quality of health education and place emphasis on quantity which is not so important.

Assumptions

While the assumptions made in the original logframes were reasonable at the start of the programme, the situation has now changed and some of them no longer hold. The assumptions that facilities will be maintained by GRM and the target population are optimistic. Communities visited had no sense of ownership of schools and health facilities and so are unlikely to maintain them, assuming it to be government responsibility. It is unclear due to current economic and political conditions whether the facilities will be staffed, supplied and maintained by the appropriate Ministries. In addition, the assumption that appropriate Ministries would cooperate and support ARC's programme did not always hold.

E BENEFITS OF ARC PROGRAMME AND LEVEL OF SATISFACTION OF PARTIES INVOLVED

Local staff have benefited from short term employment opportunities with ARC and the transfer of skills. Every effort was made to work with and hire people from the communities and people with knowledge are now left in the communities. The survey and our field visits revealed that members of the communities are aware of the benefits of drinking pump water and having a latrine. Many people observed that there had been a noticeable decrease in the number of cases of diarrhoea and malaria. There has been an increase in PHC knowledge and improved behaviour. Ultimately this should lead to a decrease in infant and maternal mortality.

The communities also have better access to safe drinking water and are now responsible for their own water supply. They have the skills to maintain and repair the pumps. Also structures such as schools and health facilities are now in place, waiting for the Ministries to staff and equip them. The infrastructures have been established, and communities may stabilise around them. Construction equipment, tools for digging latrines and health education materials have also been left with the communities.

Target Communities

Members of the target communities were extremely satisfied with ARC's work. They had noticed an increase in knowledge and safe practices, in particular, the construction and use of latrines, and the use of safe drinking water. Many had observed a decrease in the number of cases of malaria and diarrhoea and they attributed this to the change in behaviours. Community members supported the Activistas and HELP teams who were now a source of knowledge in the community. The only hint of dissatisfaction came from the Activistas themselves. Although it was made clear to them at the start of the programme that they were volunteers, they did receive several incentives and expressed a hope that this would continue. Water point committees were frustrated in some areas by continuous breakdowns. In Kaphiridzanje, the Secretarios told us that in 1993 when they first returned , their most urgent need was water. In 1996, their most urgent need is still water. Communities were very happy with the schools and health facilities but were waiting for them to be staffed and become operational. All communities expressed disappointment that ARC was leaving and hoped that they would stay on.

ARC Staff

Personnel hired by ARC are now looking for work elsewhere although many employees have benefited from having a stronger economic and skills base. Given the difficult working conditions, managers are satisfied with the overall outcome of the programme. They did feel that there could have been better communication between managers and perhaps more management meetings with direction. They also felt that collaboration with NGOs and Ministries could have been improved.

Relevant Ministries and Organizations

The Ministries were all very positive about ARC's collaboration with them and were satisfied with the quality of work produced. All expressed a desire for ARC to stay on. There was good collaboration with PSI who shared an office with ARC and was involved in the school AIDS programme. The School AIDS programme is likely to continue with the support of PSI and other NGOs.

Collaboration with the Mozambican Red Cross (CVM) was initially good. The original plan was that the CVM would be a local implementation partner and take over the supervision of the Activistas trained by ARC to ensure that they continue when ARC leaves. CVM originally seconded one of their members to work with ARC in establishing the Activista programme. He later left to continue his studies and so the links with CVM were reduced.

DANIDA expressed satisfaction with the work that ARC agreed to carry out. A general observation was made that while many NGOs had a short term approach to programmes, this created some problems for the government who then had to take on the maintenance and supervision of facilities constructed by the NGOs. DANIDA has adopted a more long term approach and is currently focusing on capacity building within the Ministries.

UNHCR reported a good working relationship with ARC and were very satisfied with the quality of work and support.

F SUPPORT FROM HEADQUARTERS

Most managers appreciated that headquarters allowed them to be independent and flexible. However, some managers expressed a desire for more technical support. Expertise from other programmes should be shared whenever possible. ARC headquarters is developing a framework and guideline document which will be useful as well as model baseline surveys and logframes. It would be of benefit to ARC if other ARC country programmes assisted with midterm evaluations to provide other opportunities to exchange ideas.

Headquarter staff could have visited Tete for longer periods of time to become more familiar with the programme, offer technical support and exchange ideas. ARC staff also reported that there was not a good grievance mechanism within ARC.

The Regional Health Advisor provided some continuity from the Malawi programme but it is understood that these posts will now be phased out and the headquarter staff are being reduced which will mean less support for the programmes.

G ENVIRONMENTAL ASSESSMENT

Based on an initial environmental assessment in September 1994 by USAID of ARC's proposed activities in Mozambique, a negative determination was recommended for hand dug well rehabilitation and construction, latrine construction, road rehabilitation, health facility rehabilitation and construction, and health education activities.

Approximately 60 wells were constructed or rehabilitated in Chifunde district and each water point was fitted with an Afridev pump. Each well was sited and constructed in accordance with the established technical standards and specifications outlined by DPOPH. The siting of the water points was carried out by the ARC water manager in close collaboration with the community leaders and a representative of DPOPH.

Communal latrines were established at health centers and schools and were the responsibility of the ARC construction manager. The establishment of family latrines was supervised by the Health Programme Manager. Both programmes used the established technical standards and specifications of the National Institute of Physical Planning (INPF) for the construction and siting of the latrines.

The ARC construction manager in coordination with the community leaders and representatives of the Ministry of Health (DPS) were responsible for the siting of new health posts to be constructed by ARC. The post were to be equipped and furnished by ARC and staffed by DPS. DPS provided the plans and specifications for the basic health post and the health post plus maternity ward. All facilities were constructed using local materials and labour where possible.

About 76km of roads were rehabilitated in order to provide access to project sites. Local labour and simple tools were used and this work was supervised by the ARC construction managers in consultation with DPOPH and ECMEP. Road work was carried out according to the UNHCR guidelines on Labour Intensive Road Construction, Improvement and Maintenance programme. Only existing compacted earth roads were rehabilitated and no new roads were constructed.

H BUDGET

ARC has completed most of the activities outlined in its donor agreements and expects to complete all activities by 30 September 1996. 2 health centers and 2 schools are still under construction (Thequesse, Luia, Amose and Marara boarding school dormitories) and ARC expects to complete these structures by October 1996.

ARC has been submitting financial reports on a quarterly basis to the respective donors. ARC took note of the USAID audit conducted in March 1996 and implemented the recommendations in the report. Although unit costs were calculated in the original proposals to donors, it was not possible to calculate the unit cost of ARC's outputs, such as wells, latrines, basic health posts, maternities, and 2, 4 and 6 roomed schools. It was also not possible to ascertain what percentage of total budget was allocated to the different programmes: construction, water health education and latrine production. This may have created more bureaucracy for ARC but this information would have been useful for planning

purposes and assessing priorities. The programme occasionally experienced some cash flow problems with delays in the transfer of funds form donors and problems with the banking system. Managers expressed a desire to have their own budgets or to have been more informed of the status of the overall budget.

LESSONS LEARNT/RECOMMENDATIONS

A GENERAL RECOMMENDATIONS

ARCs project activities had a primary health care focus and should continue to do so as this was a good approach. The HELP and Activista programmes both used members of the community as much as possible and these people will remain as a source of knowledge in the communities once ARC has left. Some of ARC's programme activities in Tete Province were not of an emergency nature. This is the first time that ARC has worked with refugees returning to their country and a resettlement programme is not the same as am emergency programme. Sustainability must receive greater emphasis.

Constructing schools and health facilities is a long term development activity. If the objective is to address the immediate needs of the returning refugees, then perhaps it would be better not to focus on infrastructure but on supporting teachers, providing educational materials and addressing immediate health needs. If the programme is going to take a longer term approach and focus on construction, then the use and maintenance of the structures must be addressed.

The fact that decisions were made in Tete instead of at ARC headquarters was beneficial to the programme as it allowed for flexibility. The managers were able to adapt to the local situation and constraints. Experience from the Malawi programme also helped the staff to start up in Tete in the shortest possible time. The management team produced detailed monthly and annual reports which were shared with donors and other collaborating NGOs. This sharing of information should be encouraged wherever possible.

Management

ARC Mozambique may have benefited from a more integrated programme. The construction, water and health programmes appeared to be very independent. The managers could have focused on strengthening links between the programmes. In particular, health and water programmes could have worked more closely throughout the programme, especially on the establishment and training of the water point committees. The water programme should also be closely linked to construction for technical support. Lastly, the health programme could have established links with the construction programme and in particular with the health facilities and schools once construction had been completed and they were in use. Perhaps better links could have been established between the Activistas and the health facility personnel to ensure that they continue their work. Unfortunately, the original plan with CVM did not work out as this would have been ideal.

While the school based AIDS programme is a commendable one, a school based health programme in the target areas could also have been implemented. This would have complemented the work of the Activistas and could have reinforced the hygiene education messages transmitted by the HELP teams. It would also have been appropriate since ARC had constructed latrines in all the schools.

The ARC programme may have benefited from more management meetings. Although these started to become reg lar towards the end of the programme, they seemed to lack direction and often became sidetracked. Management meetings may have helped to integrate the

programmes further. This could also have been complemented by management/inspection visits to the sites where input from the different programme managers could be obtained.

Programme managers could have been in charge of their own budgets. This would have been useful for planning purposes. Unit costs would also be useful for cost benefit analysis as measures of effectiveness and assessment of the delivery system. Managers would be accountable for their budgets and be able to make realistic and informed decisions about their programme strategies.

Planning

ARC was successful in implementing its programme in the districts of Changara, Chifunde and Moatize. However, operating in three different districts did present logistical problems especially problems of a multilingual nature. Two local languages, Chichewa and Chinyungwe as well as Portuguese and English were used which created an extra burden on staff when translating documents such as questionnaires and training materials. It may have been better to focus on one district and one local language or two contiguous districts.

It may have been a useful strategy to attempt to start all programme activities in the same location at the same time. ARC could present its programme as a package in a particular village and the community would then see ARCs activities as a whole. Better linkages would be established between the programmes and they would be more coordinated.

ARC was under great pressure to complete the assignment in Tete in the given time frame and this may have had implications on the quality of work produced. In hindsight, it may have been better to either have had a less ambitious programme and to focus more on follow up, or to have extended the current programme for an additional 6 months to improve the likelihood of sustainability.

Outside technical support could have been sought earlier on in the programme. Many more opinions could have been sought when writing the original proposal. Also, the baseline or midterm surveys could have been done in collaboration with consultants or other ARC programme staff from other countries. Actual project monitoring appeared to be weak. The midterm evaluation was a very thorough and comprehensive exercise which provided some very useful feedback. However, some of the recommended actions, in particular with regard to the water sector, were not adopted and implemented. It would have been appropriate for the managers to have produced a revised implementation plan at this stage.

Personnel

The Director of the programme spent a great deal of time on finance and the programme may have benefited from a separate Finance manager. Likewise, Construction and Operations could have been separated into two posts as this also proved to be a heavy workload for one person to manage. The managers also spent a lot of time on logistical and personnel issues and it may have been useful to either hire expatriate logistics and personnel managers or train local personnel for these positions. It is also important to more thoroughly check the employment history and references before employing staff and to take more time to thoroughly train local staff at the onset of the programme.

All managers including the Director should spend sufficient time if the field to ensure that they are familiar with all the project sites. It is not possible to appreciate the logistical problems and constraints without continuous field visits.

Expatriate staff should have a working knowledge of Portuguese or have the opportunity for language training at the start of programme. The ARC Mozambique programme is fairly long term in comparison with other ARC emergency programmes which usually have shorter contracts for expatiate staff. In view of this, separate housing was sensible as it is not easy to live and work together for a long period of time in such difficult conditions. Mozambique is classified as a hardship country situation and the managers may have benefited from official sanctioned long weekends in Zimbabwe or Malawi. Management retreats in a different environment were a good idea and helped to improve working relationships. Expatriate contracts should be longer than one year to ensure continuity and effort should be made to keep the managers for the duration of the programme as a lot of time is wasted on staff turnover. Management experience is important in staff selection.

It is important to share programme strategies strengths and weaknesses with other ARC programmes and other NGOs in the same area. There could have perhaps been more collaboration with other NGOs working in Tete Province. There is a tendency to "reinvent the wheel". ARC's programme would definitely have benefited from more collaboration with Ministries, in particular the Ministry of Health. Time should be spent at the beginning of the project to get to know the Ministries and NGOs and the way they work. There can sometimes be a conflict of interest as many NGOS have a set programme which may not be in agreement with the overall objectives of the Ministry of Health.

Logframe

The logframe is a very useful planning tool when used properly. Although the use of a logframe was a requirement for USAID, it appeared to be more of an academic exercise than a planning tool as attention was only given to it halfway through the programme (October 1995). All managers should be more involved in the logframe so that they take ownership of the objectives and outputs and do not inherit a logframe produced by somebody else. If managers are not there at onset of programme, they should be brought on board immediately. They should set the objectives together as a team. Ideally, managers should be able to review the logframe and resubmit to donors to approve AFTER the baseline survey has been carried out and the extent of the problems assessed. In this way more realistic and achievable objectives and outputs would be set.

For the logframe to be used properly, it must be reviewed. Once it is understood that sustainability is a problem and certain of the logframe assumptions are wrong, then corrective action should be taken. When assumptions are not held the objectives should be revised or limited and this process should be documented. The three end of grant indicators selected by USAID proved to be unmeasurable within the timeframe and scope of the programme. It is not clear why these were agreed upon. Every effort should be made to ensure that the programme has the capacity to collect and measure the agreed outputs and indicators before the onset of the programme. Each country situation is different and local constraints should be considered when deciding on end of grant indicators.

B PROGRAMME SPECIFIC LESSONS LEARNT/RECOMMENDATIONS

CONSTRUCTION:

* Increase level of participation of community in construction programmes.

* Establish PTA or school committees and encourage them to be involved in the management and maintenance of the schools.

* Schools should be formally handed over to the Ministry of Education and to the beneficiary communities and the roles of each should be made clear.

* ARC should work closely with the Ministries of Health and Education to ensure that plans are in place to staff the facilities.

* Future emergency/resettlement programmes should focus on support to teaching staff and the provision of educational materials rather than the actual school structures.

WATER:

* Continue to involve community from the start of a water project.

* Continue to train water point committees and monitor their performance closely throughout the duration of the programme.

* Continue to involve women in the water point committees as they are the main collectors of water.

* Where feasible, a separate water point committee should be established for each water point established.

* Monitoring and followup of the condition of water points should have occurred more regularly throughout the programme.

