

**SOUTHERN NEW HAMPSHIRE UNIVERSITY
&
OPEN UNIVERSITY OF TANZANIA**

COMMUNITY ECONOMIC DEVELOPMENT PROGRAM

MASTER OF SCIENCE IN COMMUNITY ECONOMIC DEVELOPMENT(2007

**ESTABLISHMENT OF A WATER SUPPLY
SCHEME**

A case of Mkudi-Kilimahewa, Nyamanoro Ward,Mwanza City

LUKAWE,LEONARD ELLIAS

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**Submitted in partial fulfillment of the
requirements for the degree of Master of
Science in Community Economic Development**

LUKAWE,LEONARD ELLIAS

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ABSTRACT

The Community Based Organization (CBO) involved in this study is called MAENDELEO MKUDI KILIMAHEWA. The CBO was first established in 1999 with members who are residents of Mkudi and Kilimahewa areas in Nyamanoro ward, in Ilemela District, Mwanza City. The group is formed by eight members who have been able to mobilize more than 2000 residents of these areas.

Mkudi and Kilimahewa areas are squatter areas located in hilly places in Mwanza City that are inadequately serviced with social services like water, schools, electricity, health facilities, markets

Therefore the main objective of forming this group has been to raise the standard of living of its members through provision of such services to the community like water, health, roads, markets environmental conservation, schools, etc.

Due to limited capacity to provide a wide range of services to the Community, the CBO prioritized the problems by ranking water as the major problem facing Mkudi and Kilimahewa residents. Piped water is not provided to the areas by the water Authorities in Mwanza due to geographical and topographical factors of the areas.

The CBO members proposed to construct a masonry water tank to the area with the capacity of storing 100m³ litres of water. The project will be one of the sources of generating income to them. User fees will be charged to residents of Mkudi and Kilimahewa.

Funding of the project is expected to come from internal and external sources like financial institutions and the government .

EXECUTIVE SUMMARY

According to the 2002 National census, Mwanza City had a total of over 476,646 people (Nyamagana district 210,735 and Ilemela District 165,911). The City has an annual natural growth rate of 3.2% and rural to urban immigration almost 8%.

The UN HABITAT recently in its survey has declared Mwanza City to be an urban settlement with the highest annual population growth rate of 7% in Africa, the population density is 134 people per sq km. The current statistics show that the City has about 50,000 housing units of which 60% are built in the unplanned areas. These unplanned settlements accommodate about 70% of the City population and have poor services.

Mkudi and Kilimahewa areas are found in the unplanned (squatter) areas of Nyamanoro ward in Ilemela district. These settlements are located on the slopes of rocky hillsides which are mostly inadequately serviced in terms of basic infrastructure such as roads, water, drains, telecommunication, health facilities, etc.

On realizing the poor quality of these services at the areas, the members of the CBO envisaged various projects for the aim of alleviating social and economic problems facing them as well as the community as a whole, but in the other hand raising the standards of living of its members.

The members prioritized the problems prevailing at the areas. They ranked high the water problem. Due to population increase in Mkudi and Kilimahewa areas the water demand has also increased tremendously. These areas are situated in the Northern part of Mwanza City at Isamilo Juu about 2 Kilometers from the city center. The increase of

water demand has resulted in most people fetching water from far distances and spend more time looking for water instead of performing other duties.

As a result the Maendeleo Mkudi Kilimahewa CBO members have decided to have their own water supply.

The existing Urban water supply in Mwanza City does not cover these areas due to the reason that they have got higher elevations which need high capacity pumps. The water demand at these two areas for over 2000 people stands now at 80 l/c per day. The demand cases for livestock and other small uses seen to be negligible due to the nature of the settlement.

The proposed masonry reservoir water tank will have the capacity to store over 100m³ of water . The project is estimated to cost over Tshs 86m/ - on completion. Water will be available to the other community members, who will be charged a user fee of about Tshs. 50/= for a 20 litre volume of water.

Funding of the project is expected to be obtained from the community members, Mwanza City council, and other stakeholders like MWAUWASA, and financial institutions.

Therefore the overall goal of this project is: To improve the social and economic conditions of Mkudi and Kilimahewa Community members.

The Project objectives include

To have a water supply scheme established by August 2007 in order to give access for piped water to over 2000 residents of Mkudi and Kilimahewa areas.

To strengthen the capacity of community members in supporting the water supply scheme by training 4 water user groups by October, 2007.

To organize a class for all 8 members of Maendeleo Mkudi Kilimahewa in order to provide basic skills in Project Management by October, 2007.

All the above objectives have not yet been achieved. However the project is lucky enough to have a site already allocated to them by the Mwanza City Council for the construction of the water tank. There are many matters they have to collaborate with other stakeholders in order to have the project succeeding.

The project has to work with the Mwanza Urban Water Supply Authorities as there is a need to get more technical assistance and guidance regarding construction of the water tank as well as supply of water. NGOs interested on the project will be invited to work with the CBO.

In conclusion it can be said that this project is in line with the National Strategy for Growth and Reduction of Poverty (NSGRP) or popularly known as MKUKUTA. The project objectives are consistent with the Development Vision 2025.


Finally the project seizes the opportunity to establish a framework for rational water Resource Management through National water policy that is in institutional reforms and legislation.

It is recommended that in order for this project to succeed high commitment on the part of all stakeholders is needed.

Important stakeholders like the CBO members, the Community at Mkudi and Kilimahewa areas, City council, and Mwanza Urban Water Authority need to participate fully in this project.

DECLARATION

I Lukawe, Leonard E, declare that this dissertation is my own work and initiatives and it has not been submitted for a Master degree or similar award in any other higher learning institutions.

Signed: 
Lukawe, Leonard E.

Date: 22nd September, 2007

Approval by:

a) Supervisor: HERMENEGILD MTENGA

Signed: 

Date: 22nd September, 2007

b) External Examiner:

Signed: _____

Date: _____

DEDICATION

This dissertation is dedicated to my wife, Rosemary Lukawe, my children Ruth and Fortunatha, who have been an inspiration to me in accomplishing this project report. I love them too.

Signed: _____

Lukawe, Leonard E.

Date: _____

ACKNOWLEDGEMENT

I feel privileged and honoured to thank Mkudi and Kilimahewa residents, specifically Maendeleo Mkudi Kilimahewa CBO members for their valuable time trying to make this project a success. They were more than willing to collaborate in the survey and accepted and did whole heartedly all what we planned.

I highly recognize the contribution of Mr. Michel Adjibodou, director of the CED Program(Tanzania) and my lecturer in Project Management for his valuable and tireless efforts and support throughout the time of the course to ensure that I succeed in my studies. Thanks also go to Mr. Felician Mutasa, co-lecturer in Project Development for his great assistance to put valuable inputs into this project work.

I am very grateful to Mr. H Mtenga, my supervisor, for his guidance and constructive criticism towards making the work better.

The success of this project work is a result of numerous inputs from lecturers in other disciplines ranging from Accounting, Microenterprise, Development Finance, Organization Management, Cooperative Development, only to mention a few.

I am grateful to Mwanza City Director, Mr. Paul Baruti for giving me an opportunity to attend classes without any problem. Special thanks should go to various officers at Mwanza City Council, MWAUWASA, who injected valuable inputs into this work. May God bless them.

Special thanks go also to my wife, Rosemary for her tireless encouragement and assistance to me in ensuring that I miss nothing material, moral and psychological help during my study. I remember her prayers and her well wishes.

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LIST OF ABBREVIATIONS

CBO	-	Community Based Organizations
CED	-	Community Economic Development
CBEM	-	Community Based Environmental Management Programme
CNA	-	Community Needs Assessment
DANIDA	-	Danish International Development Agency
hrs	-	hours
l/c	-	cubic litres
km ²	-	square kilometres
MCC	-	Mwanza City Council
MCDWC	-	Ministry of Community Development Women and Children.
MMK	-	Maendeleo Mkudi Kilimahewa
MKUKUTA	-	Poverty Reduction Strategy (Swahili Translation)
MWAUWASA	-	Mwanza Urban Water and Sewerage Authority
m ³ /day	-	cubic metres per day
NGOs	-	Non-Government Organizations
NSGRP	-	National Strategy for Growth and Reduction of Poverty
SPSS	-	Statistical Package for the Social Sciences
SMWP	-	Sustainable Mwanza Programme
SWE	-	Small Water Enterprises
UNDP	-	United Nations Development Programme
UN HABITAT	-	United Nations Agency for Human Settlements
UWSS	-	Urban Water Supply and Sewerage
WEDC	-	Water Engineering Development Centre
WEO	-	Ward Executive Officer
WUA	-	Water User Association
WUG	-	Water User Group

CHAPTER ONE

COMMUNITY NEEDS ASSESSMENT

Chapter one describes the process of identifying the problem at the project community and how the problem was defined. The chapter is divided into sub-sections detailing about community profile; community needs assessment process; and graphical data from the community.

Community Needs Assessment was conducted by going through The 2002 Tanzania National Population Census, various records from Ward Executive Office of Nyamanoro with the intention of getting information required for :

- Community Profile in general
- Economic status of Mwanza City and Nyamanoro Ward in particular.
- The problems associated with unplanned settlements in urban areas in particularly safe water.

In addition to secondary data, it was important to conduct a survey study in order to find out how much the community is aware of water problem and to what extent the community is willing to participate in reducing this problem..

1.1 Community Profile

Mwanza City is located on the southern shores of Lake Victoria in Northwest Tanzania. It covers an area of 1325km² of which 425 is dry land and 900km² is covered by water. Of the 425km² dry land area, approximately 86.8Km² is

urbanized while the remaining areas consist of forested land, valleys, cultivated plains, grassy and undulating rocky hill areas.

The City is characterised by gently undulating granites and grandiosity physiography with isolated hill masses and rock inselbergs. It is also characterised by well-drained sandy loamy soil generated from coarse grained cretaceous. The vegetation cover is typical savannah with scattered tall trees and tall grass.

