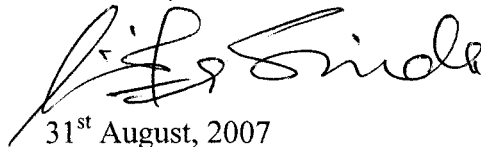


SUPERVISOR'S CERTIFICATION

I certify that this dissertation entitled **“Improving Community Water Supply Management in Low Income Households in Mbagala Kuu Ward, Temeke Municipal-Dar es Salaam,”** submitted to the Open University of Tanzania/Southern New Hampshire University for the award of Masters of Science in International Community Economic Development is an independent project work carried out by Ms. Dorah George Neema under my supervision and guidance. This Study has never been presented for the award of any academic qualification in any Institution of Higher Learning.

Name: Dr. Sinda, S.H

Signature:



Date:

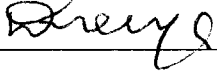
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DECLARATION

I, Dorah George Neema, hereby declare that to the best of my knowledge, this study has been done by me and no one has ever carried such a study or presented it to any University or any other Institution of Higher Learning



Neema, Dorah G

Date: 20th October 2007

ABSTRACT

The management and dispensation of water supply and sanitation projects is a big problem in Tanzania. Poor operation and management of water supply projects in the communities contributes to problems including increased rate of water related diseases including cholera. Also it contributes to increased rate of poverty as people are forced to spend more of their little income to buy water.

The government of Tanzania in collaboration with different development partners and other stakeholders including CBOs like KIBEDEA are making different efforts to ensure there is not only increased supply of water but also there is good operations and management of the existing water schemes.

Despite all the good efforts that are in place, O & M of the existing water supply schemes is still a big problem. In Mbagala Kuu where there is a community water supply scheme, a CBO called KIBEDEA has been making efforts to assist the communities to properly manage their scheme. However due to lack of proper operations plan and monitoring the problem is still existing hence failing to achieve its goal.

The purpose of the project is essentially to work with KIBEDEA and water users to assess water situation and plan on how to operate and manage community water supply scheme in a sustainable way. Good O & M will ensure reliable water supply hence improved livelihood of the communities.

ACKNOWLEDGEMENT

The preparation of this work has been a success as a result of assistance, advice, guidance and moral support received from many people of various categories.

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I am indebted to the management and members of KIBEDEA for their time and cooperation throughout the study.

I also would like confer my sincere gratitude to all my relatives and friends for the moral and material support they accorded me during the whole course of my studies.

Above all I thank God in Jesus Christ, who through His perpetual grace has granted me the strength, excellent health and most of all Life to enable the successful completion of my studies.

I remain entirely responsible for contents of this project paper. Therefore any queries of further elaboration on the contents should be addressed to me.

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ABBREVIATIONS

BTC	Belgian Technical Cooperation
CBO	Community Based Organization
CED	Community Economic Development
CIUP	Community Infrastructure Upgrading Program
CWSP	Community Water and Sanitation Strategy and Action Plan
DAWASA	Dar es Salaam Water Supply Authority
DCC	Dhaka City Corporation
DSK	Dushtha Shasthya Kendra
DWASA	Dhaka Water Supply and Sewerage Authority
FGD	Focus Group Discussion
KIBEDEA	Kijichi Beach Development Association
KIJICO	Kijitonyama Development Company
MWCDO	Municipal Community Development Officer
NAWAPO	National Water Policy
NGO	Non Governmental Organization
O & M	Operations and Maintenance
UNICEF	United Nations Children's Fund
WATSAN	Water and Sanitation Committee
WC	Water Committee
WCDO	Ward Community Development Officer
WEDECO	Water and Environmental Development Company

EXECUTIVE SUMMARY

The Project consists of assisting the communities living in Mbagala Kuu ward to improve the O & M of the existing community water scheme. The project was implemented in close collaboration with KIBEDEA, a CBO that has been assisting the communities in managing the scheme.

Poor management of the existing water scheme contributes to an increased rate of poverty to people who are already poor. During a baseline study it was learned that about 85% of the respondents, are earning between 30,000 and 50,000 Tshs a month, an amount which can not meet their daily needs.