* External technical assistance should be sought at the beginning of the programme to conduct a detailed hydro-geological survey and assessment.

* A detailed assessment of each water point to be rehabilitated should be carried out.

* Rehabilitation and establishment of new water points should be considered as separate issues with separate objectives.

* When siting wells, accessibility during the rainy season must be considered.

* Priority should be given to target population and then to institutions such as schools and health facilities.

* Committed NGO intervention is required in Kaphiridzanje to review the water

problems and to seek government support to find an alternative solution eg pilot testing of the Rotary pump which is suitable for deep wells.

* Mechanism for continued maintenance of pumps, including spares, should be firmly established before ARC leaves.

HEALTH:

* Continue to keep messages short and simple

* Continue to use nonformal education messages appropriate for the community

* Recommend more health education at schools with an emphasis on hand washing in connection with the latrines.

* Weekly planning meetings with health and water staff to encourage collaboration

Activistas:

* Continue to use volunteers from the village to provide health education as they are familiar with the local customs and beliefs and will remain in the village as a source of knowledge even after ARC leaves.

* Need a more effective reporting system to be in place before the start of field work.

* Better output than the number of messages recorded

* Go back to non literate methods of reporting

* Audit field records more often

* Overall initial training plus refresher courses quarterly or six monthly instead of monthly.

* Establish closer linkages with the health facilities to increase the likelihood of sustainability.

HELP Programme:

* Place more emphasis on follow up activities after the completion of the latrine.

* Continue to promote easy to construct hand washing units

* Continue to promote the construction and use of traditional latrines in the absence of san plats.

* Greater focus on hand washing and explore reasons why people do not wash hands despite having the knowledge of when it is important to wash hands.

* Teach communities how to site their own latrines

* Explore options on how to dig a reinforced latrine pit where the ground is sandy or unstable.

ARC should address the following issues before completing it's programme in Mozambique:

1) Ensure a smooth handover of the programme activities.

2) Repair water points that are not functioning.

3) Deepen wells that were dug in the rainy season.

4) Ensure that each well has a trained and active water point committee.

5) Review the water problems in Kaphiridzanje and pilot test an alternative deep bore hole pump in collaboration with DPOPH.

6) Together with DPOPH, survey all water points constructed or rehabilitated by ARC to assess their functionality, yield, and presence of water point committee. Ensure that all interested parties have this information when ARC leaves.

7) Mobilise communities to start a preventive maintenance programme for schools and health facilities.

8) Liaise with UNHCR to ensure that a maintenance programme is in place for the schools.

9) Liaise with DANIDA and DPS to ensure that a maintenance programme is in place for the health facilities.

10) Seek further dialogue with DANIDA and the DPS to clarify issues of staffing, supervision, equipment and supplies of health posts and maternity units constructed by ARC.

11) Establish closer linkages with the health facilities and DPS to increase the likelihood of sustainability of the Activista programme.

APPENDICES:

APPENDIX A

ARC LOGFRAME

Project Logical Framework ARC_MOZ

Narrative Summary (NS)	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
Goal: To improve the health of approximately 140,000 residents, returnees, and displaced persons, in the target areas of Moatize, Changara, Chifunde, and Mutarara districts of Tete Province, Mozambique	Decreased morbidity and mortality among the target population (beyond the scope of this project to measure)	CDC cites significant decreases of morbidity and mortality from similar interventions The primary health care approach is the key to obtaining 'Health For All' (Declaration of Alma Ata. 1978)	(Goal to Supergoal): Interventions sustained
Purpose: To improve primary health careknowledge and practices among the target population	(End of Project Status) 1 80% of HH living within 750 m radius of ARC water point get their drinking water from that protected source 2 20% increase in PHC knowledge among adult target population 3 70% of HH in target areas have and use family latrines 4 50% of births in target areas are attended by a trained health worker 5 ARC trainees show a 25-50 % increase in knowledge for each training 6 33% of adults in target area report practicing appropriate health behaviors 7 Provide health facilities in areas where sufficient population warrants cost 8 Provide educational facilities in areas where sufficient population warrants cost	1,2,4,6: Surveys 3: ARC records: Visual inspection and surveys 5: ARC records of pre/post-tests 7,8: ARC records & available population data	(Purpose to Goal): Environmental stability
Outputs: Provision of clean drinking water Provision of sanitary facilities Provision of health centers/posts and equipment	1 107 protected water points constructed or rehabilitated 2 Water point committees established and trained for each water point 3 65 VIP latrines constructed 4 8,750 family latrines constructed 5 6 health centers/posts constructed or rehabilitated and equipped	1,3,4,5,6,11: visual inspection 2,7,8,9,10: ARC reports	(Output to Purpose): Target population conducive to change Facilities utilized by target population Facilities maintained by GRM and target population Facilities staffed and supplied by appropriate Ministries Population remains stable

Project: ARC_MOZ

Date: July 31, 1996

Project Logical Framework ARC_MOZ

Narrative Summary (NS)	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
Provision of road access to project sites	6 Open and maintain 230 km of access roads		
Provision of health education	7 320 village-level health workers trained		
	8 9,375 HHs visited at least once by ARC trained village-level health worker		
	9 150,000 health education messages delivered		
	10 5 school-based AIDS clubs established		
Provision of schools	11 32 classrooms constructed or rehabilitated and furnished		
Activities: Recruit, hire, train, and supervise staff Secure material and equipment Revise administration and operation systems Maintain donor support Maintain collaboration with appropriate Ministries, NGOs, and communities On-going monitoring, evaluation, and revision of activities Implementation of program (and project activities)	Inputs: Personnel (1 CD, 1 HPM, 1 HEC, 1 WPC, O/CM, 1 AM, and project personnel) Material and equipment Transport Information Facilities	Budget:	(Activity to Output): Continued donor support Materials available and affordable Qualified staff available Appropriate Ministries, NGOs, and communities will cooperate and support ARC's program

Project. ARC_MOZ

Date. July 31, 1996

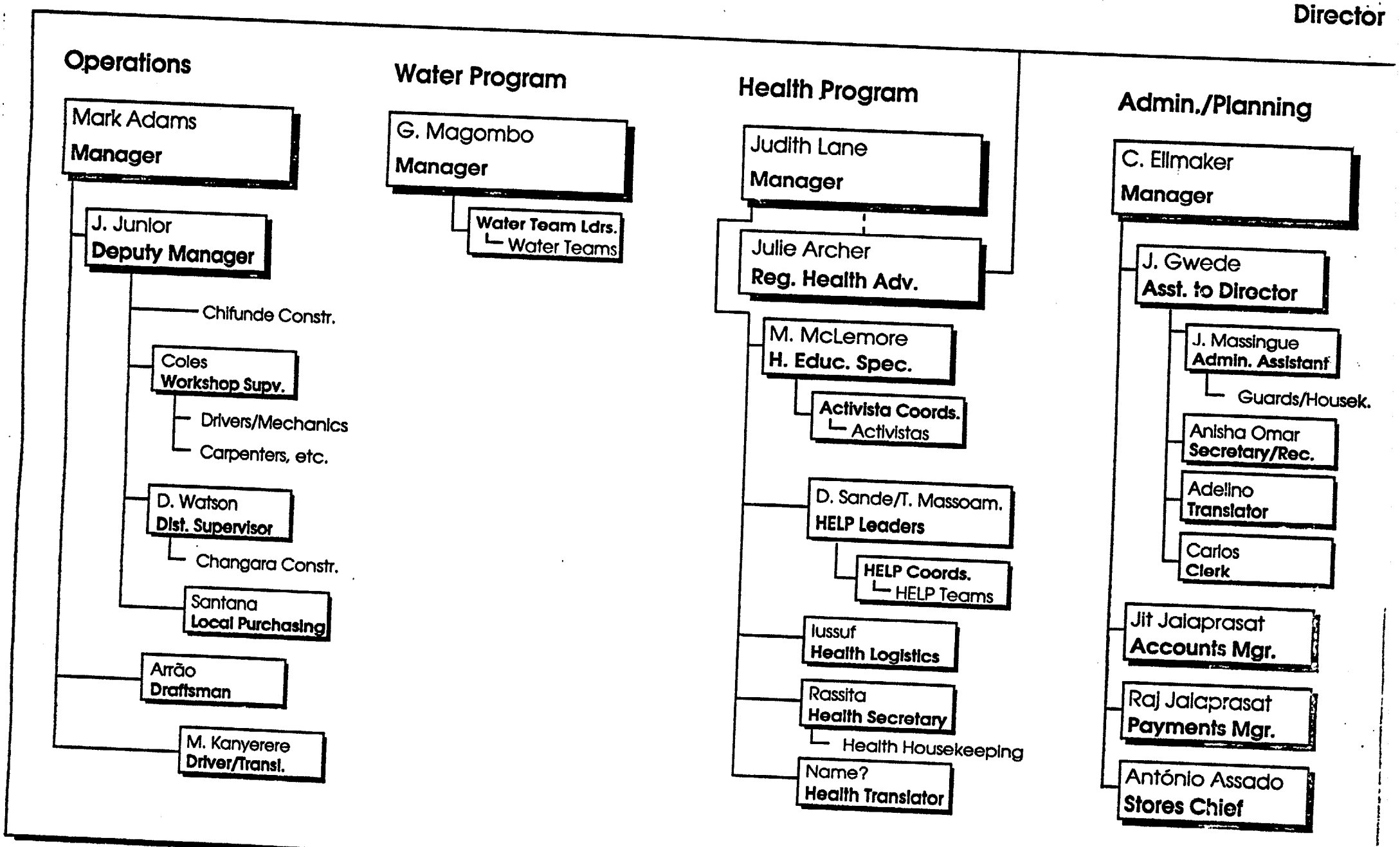
APPENDIX B

ARC MOZAMBIQUE ORGANISATIONAL CHART

American Refugee Committee

Organization Chart

Charles Ellmaker
Director



APPENDIX C

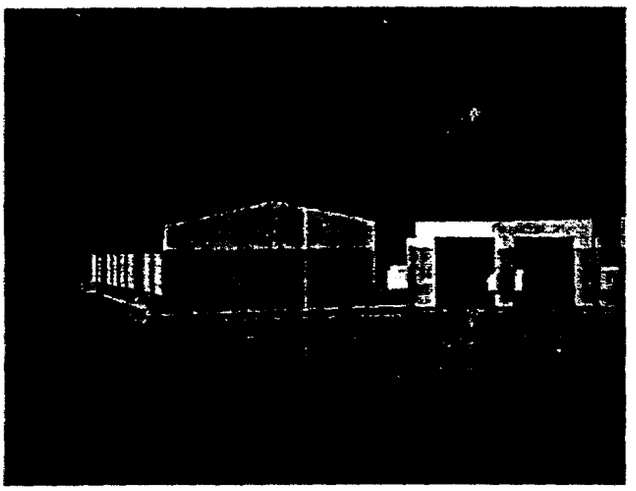
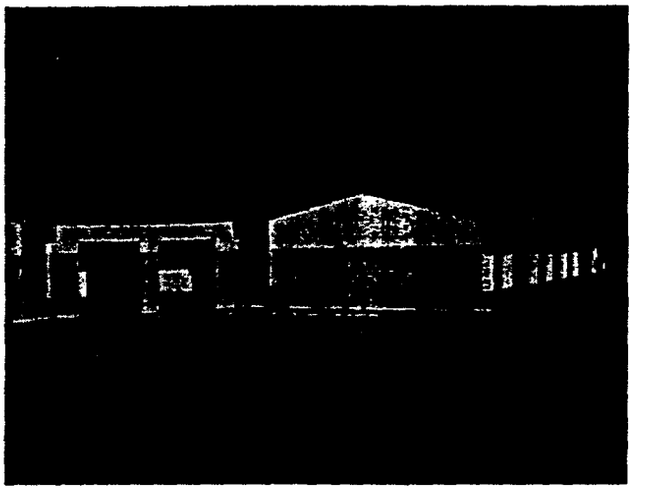
EXAMPLE OF A TYPICAL SCHOOL

AND

HEALTH FACILITY CONSTRUCTED BY ARC

AMERICAN REFUGEE COMMITTEE
VILA MUALADZI AREA SCHOOL CONSTRUCTION PROGRAM
UNHCR FUNDED
(as at 3-4 June 1996)

Bulemo: Four classrooms and two staffhouses.

Kaputo: Two classrooms and one staffhouse.


CHIPEMBERE HEALTH FACILITY

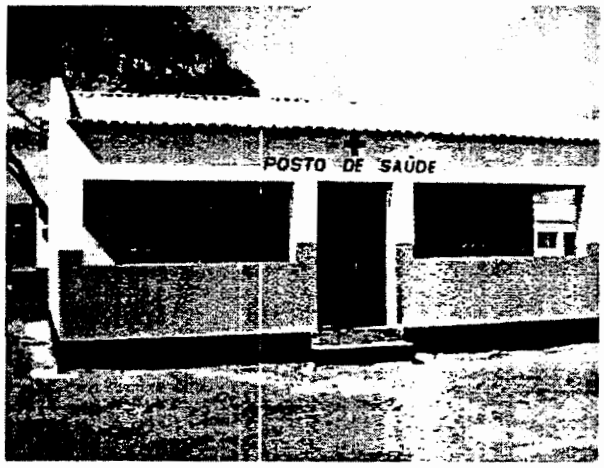
UNHCR FUNDED

CONSTRUCTED BY ARC

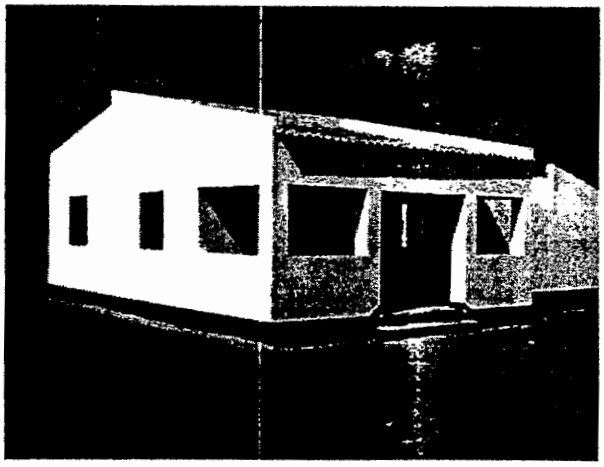
as at 8 August 1996

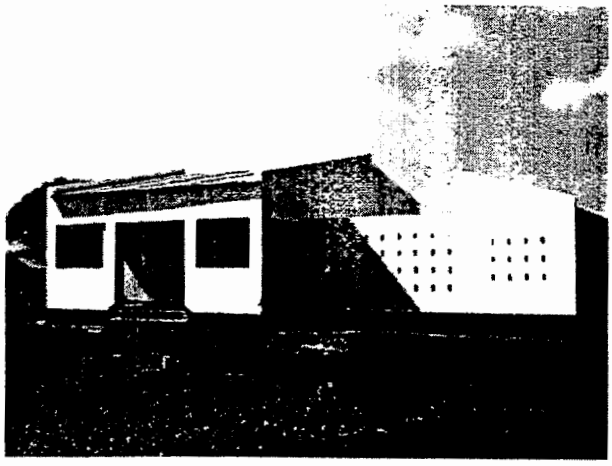
Comprising: One two roomed Health Post (clinical), one Maternity facility with a delivery room and a five bed ward, two staff houses, six public latrines and a latrine for each staff house.