Mwanza town was founded in 1892 as a regional Administration and Commercial Centre to control mainly export production of the cotton growing areas in the Lake Victoria Zone. In 1978 Mwanza obtained the status of Municipality in line with the local government structure established in 1972. In 2000, Mwanza was further promoted to a city status. The other cities in Tanzania include Dar es Salaam, Arusha, Mbeya and Tanga.

Mwanza City is comprised of two districts, namely Nyamagana and Ilemela. There are also two divisions and 21 wards.

According to the 2002 National Census, Mwanza City has 476,646 (Nyamagana District 210,735 and Ilemela 265, 911). The current population is estimated to be just above half a million people with an annual natural growth rate of 3.2% and rural to urban immigration almost 8 % (National Population Census 2002). The population density is 134 people per sq. km, being the second in the country after Dar es Salaam

This project is based at Mkudi and Kilimahewa areas in Nyamanoro Ward, Ilemela District within Mwanza City.

Nyamanoro Ward has a total population of 42,731 people composed of 20,853 males and 21,878 females(Tanzania National Census 2002).

People in the ward who are physically able to do work number at 8,588 males and 10,301 females.

The number of people who are physically unable to do work stands at 5,762 males and 5,612 females.

Mkudi and Kilimahewa are located north east of Mwanza City center, on the eastern side of Makongoro Road(Airport Road).The area has over 2,106 people up to now out of which 1,012 are males while 1,094 are females.

The areas are found in the unplanned (squatter) areas of Nyamanoro ward in Ilemela district. These settlements are located on the slopes of rocky hillsides which are mostly inadequately serviced in terms of basic infrastructure such as roads, water, drains, telecommunication, health facilities, etc.

The average household size in the areas is six(6) people.

Table 1. Population Distribution

Category	Male	Female	Total
Ilemela District	129,766	136,145	265, 911
Nyamanoro Ward	20,853	21,878	42,731
Tambukareli Sub Community	1,012	1,094	2,106

Source: 2002 Census Report

1.2 Community Needs Assessment

Apart from using secondary data, it was important to conduct a survey for the purpose of getting the following information:-

- To know the extent of water shortages facing residents of Mkudi and Kilimahewa areas.
- To know whether the community members are willing in participating to solve water problem in case it is proved by the survey that it is the first priority problem to be tackled.

Focus group discussion, field observation, semi-structured questionnaires were used in conducting this community needs assessment.

A number of approaches were used in conducting a needs assessment. But before conducting a community needs assessment, the CED student contacted the CBO through an introduction letter expressing the intention to work with CBO members.

The members agreed to the student's request. Discussions with CBO members were held mostly on Saturdays.

1.2.1 Research Questions

The following are some of the questions used in the study to gather information from the community:-

- Do you have any water connection at your home?
- If your answer above is no, where do you get water?
- How do you consider the status of water shortage at your area?

- What is the distance to where you get water?
- Do you support construction of water tank in this area?
- If your answer above is yes ,who do you prefer to establish and run the project?

1.2.2 Research Design and Methods

A research design is the way in which its environment is controlled .The research variables over which researchers have control are when the research is to be given,how often,and the number of groups to be researched.

Research questions in this study differ in nature hence require different methods of gathering information to answer them.In this case, both quantitative and qualitative methods were used.

1.2.3 Quantitative Research Design

This method was used to answer the research questions from the respondents by using statistical tools.It was important to collect data through quantitative methods for the reason that they are believed to give more objective and accurate information because they were collected using standardized methods.

1.2.4 Qualitative Research Design

This method was used specifically to answer questions on residents of Mkudi and Kilimahewa areas and other stakeholders, their views and perceptions on the status of water shortages at the areas.

1.2.5 Research Methods

Data collection methods used here included focus groups, observations, structured interviews and in-depth interviews.

1.2.6 Structured Interview

These techniques were used to collect quantifiable data according to how the research questions were designed. The reason for using this method is the fact that the emphasis is on obtaining answers to carefully phrased questions and were intended to give views and perceptions of community members at Mkudi and Kilimahewa..

1.2.7 Indepth Interviews

These are methods in which interviewers did not follow a rigid form. They were used also for the purpose of encouraging free and open responses, to get comprehensive coverage of topics and indepth exploration of a limited set of questions. The researcher had the opportunity to hold interviews with the Managing Director of Mwanza Urban Water and Sewerage Authority (MWAUWASA), Ward Executive Officer, Nyamanoro.

Interview with the MWAUWASA Managing Director was intended to know from him a number of things including any plans of the authority to provide services to Mkudi and Kilimahewa in the near future.

The Ward Executive Officer was contacted to provide information on the areas regarding status of social services and policy issues for this area with special consideration of squatter areas of Mkudi and Kilimahewa.

- **Interview Results**

The type of data obtained from this included; accessibility of water supply in the community i.e. where do community members get water, how long does it take to reach the water source and how long does it take for going, collecting water and back home. Other data include the cost of water per family, availability of water throughout the year and, different use of water at the household level.

1.2.8 Focus Groups

Focus groups are said to combine elements of both interviewing and participant observation. The hallmark of focus groups is the explicit use of the group interaction to generate data and insights that would be unlikely to emerge otherwise.

- This research method was used because it has advantages that it allows observation of group dynamics, discussion, and firsthand insights into respondents' behaviors, attitudes, language, etc. This technique also

was based on key questions determined by the researcher, but also based on prior information gaps identified when going through the existing documents used for secondary data. One of the reasons to use this instrument includes conducting community needs assessment. The other reason is that of getting an understanding of community's perception on the establishment of the water supply project.

Focus Group Results

On the 7th October, 2005 the CED student was able to hold discussions with the CBO members under the chairmanship of Mr. Sebastian Rushoke. It was an opportunity to get informed that since the establishment of the organization in 1999 poor quality of social services at the areas has been of major concern to the CBO, however in prioritizing the problems, water shortage has been ranked high to be dealt with. Being aware of this problem the CBO members started mobilizing the other members of the community to start contributing for the construction of a masonry reservoir water tank that is intended to be built in the area.

The community members responded well by contributing Tshs. 2000/= for each family.

In another development, the site for the construction of the reservoir water tank was available.

CBO members were very eager to run this project for the major aim of alleviating poverty among themselves as this will be an income generating activity.

Through discussions, it was revealed that this project started long ago back in 2001, but came to a standstill due to lack in expertise to write a project write up that would identify well potential sources of finance for the project.

It was also evident that CBO members had other income generating activities including a wholesale hardware shop. This business was not successful as it did not withstand competition from other individual shop operators. Again this project failed to help members achieve their goal of alleviating poverty through running income generating activities like this one.

From 2005 up to now the CBO has been contracted by Mwanza City Council to provide refuse collection services in Nyamanoro ward. The former is paid by the latter Tshs. 853,000/= every month for this service. Despite charging user fees, this project again has failed to bring major impacts expected by the members in improving their livelihood. Operational costs for this business are so high that little is left for the members to earn substantial income.

1.2.9 Psychometric Characteristics:

This shows how questions were scored or combined to Scale:

- Rating or ranking scale have been used to questions requesting respondents to make comparisons between variables studied.
- Checklist Scale: have been used to assess direct relationship of different phenomena.

To ensure validity and reliability, the first draft of the survey instrument (questionnaires) was pre-tested to 10 beneficiaries and necessary corrections were done prior to final administration

1.2.9.1 Reliability:

Stability of respondents was measured by observation from time to time and ensured that the survey conducted and completed on the time as scheduled to every group of respondents, and the descriptive information obtained in interviews were analyzed at the end of each day

1.2.9.2 Validity:

Validity is the ability of a tool's ability to represent/ measure the real problem that is studied.

Review and or assessment of performance of each group through the questionnaires was done by the experts (statistician and demographer) who acted as research assistants who are not part of the study.

Using both qualitative and quantitative data allowed the increase confidence in the validity of their results

1.2.10 Study Area and Administration

This study was conducted in Mwanza City, Ilemela District at Nyamanoro Ward where Mkudi and Kilimahewa squatter areas are found

This survey was conducted by 5 people with differing levels of education .

The coordinator of the survey was the Msc(CED) student, assisted by two Ward Executive Officers(WEOs) of Nyamanoro and Isamilo wards, together with two Community Development officers from Isamilo and Nyamanoro wards.

The two WEOs are holders of Secondary School Education Certificates while the community development officers hold ordinary diplomas in community development.

A day long training was done by the survey coordinator to the remaining four administrators.

Orientation covered interviewing techniques and how to enter in the community.

All 14 days were used to accomplish the survey effectively from 1st June to 14th June, 2006.

The study involved the following hamlets (Mitaa):

- Majengo Mapya
- Mji Mwema

- Nenetwa
- Mzunguko
- Msikiti
- Mnyapala 'A'
- Mnyapala 'B'
- Mkudi
- Kilimahewa

1.2.11 Survey Sampling

A sample size of 128 people was drawn from the population of 2,016 people of Kilimahewa, Mkudi and Isamilo areas.

The sample size was chosen through probability sampling whereby every person from the community had an equal chance of being selected. Simple random sampling was used to select cell(mitaa) leaders, community development officers and community members from the areas.

Purposive sampling was used to special groups in the community like CBO members, cell leaders, community development workers, and ward executive officers. These groups of people could tell facts about proposed project than any other.

Great care by the surveyor was considered in order to make the sample as accurate as possible by keeping the error small and also ensuring accurate information from the respondents.

1.2.12 Data Collection

1.2.12.1 Instruments for Data Collection

Questionnaires were found to be appropriate in this study.

Cross sectional design was used to gather information at a single point in time from a sample selected to represent some larger population by using survey method. The reason for choosing this design was simply because: it was flexible, economical and according to the nature of this study, it minimized bias and maximized the reliability of data collection and analysis.

The study design was descriptive since the study provides information that are on groups and phenomenon that already exists.

Methodology

- Survey was conducted using various information-gathering methods including:
 1. **Document review** of relevant secondary records such as Mwanza city profile, records from the Mwanza Sustainable City Programme which assisted a similar water project in the neighbouring areas of Ibungilo, Nyamanoro ward.
 2. **In person interviews** . In this exercise, male and female household heads were eligible for interview as well as boys and girls (Gender desegregation).