In peri-urban areas of Dar es Salaam including part of Mbagala Kuu, the problem of inadequate water supply is growing and affecting the poor. This resulted into increased rate of communicable diseases which women and children are the mostly affected groups of people.

Improving water services in Dar es Salaam city especially in peri-urban areas has been the major effort of the government in collaboration with different stakeholders including NGOs like Water Aid and CARE Tanzania. Also CBOs like KIBEDEA are assisting at lower levels.

However in order to ensure successful implementation of the above initiatives there is a need to come up with different strategies and efforts. Planning and implementation of different activities need to be done in a participatory manner.

During the project implementation which was mainly implemented by the advice from CED student, it was learnt that, despite the efforts by the municipal and KIBEDEA, the communities were lacking sense of ownership because most of the plans were prepared with little involvement of water users themselves. In addition, water users did not like the existing water committee which was not operating in a proper way.

During the project time, the CED student conducted a baseline study to assess water situation in the project area. Planning on how to improve the management of water supply was also conducted. During planning phase, meetings involving different stakeholders especially water users was done. Also, the CED student in collaboration with community development officer at Ward level and KIBEDEA staff facilitated selection of new water committee members. Reviewing of water guidelines was also done. Monitoring and Evaluation was also insisted throughout the project. Monitoring helps to ensure all the planned activities are carried out as per plans.

In January 2007, mid term evaluation of the project was done and it was learnt that, household's expenditure on water had slightly decreased. The CED student continued to assist the water committee and municipal officials with information on how best to facilitate the management of water schemes.

CHAPTER ONE

COMMUNITY NEED ASSESSMENT (CNA)

Introduction

Water is a basic human need. Although more people in Sub-Saharan Africa have access to safe drinking water today than ten years ago, 300 million Africans (43% of the population) are still without adequate water supply, particularly in rural areas and in urban fringes, large sections of the population especially the poor do not have access to clean and safe water. In Tanzania, it is estimated about 57% people faces the problem. The mostly affected people are the poor living in rural urban areas.

The Government of Tanzania is taking different measures to improve water supply services including its management especially in areas where people are not served at all. How ever in order to ensure good implementation and achievement of its goal of ensuring access to clean and safe water to all, the government is encouraging involvement of different development actors including NGOs and CBOs in solving the problem of inadequate supply and management of water required for human life.

In Mbagala Kuu located in Temeke Municipality there is a problem of inadequate supply of clean and safe water and management of the existing community water supply schemes. The problem is affecting the poor especially women, children and disabled. KIBEDEA is one of the CBOs

operating in Temeke Municipality engaging in assisting the communities to improve supply and management of different water schemes.

The project was carried out using different participatory approaches which were seen to be necessary in improving management of community water supply. CED student assisted/ facilitated reviewing of different project activities, including re-establishment of a WC, planning on how to manage water project and provision of trainings to the WC and other stakeholders. This project document includes all-important activities, which were carried out throughout the project period.

1.1 Community Profile

Mbagala Kuu ward is parts of Temeke. Mbagala Kuu has a total population of 69,523 people of whom 34,863 are men. Generally the ward has different types of households which differ economically, these can grouped into three categories namely low-income, middle-income and high income households.

The main economic activities in the municipality include industries, both at primary and secondary level, subsistence and commercial farming, small-scale enterprises, trade and commercial activities encompassing whole sale and retail trade, fisheries, animal husbandry and building materials and mining (sand extraction and quarrying) activities.

1.2 Employment

According to the 2002 National Population and Housing Census, there is a total labour force of 666,075 people (i.e. both employed and unemployed persons) out of them 284,358 persons (42.7 percent) are employed. Also, out of the total labour force, the unemployed persons stand at 381,717 people or 57.3 percent.

The government and the private sectors that are formal sources of employment, provide 20% of employment to the residents of Temeke Municipality. This sector includes public institutions like colleges, hospitals, primary and secondary schools, and parastatal organisations.