The two health facility structures at Chipembere.



The two staff houses constructed for health post staff.





APPENDIX D

USAID LOGFRAME

US AGENCY FOR INTERNATIONAL DEVELOPMENT

American Refugee Committee. Tete Province, Mozambique
Logical Framework

NARRATIVE	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
Goal: To achieve lasting improvements in the health and knowledge base of approximately 140,000 residents, returnees, and displaced persons, especially women and children – in Moatize, Changara, and Chifunde districts of Tete Province.	1. Decreased Morbidity 2. Decreased Mortality ~~3. Increase in educational level of population~~	1-2. CDC sites decreases of 26% (morb.) and 55% (mort.) from similar interventions. Long-term evaluation would be required (not within time scope of project) 3. End-of-Project surveys and Ministry of Education data (long-term).	1-3 No renewed fighting Continued donor support No outbreaks of disease Stabilizing population GRM able to sustain interventions
Purpose: 1. Increase access to clean water. 2. Increase access to basic health care 3. Increase access to adequate sanitation. 4. Increase the number of trained health personnel 5. Increase knowledge of health and health practices. 6. Increase access to education.	End-of-Project Status: 1. 80% of households receiving water from improved water point (750-m radius). 2. 70% latrine coverage 3. 25-50% increase in pre- and post-test scores in all trainings 4. 33% practicing health behaviors as outlined in Health Education objectives 5. 67% of households visited by ARC/MOH/CVM PHC worker. 6. 50% of births attended by trained health provider. ~~7. 50% of children attending primary school (5-km radius).~~	1-4 End of project survey. 5 ARC records 6 ARC/MOH/CVM records. 7. Ministry of Education records.	1 Clients conducive to change. 2 Population stabilizing 3. No radical environmental change: (drought, etc.). 4 GRM staffs school and health facilities.
Outputs: 1. 60 wells built with hand pumps. 2. 250 communal latrines built. 3. 6,000 family latrines built 4. 110 Traditional Birth Attendants trained. 5. 120 village health workers trained 6. 3 health facilities built. 7. 6 schools built. 8. 6 drama groups trained 9. 75,000 health education messages delivered. 10. 25,000 people receiving health education messages	1. # of wells built 2. # of communal latrines built 3. # of family latrines built 4. # of TBA's trained. 5. # of village health workers trained 6. # of health facilities built. 7. # of schools built. 8. # of drama groups trained. 9. # of health messages delivered 10. # of people receiving health education messages.	1.-7. Visual inspection 6 Acceptance by GRM. 7. Acceptance by GRM. 8. Drama groups operating 9 ARC record-keeping. 10 ARC record-keeping.	1. - 7. Materials found locally or imported duty-free. 1. - 7. ARC able to transfer goods from Malawi. 1. - 10. Staff and equipment procured according to work plan. 6 Final GRM approval. 7 Final GRM approval.
Inputs: 1. Personnel 2. Equipment 3. Supplies 4. Funding for above as outlined in budget	1 Expat + national staff on site by 8/1/94. 2. Equipment on site by 8/1/94 3 Materials procured and in place as needed 4 Funds received in timely manner	1 - 4 Donor agreements 1 - 4 Audits 1 - 4 ARC financial and progress reports	

APPENDIX E

SCOPE OF WORK AND SCHEDULE OF EVALUATION CONSULTANTS

Scope of Work

Final Program Evaluation
American Refugee Committee (ARC), Tete Province, Mozambique

Activity to be evaluated

The entire American Refugee Committee's Mozambique program, from October 1993 through July 1996 in the three districts of Moatize, Changara, and Chifunde, is to be evaluated. The program includes community health education and promotion, latrine promotion, water point rehabilitation and construction, construction of health and school facilities, and road rehabilitation. The program has been funded primarily by United States Agency for International Development (USAID), along with United Nations High Commissioner for Refugees (UNHCR), Danida, Stichting Vluchteling (SV), and the US State Department Bureau of Population, Refugees, and Migration (PRM).

Purpose of the evaluation

The evaluation is primarily to provide ARC management staff, Ministries, donors, and communities with an assessment as to the extent that program objectives have been achieved and recommendations on how the program activities could be improved for possible future replication. More specifically, the evaluation should include the following activities:

- Assess to what extent the program objectives and activities have been achieved, and identify which factors facilitated or hindered the attainment of those objectives.
- Assess the benefits provided by each program activity to the target population, including the extent to which ARC's assistance resulted in better health and sanitation practices and knowledge.
- Assess the level of satisfaction expressed of the targeted communities, ARC staff, relevant Ministries, and collaborating NGOs regarding ARC's activities and resulting effects.
- Assess the advantages and disadvantages of the strategies chosen to achieve the stated objectives and contribute towards ARC's goal, and assess the strengths and weaknesses of the specified objectives and assumptions.
- Assess the condition of the outputs produced in providing water points, health and school facilities, rehabilitated roads, communal latrines and latrine slabs.
- Assess the quality[1] of health education activities.
- Assess the sustainability[2] of the overall effects from ARC's water, sanitation, and health education activities without continued ARC support or other international assistance.
- Determine if the specified outputs were produced within the given global budget.

---

[1] Quality refers to whether the activity was done correctly, in accordance with any specified guidelines, and geared to the appropriate level for the target population (i.e. age, socioeconomic status, educational level, etc.). For health activities, quality should also include whether issues of major importance to the communities' health are addressed. For construction activities, durability should be considered, as well.

[2] Sustainability refers to enduring benefits, or the continuation of the effects produced, at least in part, by ARC's program, even after ARC has ceased its support.

- Assess the environmental impact of ARC's activities (as outlined on pp.37-40 of the USAID Grant agreement with ARC).

- Summarize lessons learned and recommend changes to the program design and means of verification that would enhance the attainment and measurement of similar objectives for a similar situation and program.

- Review institutional support from headquarters, and provide suggestions for improvement.

Background of ARC's Mozambique Program

The American Refugee Committee (ARC), at the request of the United Nation's High Commission for Refugees (UNHCR) and the Government of the Republic of Mozambique (GRM), began its program in Tete Province, Mozambique soon after the signing of the peace accord in October 1993. ARC's goal has been to improve the health of approximately 140,000 residents, returnees, and displaced persons in four districts of Tete Province: Moatize; Changara; and Chifunde; and more recently Mutarara. ARC plans to achieve this goal through assisting the Mozambican government with the reconstruction and rehabilitation of infrastructure, and through the increased knowledge and improved practices which lead to good health among the targeted population. For further details on the program's goals, objectives, means of verification, and activities, please refer to Appendix I, the ARC Program Logframe.

ARC's Mozambique program began with water point rehabilitation and communal ventilated improved pit (VIP) latrine construction in Moatize district. Construction of health and school facilities and further water point construction was begun in Changara District soon after; later in 1994 those same activities were expanded to Chifunde District. The hygiene education and latrine promotion (HELP) project began in Moatize district in April 1994. As a result of the project's success, the HELP project was expanded to Changara District in August 1994, Chifunde District in March 1995, and to Mutarara District in September 1995. Starting in March/April 1995 community health volunteers (called *Activistas*) began to be trained to provide communities with primary health care (PHC) education. Road rehabilitation activities have also been conducted in Changara and Chifunde Districts to facilitate access to project sites. ARC water point construction and rehabilitation has occurred in Changara, Chifunde, and Moatize districts.

The health education program consists of two major components: hygiene education and latrine promotion (HELP); and community health volunteers (called *Activistas*). Both health program components revolve around a team of health educators, either ARC-paid staff or unpaid Activistas, most of whom originate from the area where the program is located, and are trained and supervised by ARC. The staff of both health program components work together to mobilize and educate the people in their communities. The health educators coordinate, mobilize, and educate the community and community leaders to take responsibility for their health through improved health practices. They are responsible for conducting community health education sessions, household visits in their neighborhoods (bairros), health education talks at the schools and health facilities, and competitions. The messages, which are as short and simple as possible, are presented using a variety of non-formal adult education techniques, including: discussions, puppets, visual aids, dramas, and songs. The Activistas conduct health education on a variety of primary health care topics; the HELP teams focus primarily on hygiene and sanitation, including the provision of latrine slabs to individual households.

The water program stresses the importance of community participation in the siting, construction, and maintenance of the water points constructed/rehabilitated by ARC. Where possible, the community assists in siting the water point and collecting materials; local labor is hired for digging the hole. ARC

assists the community in establishing and training water point committees to maintain the pump and surrounding area. The training includes water hygiene and treatment. The community is requested to collect money to purchase one set of spare parts, but is given the necessary tools, to maintain the pump after the training.

The construction program's aim was to assist the Government of Mozambique in structural rehabilitation of health and school facilities, and some road rehabilitation. Community members were employed where possible to assist in the building of health and school structures and roads; but due to the tight time schedule, the program couldn't include much skills-building.

Surveys Conducted

Between March 1994 and May 1995, three water and sanitation baseline surveys in ARC's three target districts and one primary health care (PHC) baseline survey of the same 3 districts were conducted. The baseline surveys were implemented to assess knowledge, attitudes, and practices (KAP) within the target communities prior to beginning health promotion activities. A mid-term monitoring survey was also conducted in all three districts during November 1995 to assess ARC's progress in affecting changes in KAP within the target populations.

During the mid-term monitoring survey, water utilization and water point observation surveys were also conducted. The water utilization survey was implemented to obtain an indication as to the percentage of individuals who live within 750 m of an ARC rehabilitated or constructed pump who also collect their drinking water from that pump. The water point observation survey was implemented to ascertain the condition of approximately half of the pumps rehabilitated or constructed by ARC.

Evaluators

A team of two outside evaluators will conduct the evaluation and provide a final report, in close collaboration with ARC-Mozambique's Evaluation Coordinator, Julie Archer Tunney, and Director, Charles Ellmaker. The evaluators will review documents, interview individuals, hold group discussions, and conduct site visits prior to analyzing the information and writing a final report. A third consultant, a survey consultant, will be employed to review and revise ARC's survey questionnaire and sampling methodology, and input, analyze, and produce tables and graphs of the KAP survey results.

The evaluators need to meet the following criteria:

- experience conducting program evaluations, preferably for an NGO
- international development experience in health, community development, water/sanitation, or management, preferably with an NGO in Africa.
- good writer
- professional attitude
- team player
- fluent in English and computer-literate

The Team Leader needs to also meet the following requirements:

- conducted at least 1 program evaluation, for which he/she acted as team leader
- experience working with/for NGOs in Africa
- detail person
- demonstrated leadership qualities
- health background

Role of the Evaluation Consultants

Team Leader

The Team Leader will assign responsibilities to herself and to the other consultant to ensure that all necessary activities will occur according to the established schedule. . The Team Leader will collect and synthesize the evaluation components into one comprehensive evaluation report.

Evaluation Methodology

- Document Review: Through the document review, the evaluation team will become familiar with ARC's program, write a brief history of ARC's activities, determine if the specified outputs were produced within the given budget, assess the quality of outputs, and assess the extent to which ARC has accomplished its intended activities and objectives, as shown in the documents. Documents to review include: monthly and annual reports; program proposals; grant agreements; program and project logframes; implementation plans; surveys (baseline and mid-term); records (including number of health education messages, number of households visited, number of latrines and hand-washing posts completed, number of wells constructed, number of trainings conducted, pre/post-tests, etc.); budgets; construction inspection reports; and documents specifying the health education messages promoted.

- Discussions/Interviews
  Discussions and interviews will be conducted by the evaluation team. A list of questions to be covered during the discussions and interviews will be drafted by the evaluation team, in collaboration with the Evaluation Coordinator.
  - Discussions/interviews with ARC program staff (including ARC management staff, field supervisors, and health field staff living in the villages) will be conducted to obtain an overview of the projects, headquarters' institutional support, the projects strengths/weaknesses, lessons learned, staff's level of satisfaction with the program, and recommendations for improving the program and institutional support.
  - Group discussions or individual interviews with representatives of randomly selected communities, NGOs collaborating with ARC, and Ministries of Health, Education, Water, and Construction will be conducted to obtain their level of satisfaction with ARC's projects, the impact of ARC's projects on the community, the perceived benefits of program activities for the target communities, and the potential for sustainability of benefits.
  - Interviews with water point committee members will be conducted to determine their knowledge of water point hygiene and maintenance which will influence the sustainability of the water points.

- Site visits/inspections: In order to assist in determining the quality and sustainability of project components, and the acceptability and practical application of health messages with respect to the water points and latrines. The evaluation team will assess the current condition of randomly selected latrines, ARC-constructed or rehabilitated water points, roads, schools, health facilities, and related Ministry staff housing. A random audit of the records of work completed could also be integrated into this visit.

- Household knowledge, attitude, and practice (KAP) survey: A KAP survey will be implemented to determine the extent of change in knowledge, attitudes, and behavior as regards primary health care. The survey will use identical knowledge questions posed in the baseline surveys, so that changes over time, as specified in the objectives, can be measured. The survey will also include

questions to assess appropriate health behaviors and participation in program activities. The survey will be implemented by ARC-Mozambique health project staff. The Survey and Evaluation Consultants will verify that the survey instrument and methodology are appropriate and recommend modifications where needed. The Survey Consultant will analyze the collected data and compare it to the baseline surveys, and the Evaluation Consultants will interpret the data, determine the extent to which objectives have been met, and incorporate the results into the final evaluation report.

- Water observation and utilization survey: A survey will be implemented and data tabulated by ARC-Mozambique water and health project staff to assess the percentage of functioning and well-maintained water points and to determine the utilization of ARC-constructed or rehabilitated water points. The information will be used to measure the attainment of the water-related end-of-project status indicators and as an indication of the quality and sustainability of the water points and water point committees. The Survey Consultant will verify that the survey instrument and methodology of sampling is appropriate. The evaluation team will review and suggest changes to the survey instrument and interpret the collected data.