3. **Self administered questionnaires** were used for questioning of the respondents using both closed and open-ended questions. Used to the community leaders, and to CBO members. The questionnaires were formulated in English and later translated into Kiswahili to facilitate easy communication during data collection.
 4. **Focus Group Discussion** was based on key questions determined by the researcher, but also based on prior information gaps identified when going through the existing documents used for secondary data. One of the reasons to use this instrument includes conducting community needs assessment. The other reason is that of getting an understanding of community's perception on the establishment of the water supply project.
 5. **Observation** of the activities and projects was also done during field visits
- The decisions on the conclusions on the specific information were made and agreed on in a participatory way and especially during the focus group discussion to allow the study population to tell things about their own experiences, feelings and perceptions.

6. Community meeting had the purpose of getting the following

- To introduce the project to the community
- To understand community pressing problem
- To design with community the way the project will be implemented
- To emphasize the need to have community structures (water user groups and water committees).

CONTENTS OF QUESTIONS

A total of 44 questions to the interviewees were distributed as follows:

- 14 questions for community members,
- 12 questions for CBO members
- 10 questions for Cell leaders and one Ward officer.
- 8 questions for other stakeholders like business people living in the areas, MWAUWASA officers.

Questions were designed to try get responses on such issues like attitudes of the community on the establishment of the water supply project, community responsibility to the water project, training aspects to CBO members and water user groups.

Description of content Questions were categorized into 5 sub sections by basing on sample characteristics such as; cell(mitaa)

leaders; Ward leaders; ; CBO members; House wives; business people

1.2.12.2 Secondary Data

Document review of relevant secondary records such as Mwanza city profile, records from the Mwanza Sustainable City Programme which assisted a similar water project in the neighboring areas of Ibungilo, Nyamanoro ward.

Data Analysis

The data collected from the survey was processed and analyzed manually by tallying and averaging responses. Percentage and proportion calculations were used to compare weighted responses and later presented into tables.

The data collected from the responses was based on the research questions as described earlier. Editing data was important in order to correct errors of omissions as well as arranging data in their respective groups.

1.3. Findings and Analysis

This survey study had been conducted with the main objective of describing the perception and willingness of community members at Mkudi, Kilimahewa and Isamilo areas on the construction of a water tank.

The analysis of data from the SPSS (version 10) package showed some of the following results.

Number of respondents

Table II: Statistics

		status of water shortage	agree CBO to provide supply	hand over to MWAUWASA	agree CBO members to be trained	agree to support construction	family size of respondent
N	Valid	128	128	128	128	128	128
	Missing	0	0	0	0	0	0
Mean							1.53
Median							1.00
Mode							1
Std. Deviation							.65
Variance							.42
Range							2
Sum							196
Percentiles	25						1.00
	50						1.00

A sample size of 128 residents was selected using random sampling from 9 hamlets (mitaa). All of them responded well at 100%

Table III: Status of Water availability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acute	94	73.4	73.4	73.4
	Moderate	34	26.6	26.6	100.0
	Total	128	100.0	100.0	

73.4% of respondents agreed that there is acute shortage of water at Mkudi and Kilimahewa as they are not supplied with water at a near distance.

Table IV: Agree CBO to provide supply

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	105	82.0	82.0	82.0
	NO	19	14.8	14.8	96.9
	DON'T KNOW	4	3.1	3.1	100.0
	Total	128	100.0	100.0	

Given alternative suppliers of water at the areas respondents were asked whether they liked the CBO Maendeleo Mkudi Kilimahewa to go on the project or providers like the Mwanza Urban Water and Sewarage Authority (MWAUWASA), other individuals should provide water. 82% of respondents liked the CBO to provide water as is within the community and will be owned by the whole community. 14.8% liked to see water provided by other groups/individuals.

Table V: Agree CBO and Community members to be trained

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	104	81.3	81.3	81.3
	NO	20	15.6	15.6	96.9
	DON'T KNOW	4	3.1	3.1	100.0
	Total	128	100.0	100.0	

As a means of building capacity to CBO and community members in managing and sustaining the project, respondents were asked whether they supported the idea of being trained. 81.3% agreed, while 15.6% of the respondents disagreed, and 3.1% were undecided.

In summary, results showed that the status of lack of clean and safe water at Mkudi and Kilimahewa areas is acute and that residents do support the project to be run by the CBO Maendeleo Mkudi Kilimahewa.

The respondents agree that training is necessary to community members to ensure sustainability of the project.

Survey results showed that community members at Mkudi and Kilimahewa areas are not accessible to piped water at near distances and that they are willing to support the proposed water supply scheme to be established by the CBO Maendeleo Mkudi Kilimahewa.

73.4% of respondents(94 out of 128) agreed that there is acute shortage of water at Mkudi and Kilimahewa as they are not supplied with water at a near distance.

Family size of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-6	71	55.5	55.5	55.5
	7-12	46	35.9	35.9	91.4
	13 and up	11	8.6	8.6	100.0
	Total	128	100.0	100.0	

Table I:Table showing family size of sample size of residents of Mkudi and Kilimahewa(Source,CNA survey data,2006).

1.3.1 Findings basing on Research Tools used

The following were results obtained from the research tools used in this study.

The tools used included; structured interview, indepth interview, and focus group discussion.

1.3.2 Structured Interviews

Under this tool, the purpose for using the method was to get views and perceptions of community members at Mkudi and Kilimahewa on water shortages at the areas and their suggestions on how to solve the problem.

The researcher managed to have interviews with fifteen **members of the community** who reside in the areas composed of equal numbers divided into both sexes.

Both men and women expressed their concern on the acute shortage of water and lack of other basic social services in Mkudi and Kilimahewa as follows:

- Piped water is not provided in squatter settlements of Mkudi and Kilimahewa and residents of the areas have to fetch it from neighborhoods that have such service.
- Water is obtained from water vendors located at a distance beyond 400 meters downhill at a fee of Tshs. 50/= per 20 liters.
- They need a water supply scheme that will be able to serve them near their homes in order to do away with inconveniences caused by fetching water at far distances.
- They said that they were involved earlier by Maendeleo Mkudi-Kilimahewa Group in planning and establishing a water tank construction project in the areas. But such an endeavor ended up only in the initial stages. They were eager to see such a project re-established for the betterment of the community.

Under Structured Interview, the researcher also had the opportunity to interview 9 cell leaders and one Ward Executive Officer for Nyamanoro who pointed out the following regarding the community:

- Mkudi and Kilimahewa areas settlements where provision of basic social services is difficult due to accessibility. The areas are poorly serviced with

passable roads, piped water, collection of refuse, health services, schools and many more.

- Members of this community are aware of their problems and as such the spirit of self help in contributing for development activities is high among them. The residents are very cooperative in implementing government and any other directives from higher authorities.

The **Managing Director for Mwanza Urban Water and Sewerage Authority(MWAUWASA)**,**Mr. Zephania Mihayo** was also contacted in the interview and had the following to say about provision of water services to this City and in particular squatter settlements of Mkudi and Kilimahewa:

- The piped water network in Mwanza is about Km² 250 and found to 380,000 people, which is 78% of total population. The remaining 22% of the City population does not get clean piped water.
- The Authority has not been able to serve community members of Mkudi and Kilimahewa areas to difficulties in accessing the areas due their topography which renders it difficult in laying pipes and necessitating for construction of more water reservoir tanks.
- The Authority appreciates efforts by the Maendeleo Mkudi Kilimahewa Group in supplementing what MWAUWASA was supposed to do in terms of water infrastructures. Their efforts date back as far as 2001 when they started plans to construct water reservoir tanks for the areas. MWAUWASA welcomes most this plan as the Authority is ready to cooperate with CBO and members of the community in ensuring that the project is successful.

Focus Group Discussion

The researcher managed to hold discussions with eight members the CBO Maendeleo Mkudi Kilimahewa with the purpose of knowing the status of water shortage at the areas, proposed plans to solve this problem, and willingness and perception of the community in implementing the project in case it is accepted.

The CBO members had the following:

- Since the establishment of the organization in 1999 poor quality of social services at the areas has been of major concern to the CBO, however in prioritizing the problems, water shortage has been ranked high to be dealt with.
- CBO members started mobilizing the other members of the community to start contributing for the construction of a masonry reservoir water tank that is intended to be built in the area.

1.4 Graphical Content

Water Supply Services in Mwanza City

Mwanza City is to a great extent supplied with clean water in both districts.

The availability of clean piped water is mainly from Lake Victoria. Water storage is at Capri Point, Luchehele and at Chakula Barafu

The piped water network in Mwanza is about Km² 250 and found to 380,000 people, which is 78% of total population.

The remaining 22% of the City population does not get clean piped water.

ILEMELA DISTRICT

Table : Water supplies

Wards supplied with tape water	Wards with tape periodical, water supply.	Wards without tape water	Wards with shallow and borehole wells
Kirumba Nyamanoro	Nyakato Ilemela Pasiansi Kitangiri	Buswelu Sangabuye Bugogwa	Nyakato Ilemela Sangabuye Bugogwa Pasiansi Buswelu

Water demand Projection:

Population projection (with growth rate 3.2% within 10 years)

2006	After 5 years	After 10 years
2,106	2,320	3.062

(a) Water demand (m³/day) assuming 80 l/c day

2006	2011	2016	2026
320	389.4	473.7	701.2

(b) Maximum water demand including losses 25% peak factor (1.2)

m³/day

2006	2011	2016	2026
576	584	710.5	1051.8

- (c) Demand assuming 5 – 10hrs of Peak Hour Pumping (m^3/hr) is taken as 30 M^3/hr**

The proposed project shall collect water from water valve at Makongoro (of 16mm diameter D.I.), from this water will gravitate through a 100mm PVC class B” pipe to drainage of 540. This pipe will manage to carry maximum flow rate of 30 M^3/hr .

Pump house of 1.5m x 1m is reasonable to accommodate the proposed pumping unit.

CHAPTER TWO

PROBLEM IDENTIFICATION

Detailed technical information was gathered on the existing water system at Mkudi and Kilimahewa with the assistance of the CBO during the Community Needs Assessment phase of the project. This information was analyzed by the Mwanza City Water Engineer's , and the results were presented and discussed with the CBO members. This provided the community with the basis for making an informed decision on the most appropriate way to improve their water supply.