The informal sector accounts for about 49%, agriculture 13%, with 18% being other types of employment-otherwise known as elementary occupations. Concerning usual economic activity, 42.7 percent of the labour force is employed while 57.3 percent of the labour force is unemployed out of which, 24.8 percent are fulltime students. Regarding current economic activity, 41.9 percent of the total labour force is employed while 58.1 percent are unemployed, the majority of whom are home maintenance workers (23.4 percent). The data on employment status shows that slightly more than 45 percent of the labour force is engaged in agriculture, 36 percent as employees and 15 percent are engaged in non-agricultural activities, otherwise known as elementary occupations

The category of informal occupations include: street vendors who constitute 24.4 percent, farmers 13.4 percent, service and shop sales workers 11.2 percent, craftsmen 9.8 percent, elementary occupations 9.3 percent, technicians and associated professionals 7.5 percent, plant operators and assemblers 6 percent.

1.3 Community Needs Assessment

Mbagala Kuu is one of the areas in Dar es Salaam City facing the problem of inadequate clean and safe water especially in areas where low-income households are living. It is estimated that about 87% of the communities are relying in unsafe water sources. The street of Mbagala Kuu has only five boreholes, which only 56% have access to water from these sources. And out of 5 boreholes, only 3 are operational.

The communities are buying water from water vendors where the source of water is unknown. In addition in places where the community water supply schemes exist there is poor management including lack of regular maintenance of the existing facilities . These problems necessitate immediate mitigation measures. The approach used to assess the need for improving water supply and its management in the area, was through consulting with water users, sub ward Officers and Temeke Municipality officials dealing

with community development and water supply services. Also Consultation with the affected people including women was also done.

During the meeting with Sub- ward and Municipal officials said that, the problem has been there for a long time and also it has been incorporated both in Municipal and Ward Development Plans. However the efforts of solving the problem have been constrained by lack of enough funds and technical know how in managing such projects.

In order to solve the problem, different approaches need to be used in a participatory way. The communities are the beneficiaries and owners of the project hence they would be involved throughout the project. Also different experts and municipal officials would be required to participate fully. Therefore, cost effective strategies are needed more quickly to increase access to improved water supplies for both rural and peri-urban households.

1.4 Research Methodology

Different methodologies were used throughout the study. These methodologies were in line with achieving the objective of exploring ways of improving water situation in peri-urban areas in Mbagala Kuu area. Participatory approach was the best approach used throughout the study. Different stakeholders were involved; these include water users, sub ward leaders, KIBEDEA staffs, Municipal Officials and other development partners.

A survey's design is the way in which its environment is controlled. The CED Advisor considered using cross-sectional design which provides a portrait of things as they are at a single point in time. During the study, The CED advisor considered selection of appropriate methodology which includes conducting household survey and Focus Group Discussions.

There are different groups of water users with different income levels, age and status who have different opinions on how to improve water supply in their area. Using of this design helped the surveyor to come up with a participatory survey results which were to be implemented.

The main research methods used in the study included the following:

i. Focus Group Discussions

FGD was conducted to a group of people doing the same type of activities. The FGD was specifically conducted to sub-ward leaders who were responsible in ensuring the communities have access to clean and safe water. A total of 10 sub-ward leaders were included in the survey, among them 4 were women.

ii. Documentary/ Literature Review

Literature Review was another methodology of the study. The methodology helped to gather information about other similar projects. Also it helped not only to get ideas on better ways of improving

operations and management of water projects but also challenges facing such projects. Also different relevant policies were reviewed.

iii. Observations

Another methodology used was observations through field visits, Observation assisted to get some information which could not be gathered during household and focus group discussions.

iv. Household Survey

The approach was used in order to know general socio-economic situation at the household level. A total of 50 households were selected for the survey.

1.5 Sampling for the Survey

The methodology was used in order to assess water situation in the selected households. Also to know household's income spent on water and their copying mechanisms. During the study, a sample of 50 households out of 526 was selected as a sample population. These included low-income households (30), middle-income households (15), and high-income households (5). It should be noted that in the study area in Mbagala Kuu there are a total of 526 households. Selection of representative sample was done in collaboration with sub ward leaders who know better their people. The approach used to

identify these households was through wealth ranking by consulting Sub-ward leaders.