- The environmental impact of ARC's activities will be assessed through review of documents, site visits and interviews to address the concerns outlined on pp.37-40 of the USAID Grant agreement.

Evaluation Output: Final Report

The evaluation report should include the following elements:

- Executive Summary

- Background: brief country profile (including population figures of refugees and returnees); overview of ARC (overall and Mozambique program), including: program goals and objectives, activities, collaborative relationships with other NGOs and Ministries; and an overview of baseline and mid-term surveys conducted

- Evaluation Methodology

- Evaluation results and discussion (including tables and charts, where useful): to provide results and discuss all elements listed under the purpose of the evaluation, and to specifically address the following questions:
  - Did ARC achieve what it agreed to in donor agreements?
  - Did ARC achieve its output and purpose indicators, as specified in the program logframe? What other factors hindered or facilitated attainment of the objectives?
  - Do ARC's program activities and objectives contribute towards the attainment of the program goal?
  - Do program managers and evaluators feel the goals and objectives were appropriate for the program purpose, and if not, how do they suggest changing them?
  - What are the advantages/disadvantages of the strategies chosen to achieve the stated objectives?
  - What were the strengths/weaknesses of the program activities? What recommendations can be given for strengthening the program strategies?
  - Which projects, activities, or effect from activities did ARC expect to be sustained, and to what extent are they sustainable?

Did ARC produce quality[3] work?
To what extent were community members (difference between those who did or did not actively participate?), ARC staff, relevant Ministries and collaborating NGOs satisfied with ARC's interventions, and why? Did they find the program useful? Why/why not? Were the communities' priorities met?
To what extent have the communities accepted ARC staff, Activistas, water committees, and project activities, and have they taken ownership of certain projects?
What benefits were provided to the target communities, especially regarding improved health and sanitation?
What benefits were provided to others, including other NGOs, Ministries, ARC staff?
Were the specified outputs produced within the given global budget?
What impact did ARC's water and construction activities have on the environment?
How could the institutional support from headquarters be improved, and which elements should be maintained as is?

- Lessons learned and recommendations for improving project activities for potential replication elsewhere (input from ARC and evaluation team). Include suggestions for proposal revision.

- Appendices
  - Scope of Work
  - Terms of reference
  - Evaluation Schedule
  - Survey instruments
  - Log Frames
  - More detailed data tables

The final report will be written in English, and later translated into Portuguese. The evaluators will orally present the findings to the ARC staff in Tete, and again to representatives of USAID in Maputo. The evaluators will produce a draft report for ARC staff to review and suggest modifications, prior to the final report being produced. The results from the evaluation will be shared with Ministries, donors, and community members during visits to the communities by program management staff.

[3] see footnote 1

Evaluation Schedule

18 June-12 July	Prepare KAP and water survey materials and translate; identify enumerators, and determine sampling methodologies
3 July	Evaluators to review, and revise if necessary, KAP and water utilization and observation surveys procedures, questionnaires, methods of data input, sampling methodologies (1-2 days)
1 July	Survey Consultant to review, and revise if necessary, KAP and water utilization and observation surveys procedures, questionnaires, methods of data input, sampling methodologies (1 day)
2-5 July	Water utilization and observation surveys preparation (4 days)
2-22 July	KAP Survey preparations: select sample, revise, translate, pilot, and copy survey
9-18 July	Implementation of water surveys (10 days)
23-26 July	Train enumerators for KAP survey (5 days)
29 July-6 August	Conduct KAP survey (6-8 days)
5 August	Introductions to ARC-Tete and initial team discussion and division of responsibilities
5-10 August	Document review and interviews with program managers and other organizations or Ministries in Tete (6 days)
5-8 August	Survey form review and translations
9-22 August	Input and analyze KAP survey data (11 days)
12-21 August	Site visits and interviews in communities with community members (including ARC staff) and interviews/discussions in Tete with staff of ARC, Ministries, and collaborating NGOs (1 1/2 weeks)
13-16 August	Data input and frequencies for water surveys (4 days)
22 August	Budget and environmental assessment (1 day)
23 August	Water utilization and observation surveys analysis (1 day)
24/26 August	KAP survey results review and analysis (1 day)
24-29 August	Synthesize report components into report format (5 days)
30 August	**Presentation to ARC and Submission of Draft Report to ARC (Tete)**
3 September	ARC to submit comments on report (3 days)
5-20 Sept	ARC to share findings with target communities (2 weeks)
9 September	**Debriefing for USAID (Maputo) and Submit Final Report**
12-16 Sept	Distribute final English report to donors, Ministries, and ARC
11-20 Sept	Translate final report summary into Portuguese (9 days)
23-24 Sept	Distribute Portuguese report summary to Ministries

APPENDIX F

TERMS OF REFERENCE OF EVAULATION CONSULTANTS

Evaluation Consultant: Terms of Reference

Final Program Evaluation
American Refugee Committee (ARC), Tete Province, Mozambique

POSITION:	Evaluation Consultant	
LOCATION:	Tete Province, Mozambique	
DURATION:	Team Leader:	28 June; 3 July; 4 August - 10 September (approx. 32 days)
	Other Consultant:	3 July; 4 August - 10 September (approx. 31 days)

Evaluation Description

The entire American Refugee Committee's (ARC) Mozambique program, from October 1993 through July 1996 in the three districts of Moatize, Changara, and Chifunde, is to be evaluated. The program includes community health education and promotion, water point rehabilitation and construction, construction of health and school facilities, and road rehabilitation. The program has been funded primarily by United States Agency for International Development (USAID), along with United Nations High Commissioner for Refugees (UNHCR), Danida, Stichting Vluchteling (SV), and the US State Department Bureau of Population, Refugees, and Migration (PRM).

The evaluation is primarily to provide ARC management staff, Ministries, donors, and communities with an assessment as to what extent the program objectives have been achieved and recommendations for how the program activities could be improved for possible future replication. The Scope of Work describes in more detail the purpose of the evaluation and the methodology to be implemented in order to obtain the information required to evaluate the program.

Evaluators

A team of two outside evaluators will conduct the evaluation and provide a final report, in close collaboration with ARC-Mozambique's Evaluation Coordinator, Julie Archer Tunney, and Director, Charles Ellmaker. The evaluators will review documents, interview individuals, hold group discussions, and conduct site visits prior to analyzing the information and writing a final report. A third consultant, a survey consultant, will be employed to review and revise ARC's survey questionnaire and sampling methodology, and input, analyze, and produce tables and graphs of the KAP survey results.

The evaluators need to meet the following criteria:

- experience conducting program evaluations, preferably for an NGO
- international development experience in health, community development, water/sanitation, or management, preferably with an NGO in Africa.
- good writer; computer-literate
- professional attitude
- team player
- fluent in English

The Team Leader needs to also meet the following requirements:

- conducted at least 1 program evaluation, for which he/she acted as team leader
- experience working with/for NGOs in Africa
- detail person
- demonstrated leadership qualities
- health background

Role of the Evaluation Consultants

Team Leader

The Team Leader will assign responsibilities to herself and to the other consultant to ensure that all necessary activities will occur according to the established schedule. The Team Leader will collect and synthesize the evaluation components into one comprehensive evaluation report.

Evaluation Consultants

(1) The Evaluation Consultants will review the content of the KAP and water utilization and observation survey questionnaires to determine if they are valid instruments for measuring the following specified objectives:

1. 80% of HH living within 750 meter radius of an ARC water point get their drinking water from that protected source
2. 20% increase in PHC knowledge among adult target population
3. 70% of HH in target areas have and use family latrines
4. 50% of births in target areas are attended by a trained health worker
5. 33% of adults in target area report practicing appropriate health behaviors

The surveys should also include means for obtaining the required information specified in the USAID grant agreement, to the extent feasible and practical.

Where the survey questionnaires need to be modified, the Evaluation Consultants will advise ARC's Evaluation Coordinator as to how they should be modified. The points for approval and recommendations on the surveys will be discussed with the Evaluation Coordinator. Further recommendations, including how the evaluators would like the data presented to them from the Survey Consultant should be summarized in writing and copies given to the Evaluation Coordinator and the Survey Consultant by the 15 of July according to the schedule provided. The Evaluation Consultants must be willing to respond to questions the Evaluation Coordinator or Survey Consultant might have regarding the recommendations or requirements. (Team Leader (3 days); Other Consultant (2 days): (June 28 - 15 July)

(2) As specified in the Evaluation Scope of Work, the Evaluation Consultants will collect relevant information through interviews, discussions and observations, or review of already collected information. The Evaluation Consultants will devise outlines of the types of questions they would like answered through interviews or discussions and the observations they will make during site visits. These outlines will be shared and discussed with the Evaluation Coordinator during the first week in Tete to ensure that the issues of major importance are covered. The Evaluation Consultants will analyze, interpret, discuss and summarize the collected information.

The collected information will be used to:

- Assess to what extent the program objectives and activities (listed in logframes and program proposals and agreements) have been achieved (including interpretation of data to be collected through the surveys), and identify which other factors facilitated or hindered the attainment of those objectives.
  (Through document review, survey data, visual inspection, etc.)
- Assess the benefits provided by each program activity to the target population, including the extent to which ARC's assistance resulted in better health and sanitation.
  (Through interviews or discussions with communities and others, records, etc.)
- Assess the level of satisfaction expressed by the targeted communities, ARC staff, relevant Ministries, and collaborating NGOs regarding ARC's activities and resulting effects.
  (Through interviews and discussions)
- Assess the advantages and disadvantages of the strategies chosen to achieve the stated objectives and contribute towards ARC's goal, and assess the strengths and weaknesses of the specified objectives and assumptions.
  (Through discussions, interviews, ARC document review, literature review, etc.)
- Assess the condition of the outputs produced in providing water points, health and school facilities, roads, communal latrines, and latrine slabs.
  (Through visual inspection and inspection reports)
- Assess the quality[1] of health education activities.
  (Through ARC documents and surveys, discussions, etc.)
- Assess the sustainability[2] of the overall effects from ARC's water, sanitation, and health education activities without continued ARC support or other international assistance.
  (Through discussions, interviews, literature review, etc.)
- Determine if the specified outputs were produced within the given global budget.
  (Through review of budgets and documentation of outputs)
- Assess the environmental impact of ARC's activities (as outlined on pp. 37-40 of USAID Grant agreement with ARC).
  (Through interviews, visual inspection, and document review)
- Gather information on lessons learned and recommended changes to the program design and means of verification that would enhance the attainment and measurement of similar objectives for a similar situation and program.
  (Through discussions, interviews, relevant experiences, etc.)
- Review institutional support from headquarters, and provide suggestions for improvement.
  (Through discussions and interviews)

(3) The Evaluation Consultants will devise a preliminary schedule of site visits and interviews, with assistance from the Evaluation Coordinator, by 6 August. (If a schedule could be devised before that time, all the better in order for ARC to plan the relevant logistics.)

(4) The Evaluation Consultants will produce a draft evaluation report (7 copies) containing the elements specified in the Scope of Work by 30 August.

---

[1] Quality is referring to whether the activity is done correctly, in accordance with any specified guidelines, and geared to the appropriate level for the target population (i.e. age, socioeconomic status, educational level, etc.). For health activities, quality should also include whether issues of major importance to the communities' health are addressed. For construction activities, durability should be considered, as well.

[2] Sustainability is referring to enduring benefits, or the continuation of the effects produced, at least in part, by ARC's program, even after ARC has ceased its support.

(5) The Evaluation Consultants will present their findings and recommendations to ARC staff in Tete on 30 August.

(6) The Evaluation Consultants will review, and incorporate into the final evaluation report where appropriate, the written comments made by ARC staff (ARC staff to produce comments on 2-3 September). The Evaluation Consultants will produce a final report (original copy plus 20 bound copies) by 9 September.

(7) The Evaluation Consultants will go to Maputo to present a debriefing to the USAID mission on 9 September. The Director, Health Program Manager, Operations Manager, and the Health Advisor (Evaluation Coordinator) will also attend the debriefing.

The Evaluation Coordinator will make available to the Evaluation Consultants the relevant records, reports, survey questionnaires, data files, health education training materials, pre and post-tests, etc. to complete the services specified in the Terms of Reference and Scope of Work. Some of the reports, surveys, agreements, and background information will be available by 6 July, the majority of the documents, however, will not be available until 4 August in Tete. The budget information will be available on 17 August. If particular documents are needed in advance of the stated dates, the Evaluation Coordinator should be informed.

Evaluation Outputs

The Evaluation Consultants will provide the following according to the scheduled dates:

1. Discussion with Evaluation Coordinator regarding recommendations for maintaining and/or modifying the questionnaires or sampling methodology for the water and KAP surveys (28 June and 3 July). Further written suggestions on the KAP survey to be made by 15 July (by fax to Tete).

2. Written summary of the frequencies, tables and graphs of the KAP survey data to be supplied to the Evaluation Coordinator and Survey Coordinator by 15 July.

3. Written evaluation draft and final reports, including the elements specified in the Scope of Work to be completed and handed to the Evaluation Coordinator or Director as follows:
   August - Draft report (7 copies)
   September - Final report (20 copies and original print-out and 2 copies on diskettes).

4. Oral presentation of the evaluation conclusions and recommendations to ARC staff in Tete on 30 August.

5. Oral presentation (Debriefing) of the final evaluation conclusions and recommendations to USAID mission staff in Maputo on 9 September.