The main source of water for the tank to serve the community is expected to be piped water by the Mwanza Urban and Sewerage Authority (MWAUWASA) which is located near to the areas. There is no piped water services to the residents of Mkudi and Kilimahewa as the relevant water authorities do not provide such services for the reason that the topography of the areas render them difficult to pump water uphill with the same pressure. Such a technical problem needs additional pumps which is a plan that is not a priority in the near for the urban water authorities.

Mkudi and Kilimahewa areas are unplanned squatter settlements that lack basic social services as it becomes very difficult for relevant authorities to access easily the areas which lack even passable roads.

2.1 Problem statement: Poor social services in squatter areas of Mkudi and Kilimahewa

Mwanza is the second city in Tanzania and a major urban center in the Lake Victoria region. There are fourteen unplanned settlements in Mwanza City. The current estimates reveal that unplanned settlements in Mwanza occupy between 40 – 60 percent of the housing stock in the City (Sustainable Mwanza Programme (SMWP) 2001). These settlements make up 70% of the total land use and 50% of these have been built in the rocky hills and sensitive land (SMWP 2001). Most squatters have no electricity or tap water because of inaccessibility. The settlements are inadequately serviced in terms of basic infrastructure such as roads and drains. Sanitation is generally poor as the residents have no latrines at all. of these settlements depend on shallow pit latrines and a significant number of settlers have no latrines at all.

According to the 2002 National census, Mwanza City has a total of 476,646 people (Nyamagana District 210,735 and Ilemela District 165,911). Current population is estimated to be just above 600,000 people with an annual natural growth rate of 3.20% and rural to urban immigration almost 8% (National Population census 2002).

The UN HABITAT its 2005 report has declared Mwanza to be an urban settlement with the highest annual population growth rate of 7% in Africa. The population density is 134 people per sq km. The population distribution at Nyamanoro ward is shown below:

WARD	MALE	FEMALE	TOTAL	HOUSEHOLD NUMBER	AVERAGE SIZE
Nyamanoro	20,853	21,878	42,731	9,647	4.4

It can be observed that the causes of poor quality of social services in squatter areas in Mwanza City including Mkudi and Kilimahewa areas are due to the whole urban housing crisis. There are ever rising populations.

The crisis reflects the City's growing population and poor planning by government authorities. Most of the Mwanza population as said above live in squatter areas. Among the major factors contributing to this growth are the economic advantages of squatting and the inability of various government agencies concerned with land use to discharge their legal responsibilities with respect to unauthorized occupation of public land therefore squatting as a product of urban housing crisis presents an increasingly severe constraint on orderly planning. Proper services cannot be provided to squatter areas, health standards become more difficult to maintain and the land occupied by squatters cannot be put to its optimum use.

These poor services have the effects in environmental degradation and expose their inhabitants to restricted unhealthy living conditions. Solid wastes also is disposed of haphazardly such that in the final analysis, most waste matter end up untreated in Lake Victoria.

Therefore it can be deduced that problems associated with living in squatter areas are many, these become acute when such areas are those of the hilly – rocky sides.

Mkudi and Kilimahewa areas are typical examples of squatter areas that are found in hilly sides of the City.

It becomes very difficult for the relevant authorities to provide their services to people living in these areas. The situation that the CBO members want to change is the poor quality of social services to the areas like water, surveyed plots, electricity, schools, health facilities, playgrounds etc.

As a priority, Maendeleo Mkudi- Kilimahewa have decided to tackle the water problem first. As of now, the residents of these two areas are getting water at the distance of over 2 ½ Kilometers away. The most affected group is women and children. Mkudi and Kilimahewa squatter areas are inhabited by over 2000 residents. According to the Mwanza Urban Water Supply Authority water requirements to Mwanza residents in a month is estimated at 160,1460m³ while supply stands at 141,6329 m³. One of the shortfalls of this is lack of accessibility to piped water to the hilly side residents due to gravitational force problems.

Housing in Mwanza City can be divided into two categories. One is housing in the planned and surveyed areas and second is in the unplanned (squatter) areas.

The current statistics show that the City has about 50,000 housing units out of which 60% are built in the unplanned areas.

Unplanned settlements accommodate about 70 of the City population.

Unplanned settlements are characterised by:

- ⇒ High congestion of buildings
- ⇒ Poor accessibility
- ⇒ Lack of physical infrastructures like electricity, roads, and telephones as well as public facilities like dispensaries, open spaces etc.
- ⇒ Inadequate hygienic services like toilets, disposal of solid wastes etc.

Services delivery in Mwanza City has serious problems in terms of its quality and quantity. Appropriate planning and administration for the distribution of limited resources is in urgent need in order to reorient management towards meeting service levels that meet the requirements of the city residents. Among the key challenges that are faced by Mwanza City Council are:

1. To ensure that the increase in population growth (11.2% per annum) is consistent with the increase in revenue to maintain a balance without constraining service delivery on the social and economic infrastructure within the City.
2. Low level of social services' provision: - access to water, sewerage services, piped water, health & education services. The challenge is to improve the situation to a higher level.

From these challenges, the following are key aspects: -

- ⇒ Poor situation in squatter settlements: - lack of water, roads, sanitation systems, basic facilities like schools, dispensaries etc.
- ⇒ Control of pollution of water sources.
- ⇒ High rate of unemployment: - Providing opportunities for employment by creating conducive environment for new investments and upgrading areas used by micro entrepreneurs.

The targeted community groups for this project are:

- Residents of Mkudi and Kilimahewa in Nyamanoro ward who are not served with clean piped water for domestic use are targeted by this project so that they are accessed by it.

- Maendeleo Mkudi Kilimahewa CBO members are part of the community in the areas. They are therefore part of this project.

In this case community members of Mkudi and Kilimahewa organized themselves to plan this project after meeting and discussing their many social and economic problems facing them and at the end prioritized water shortage to be the main problem facing them.

Members of Maendeleo Mkudi Kilimahewa organized themselves to acquire a site where construction of the tank will take place. They later on managed to start collecting stones at the site as building materials.

Being aware of this problem, also, the CBO members started mobilizing the other members of the community to start contributing for the construction of a masonry reservoir water tank that is intended to be built in the area.

The community members responded well by contributing Tshs. 2000/= for each household. In total Tshs. 459,400 was collected.

The CBO involves community members in planning for the project in issues like generating the idea to have a water supply scheme, identifying project site, and activities like collection of stones, and fund raising for the project.

The community is empowered by the project as its members have the feeling of ownership of the project as well as they know that the project idea developed from themselves.

2.2 Stakeholders

The CBO has its own stakeholders who are affected in one way or another by its actions or operations. These stakeholders determine the success or failure of this organization.

The roles and evaluation of key stakeholders to the project are summarized in the table below:-

2.2.1 Stakeholders' Impact Analysis:

Name of Stakeholder	Participation	Evaluation	Impact	Rate	Plan
CBO Members	Key implementers of the project(Water Supply Scheme)	High	Fully involved in Planning, implementing and monitoring the project	Positive	Involve them fully in participation
Residents of Mkudi and Kilimahewa areas	Key beneficiaries of the project outputs	High	Will provide community contribution, pay user fees, sustain project through formation of Water user Groups.	Positive	-Educate them to sustain the Project through forming Water User Groups -
Mwanza City council	-Provide Sectoral Policies, regulations -Incorporate Project in annual plans	Medium	Providers of assistance through WEO,City Water Engineer, Community Devt. Officers	Positive	-Will be contacted every time CBO needs their assistance -Council will be contacting CBO Every time instructions need to Be acted upon by CBO.
Financial Institutions	Potential Customers to them	High	Are expected to provide financial resources for the establishment of the project	No	Ensure that their conditions Are fulfilled so that loans/ Assistance are obtained.

Name of Stakeholder	Participation	Evaluation	Impact	Rate	Plan
MWAUWASA	Suppliers of water to the proposed tank	High	Have impact on outputs of the project: prices, availability, quality	Positive	Negotiate with them to provide Technical assistance, better water Charges -ensure timely paying of water Bills to evade disconnections
CED Student	Provider of technical Assistance in the establishment of water supply scheme	High	Improved project management	Positive	Will provide assistance even after Graduating from studies

Table VI :Different stakeholders who have interest in the project, their participation roles, evaluation, impact and plan(Source: Survey data,2006)

Briefly, the roles, concerns and expectations of other stakeholders to the project include:

- The Mwanza Urban Water and Sewerage Authority(MWAUWASA) are expected to sell water to the project. Water to be pumped to the reservoir tank is to be connected from a point owned by MWAUWASA. Water will be charged according to the usage, while the project will cover these costs through water user charges to consumers in the community.
MWAUWASA expects when the project is successful, it will help reduce water supply gap as more people will be accessed to water supply which is their goal.
- Mwanza City Council has the overall goal of ensuring its residents are accessed with basic social services. To ensure this project is successful, MCC will provide the necessary policy guidelines, procedures and all the required

help through its relevant departments like Community Development, Cooperatives, Urban Water Supply, and Urban Planning.

- Financial Institutions are to be solicited for providing funds for the project. Apart from local community contributions, a large part of the project cost is to be funded from would- be financiers.

2.3 Project Goals

To improve the social and economic conditions of Mkudi and Kilimahewa community members through establishing a water supply scheme.

2.4 Project Objectives

General Objective

To increase access to social basic needs (including water) to residents of Mkudi and Kilimahewa residents through constructing a water tank.

Specific Objectives

- A water supply scheme established by August 2007 in order to give access for piped water to over 2,000 residents of Mkudi and Kilimahewa.
- Strengthened capacity of community members in supporting the water supply by training four water user groups by October 2007.
- Improved capacity for eight CBO members in project management by October 2007.

2.5 Host Organization

This project is not affiliated to any organization .It is entirely owned and proposed by the community through the CBO Maendeleo Mkudi Kilimahewa.

The role of the CED student to this project is to work as a consultant with the major aim of writing a proposal to solicit funds from financial institutions and other donors.