Also two (2) Community Development Officers (CDOs) and one (1) Water Engineer (WE) from Temeke Municipality took part in the study. In addition, 4 selected KIBEDEA representatives and 10 sub –ward leaders were included in the study.

1.6 Type of the Survey Instrument(s)

The survey used questionnaires both self- administered and in-person interviews, check list and observations. This was to ensure that the information obtained from the questionnaires relates to that from the interviews. Observation was employed as the researcher was observing the sewage systems as well as latrines and solid waste disposals as the survey was conducted during the rainy season. The information collected was used to collect the actual information from the field so as to compare with the information obtained from individuals through questionnaires and interviews.

1.7 Data Collection

1.7.1 Primary Data

Reconnaissance survey was done to provide a general picture of the study area. The main activities during the reconnaissance survey were the identification of ward and Cell Leaders and general familiarization of the study area, the community organization and its people.

i) Semi Structured Interviews

In this type, interview information was collected using pre-determined questions and topics that allow new topic to be developed as the discussions are in progress. Question were planned to get overall indigenous knowledge on management issues.

ii) Questionnaires

Well-designed questions were used to explore information from key informants and other respondents from selected Respondents.

iii) Observations

This method was used during data collection process by making an actual visit to the water supply points. The objective of such visit was to see the status/condition of water supply points and also the condition of the sewerage systems in the study area

1.7.2 Secondary Data

The secondary data from the baseline for this study data were obtained from files of various reports of Municipal and Sub ward Development plans and reports. Sources of data included, KIBEDEA reports, as well as ward Development reports on water issues and sanitation. The Researcher also collected Secondary data from the water

policies and other journals as well as from various project documents related to water supply and sanitation.

1.8 Data Analysis

The data was systematically analyzed to shed more light on the research objectives. The collected data was analyzed both quantitatively and qualitatively. The quantitative data was compiled, summarized and analyzed using Statistical Programme for Social Studies (SPSS). Descriptive statistics was used to analyze quantitative data while content analysis was employed to analyze the qualitative information collected through verbal discussion with different respondents. Consensus reached in each discussed topic during interview was recorded as the knowledge of the community related to management of water supply and sanitation issues.

1.9 Research Findings and Discussion

The finding of the conducted research were upon analyzing the data divided into five (5) categories and parameters, that were perceived to be most characteristic of the community in Mbagala Ward. The parameters chosen were also those that were deemed to have significant bearing on the performance of the KIBEDEA and water scheme in general. The parameters for which data was collected and analyzed include the following:

- i. Education of the respondents
- ii. Occupation
- iii. Income Levels
- iv. Involvement in Financial Benefits

v. Management of Water Supply and Sanitation Projects

Each of the aforementioned parameters is analyzed hereunder as a basis of the conclusion of the research.

Questions

The main questions were based on the objectives of the study and its purpose. These questions were designed in a way of giving guidance towards coming up with viable solutions aimed at improving management of community water supply scheme.

The main questions were:

- Where do communities obtain household's domestic water?
- Does community water fund exist?
- Have the communities been trained on how to do O& M of their water scheme?
- Who is responsible for O& M of the existing facilities?
- Readiness to contribute to the water fund.