Evaluation Schedule

Evaluation Consultants' responsibilities are in bold type

18-27 June	Prepare KAP and water survey materials and suggest sampling methodology
28 June- 15 July	**Evaluators to review, and revise if necessary, the KAP and water utilization and observation surveys' content and sampling, and specify data presentation needs for KAP survey (2 or 3 days)**
2-5 July	Water utilization and observation surveys preparation (4 days)
8 July	Water Survey Training (1 day) (ARC team)
9-18 July	Implementation of water surveys (10 days) (ARC water team)
2-22 July	KAP Survey preparations: select sample, revise, translate, pilot (16-17 July), and copy survey (ARC team)
23-26 July	Train enumerators for KAP survey (4 days) (ARC health and water team)
29 July-6 August	Conduct KAP survey (6-8 days) (ARC health and water team)
4 August	**Travel from Harare to Tete**
5 August	**Introduction to ARC-Tete and Initial team discussion and division of responsibilities**
5-10 August	**Document review and interviews with program managers and other organizations or Ministries in Tete (6 days)**
5-8 August	Survey form review and translations (ARC-Tete)
9-22 August	Input and analyze KAP survey data (Survey Consultants: 11 days)
12-21 August	**Site visits and interviews in communities with community members (including ARC staff) and interviews/discussions in Tete with staff of ARC, Ministries, and collaborating NGOs (1 1/2 weeks)**
13-22 August	Data input and frequencies for water surveys (4 days) (ARC team)
22 August	**Budget and environmental assessment (1 day)**
23 August	**Water utilization and observation surveys analysis (1 day)**
24/26 August	**KAP survey results review and analysis (1 day)**
24-29 August	**Synthesize report components into report format (5 days)**
30 August	**Presentation of findings to ARC and Submission of Draft Report to ARC**
3 September	ARC to submit comments on report
5-20 Sept	ARC to share findings with target communities (2 weeks)
? 7 or 8 Sept	**Travel to Maputo**
9 September	**Submit Final Report and Debriefing for USAID (Maputo)**
10 Sept	**Travel to Harare**
12-16 Sept	Distribute final English report to donors, Ministries, and ARC
11-20 Sept	Translate final report summary into Portuguese (9 days)
23-24 Sept	Distribute Portuguese report summary to Ministries

APPENDIX G

ARC ACTIVITIES AT FIELD VISIT SITES

ARC ACTIVITIES AT FIELD VISIT SITES

	ARC ACTIVITIES				
	School	Health Post	Water	HELP	Activista
Chifunde East					
Bulimo	4 CR		7	Yes	Yes
Kaputo	2 CR		2		
Namiramba	2 CR		2	Yes	Yes
Villa Mualadzi	2 CR	Clinic & Maternity	2	Yes	Yes
Macantha	2 CR			No	No
Chifunde West					
Nsadzu	4 CR	Clinic & Maternity		Yes	Yes
Amose/Ngwenya	3 CR	COMMUNITY CENTER			
Thequesse	6 CR	Clinic & Maternity		Yes	Yes
Luia		Clinic & Maternity		No	No
Changara					
Marara	Boarding School Dorms	Rehab Clinic & Maternity		Yes	Yes
Matambo				Yes	No
Mazoe Ponte		Clinic & Maternity		Yes	Yes
Moatize					
Kaphiridzanje				Yes	Yes

APPENDIX H

KAP SURVEY QUESTIONNAIRE

AMERICAN REFUGEE COMMITTEE
FINAL EVALUATION KAP SURVEY

Tete Province, Mozambique
Draft July 24 1996

100 IDENTIFICATION

101 *I.D. N°:* _ _ _ _ _ _ _ _ _

102 *District:* _____

103 *Village:* _____

104 *Bairro:* _____

105 *Interviewer's code:* _ _

106 *Date:* _____/_____/1996
(day) (month)

107 *Supervisor's code:* _ _

Data Capture 1: _____ [_][_]

Data Capture 2: _____ [_][_]

200 RESPONDENT'S CHARACTERISTICS

201 *Respondent's sex:*
1. [ ] Female
2. [ ] Male

We would like to start by asking you a few basic questions about you and your household.

202 a. How many people <u>usually</u> live and eat together here in this household (including yourself, children, cowives, and workers)? _____ (*Total*)
b. How many women of reproductive age[1] usually live here? _____
c. How many children less than five years old usually live here? _____

203 Who is the head of the household?
1. [ ] Man
2. [ ] Woman
99.[ ] DK/NR[2]

204 How old are you? _____ *years*

If age not known, ask: "What year were you born?" _____

99.[ ] DK/NR

205 How long have you lived here in this village?
1. [ ] Less than 6 months
2. [ ] 6 - 11 months
3. [ ] 1 - 2 years
4. [ ] More than 2 years
99.[ ] DK/NR

---

[1] 15 - 49 years
[2] Don't know or no response

206 Do you plan to stay here for more than a year?
0. [ ] No
1. [ ] Yes
99. [ ] DK/NR

300 WATER SUPPLY, SANITATION, AND HYGIENE

Now we would like to ask you some questions about your water, sanitation and hygiene practices.

Water

301 Where do you usually get your drinking water?
1. [ ] Pump or lined well with lid *(Go To Q 303)*
88. [ ] Other
99. [ ] DK/NR

302 Do you do anything to treat the water before drinking it? (*Probe*: How do you treat it?)
0. [ ] No
1. [ ] Boil / Filter / Chlorinate (Javel)
88. [ ] Other
99. [ ] DK/NR

==>> ***Go to Q 304***

303 What are the advantages, if any, of getting drinking water from a pump or protected well, instead of an unprotected well or riverbed?
(Multiple Responses Accepted)
0. [ ] No advantages
1. [ ] Water is good (*Probe:* How is it good?)
2. [ ] Water is clear
3. [ ] Less likely to get sick / Better for health
4. [ ] No need to treat water
88.[ ] Other
99.[ ] DK/NR

Latrines

304 Does your household currently have a latrine?
0. [ ] No (*Go to Q307*)
1. [ ] Yes
2. [ ] Currently constructing (*Go to Q308*)
99. [ ] DK/NR (*Go to Q307*)

305 Do the men, women, and older children in your household usually use your latrine?
0. [ ] No
1. [ ] Yes
99. [ ] DK/NR

306 Do the small children, 1 to 4 years old, in your household usually use your latrine?
0. [ ] No
1. [ ] Yes
2. [ ] No small children in household
99. [ ] DK/NR

==>> ***Go to Q 309***

206 Do you plan to stay here for more than a year?
0. [ ] No
1. [ ] Yes
99. [ ] DK/NR

300 WATER SUPPLY, SANITATION, AND HYGIENE

Now we would like to ask you some questions about your water, sanitation and hygiene prac

Water

301 Where do you usually get your drinking water?
1. [ ] Pump or lined well with lid *(Go To Q 303)*
88. [ ] Other
99. [ ] DK/NR

302 Do you do anything to treat the water before drinking it? (*Probe*: How do you treat
0. [ ] No
1. [ ] Boil / Filter / Chlorinate (Javel)
88. [ ] Other
99. [ ] DK/NR

==>> ***Go to Q 304***

303 What are the advantages, if any, of getting drinking water from a pump or protected
instead of an unprotected well or riverbed?
(Multiple Responses Accepted)
0. [ ] No advantages
1. [ ] Water is good (*Probe:* How is it good?)
2. [ ] Water is clear
3. [ ] Less likely to get sick / Better for health
4. [ ] No need to treat water
88.[ ] Other
99.[ ] DK/NR

Latrines

304 Does your household currently have a latrine?
0. [ ] No *(Go to Q307)*
1. [ ] Yes
2. [ ] Currently constructing *(Go to Q308)*
99. [ ] DK/NR *(Go to Q307)*

305 Do the men, women, and older children in your household usually use your latrine?
0. [ ] No
1. [ ] Yes
99. [ ] DK/NR

306 Do the small children, 1 to 4 years old, in your household usually use your latrine?
0. [ ] No
1. [ ] Yes
2. [ ] No small children in household
99. [ ] DK/NR

==>> ***Go to Q 309***

307 Why don't you have a latrine?
(Multiple Responses Accepted)
0. [ ] Don't want one / Don't like them
1. [ ] No tools / No materials
2. [ ] No one to dig
3. [ ] Accustomed to bush / Like to use bush
88. [ ] Other (*Specify*): _____
99. [ ] DK/NR

308 Where do your household members usually defecate?
0. [ ] Not a latrine
1. [ ] Latrine
2. [ ] Some use latrine, but some do not
99. [ ] DK/NR

309 What are the benefits to regularly using a latrine?
0. [ ] No benefits
1. [ ] Less chance of disease / Better health
88. [ ] Other benefits
99. [ ] DK/NR

Hygiene

310 When is it important to wash your hands?
(Multiple Responses Accepted)
1. [ ] Before eating or feeding a child
2. [ ] After using a latrine
3. [ ] Before food preparation
4. [ ] After working in fields
5. [ ] After cleaning baby's bottom
88. [ ] Other
99. [ ] DK/NR

311 What should you do with leftover food to make it safe for eating?
(Multiple Responses Accepted)
1. [ ] Keep it covered / Keep it away from flies or animals
2. [ ] Reheat it / Boil it
88. [ ] Other
99. [ ] DK/NR

400 DIARRHEA

Now, we would like to ask you some questions about diarrhea, that is, the occurrence of three or more watr ~y stools in one day.

401 The last time someone in your household had diarrhea, what was he or she given?
(Multiple Responses Accepted)
(Respondent can get assistance from others in household, if needed)
0. [ ] Nothing Given
1. [ ] No one has had diarrhea *(Go to Q403)*
2. [ ] ORS *(Probe:* What type of ORS?)
   a. [ ] ORS sachet solution
   b. [ ] Cereal-based ORS ("SRO de farinha")
   c. [ ] Sugar-salt solution
3. [ ] Watery porridge ("papas aguadas")
4. [ ] Breastmilk
5. [ ] Other fluid not specified above
6. [ ] Tablets / Injections / Medicine from health post
88. [ ] Other
99. [ ] DK/NR

402 In the past 3 days how many people in this household have had diarrhea?
0. [ ] 0 / no one
[ ] _____ *(write the number)*
99. [ ] DK/NR

403 How is diarrhea transmitted?
(Multiple Responses Accepted)
1. [ ] Flies / Contaminated food/water
2. [ ] Feces / Improper hand-washing
3. [ ] Dirty latrine / Not using a latrine *(Probe:* How?)
88. [ ] Other *(Specify)*: _____
99. [ ] DK/NR

500 SAFE MOTHERHOOD and INFANT CARE

We would like to ask you a few questions about prenatal care, delivery, and infant care.

501 How soon after a woman knows she is pregnant, should she go for a pregnancy consultation?
0. [ ] No need to go
1. [ ] Within first 3 months / As soon as possible
88. [ ] Other
99. [ ] DK/NR

502 Do you have a child less than one year of age?
0. [ ] No *(Go to Q504)*
1. [ ] Yes
99. [ ] DK/NR *(Go to Q504)*

503 Who was the main person assisting with the delivery?
(Respondent can get assistance from others in household, if needed)
1. [ ] Health facility staff
2. [ ] Traditional birth attendant (TBA) (*Probe*: Has the TBA been trained?)
   a. [ ] Untrained
   b. [ ] Trained
   c. [ ] Don't know if trained
3. [ ] Friend / Family member / Neighbor
4. [ ] Self
99. [ ] DK/NR

504 Is it important to give your newborn colostrum? (*If the respondent does not know the term, define colostrum as:* "the thick yellowish breastmilk produced in the first few days after birth")
0. [ ] No
1. [ ] Yes
99. [ ] DK/NR

505 At what age should a baby <u>begin</u> to receive other food or liquid in addition to breastmilk?
1. [ ] Before 4 months
2. [ ] 4 - 6 months
3. [ ] Later than 6 months
99. [ ] DK/NR

506 Do you have a child between the ages of 1 and 2 years?
0. [ ] No (*Go to Q601*)
1. [ ] Yes
99. [ ] DK/NR (*Go to Q601*)

507 We would like to know what this child ate or drank yesterday. Did this child have any of the following, either added to the sauce or papas or eaten or drunk separately?
(Respondent can get assistance from others in household, if needed)

a. Did your child eat any papas or nsima?
   0. [ ] No
   1. [ ] Yes
   99. [ ] DK/NR

b. Did your child have any sugar or oil?
   0. [ ] No
   1. [ ] Yes
   99. [ ] DK/NR

c. Did your child have any groundnuts, meat, fish, beans, or eggs?
   0. [ ] No
   1. [ ] Yes
   99. [ ] DK/NR

d. Did your child have any salt?
   0. [ ] No
   1. [ ] Yes
   99. [ ] DK/NR

e. Did your child have any vegetables, leaves, or fruit?
0. [ ] No
1. [ ] Yes
99. [ ] DK/NR

f. Did your child have any breastmilk?
0. [ ] No
1. [ ] Yes
99. [ ] DK/NR

600 REPRODUCTIVE HEALTH

We would now like to ask you some questions about reproductive health.

601 What can a man and a woman do to avoid or postpone becoming pregnant?
(*Probe for details of method of child spacing*)
(Multiple Responses Accepted)
0. [ ] Nothing
1. [ ] Pills / Injectables / IUD
2. [ ] Condoms
3. [ ] Abstinence / Avoid sex
4. [ ] Exclusive breastfeeding
5. [ ] Traditional Medicine
88. [ ] Other (*Specify*): _____
99. [ ] DK/NR

602 How much time should elapse between the birth of one child and the beginning of the next pregnancy?
1. [ ] 2 or more years
2. [ ] Less than 2 years
88. [ ] Other
99. [ ] DK/NR

603 What do you do to protect yourself from getting AIDS?
(Multiple Responses Accepted)
0. [ ] Nothing
1. [ ] Remain faithful to partner(s)
2. [ ] Use condoms
3. [ ] Avoid sex
4. [ ] Avoid sex with people who are thought to be infected
5. [ ] Ensure needles or razors are sterilized or new
6. [ ] Avoid receiving contaminated blood
88. [ ] Other (*Specify*): _____
99. [ ] DK/NR

604 How is AIDS transmitted?
(Multiple Responses Accepted)
1. [ ] Through sex or through vaginal fluids/semen
2. [ ] Through contaminated blood / blood transfusion from infected person
3. [ ] By sharing or using needles or razor blades which are unsterilized or not new
4. [ ] From an infected woman to her unborn or new-born baby
5. [ ] Tattooing (*Probe:* How?)
88. [ ] Other
99. [ ] DK/NR

605 What is a condom used for? *(Show condom)*
(Multiple Responses Accepted)
1. [ ] To prevent diseases
2. [ ] Family planning
88. [ ] Other
99. [ ] DK/NR

700 MALARIA

We would now like to ask you a few questions about malaria.

701 How is malaria transmitted?
(Multiple Responses Accepted)
1. [ ] Mosquitoes
88. [ ] Other
99. [ ] DK/NR

702 What do you do to protect yourself from getting bit by mosquitoes?
(Multiple Responses Accepted)
1. [ ] Sleep under a mosquito net / Use mosquito repellent or coil
2. [ ] Eliminate standing water / Cut grass
3. [ ] Create smoke
4. [ ] Wear protective clothing
88. [ ] Other
99. [ ] DK/NR

800 *HEALTH TALKS AND VISITS*

We would now like to ask you a few questions about health talks and visits by health workers.