Responsibilities of the CED student include:

- Offering technical assistance in Project Management to the CBO
- Budget preparation
- Project Writing

CHAPTER THREE

LITERATURE REVIEW

This part tries to inform what other similar water supply scheme projects were successfully started and run.

The chapter is divided into three parts; Theoretical, Empirical, and Policy Reviews.

On the theoretical part, much has been covered in explaining what water means to any society, its uses and what should be considered most by an entity providing this vital service to any community.

The empirical part of this chapter touches on experiences drawn from other projects implemented already from other parts but which are similar in nature to this project. Ibungilo Water Project is found in the same ward of Nyamanoro. The project was implemented by residents of Ibungilo which are squatter settlements in hilly slopes.

The Tanzania National Water Policy has been covered to relate it to the project as to what is emphasized in it.

3.1 Theoretical literature

What is Water?

Briefly water is described in many ways, as water available for a community or region.

Or it is said to be the source and delivery system of such water

process or activity by which water is provided for some use, e.g., to a home, factory, or business. The term may also refer to the supply of water provided in this way.

The basic source of water is rainfall, which collects in rivers and lakes, under the ground, and in artificial reservoirs. Water from under the ground is called groundwater and is tapped by means of wells. Most often water must be raised from a well by pumping. In some cases a well will draw water from a permeable rock layer called an aquifer in which the water is under pressure; such a well needs little or no pumping (see artesian well). Water that collects in rivers, lakes, or reservoirs is called surface water. Most large water supply systems draw surface water through special intake pipes or tunnels and transport it to the area of use through canals, tunnels, or pipelines, which are known as mains or aqueducts. These feed a system of smaller conduits or pipes that take the water to its place of use. A complete water supply system is often known as a waterworks. Sometimes the term is specifically applied to pumping stations, treatment stations, or storage facilities. Storage facilities are provided to reserve extra water for use when demand is high and, when necessary, to help maintain water pressure. Treatment stations are places in which water may be filtered to remove suspended impurities, aerated to remove dissolved gases, or disinfected with chlorine, ozone, ultraviolet light, or some other agent that kills harmful bacteria and microorganisms. Sometimes hard water is softened through ion exchange, by which dissolved calcium and magnesium salts are replaced by sodium salts, which do not interfere with soap. Salts of iodine and fluorine, which are considered helpful in preventing goiter and tooth decay, are sometimes added to water in which they are lacking.

Not all water supply systems are used to deliver drinking water. Systems used for purposes such as irrigation and fire fighting operate in much the same way as

systems for drinking water, but the water need not meet such high standards of purity. In most municipal systems hydrants are connected to the drinking water system except during periods of extreme water shortage. Because many cities draw water from the same body into which they discharge sewage, proper sewage treatment has become increasingly essential to the preservation of supplies of useful water.

What precisely is this fascinating substance water?

Webster defines it briefly as: "The liquid which descends from the clouds in rain, and which forms rivers, lakes, seas, etc. Pure ordinary water (H_2O) consists of hydrogen (11.1888 percent) by weight and oxygen (88.812 percent). It has a slightly blue color and is very slightly compressible. At its maximum density at 39.2 °F or 4 °C, it is the standard for the specific gravities of solids and liquids. Its specific heat is the basis for the calorie and the B.T.U. units of heat. It freezes at 32 °F or 0°C"

Note the term "pure water" in this definition. Though we talk a great deal about "pure water," the phrase is more of a designation than an actuality. Actually, "pure water" (H_2O) occurs so rarely, that for all intents and purposes, it is a non-existent liquid.

Even the term "pure water" is somewhat ambiguous. It has different connotations to individuals in various fields. The bacteriologist, for example, is apt to regard "pure water" as a sterile liquid, that is, one with no living bacteria in it. The chemist, on the other hand, might well classify water as "pure" when it possesses no mineral, gaseous or organic impurities. It is obvious that "pure water" as described in this

paragraph is likely to be found only in laboratories ... and even there only under ideal conditions.

The United States Environmental Protection Agency (EPA) provides practical standards for water in terms of its suitability for drinking (or portability) in the Primary Drinking Water Regulations and for aesthetic considerations in the Secondary Drinking Water Regulations.

In its Drinking Water Regulations, the U.S.EPA takes into consideration adequate protection of water against the effects of contamination, both through natural processes and through artificial treatment. The Standards list requirements for bacterial count, physical and chemical characteristics.

It is almost impossible to find a source of water that will meet basic requirements for a public water supply without requiring some form of treatment. In general, the requirements for a public water supply may be considered as follows:

1. That it shall contain no disease-producing organisms.
2. That it be colorless and clear.
3. That it be good-tasting, free from odors and preferably cool.
4. That it be non-corrosive.
5. That it be free from objectionable gases, such as hydrogen sulfide, and objectionable staining minerals, such as iron and manganese.
6. That it be plentiful and low in cost.

While the presence of coliform bacteria and toxic chemical content in a water supply would cause a water to be classified as unsafe to drink, other factors such as taste, odor, color and mineral content have a certain aesthetic effect - which can cause a water to be rejected as a usable supply.

A potable, or safe water, is not necessarily usable or useful for many purposes. For this reason it may require treatment of another sort to render it useful to the needs of the home or industry ... or for use by the space age scientist, for example. In any event, no snap judgment should be the basis for determining whether or not a certain water can meet requirements for a certain use.

There are tremendous variations in the quality of water from area to area. Review of the maps at the end of the article gives some indication of the variations. These, however, are only broad general indications of the differences. Even within a specified area significant differences may be noted.

In some cases there are variations in the quality of water in a given area, even on a day to day basis. Why do such variations occur?

The answer can be traced to the fact that water is a solvent. Water is aptly described as "the universal solvent." Scientists generally agree that it is one of the best solvents available.

As a result of its solvent action, water dissolves at least a portion of everything it touches. It dissolves metals, rocks, waste matter, gases, dust and numerous other foreign substances and may contain appreciable amounts of these dissolved materials.

The dissolved mineral content of water ranges from 20 to 80 parts per million (milligrams per liter) in areas where there are only slightly soluble granite formations. From this low level it increases quite noticeably depending on area conditions.

The dissolved solids content of the oceans is in the 35,000 ppm (mg/l) range. It is estimated that there are enough dissolved solids in the oceans to cover all the earth's land surfaces to a depth of 112 feet. Each year inland waterways carry billions of tons more of dissolved solids into the oceans.

In any area, the dissolved solids content of a water supply may vary sharply depending on whether the water is drawn from a deep well, a lake, a river or a pond

Water defined as fundamental right'

New Delhi Oct. 17. Water should be defined as a fundamental human right rather than a human need in the National Water Policy, a seminar on 'Water and Environment' recommended here today.

The seminar organized by the Earthcare Foundation in association with the Commonwealth Forestry Association suggested resource mobilization for utilizing traditional water harvesting systems through participation of NGOs, civil society, private and public partnership.

The participants recommended recycling of effluent water in building complexes in urban areas through sewage and water treatment plants. Inter-sectoral issues like

energy, health and education may also be integrated with water conservation policies and programmes.

Importance of Private Sector Participation(PSP) in Urban Water Supply:

This section assesses the evidence for the effectiveness of PSP in improving affordable access to water and sanitation for the poor in developing countries. Account is specifically given of small water enterprises that operate outside of local urban water supply authorities.

Even after the United Nations "Water Decade" (1981 to 1990), and Safe Water 2000, more than 1 billion people in the less developed countries (LDCs) lack access to safe, clean water, and 3 billion to adequate sanitation. The conferences in Dublin (Water and Environment) and Rio (Environment and Development) in 1992 explicitly linked these issues to environmental concerns, and the 1997 White Paper of the Department for International Development (DFID) further linked water and sanitation to the goal of poverty elimination.

Achieving the goal of safe water and sanitation for all is a complex matter. Without suitable technologies, which communities can afford and manage, and without high quality design and construction, the likelihood of achieving these goals is remote. But technology is not enough on its own. In the absence of Governments with the resources and capacity to implement and maintain water and sanitation services, this burden falls increasingly on communities and non-Government organizations (NGOs). These organizations need to be able to make informed choices of technology and organizational arrangements; they need to be trained in technical, organizational, and management skills; and they need to be made aware of the health implications of

poor management of water and sanitation. But Government's role is not eliminated - it is changing from a focus on implementation and management to one of policy guidance, monitoring, and enabling.

Andrew Cotton of WEDC in his report on the effectiveness of PSP in complementing efforts of water supply services notes the following facts:

Public sector performance is poor in many cities in sub-Saharan Africa where less than 50% of the population is supplied. Small Water Enterprises often fill the gap.

PSPs can lead to improved utility performance but there is little evidence to show the extent to which service coverage has been extended to the urban poor.

Small Water Enterprises are likely to be essential to any strategy to increase access to better and affordable levels of water service for the urban poor.

If PSP is to improve access and service delivery for the poor, then this has to be specified in the contract documents which will ultimately be the basis for engaging the private sector.

Serving the Urban Poor

Every day 160,000 people migrate from rural to urban locations in developing countries. Annual urban growth rates in Africa are the most rapid, at nearly 4%, which is twice the global average. Almost 1 billion people live in slums, making up 32% of the global urban population. In sub-Saharan Africa 72% of the urban population is estimated to live in informal settlements.

Public Sector Performance

In general public sector performance in developing countries has been poor. Keeping pace with the rapid rates of urban growth is in itself a major challenge, let alone expanding service coverage.

Both the poor and the not-so-poor receive inadequate services - or no service at all - from water utilities, with less than half the population served by fully public utilities.

Public utilities have been unable to expand service delivery to keep up with the colossal growth in urban population.

Service coverage

City	Population supplied by Public Utility
Mombasa, Kenya	25% including 4% of those living in informal settlements
Dar es Salaam, Tanzania	46%
Mwanza, Tanzania	43%

In sub-Saharan Africa, the number of urban people having household water connections actually fell from 47% to 39% between 1990 and 2002. However, there is little data that disaggregates service provision, whether public or private, for the poor in informal settlements.

Thus involvement of SWEs is essential to any strategy to improve access to water for the urban poor whether under public or private sector management.