Reliability and Validity

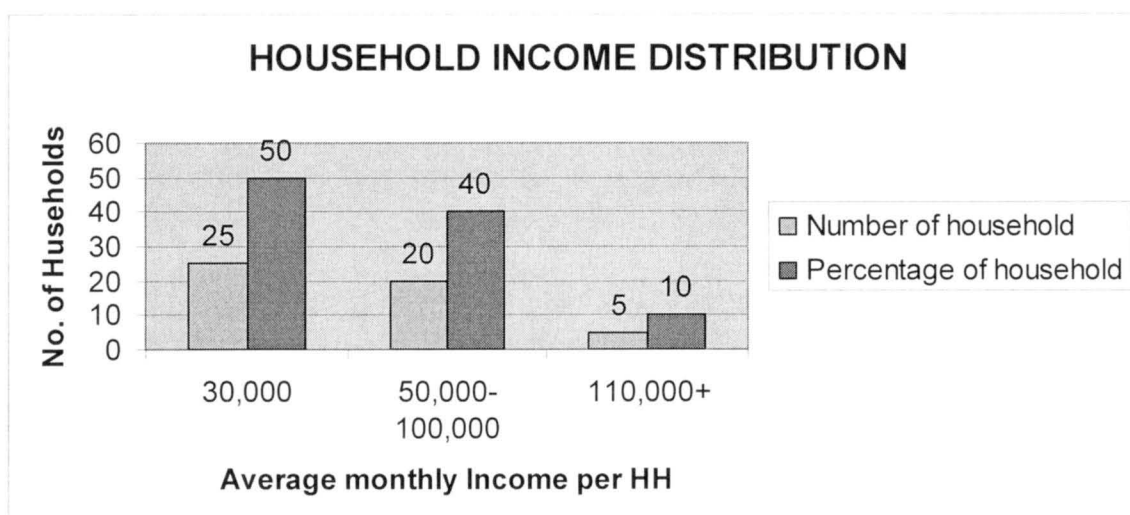
In order to be able to come up with the expected outputs of the project, approaches and methodologies used in the project have to be both reliable and valid.

The results of the baseline study were communicated to the communities in their street meetings, whereby a total of 4 meetings were conducted. These results are presented below, and mitigation measures aimed at improving water supply services have been discussed in the implementation chapter.

1.9.1 Average Household Income

The project was implemented in the peri-urban areas of Mbagala Kuu. During the study the communities were asked about their income levels in order to know their status and ability to contribute to the water fund.

Table 1: Monthly Income of Respondents



Source: Baseline study, 2006

Most of the respondents were not able to disclose their actual average monthly income. However 25 of the surveyed households responded they get under 30,000 Tshs a month. 40% said they get between 30,000 – 90,000 Tshs and 10% earn more than 100,000 Tshs a month. However during the study, sub ward leaders were able to

guess in which income level does a household belongs. The result of the study indicates that, many households are from low-income levels, indicating that there is a need to establish water fee that could be contributed by the poor.

1.9.2 Existence of Guidelines on O& M

During the survey, respondents were asked if there is any guideline regarding operations of the existence water facilities. 30 respondents reported that guidelines are not in place. 5 people including KIBEDEA official and Sub-ward leaders said guidelines are still under preparation, however the communities were not fully involved in that early stage.

Establishment of O& M guidelines is important in ensuring reliable water supply in the communities. In areas like Kilimanjaro where there are clear guidelines on O& M, water schemes have been managed well and communities have reported to benefit from their schemes.

Table 2: Awareness on existence of the National Water Policy

Awareness of the National Water Policy	Number of Respondents	Percentage
Yes	17	34
No	18	36
Do not know	10	20

Source: Baseline study, 2006

The National Water Policy of 2002 includes proper guidelines on how to manage water schemes both in rural and Urban areas. The policy necessitates the need to have water bodies and funding. The policy also insists on the need of involving different stakeholders in the O& M of community water schemes.

During the survey, 17 people said they have heard about it during the water week celebrations, and have also read the policy book. 18 people were not aware of the policy and 10 people said they completely not aware of there is the National Water Policy of 2002.

1.9.3 Training on How to do O& M of Water Schemes

The respondents were asked if they have received any training on how to operate and manage their water schemes. 8 out of 50 respondents said they have attended one training which was organised by KIBEDEA in collaboration with Temeke Municipality. The training was concentrated on how to establish water fund and its management. 42 respondents said they have never attended training on water issues.

1.9.4 Existence of Community Water Fund

In National Water Policy of July 2002, it has been stipulated that, water users have to be responsible in the O & M of their water schemes. This means that, water users have to have means especially water fund required for the O & M of the existing water schemes. The government could only assist in areas where water users cannot meet costs of O & M due to high maintenance costs.

During the survey, all respondents said, there is no community water fund in place however there was a mobilization meeting which was organized by KIBEDEA to sensitize the communities to establish their own water fund. The communities also complained of their low levels of the monthly households' income. They advised the amount of water fees to be established should be affordable by water users.