801 Have you participated in any health talks in the past two months?
0. [ ] No
1. [ ] Yes
99. [ ] DK/NR

802 Did someone from the ARC health program visit your household during the past 2 months?
0. [ ] No
1. [ ] Yes
99. [ ] DK/NR

900 *YARD OBSERVATION*

901 Will you please show me where you store your drinking water.
(Observe: Is the water container covered?)
0. [ ] No, not covered
1. [ ] Yes, covered
88. [ ] Refused to show / No water container

902 Will you please show me where you put your rubbish?
(Multiple Responses Accepted)
0. [ ] No rubbish / Refuses to show
1. [ ] In pit or pile
2. [ ] Burns it
88. [ ] Other
99. [ ] DK/NR

1000 *LATRINE OBSERVATION*

If the respondent has a completed latrine, ask the following question.

If not => Go to END

1001 May I please see your latrine?
0. [ ] No *(Go to END)*
1. [ ] Yes

Observe the following, and tick the appropriate option.

1002 *Is there a cement floor?*
0. [ ] No
1. [ ] Yes

1003 *Is there urine or feces on the floor or slab?*
0. [ ] No
1. [ ] Yes

1004 *Is a lid covering the hole?*
0. [ ] No
1. [ ] Yes

1005 *Is there water for washing hands within 5 meters of the latrine?*
0. [ ] No
1. [ ] Yes

END

This concludes the interview. Thank you for your time and cooperation in completing this interview. Your responses will assist us a great deal in assessing our health education messages and services.

AMERICAN REFUGEE COMMITTEE
Final Evaluation
July 1996

• ARC WATER POINT OBSERVATION SURVEY•

Village: _____ Bairro: _____

Pump Number: _____ Date ARC opened water point: _____/_____
(month) (year)

Rehabilitated or new water point? 1. [ ] new
2. [ ] rehabilitated

Evaluator's Name: _____ Date of evaluation: ___/07/96

Supervisor's Signature: _____

Type of water point:
a. [ ] borehole
b. [ ] hand-dug water point with pump
c. [ ] hand-dug water point with pump and access door

Record observations by ticking the corresponding number.

1. Is the pump working now?
   0. [ ] no
   1. [ ] yes *(Go To Q3)*

2. Is the access door open (unbolted)?
   0. [ ] no
   1. [ ] yes

3. Is the apron clean and free of debris?
   0. [ ] no
   1. [ ] yes

4. Is the apron in good condition and free of cracks and holes?
   0. [ ] no
   1. [ ] yes

5. Is there stagnant water within 10 meters of the water point?
   0. [ ] no
   1. [ ] yes

6. Is there a fence around the water point?
   0. [ ] no *(Go To Q8)*
   1. [ ] yes

7. Is it possible for animals to get inside the fence?
   0. [ ] no
   1. [ ] yes

8. Are there animals or animal feces within 10 meters of the water point?
   0. [ ] no
   1. [ ] yes

9. Are there any latrines within 30 meters of the water point (or within 50 meters of the water point if latrine is uphill from water point)?
   0. [ ] no
   1. [ ] yes

10. Are there people washing clothes or dishes within 5 meters of the water point?
   0. [ ] no
   1. [ ] yes

11. ***Taste the water***: Is the water salty?
   0. [ ] no
   1. [ ] yes, a little salty: drinkable
   2. [ ] yes, very salty: NOT drinkable

Ask an adult at the well who usually uses the water point (or at a nearby house) the following questions:

12. If the pump breaks, is there someone in the community who can fix it?
   0. [ ] no
   1. [ ] yes
   99.[ ] don't know

13. When was the last time the pump broke?
   0. [ ] has not broken ***(Go To Q15)***
   88.[ ] ___ ___ / ___ ___
   (month)/ (year)
   99.[ ] don't know

14. Did someone from the community fix the pump?
   0. [ ] no
   1. [ ] yes
   99.[ ] don't know

15. How does the community obtain spare parts for the pump?
   0. [ ] no spare parts obtained
   1. [ ] community contributes money to purchase parts
   2. [ ] spares given to community
   88.[ ] other: _____
   99.[ ] don't know

END

If the pump is broken, ask a water point committee member why it is broken. Below, please briefly describe the problem.

APPENDIX J

WATER UTILIZATION QUESTIONNAIRE

AMERICAN REFUGEE COMMITTEE
Final Evaluation
July 1996

• ARC WATER POINT UTILIZATION SURVEY•

100 IDENTIFICATION

Village:_____ Bairro:_____

Pump Number: _____ Date: ___/ 07/96

Respondent Number: ___ ___ Distance from water point: _____ meters

Interviewer's name: _____

Supervisor's signature: _____

200 WATER

201 From where do you usually get your drinking water?
1. [ ] ARC Pump / ARC Pump with access door
2. [ ] Other pump
3. [ ] None of the above
99.[ ] DK/NR[1]

202 Why do you get water from there?
1. [ ] Water source is closest ***(Go To End)***
2. [ ] Water is clean / better for health
3. [ ] Pump is broken
4. [ ] Water from pump is salty
8. [ ] Other
99.[ ] DK/NR

203 Is that the closest water point?
0. [ ] No
1. [ ] Yes
99.[ ] DK/NR

END

This concludes the inte view. Thank you for your time and cooperation in completing this interview. Your responses will assist us a great deal in assessing our water projects.

[1] Don't Know / No Response

APPENDIX K

DATA TABLES FROM KAP SURVEY

DATA TABLES FROM KAP SURVEY

Comparison of Baseline and Final Surveys: Water Collection

	Moatize Baseline	Changara Baseline	Chifunde Baseline	Overall Water and Sanitation Baseline	Final
Collect drinking water from a pump/protected source	38	50	27	38	44
Treat drinking water	7	3	19	10	46
Advantages of getting water from pump: better for health	7	51	38	33	72

Comparison of Baseline and Final Surveys: Latrines

	Moatize Baseline	Changara Baseline	Chifunde Baseline	Overall Water and Sanitation Baseline	Final
Households with latrines	20	8	16	15	64
Adults using latrine	20	11	22	18	72
Small children using latrine	-	-	-	-	58
Benefit if using a latrine: better health	46	28	43	39	72
Latrine floor clean	37	36	58	44	93
Lid on latrine hole	13	44	23	22	69
Water for washing hands	0	0	6	2	21

Comparison of Baseline and Final Surveys: Hygiene

	Moatize Baseline	Changara Baseline	Chifunde Baseline	Overall Water and Sanitation Baseline	Final
You should wash hands: - before eating or feeding a child - after using a latrine - before food preparation - after working in fields		89 22 47 2	74 38 19 7	82 30 33 4	47 72 19 17
When is it important to wash hands (>=1 corr resp)		99	95	97	92
How to make leftover food safe for eating (>=1 corr resp)			95	95	88
Drinking water covered	80	71	46	66	59
Rubbish in pile or burnt	23	64	38	41	97

Comparison of Baseline and Final Survey: Diarrhoea

	Moatize Baseline	Changara Baseline	Chifunde Baseline	Overall Water and Sanitation Baseline	Final
How to treat diarrhoea (>=1 corr resp)	99	92	69	89	80
Incidence of diarrhoea in last 3 days	18	19	19	19	21
Diarrhoea transmission (>=1 corr resp)		31	50	38	65

Comparison of Baseline and Final Surveys: Safe Motherhood/Infant Care

	PHC KAP Baseline	Final
Importance of prenatal care	56	51
Births assisted by a trained health care worker	45	61.8
Importance of giving colostrum	38	45
Age to introduce solid foods to baby	23	46
Young child's diet	-	12

Comparison of Baseline and Final Surveys: Reproductive Health

	PHC KAP Survey	Final
Method of family planning (>=1 corr resp)	66	66
Child spacing (2 or more years)	57	63
Methods of protecting oneself from AIDS (>=1 corr resp)	-	95
AIDS transmission (>=1 corr resp)	82	80
Condom use (>=1 corr resp)	-	72

Comparison of Baseline and Final Surveys: Malaria and Health Talks

	PHC KAP baseline	Final
How is malaria transmitted	14	30
Protection from mosquito bites (>=1 corr resp)		55
Participated in any health talks in last 2 months	27*	30
Visited by ARC health programme in last 2 months		

* HELP teams were already active at all sites

APPENDIX L

ARC HEALTH FACILITIES PROGRAMME

American Refugee Committee

Health Facilities Program
1993-1996

Location	Health Facilities	Staff Houses	Sanitation/ Latrines	Donor
Chifunde District				
Nsadzo	Health Center*	3 New	11 VIP	DANIDA
Thequesse	Health Center	2 New	14 VIP	USAID
Vila Mualadzi	Clinic/Maternity Rehab and Extension	1 Rehab (also temp. clinic)	5 VIP	USAID
Luia*	Health Center	2 New	14 VIP	DANIDA
Changara District				
Chioco	Health Post New	1 New	5 VIP	UNHCR
Mazoe Ponte	Health Post New	1 New	5 VIP	SV
Msaua	Health Center	1 New	5 VIP	UNHCR
Matambo	Health Post Rehab	1 Rehab	5 VIP	UNHCR
Marara	Health Center	1 Rehab	Yes	UNHCR
Goba	Clinic Rehab	1 Rehab	5 VIP	UNHCR
Chipembere	Health Post w/Maternity	2 New	7 VIP	UNHCR
Mazoe Ponte	Maternity	1 New	5 VIP	USAID

* Health Centers include maternities

APPENDIX M

ARC SCHOOL PROGRAMME

American Refugee Committee

Schools Program
1994-1996

Location	Classrooms/ Other	Staff Houses	Sanitation/ Latrines	Donor
Changara District				
Marara	Kitchen rehab, girls' dormitory & bath; boys' dormitory and bath	4 Rehabs	Yes	SV
Matambo	2 New; 2 Reconstructed; 1 Rehab; 2 teachers' officew rehab	1 New	5 VIP	UNHCR
Msaua	2 Reconstructed	1 New	5 VIP	UNHCR
Mazoe Ponte 1	2 Rehab		4 VIP	SV
Mazoe Ponte 2	3 Rehab	1 New	5 VIP	SV
Chifunde District				
Bene	1 New	1 New	3 VIP	UNHCR
Tsagale	2 New	1 New	5 VIP	UNHCR
Chifunde Sede 1	2 New	1 New	5 VIP	UNHCR
Chifunde Sede 2	2 Rehab	1 Rehab	5 VIP	UNHCR
Nsadzo	4 New	2 New	10 VIP	UNHCR
Thequesse	6 New	2 New	9 VIP	UNHCR
Vila Mualadzi	2 New	1 New	5 VIP	UNHCR
Mcantha	2 New	1 New	5 VIP	UNHCR
Namiramba	2 New	1 New	5 VIP	UNHCR
Kaputo	2 New	1 New	5 VIP	UNHCR
Bulimo	4 New	2 New	10 VIP	UNHCR
Ngwenya*	4 New	2 New	14 VIP	UNHCR

APPENDIX N

ARC WATER POINT INSTALLATION

AND

REHABILITATION PROGRAMME

American Refugee Committee

Water Point Installation and Rehabilitation Program 1993-1996

Location	New Hand Dug/Vonder Rig Points	Rehabilitated Hand-Dug Water Points	Rehabilitated Boreholes	Donor
Changara	29	5	33	UNHCR/SV
Chifunde	56		6	USAID/DANIDA
Moatize		5	23	SV/USAID
Total	85	10	62	157

APPENDIX O

ARC HEALTH EDUCATION AND SANITATION PROGRAMME

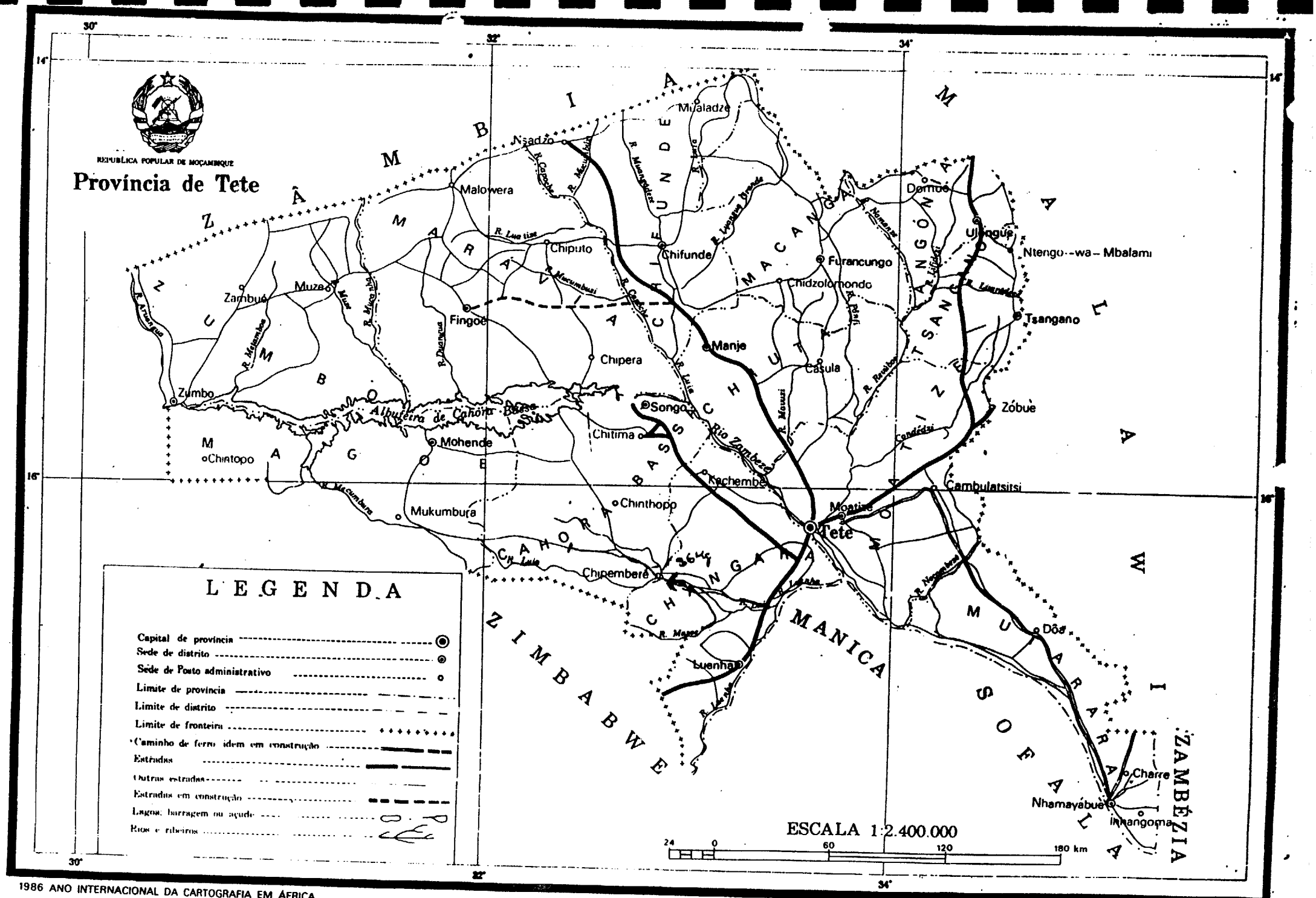
American Refugee Committee

Health Education and Sanitation Program
1993-1996

Location	Hygiene Education and Latrine Promotion (HELP)	Community Health Volunteers (Activistas)	Donor
Changara District			
Chioco	√		UNHCR/USAID
Cachembe	√		USAID
Chipembere	√		USAID
Marara	√	√	UNHCR/USAID
Matambo	√		UNHCR/USAID
Mazoe Ponte	√	√	SV
Msaua	√	√	UNHCR/USAID
Muchamba	√	√	USAID
Mufacaconde	√		USAID
Phacassa	√		USAID
Chifunde District			
Bulimo	√	√	USAID
Cassocheca	√	√	USAID
Chifunde Sede	√	√	USAID
Namiramba	√	√	USAID
Nsadzo	√	√	USAID
Thequesse	√	√	USAID
Vila Mualadzi	√	√	USAID
Moatize District			
Kaphiridzanje	√	√	SV/USAID
Mutarara District			
Dôa	√		USAID