Access to clean drinking water

MacKay et al., (1995:190-200) describes how that, about 70 villages in northern and central Israel are not recognized by the state of Israel. Additionally, at least half of these villages are not connected to national drinking water network. Not only that, but they also lack sufficient quality and quantity of water. Many outbreaks of diseases associated with contaminated water supply have occurred, as well as substantial environment distress due to this shortage. An out break of hepatitis A that led to the cooperation of a public health physician, inures, an environmental engineers, and a human right lawyer to successfully take a case to the International Water tribunal to get access to safe drinking water for these communities. This case study provides model of cooperation between proponents and practitioners of health and human right.

Fisher (2005:12) further emphasizes that, access to clean potable water should be focused to disabled people. He enlists basic fact such as why water professionals urgently need to address the following issues;

- Right to safe water is a human right enshrined in international legal instrument
- Water services should benefit many people who have difficulties with balance coordination, weak grip, squatting or lifting in addition to disabled people (e.g. Elderly, pregnant women, and people who are injured or)
- The inclusion (from outside) of the disabled people in mainstreaming initiatives would be cost effective because, generally, only minor adjustments would be necessary, and
- Carriers (usually women and girls) would benefit from improved service.

3.2 Empirical Literature

Ibungilo Hill Water Supply Project is a project similar to the proposed one to be run by the CBO, Maendeleo Mkudi- Kilimahewa. The Ibungilo area is a squatter settlement found also in the hilly rocky sides within the same Nyamanoro ward. The project has got the same characteristics and features as those found at Mkudi and Kilimahewa areas. Ibungilo Hill community in Nyamanoro ward, Mwanza city, planned to establish a water project in 1995 with the objective to provide water to the settlement for domestic use. The planning also included improved sanitation and environmental conservation, as the Government had no plans for the same. With regard to the water supply project UNDP/LIFE Programme and CBEM (Danida support Project) in 1998 assisted with funds for design and granted Tshs 12,885,000/= for purchase of machinery, water pipes, water tank construction and booster house construction. This part of the project was completed in 2000 and pumping operations commenced formerly on 16/02/2001. At this time the project was not quite completed. The distribution system was under construction and only one stand post was in operation. The following months the system was expanded although the CBO was in such a hurry that the structures were not done properly partly due to lack of design and partly due to lack of proper technical support. Initially all families in the service area were supposed to be supplied by stand posts. However the CBO in charge of the project soon started to allow also house connections to be constructed and at present there are a number of such connections. At present water from the project has been distributed to approximately 60% of the residents in 8 mitaas (streets). The area has over 4000 people. The project buys water

from the Mwanza Urban Water Supply Authority and a water meter is used and hence the amount to be paid is well determined.

Impact of Ibungilo Water Project to Mkudi Kilimahewa Water Supply Scheme

The purpose of referring to Ibungilo Water Project as a case study is due to the relevance of the project concept and environment which gives the following benefits by learning from it:

- The project transfers to the community the responsibility to plan, manage, and maintain safe and reliable drinking water systems. This project facilitates community ownership and management of local water supplies by providing training in pump maintenance, community mobilization, and community education.
- The project activities support the achievement of results. There is regular monitoring and review of the project. Performance review framework is in place to ensure expected results are achieved.

Such general findings show strong accountability and reporting of results.

3.3 Policy Review:

Water sector development in Tanzania is governed by the water sector policy. The first water sector policy was issued in 1991. The current water policy was issued in 2002. However, recently the Government of Tanzania has embarked upon a policy reform programme that covers the entire social, economic and political body therefore including the water sector. Therefore the water sector policy is

supplemented by the Water Sector Reform Programme which is still going on. The Water Sector Reform Programme works on improving the policy as well as sector management and operational set up, overall the water policy and together with the ongoing sector reform stipulates the following:

- Water is considered as a basic need;
- Government policy on water aims at achieving equitable access to and adequate sustainable supply of clean safe water both in rural and urban areas;
- The policy goal is to ensure universal access to clean safe water supply within a distance of 400 meters from people's home;
- Water development and supply is a liberalized sector i.e all potential actors, for example, communities, private sector, NGOs (local and foreign are allowed and encouraged to engage especially by way of investing to supplement Government efforts in the development and delivery of water supply services
- Government will make efforts to promote active participation of the private sector and beneficiaries in service delivery in order to improve efficiency, effectiveness and enhance sustainability of the services

Fresh water is a basic natural resource, which sustains life and provides for various social and economic needs.

In its natural state, water is an integral part of the environment whose quantity and quality determine how it can be used. Safe drinking water and good sanitation practices are basic considerations for human health.

Despite its importance to our lives and development, water is unevenly distributed in time, space ,quantity and with great variations in quality. Furthermore water is a finite and a vulnerable resource.

Over the past 15 years(base year 2002),water demands in Tanzania have intensified with the increase in population and concurrent growth of economic activities requiring water as an input such as domestic activities. Water scarcity is perceived at many places due to unreliable rainfall, multiplicity of competing uses, degradation of sources and catchments.

Despite significant investment in the water supply services since the early 1970s, water supply coverage is not satisfactory. The 1991 National Water Policy set a goal of providing clean and safe water to the population within 400 metres from the households by the year 2002.

Today only 50% of the rural population has access to a reliable water supply service.

The coverage for urban areas is 73%,but most urban water supplies are inadequately treated due to malfunctioning treatment plants.

This coverage in the provision of safe water is undesirably low.The people, mainly women and children walk long distances to fetch water. The national economy suffers because of inadequate water supplies in the rural and urban population.

Water sector is covered in the Tanzania 2025 Development Vision as well as the Tanzania's poverty Reduction Strategy Paper(PRSP).

Water is considered a key factor in the socio-economic development and the fight against poverty.

The water policy document contains three sections addressing three sub-sector issues including Urban Water Supply and Sewerage

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Community Level and Water User Associations

Water User Associations(WUAs) or Water User Groups(WUGs) will be the lowest appropriate level of management. These associations will be responsible for local level management of allocated water resources, mediation of disputes among users and between groups within areas of jurisdiction, collection of various data and information, participate in the preparation of water utilization plans, conservation and protecting water sources, efficient and effective water use and ensuring return flows, enforcement of the law and implementation of conditions of water rights, and control of pollution.

Communities in general play a major role in the water sector because they are the primary users, guardians and managers of water sources. participation of both men and women in decision making, planning, management and implementation of water resources has to be enhanced.

Urban Water Supply and Sewerage

Urban areas in Tanzania are experiencing rapid expansion. The population is growing at a rate more than 6% per annum, which is exerting enormous strain on the delivery of various services including water and sanitation services. According to a recent review, between one third and one half of the urban population lives in unplanned squatter areas. Apart from being of generally poor housing, the areas are

characterized by high population density and general deficiencies in infrastructure services including water and sanitation.

Major issues and challenges facing the urban water supply include inadequate both in quantity and quality, poor billing and revenue collection, lack of an enabling environment for private sector participation and belief that water is a God given resource for which no price can be attached.

Water Policy Objectives with regard to Urban Water Supply

This policy aims at achieving sustainable, effective and efficient development of urban water supply and sewerage(UWSS) services. This will be attained by providing a framework in which the desired targets are set outlining the necessary measures to guide the entire range of actions are to harmonize all related UWSS activities and actors with a view of improving the quality of service delivery.

The specific objectives of the Policy in the context of developing and managing UWSS services are:

- To guide the development and management of efficient ,effective and sustainable water supply and waste water disposal systems in urban centres.
- To create an enabling environment and appropriate incentives for the delivery of reliable, sustainable and affordable UWSS services.
- To develop an institutional framework and ensuring that the UWSS entities are financially autonomous.
- To enhance an efficient and effective system of income generation from sale of water and waste removal.
- To enhance water demand management and waste water removal.

Water for Low Income Groups and Community User Groups

People living in underprivileged urban and peri-urban areas rarely benefit from adequate water supply and sanitation services. They collect water from kiosks or buy it from vendors at a cost higher than that of the house connections.

Recognizing the existence of low income groups in the urban and peri-urban areas, UWSS entities shall be required to provide them with appropriate water supply services. Given the importance of water for life and survival, appropriate social equity a basic level of water supply and sanitation service provided to the poor at affordable costs. Public-private partnerships will be encouraged.

Also, in here, NGOs and CBOs will be encouraged in financing, developing and managing the WSS service in low income urban areas.

An assessment of this policy for the water supply scheme at Mkudi and Kilimahewa shows that the Government encourages initiatives of such CBOs in supplementing its efforts in providing water services to the residents who are accessible to them.

Partnership between the CBO and the MWAUWASA is also highly encouraged as the former will be providing the services where the latter has not yet covered.

One of the major problems of the first National water Policy of 1991 was on financing, and the wet-distorting signals sent to the consumer by the policy of free-water. Not only were the members of the community generally excluded from participation in the design and construction of the water systems, except as hired labor or somewhat coerced 'volunteers', but they were also asked to contribute little or nothing in cash or in kind to the operation and maintenance of the system. The effect of this policy was to perpetuate a lack of a sense of ownership on the part of

system users, a lack of recurrent-cost financing to maintain the operation of the systems, and a continued dependence on external funds for implementation of new schemes.

Therefore, the current water policy sets out key elements in the sector, and reflects some of the lessons that were learned from past mistakes .For example, the document highlights the need for community participation in construction ,plus cash in-kind contributions toward operation and maintenance .It seeks to encourage the adoption of low cost technologies to enhance water coverage.

CHAPTER FOUR

PROJECT IMPLEMENTATION

Maendeleo Mkudi Kilimahewa(MMK) Group implements the water supply scheme project using a holistic, community-oriented process. This involves an intensive process of capacity building and community training before construction is started. The community is empowered with the skills and knowledge to make their own decisions throughout the project process. This also results in maximizing the use of local labour and materials in the implementation of the project. MMK provides social and technical support throughout the project so that the community is able to properly manage their project. .

Every effort is made to have the community and local people do as much of the work as possible throughout the implementation of the project. The MSc(CED) student also helped the community to recognize certain situations when outside expertise is required. Typical examples of these situations are for financial training, proposal writing, preparing design drawings, or doing connection of pipes from MWAUWASA main water point.