Establishment of a community water fund was seen as a necessity in ensuring proper functioning of the existing scheme and hence its sustainability. The following were the findings of the study, when the communities were asked about their readiness to re establish water fund.

Table 3: Do you have a Community Water Fund

Existence of community water fund	Number of Respondents	Percentage
Yes	0	0
No	50	100

Source: Baseline Study, 2006

1.9.5 Community Participation in the O& M Of the Water Scheme

During the Survey, water users were asked their experiences in connection to the operation and maintenance of community water supply scheme in their localities. 45 respondents said that the government was responsible for the daily operations of the scheme although they that management of the scheme is very poor something which has contributed to the collapse of two boreholes.

5 people who are sub ward leaders said that there is community involvement in the management of water scheme. They cited an example when maintenance is needed they normally conduct community meetings for fund collection.

The major problems in the management of water schemes were reported to lack of community involvement especially women. It was also reported that, there is a no a proper and accepted body responsible for the management of the existing schemes. Lack of community water fund was reported to be a constraint of doing proper management of the existing water scheme. The Sub ward leaders and the Municipal Water Engineer said they have asked funding from the Ilala Municipality required to maintain and repair the existing water facilities however they have not yet received it.

Table 4: Community participation in the management of the water scheme

Have you participated in the management of the existing water scheme	Number of Respondents	Percentage
No	45	50
Yes	5	10

CHAPTER TWO: PROBLEM IDENTIFICATION

This chapter is about the problem statement where it discusses the existing water situation in parts of Mbagala Kuu Ward. It has also included target community who are water users and beneficiaries of the existing facilities. The chapter has also included different stakeholders in the area who in one way or another are benefiting or involved in improving water supply in the area. Information about the host organisation i.e. KIBEDEA has also been included in the chapter. Project goals, objectives and expected outputs have also been included in this part.

2.1 Problem Statement

Lack of clean and safe water is critical in parts of Mbagala Kuu Ward in Temeke Municipality. It is estimated that, about 78.5% of the population suffer the problem. Despite the effort done by the government, NGOs such as Water Aid, CBOs such as KIBEDEA to eradicate the problem, the problem is still big.

Lack of clean and safe water has been due to poor management such as inadequate funds for the government to improve the situation through construction of more water facilities and provision of regular training on how to manage the existing water facilities. In addition the communities are still having the past mentality that the government is responsible for providing free water services and for the maintenance of the existing water facilities.

Insufficient supply of clean and safe water is affecting the communities from low-income households earning about one USD a day. A bucket of water in those areas costs range from 200 to 500 Tshs. According to the communities and the Municipal officials, on average one household uses six buckets of water, thus spending 1,200 to 3,000 Tshs a day for water only. Such a situation forces some of these poor households to rely on unsafe water sources, hence increased number of communicable diseases especially cholera, diarrhoea and other. Such problems have caused more expenditure on health matters hence has forced to increased rate of poverty. The mostly affected people in the communities are women, children and the disabled.

Immediate mitigation measures through construction of more water facilities and provision of training on how to operate and manage them need to be in place. If nothing would be done to eradicate the problem, poverty is likely to increase in those areas; hence poor people will continue to suffer.

Construction of more water facilities and provision of training on operations and management of them could help to minimise the problem of inadequate supply of clean and safe water and hence reduction of water related diseases.

2.2 Target Community

The project is implemented in underserved areas of Mbagala Kuu located in Temeke Municipality. It should be noted that, most of the past community water supply

project collapsed due to lack of communities' participation in all stages of the project. In order to achieve sense of ownership different stakeholders including the target communities for this case water users have to be involved fully. Also KIBEDEA and the municipal council are involved fully. Their involvement helps to ensure the project is well managed and sustained. Also the target community's involvement in different stages of the project helps to smooth implementation of the planned activities.