APPENDIX P

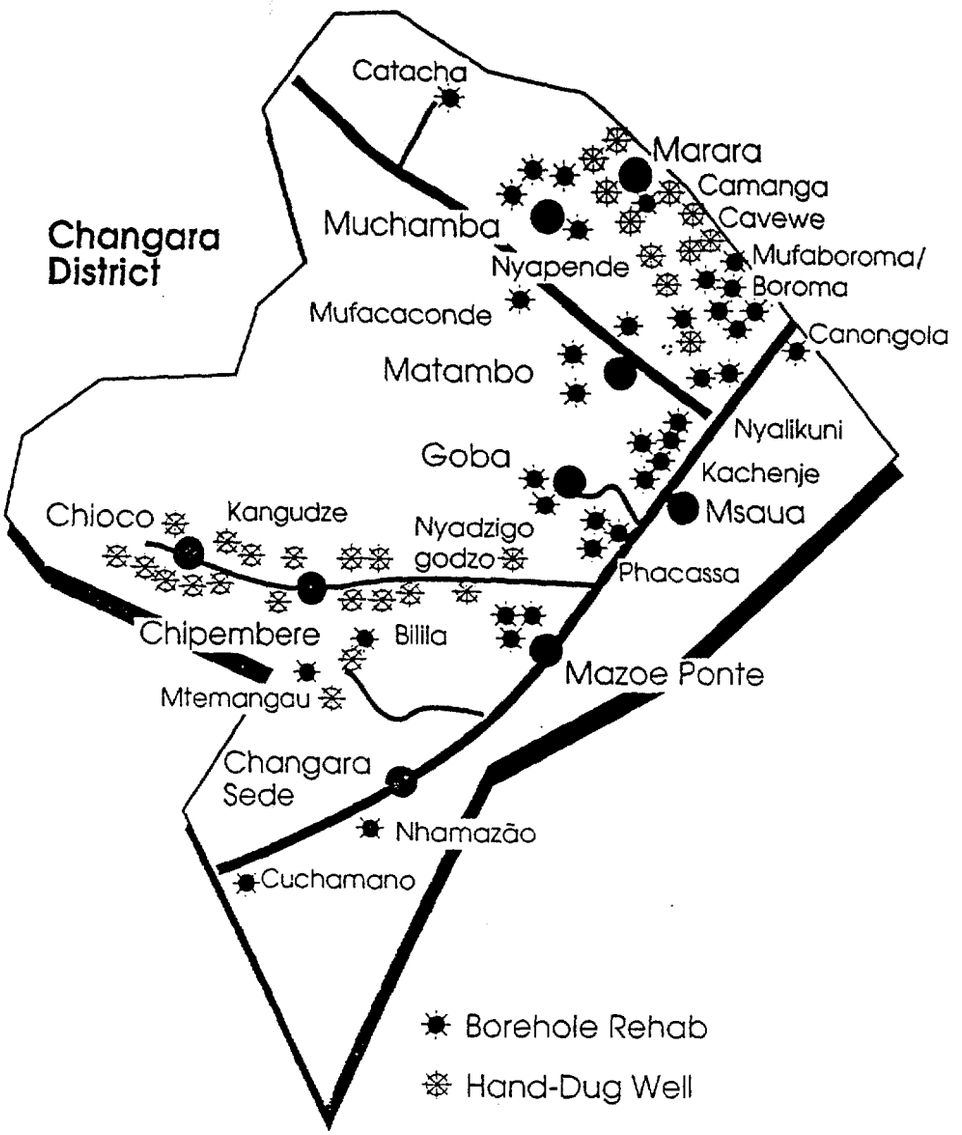
DETAILED MAPS OF TETE PROVINCE

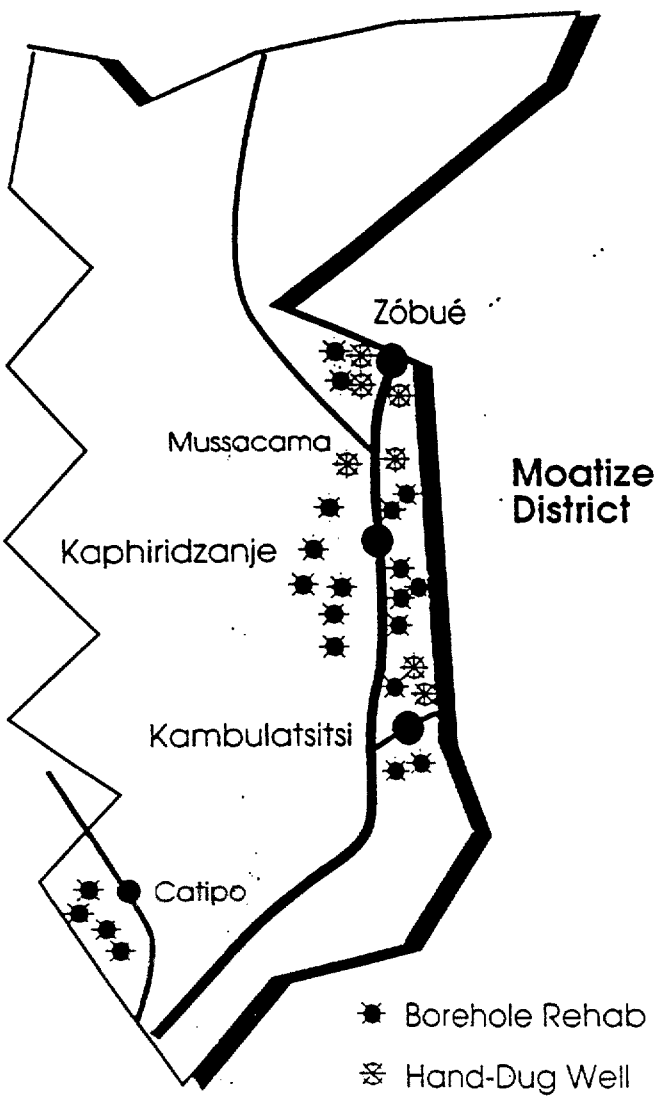


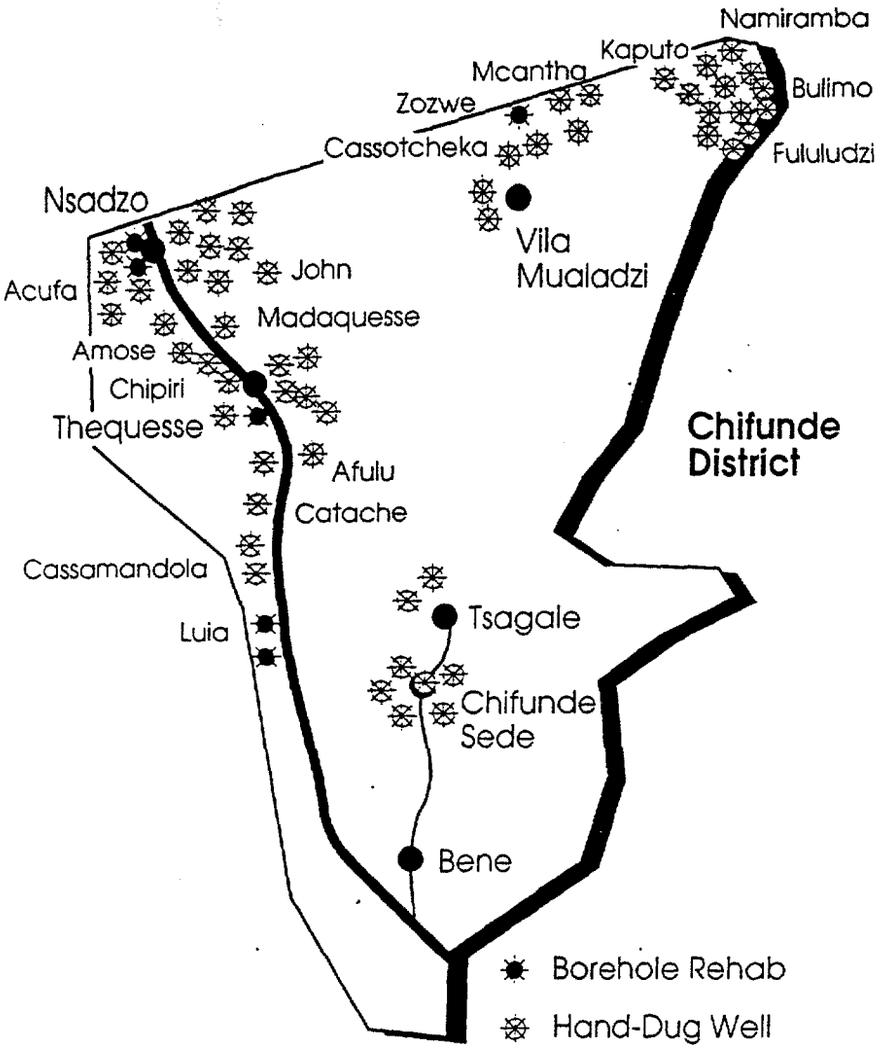
1986 ANO INTERNACIONAL DA CARTOGRAFIA EM ÁFRICA

Ano de Publicação 1988

Direcção Nacional de Geografia e Cadastro


Changara
District
Catacha
Marara
Camanga
Cavewe
Muchamba
Nyapende
Mufaboroma/
Boroma
Mufacaconde
Canongola
Matambo
Nyalikuni
Goba
Kachenje
Msaua
Chioco
Kangudze
Nyadzigo
godzo
Phacassa
Chipembere
Bilila
Mazoe Ponte
Mtemangau
Changara
Sede
Nhamazão
Cuchamano
Borehole Rehab
Hand-Dug Well


Zóbué
Mussacama
Moatize
District
Kaphiridzanje
Kambulatsitsi
Catipo
Borehole Rehab
Hand-Dug Well


Namiramba
Kaputo
Mcantha
Zozwe
Bulimo
Cassotcheka
Fululudzi
Nsadzo
Vila
Mualadzi
John
Acufa
Madaquesse
Amose
Chipiri
Thequesse
Chifunde
District
Afulu
Catache
Cassamandola
Tsagale
Luia
Chifunde
Sede
Bene
Borehole Rehab
Hand-Dug Well

American Refugee Committee

Schools Program
1994-1996

Location	Classrooms/ Other	Staff Houses	Sanitation/ Latrines	Donor
Changara District				
Marara	Kitchen rehab, girls' dormitory & bath; boys' dormitory and bath	4 Rehabs	Yes	SV
Matambo	2 New; 2 Reconstructed; 1 Rehab; 2 teachers' officew rehab	1 New	5 VIP	UNHCR
Msaua	2 Reconstructed	1 New	5 VIP	UNHCR
Mazoe Ponte 1	2 Rehab		4 VIP	SV
Mazoe Ponte 2	3 Rehab	1 New	5 VIP	SV
Chifunde District				
Bene	1 New	1 New	3 VIP	UNHCR
Tsagale	2 New	1 New	5 VIP	UNHCR
Chifunde Sede 1	2 New	1 New	5 VIP	UNHCR
Chifunde Sede 2	2 Rehab	1 Rehab	5 VIP	UNHCR
Nsadzo	4 New	2 New	10 VIP	UNHCR
Thequesse	6 New	2 New	9 VIP	UNHCR
Vila Mualadzi	2 New	1 New	5 VIP	UNHCR
Mcantha	2 New	1 New	5 VIP	UNHCR
Namiramba	2 New	1 New	5 VIP	UNHCR
Kaputo	2 New	1 New	5 VIP	UNHCR
Bulimo	4 New	2 New	10 VIP	UNHCR
Ngwenya*	4 New	2 New	14 VIP	UNHCR

APPENDIX N

ARC WATER POINT INSTALLATION

AND

REHABILITATION PROGRAMME

American Refugee Committee

Water Point Installation and Rehabilitation Program 1993-1996

Location	New Hand Dug/Vonder Rig Points	Rehabilitated Hand-Dug Water Points	Rehabilitated Boreholes	Donor
Changara	29	5	33	UNHCR/SV
Chifunde	56		6	USAID/DANIDA
Moatize		5	23	SV/USAID
Total	85	10	62	157