4.1 Implementing Strategy

This project comes as a result of engagement/attachment to the CBO, Maendeleo Mkudi- Kilimahewa, Nyamanoro ward in Mwanza city.

According to needs Assessment conducted at the Community, and citing various reports and literatures, like the neighboring Ibungilo Hill Water Project, this project

has a key role to be a good source of income to the CBO members and improve water supply services at areas.

As of now already a project write up has been prepared and has been used to solicit funds from Mwanza City Council to incorporate the project in the next Development Plan for 2007/2008.

The project is targeted to benefit CBO members as well as the Mkudi and Kilimahewa Community where the water supply scheme will be run . The project will provide training to both CBO members and water user groups as representatives of the community. CBO members will be imparted with management skills to enable them run successfully the project. The following strategy will, therefore, be used by the project;

- ❖ Members of the CBO the community will contribute to the construction of the water tank
- ❖ The CBO members will make acquisition of the necessary materials, pipes and equipment for the construction and installation of water supply scheme.
- ❖ Training will be done by officers from the Mwanza City Council, Urban water authority on managerial and technical skills for the project.

In the initial stages of the project, members of the community were involved in contributing for the clearing of the site, collection of stones for construction of the proposed tank.

4.2 Project Products and outputs

By the end of the second year, the project is expected to accomplish the following(outputs):

- Eight(8) members of the CBO Maendeleo Mkudi Kilimahewa trained in project management
- Four(4) Water User Groups trained in supporting the project on security, sanitation, and technical skills.
- A water supply scheme established in the area.
- Awareness among community members raised on owning the project and protecting it.
- At least 2,000 residents of Mkudi and Kilimahewa are accessible to safe water within 400 meters from their households.

Other Results of the Project

Social benefits

- ❖ Relief of a burden on women and children to fetch water from long distances during the day,a factor that consumes a good number of useful day- time working hours. In general hygienic condition and standards of living will be greatly improved.
- ❖ Provide improved sanitation

Economic benefits

- ❖ Availability of water at much cheaper rates
- ❖ Creation of some economic activities
- ❖ Raising income levels of CBO members

4.3 Project Plan and Implementation Schedule

The project for establishing a water supply scheme at mkudi and Kilimahewa was targeted to achieve three objectives through a number of activities as given in the following tables.

OBJECTIVE 1: A water supply scheme established by August, 2007 to give access to over 2,000 residents of Mkudi and Kilimahewa areas

S/N	ACTIVITY	PROJECT MONTH(2005-2007)												RESOURCES NEEDED	RESPONSIBLE
		8/05	9/05	10/05	4/06	5/06	12/06	1/07	2/07	6/07	8/07	11	12		
1	Introduction and meeting with CBO members														<ul style="list-style-type: none"> ➤ CED Student ➤ CBO Members
2	Conducting needs assessment and problem identification														<ul style="list-style-type: none"> ➤ CED student ➤ CBO members ➤ The community (Mkudi & Kilimahewa)
3	Conduct meetings with CBO members on raising funds													Venue (CBO own building)	<ul style="list-style-type: none"> ➤ CBO Chairman

S/N	ACTIVITY	PROJECT MONTH(2005-2007)												RESOURCES NEEDED	RESPONSIBLE
		8/05	9/05	10/05	4/06	5/06	12/06	1/07	2/07	6/07	8/07	11	12		
4	Writing project proposal for soliciting funds from financiers													➤ Funds	➤ Chairman ➤ CED student
5	Purchasing Building materials and equipment for the water tank													➤ Funds	➤ CBO Secretary
6	Construction work of water tank and laying of pipes													➤ Funds	➤ CBO members
7	Monitoring													➤ Funds	➤ CBO members
8	Evaluation													➤ Funds	➤ CBO Members ➤ CED student ➤ Stakeholders

OBJECTIVE 2: Capacity of community members strengthened in supporting water supply scheme by training four water user groups by October 2007

S/N	ACTIVITY	PROJECT MONTH(2007)												RESOURCES NEEDED	RESPONSIBLE
		1 1	12/ 06	01/ 07	02/ 07	3	4	5	6	7	08/ 07	9/0 7	10/ 07		
1	To conduct training to 4 water user Groups on project management													➤ Venue ➤ Funds	➤ Chairman ➤ CED student ➤ Officers from City Council 17 Urban Water Supply Authority
2															

OBJECTIVE 2: Improved capacity for four water user groups in project management by October 2007

OBJECTIVE 3: Improved capacity for eight CBO members in project management by October 2007

S/N	ACTIVITY	PROJECT MONTH(2007)												RESOURCES NEEDED	RESPONSIBLE
		12/ 06	1	2	3	4	5	6	7	8	9	10	11		
1	To conduct training to 8 CBO members on project management													➤ Venue ➤ Funds	➤ Chairman ➤ CED student ➤ Officers from City Council
														➤	➤

Table 6:

Showing implementation status of the project showing objectives,activities conducted,resources used,time frames,actual implementation.

The project will be linked to both the Mwanza Urban water supply authority and Mwanza City council for support and guidance in all phases of implementation in ensuring that community members have good access to clean water .

- ❖ The project aims to ensure that there is full Community members' participation in supporting the project.

4.4 Project Implementation Status

Up to now the following activities have been implemented by the project:

- a site where the tank is to be constructed has been found
- collection of construction stones (2 trips) has been done
- A full Proforma for the project cost has been obtained.
- Request for financing from Mwanza City Council has been done and accommodated in this current year's budget as government budget has been approved..
- Most of the project activities have not been done as financing from the City Council and would-be donors is still awaited.
- Community members have been requested for further community contribution for the project.

CHAPTER FIVE

MONITORING, EVALUATION AND SUSTAINABILITY

Monitoring is a powerful project management and learning tool that considers the need of all stakeholders groups.

This is the periodic surveillance of the physical implementation of a project to ensure that inputs, output and external factors are proceeding as to plan. (CEDPA Training Manual vol.II)

In order monitoring moves smoothly, you must establish a yard stick that will be used as a standard measure all along surveillance of project implementation, to ensure that things are moving as planned or else you take action before things go astray.

Monitoring is a continuous process aimed at looking how the day to day activities are implemented so that necessary corrections can be done to achieve the desired goal before it is too late.

5.1 Management Information System

From the set up of the implementation management structure, it is obvious that the planned activities will move as scheduled.

This tool will foster information flow to and from projects participants, supervisors and all stakeholders. The monitoring process will include field visits, monthly review meetings, reports and on site training.

All stakeholders in the project will be fully involved from the start to the end .This has to be participatory.

On the part of community and CBO members creates sense of ownership.

Project monitoring will be carried throughout the two years of project period using different perspectives to ensure that the planned activities are implemented as targeted.

The following methods were done to collect information for monitoring:

- Special forms were designed and used to collect data as follows:
 - Monthly reports from Tank Operators to the Supervisors for compilation
 - Monthly compiled reports from Supervisors to the Project Secretary who sends the same to Project Financiers.
- The monthly reports show the following information:
 - Sales of water from the tank showing; amount of water sold, revenue collected, number of households served, consumption of electricity used. Reports have also to show any technical problems faced like pumping capacity.
 - Separate reports on training workshops to Water User Groups and Technical staff, their effectiveness and training needs for the future.
 - The Project Secretary who coordinates all project activities ensures that everything is implemented according to plan with deviations also reported and submitted to project financiers.

5.1.1 Monitoring and Evaluation Matrix

Objectives	Indicator	Baseline Target	Source of Information	Data Collection Methods	Who Collects data	Users Of Informat.	Importance Of information
Residents of Mkudi and Kilimahewa are accessible to safe water Within a distance of 400 metres.	Number of residents	Over 2,000 people	-community members -MWAUWASA -Ward Offices (Local Govt.)	-Face to face interview -Secondary data	-Community members	-CBO(MMK) - MWAUWASA -Mwanza City Council -NGOs	To know water service delivery gap
Water User Groups trained in project Mgt.	Number of trained groups	4 groups	-Ward Offices -CBO(MMK)	-Training Needs Assessment -Project records	-Community members -Consultants	-CBO -NGOs -Mwanza City Council	Enhance performance in managing water scheme
CBO members trained in project management	Number of trained members	8 members	-CBO's office	-Training Needs Assessment -Project records	-Community members -Consultants	-CBO -NGOs -Mwanza City Council	Improve management of water supply scheme

5.1.2 Monitoring Plan and Strategy

The CED student has been assisting the group members in ensuring that project objectives are achieved.

They are assisted to identify indicators that show them that they are achieving their set targets. Such indicators help them to adhere to the set project timelines. Gathering of information was assigned to specific CBO members so as to provide the necessary information to be available for feedback.

Group members agreed to meet on Saturdays to discuss progress, problems, possible solutions and what to do next.

5.1.1.1 Indicators to be monitored

- Number of residents served with safe water from the tank
- Number of water user groups trained in project management
- Number of CBO members trained in project management

5.1.3 Research Methodology

The CED student together with CBO members agreed on the following monitoring plan that will enhance the success of the project:

Meetings have to be convened on Saturdays every month. Problems encountered during implementation of activities have to be reported and solutions to them have to be sought and rectified.

To be invited to the meetings include CED student, Community Development Officer from City Council, a representative from MWAUWASA, and WEO.

The data to be recorded will include such information like number of buckets of water fetched from the tank every day, water units consumed each day, multiple uses of water, whether domestic or commercial, units of electricity consumed in order to track costs of all operating activities.

Members will be trained in filling such data in forms to be designed.

Such collected data will be used by CED student and a representative from MWAUWASA for analysis and later form basis for formative evaluation process.

It is recommended every after one year formative evaluation should be done.

The following methods were used to collect information for monitoring purposes.

- **Records Review**

The following records are kept by each tank operator and used in the monitoring process;

- Sales of water from the tank showing; amount of water sold, revenue collected, number of households served, consumption of electricity used. Reports have also to show any technical problems faced like pumping capacity, how they were solved or what are recommendations to solve them.
- Number of residents served with safe water from the tank
- Number of water user groups trained in project management
- Number of CBO members trained in project management

- **Interviews**

This method was applied to collect quantitative and qualitative data through open discussions. The questions focused on knowing the following:

- Whether the number of Mkudi and Kilimahewa residents who were not accessible to safe water within a distance of 400 meters is now supplied with this essential social service.
- Whether the kind of training provided to Water User Groups has helped them manage and participate well in the water supply scheme.
- Whether the kind of training provided to CBO members has helped them to manage well the project.