Table 4 TABLE OF STAKEHOLDERS

No.	Name of Group	Role	Expectations	Concerns
1	KIBEDEA, a CBO	<ul style="list-style-type: none"> • To mobilise and sensitise the communities to fully participate throughout the project • To provide training on how to operate and manage their water schemes • To monitor the implementation of the project • Liaise with the project staff to secure fund required for the successful implementation of the project. 	<ul style="list-style-type: none"> • The communities will and continue to participate fully in the project 	<ul style="list-style-type: none"> • Inadequate fund • Communities might not contribute in cash as planned
2	The target communities	<ul style="list-style-type: none"> • To participate fully in the project • To contribute in terms of cash in the project and also in kind • To manage their water scheme including provision of security services 	<ul style="list-style-type: none"> • To get clean and safe water continuously • The government will manage the project including doing its maintenance 	<ul style="list-style-type: none"> • Not sure if water will be available as planned. • Some community members might not be willing to pay for water.

3	Temeke Municipal Officials	<ul style="list-style-type: none"> • Assist in project planning, implementation through working closely with the beneficiaries and other stakeholders • Sensitise the communities in ensuring they participate fully throughout the project. • Educate the communities on the National Water Policy of 2002 	<ul style="list-style-type: none"> • Water supply is increased in the project area • Funds are made available on time • The project is implemented as planned and sustained 	<ul style="list-style-type: none"> • Funds will be made available on time • If funds will be well managed without being misused • If the beneficiaries will be able to manage their project in a sustainable way.
	Medical Department	<ul style="list-style-type: none"> • To sensitize the communities to use clean and safe water in order to reduce water related diseases especially cholera 	<ul style="list-style-type: none"> • Water and sanitation services will be improved in un-served area within the project area 	<ul style="list-style-type: none"> • People might not use clean and safe water due to unwillingness to pay or due to lack of enough income hence water related diseases might not be reduced
	Street and Ward leaders	Liaise with the project workforce, municipality and the communities to ensure smooth implementation of the project.	<ul style="list-style-type: none"> • Communities will participate fully • Good communication and relationship 	<ul style="list-style-type: none"> • If the project will be implemented as planned • The communities might not be

		To make follow up of project activities and make sure the sustainability of the project	<p>between all parties will be established and sustained</p> <ul style="list-style-type: none"> • Fund for the project will be available on time. • Will be facilitated in terms of allowances throughout the project 	<p>willing to participate fully hence delay in the implementation of the project</p>
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2.3 Project Goal in CED Terms

The communities living in Mbagala Kuu area have been suffering from the problem of inadequate clean and safe water. This has resulted to an increased rate of poverty to the poor communities.

The goal of the project is to improve communities' welfare through provision of clean and safe water by year 2010.

The project is in good progress as the communities have prioritised it in their Ward Development Plan which is an indication that they will participate fully in eradication of the problem of shortage of clean and safe water.

2.4 Project Objectives

The project has the following objectives;

- To assess the existing water supply situation including its management in the project area;
- To raise awareness to the communities on the importance of their participation in O& M of the water scheme;
- To generate water fund required for successful operation and management of water scheme;.
- To assess how the existing water facilities are operated/ managed and provide training on how to manage them;
- To monitor the implementation of the planned project activities; and.

- To prepare a proposal for funding in order to construct additional 2 boreholes

2.5 Expected Outputs

- Water Situation in the project area is known;
- The communities are participating fully throughout the project;
- Good communication between water users, municipality and other stakeholders is in place;
- Water fund is in place and an account has been opened, and; and
- The Water committee/ body is in place and have been trained on how to operate and manage their water

2.6 Host Organisation

KIBEDEA is a CBO operating in Mbagala and Mbagala Kuu Wards in Temeke Municipality. The CBO has an objective of improving livelihood of the communities in the two wards. The CBO is implementing different activities which are aiming at reducing the rate of poverty in the two wards. One of its activities is to provide clean and safe water and ensuring good management in selected areas in the two Wards. Other activities include construction of primary schools, rehabilitation of the existing roads and promotion of income generation activities. The project is implemented as part of KIBEDEA activities.

In implementation of the project, my role was to provide advice through conducting training to both KIBEDEA staff and the body which is responsible for managing

community water supply. This would help to build capacity and at last achieve sustainability of the proposed project. It should be noted that, the project by the CED Advisor is only temporary. Hence it is not advised to take full charge of the project.