APPENDIX O

ARC HEALTH EDUCATION AND SANITATION PROGRAMME

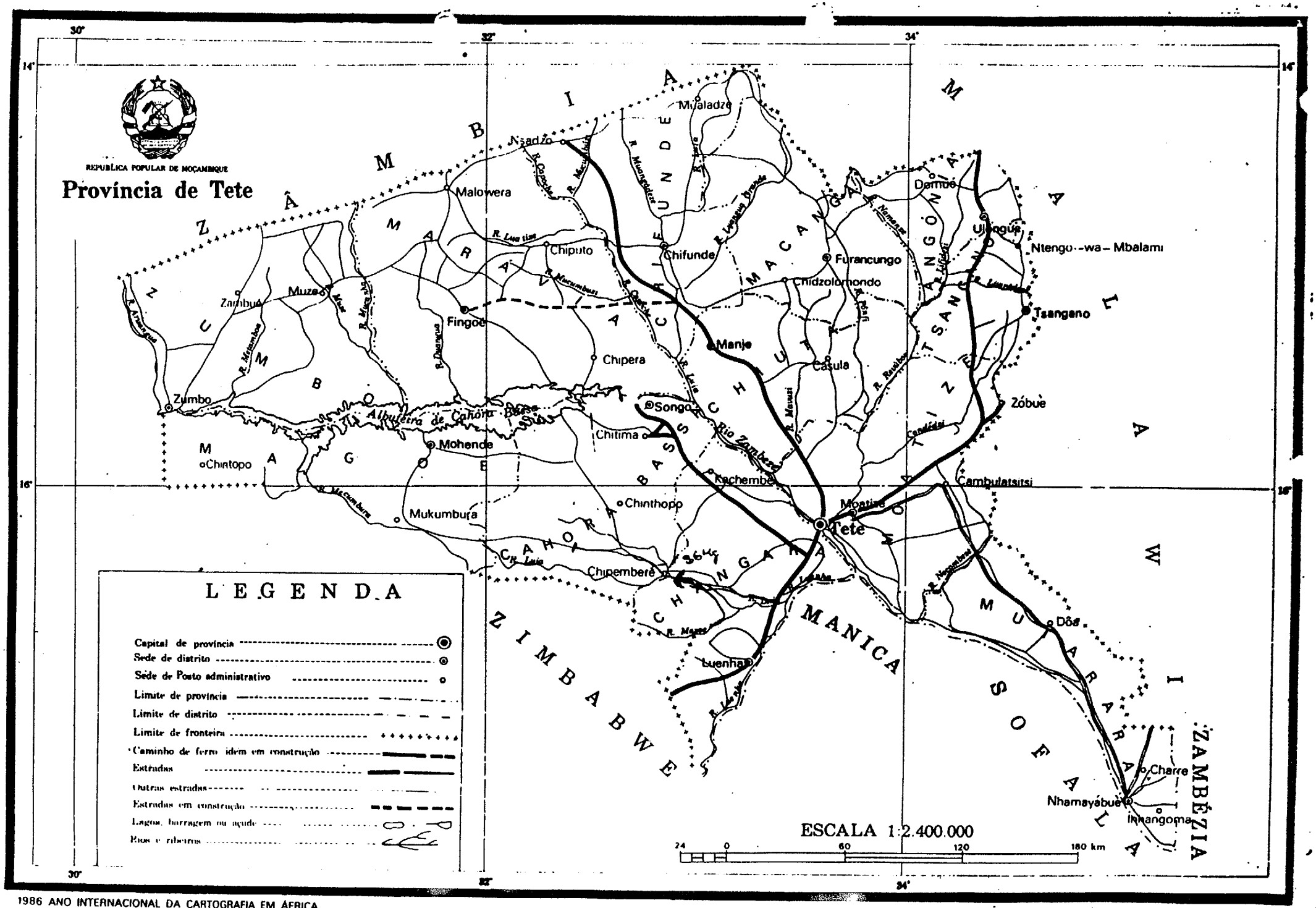
American Refugee Committee

Health Education and Sanitation Program
1993-1996

Location	Hygiene Education and Latrine Promotion (HELP)	Community Health Volunteers (Activistas)	Donor
Changara District			
Chioco	√		UNHCR/USAID
Cachembe	√		USAID
Chipembere	√		USAID
Marara	√	√	UNHCR/USAID
Matambo	√		UNHCR/USAID
Mazoe Ponte	√	√	SV
Msaua	√	√	UNHCR/USAID
Muchamba	√	√	USAID
Mufacaconde	√		USAID
Phacassa	√		USAID
Chifunde District			
Bulimo	√	√	USAID
Cassocheca	√	√	USAID
Chifunde Sede	√	√	USAID
Namiramba	√	√	USAID
Nsadzo	√	√	USAID
Thequesse	√	√	USAID
Vila Mualadzi	√	√	USAID
Moatize District			
Kaphiridzanje	√	√	SV/USAID
Mutarara District			
Dôa	√		USAID

APPENDIX P

DETAILED MAPS OF TETE PROVINCE

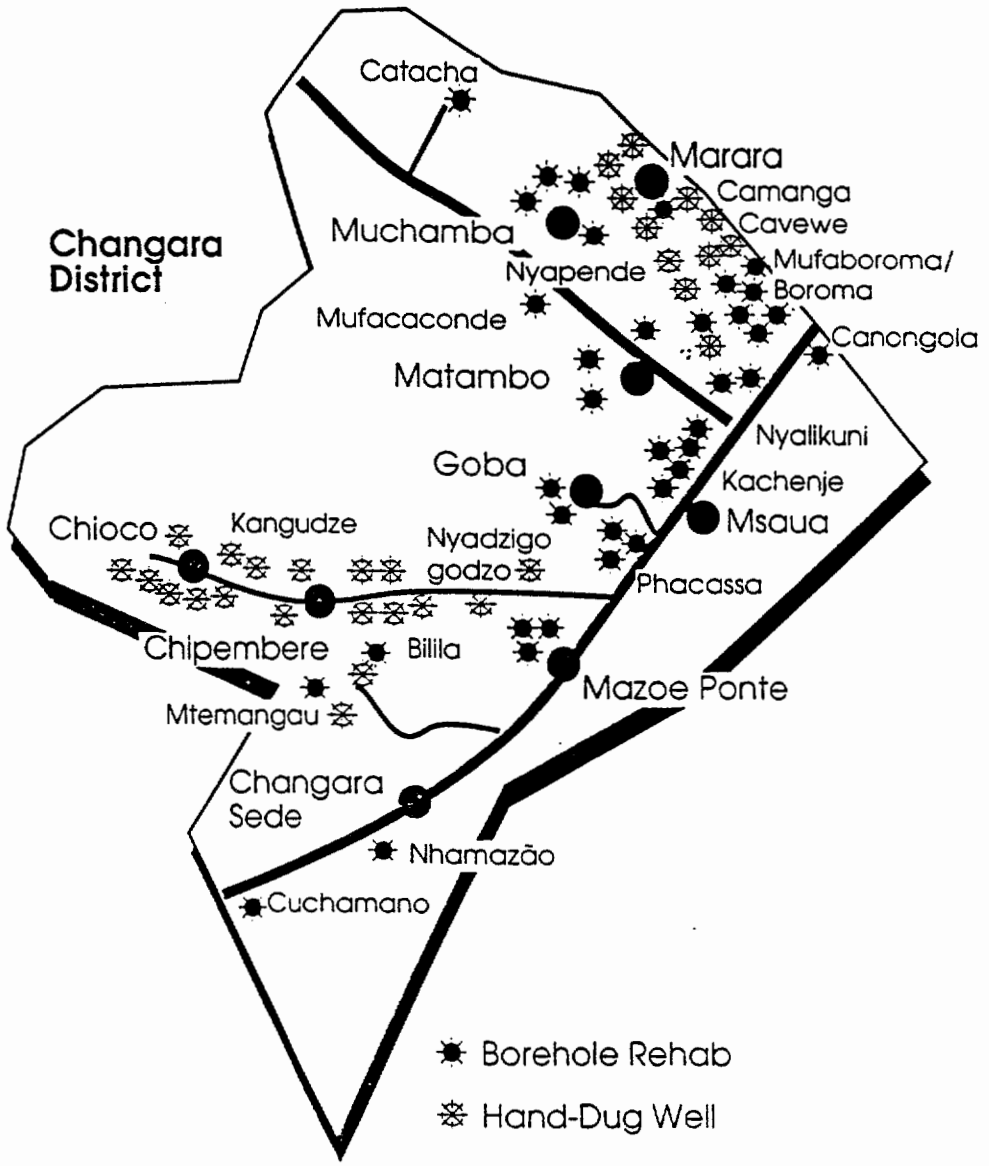


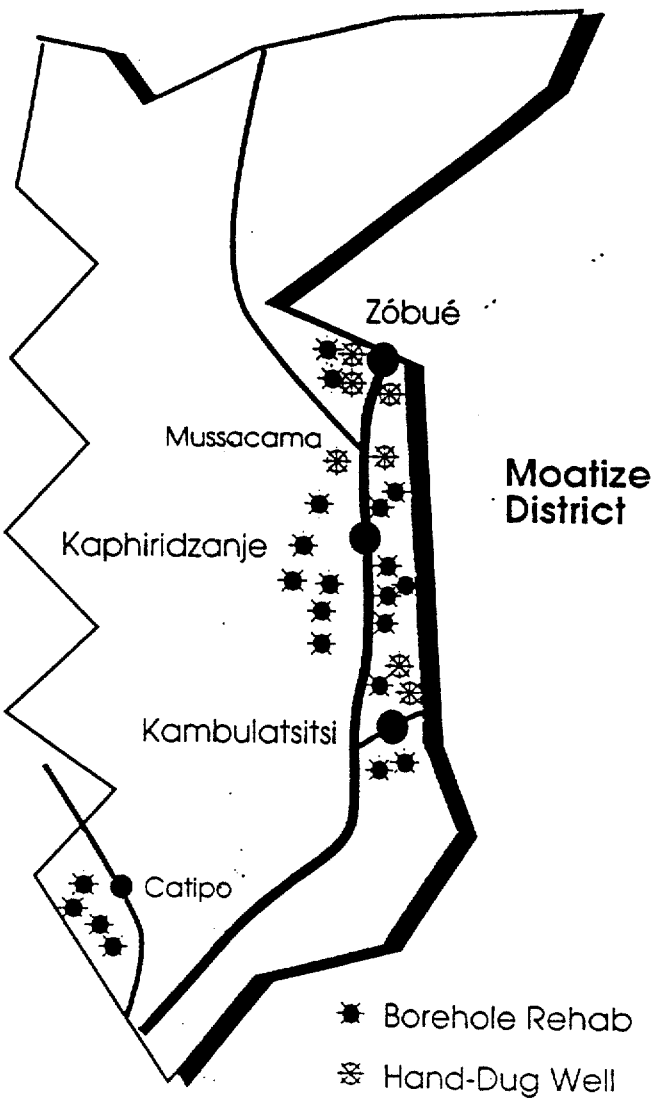
1986 ANO INTERNACIONAL DA CARTOGRAFIA EM ÁFRICA

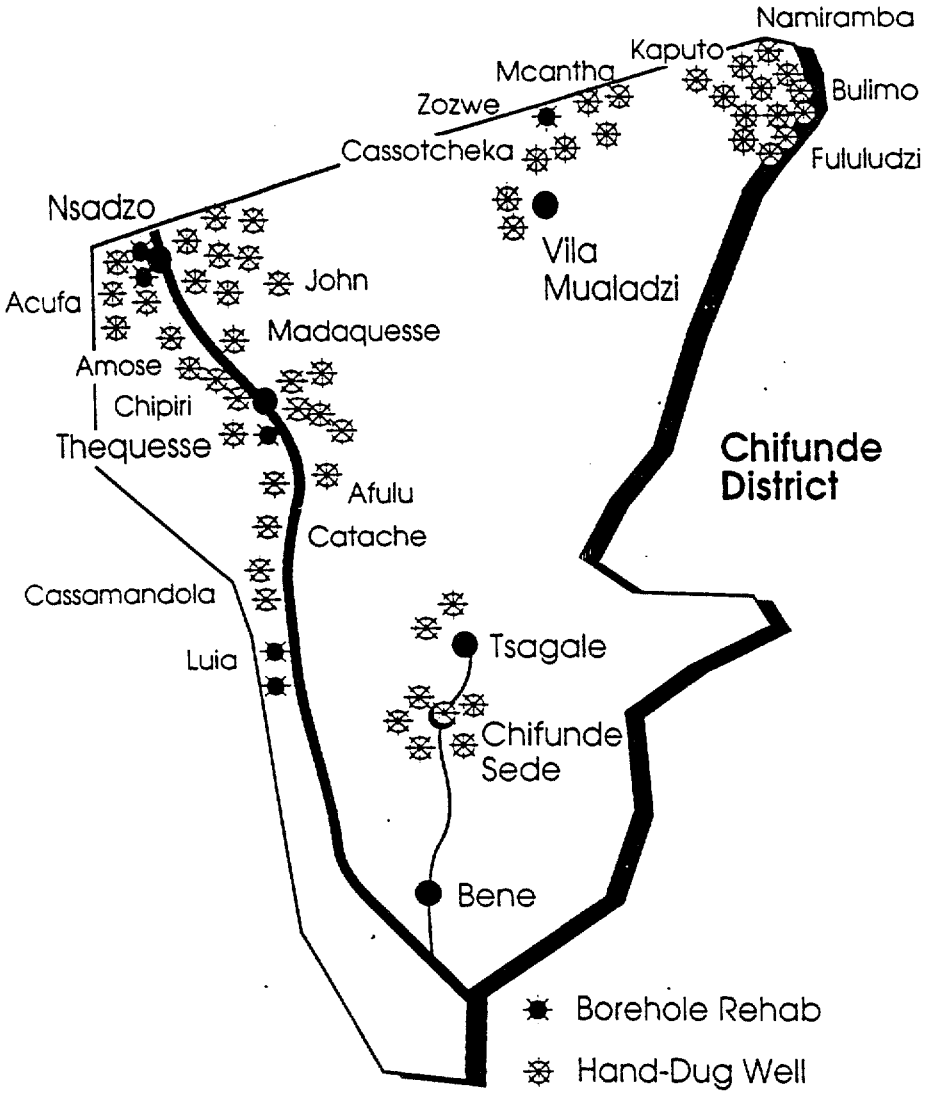
Ano de Publicação 1988

Direcção Nacional de Geografia e Cadastro

1981


Changara
District
Catacha
Marara
Camanga
Cavewe
Muchamba
Nyapende
Mufaboroma/
Boroma
Mufacaconde
Canongola
Matambo
Nyalikuni
Goba
Kachenje
Msaua
Chioco
Kangudze
Nyadzigo
godzo
Phacassa
Chipembere
Bilila
Mazoe Ponte
Mtemangau
Changara
Sede
Nhamazão
Cuchamano
Borehole Rehab
Hand-Dug Well


Zóbué
Mussacama
Moatize
District
Kaphiridzanje
Kambulatsitsi
Catipo
Borehole Rehab
Hand-Dug Well


Namiramba
Kaputo
Mcantha
Zozwe
Bulimo
Cassotcheka
Fululudzi
Nsadzo
Vila
Mualadzi
John
Acufa
Madaquesse
Amose
Chipiri
Thequesse
Chifunde
District
Afulu
Catache
Cassamandola
Tsagale
Luia
Chifunde
Sede
Bene
Borehole Rehab
Hand-Dug Well