- **Focus Group Discussion**

Discussions with the following persons and groups were done:

- CBO(Maendeleo Mkudi Kilimahewa Group) members
- MWAUWASA officers
- Mwanza City Council officers including City Director, Community Development Officer, City Economist, and Ward Executive Officers.

5.1.4 Data Analysis and Findings

Data collected and information collected on activities done, progress achieved so far, problems faced are recorded by CED student and Project Secretary and stored in computer data base. The same records are compared with the planned activities and conclusions are made basing on the comparisons.

5.2 Evaluation

Evaluation summarizes all monitoring process activities. The aim of conducting evaluation at the end of the project is to find out if planned output has been achieved . Evaluation exercise will involve experienced evaluators who will join CBO members, CED student and MWAUWASA engineer to conduct the exercise. This will involve establishing yardstick for measuring output.

This is the systematic identification of the effects whether they are positive or negative in order to realize how much project activities reached the beneficiaries.

Evaluation is carried out to see where the project objectives have been achieved. Also it enables to learn how well things have been done and to learn from experiences so that future activities can be improved. Evaluation of this project will be done periodically. Internal evaluation will be done by project leadership. External evaluation will be done by other stakeholders like the Government and financiers of funds on other interested parties

Evaluation summarizes all monitoring process activities. The aim of conducting evaluation at the end of the project is to find out if planned output has been achieved. This will involve establishing yardstick for measuring output and what is effect on the beneficiaries.

Monitoring records will be used to assess how much implementation has been achieved according to the work plan.

CBO members were involved in discussions about the importance of conducting evaluation as well as describing to them what is comprised in this process. Both formative and summative evaluations will be done

5.2.1 Evaluation Plan and Strategy

5.2.2 Formative evaluation

Implementation Evaluation

This type of evaluation started during project development and will continue throughout project life span. The major aim of this process is to assess the ongoing project activities so as to provide information to monitor and improve the project.

This was done at several points during the development life of the project. The aim was to see whether project was being implemented as planned before. So this is implementation evaluation and as such this was treated as monitoring and indicators for monitoring are used for implementation evaluation.

Progress Evaluation

The purpose here is to make assessment of progress in meeting the goal of the project. Involves collecting all the information to learn whether or not the yardsticks of participants' progress were met. This determines the impact of the activities and strategies on the goal. It acts as an annual evaluation.

Participatory self review and planning as a method will be used. This will be done annually and as such, data from monitoring and implementation evaluation will be used in the evaluation.

Participants here will have an opportunity to assess and see what went wrong, weaknesses, opportunities, requirements, and responsible persons.

It seeks to know what should be done to improve the project.

Progress reports will be inputs to the evaluation process. This process will be done annually and even CBO members will have the capacity to use do it even after the CED student leaves the project.

5.2.3 Summative Evaluation

The purpose of this process of evaluation is to assess a mature project's success in reaching its planned goal(s). This type of evaluation is also known as impact or outcome evaluation. It frequently addresses many of the same questions as those from progress evaluation, though it done after the project has been established and the timeframe possible for change has occurred. It collects information about outcomes and related processes ,strategies, and activities that have led to them. Regarded as an appraisal for worth or merit. This type is needed for decision making.

Alternatives in decision making include dissemination to sites or agencies, continue funding, continue on probationary status, modify and try again and discontinue.

Questions like; to what extent has the project met the stated goals for change or impact, can the program be sustained.

5.2.4 Performance Indicators for Evaluation

- The main purpose was to identify people at Mkudi and Kilimahewa areas who are not accessible to safe water within 400 meters as targeted in the Tanzania National Policy, 2002. The indicator for evaluation was the **number of residents identified**.
- The number of residents categorized into water user groups identified had to be trained on how to support the water supply scheme. The indicator here is the **number of water user groups trained**.
- CBO members had to be trained in order to acquire necessary management skills to run the project. The indicator here is the **number of CBO members trained in project management**.

5.2.5 Research Methodology

Data gathering in this process is done through focus group discussion, on site observation, and semi-structured questionnaire.

Discussion with members was done so that solutions for the problems seen have to be agreed for immediate actions.

Analysis for the results will be qualitative and communicated to members by using simple tables, charts and narrations for easy understanding.

The research is done with the major aim of comparing data collected with the project objectives if have been achieved.

Evaluation process was participatory in the sense that community members, BO members, and other stakeholders were active participants in the process.

Evaluation process used the following methods in collecting data:

- **Review of Records**

This method involved review of project documents and records kept during project implementation. Such records include minutes of meetings held by CBO and water user groups, workshops; number of residents supplied with water from the tank.

- **Observation**

This was done when community members had the opportunity to comment on the implementation of the project as they were physically seeing what is happening. It was easy to compare what is being implemented against what was planned before as they were all involved in all the implementation processes. It was easy to assess community awareness on what is going on.

- **Focus Group Discussion**

This was another method used in collecting data necessary for evaluation purposes whereby focused groups and targeted people were of good help to assess the quality of water services supplied ,their awareness on the project,

how it is performing and what is to be corrected throughout the project life span.

5.2.6 Data Analysis and Findings

Data collected and information collected were analyzed. The same records are compared with the planned activities and conclusions are made basing on the comparisons. Discussions were done and conclusions reached in a participatory way with CBO members and other stakeholders.

The findings were as follows:

- A proposal writing was prepared and presented to Mwanza City Council for incorporation in the Council development budget. The proposal was accepted by the Council and agreed to fund 20% of the project cost which is Tshs.17,252,330/=.
- Four Water User Groups were targeted to be formed from the nine cells(Mitaa). The groups have all been formed in the areas.

5.3 Project Sustainability

Project sustainability is the capacity of project to continue functioning, supported by its own resources (human, financial and physical) even when external sources of funding have ended.

There are several reasons why the project will be able to sustain itself .

- ❖ The CBO members together with the whole community of Mkudi and Kilimahewa participated actively in identifying the needs, and later on prioritizing high water problem to solve first.
- ❖ All key stakeholders like Mwanza City Council, Urban water authorities, financiers support and are dedicated to support the project.
- ❖ Community and CBO members are well sensitized and have the feeling of ownership of the project. They value much the project to belong to them.
- ❖ Revenues to be generated from the project far outstrip operational costs.
- ❖ The formation of water user groups ensures sustainability of the project as they have the capacity to manage the project in all technical and safety problems that may arise to the project.

5.3.1 Sustainability Plan

The residents of Mkudi and Kilimahewa are fully aware that water shortage is high in the priority list in which they wanted first to be solved. This is why they were ready to start contributing financially, materially and in kind as far as the way back in 2001. They showed and still they are ready to participate in every process of project implementation and in sustaining it.

- The CBO got a tender from Mwanza City Council for refuse collection since 2005. The gross monthly turnover is about Tshs. 958,000/= from which the CBO puts some of the money into the water supply scheme to ensure some sustainability to the project.

- The CBO has also approached the Tanzania Social Action Fund(TASAF) for further funding of the project.The Fund is still processing the request.

5.3.2 Institutional Plan

- Mwanza City Council through its five year Plan has already incorporated this project and it is hoped then that the project will continue to get funding for the next five years.
- The training of water user groups and CBO members have enhanced the sense of ownership among all community members. This is expected to ensure the project is secure and properly functioning.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

This chapter reviews the results of the work done so far. It reports objectives that were fully achieved and those not achieved. Factors or conditions that greatly affected the ability to complete the project and achieve all stated objectives are explained.

The chapter also provides experience gained during the project implementation. It recommends to others attempting similar project on strategies and best practices. Next steps for smooth implementation of this project are also explained here

6.1 Results

From the project research findings, the following results can be established:

- The problem of water shortage supply in squatter areas of Mkudi and Kilimahewa in Nyamanoro ward is very acute. This is a result of population problems in urban areas particularly Mwanza City where the situation is very worse. Planning for provision of basic social services, like water supply, by relevant authorities becomes very difficult.
- Achievement of project objectives has not been reached. Most of the project activities are yet to be done as they are waiting for availability of funds from financiers, Mwanza City Council, and community contribution. This project has been accepted by the Council for incorporation in its 2007/08 budget proposals. Soliciting of funds is being done to other institutions including The Savings and Finance Bank, Mwanza Branch, and the National Social Action Fund (TASAF).

6.2 CONCLUSION

It can be concluded that the project goals and objectives well address the problems facing CBO and Community members on the need to have improved quality of social services, mainly water at Mkudi and Kilimahewa areas.

The goals and objectives of the project do not change over the life of the project due to the nature of the project itself.

The requirement for safe water is not limited with time. The CBO members and the community at large will ever need safe water for improving their livelihood and for the former in raising their incomes.

6.3 RECOMMENDATION

In light of findings in this project, I recommend the following with regard to establishment of a project of this nature:-

- ❖ Strengthening and formation of water User Groups at all levels will form the basis for sustainability, autonomy, transparency, and accountability in water supply management which will ensure effective community and stakeholder engagement and participation on all stages.
- ❖ Regular monitoring and evaluation is necessary as a way for all water users to pay fees according to their consumption.
- ❖ All stakeholders to the project should be coordinated to make the project a success.

There are factors which denote the existing greater potential and opportunities for investment in the water sector now and for several years to come and they include the following:

- That there is greater unexploited water resource potential
- There is greater demand for water sector services that is still unmet and that demand is still growing as both the population as well as the quest for social economic development in Tanzania are also growing.
- The current Government policy calls for increased promotion and participation of other sectors, in the development of social sectors, water included.
- There is already a great number of institutions which have invested in the sector and which already have positive experiences to learn from and provide opportunities to for forming partnerships.

The sector has a big range of fields for investing into ie. From direct delivery of water to construction of infrastructures (eg. Sources, supply mains, etc), manufacturing and supply of machinery, equipment, and training of professionals

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