The advisory roles included:

- To provide training to Community Water Committee;
- To conduct a survey in order to understand the existing situation in relation to water supply in the area;
- To participate in community meetings for advice. The community meetings were organised to discuss issues including community contribution, status of water fund and other operations matters. Also to mobilise more resources required for the construction of water facilities;.
- To liaise with the Municipal relevant departments of water and Community Development for advice; and
- To make follow up and report on important issues/ matters in relation to my activities.

CHAPTER THREE: LITERATURE REVIEW

This chapter explains literature review which comprises of theoretical and empirical literature. The chapter has also included review of relevant policies which includes the National Water Policy of July, 2002. The chapter has also included Millennium Development Goals and the National Strategy for Growth and Reduction of Poverty (NSGRP).

3.1 Theoretical Literature Review

The period from 1981 to 1990 was officially deemed International Drinking Water Supply & Sanitation Decade (IDWSSD), during which an estimated \$133.9 billion dollars was invested worldwide. Approximately 1.6 billion people were served with safe water and close to 750 million with adequate excreta disposal facilities. At the end of the decade—according to WHO estimates—1 billion people still lacked access to safe water and 2 billion lacked sanitation services. Moreover, only about 25% of the \$133.9 billion went to peri urban and rural areas, where 75% of the poor in developing countries reside.

According to some experts, the IDWSSD did not achieve its intended goals because it was largely supply-driven and did not respond to demand, and it did not focus on sustainability. Evidence gathered from India toward the end of the IDWSSD showed that while many rural systems had been installed, maintenance of those systems was either assigned to overburdened state agencies, to local governments with little technical and financial capacity, or not assigned at all. The government estimated that “inattention to maintenance [cut] the useful life of water supply systems in rural

areas by 50 to 75 percent.” The same survey found that “only about one-half of the poor ostensibly served by hand pumps were actually using them.”

Community participation is a very important aspect for ensuring sustainability of water projects. Communities should be involved in all stages of the project i.e. problem identification, planning, implementation, monitoring and evaluation of their projects. Community participation is a key for success of any project, and will also help to avoid unnecessary conflicts between different stakeholders. Participation should consider all groups of people including women and other vulnerable groups of people. It should be noted that women are the main water users therefore their contribution is primary.

In the previous years, the Government of Tanzania was responsible for taking care of all social services in the communities, including water supply. The policy made it impossible for the government to ensure every Tanzanian has access to clean and safe water. Currently the Government has changed its stand, and different actors have been asked to join hands with the government to ensure better services to its citizens. Also water users are required to contribute in terms of cash and kind for their projects. For an example Rural Water Supply and Sanitation funded by the World Bank the communities are required to contribute 40% of the total cost of the proposed development. In addition during operational time, the communities are required to pay for the service. The amount of fees to be paid are planned by water users themselves in collaboration with community development officers, Water Engineers and other actors who have expertise on the subject.

In order to achieve sustainable development through ensuring equitable access to clean and safe water to the poor, the Agenda 21 has stressed the need to build local capacity; raising public awareness and demonstrating and disseminating appropriate technologies and measures. Give priority to sustainable household-based sanitation activities dissemination of affordable, sustainable, environmentally-friendly technologies and measures throughout communities.

Develop financing mechanisms that will emphasize local service delivery for activities in water supply, sanitation and water resources management. These have been implemented in different parts of the developing countries including India and Bangladesh. Implementation of Community Water Supply Schemes through capacity building and participation has contributed to improved health status of the poor and hence poverty reduction.

Over 250 million people, half of Sub Saharan African population have no access to clean and safe water, and almost 300 million people lack adequate sanitation. If the current situation does not improve, an estimated 500 million Africans are likely to be without safe water and sanitation by the year 2020, given the rate of population growth.

Dwindling water supplies of lower quality and ever- higher costs, also will constrain food production and increased environmental degradation and may possibly result in conflict, among users within countries and across borders. (Margerer T. Novicki. 1997. Improving Water Supply in Africa).

Water Supply in the city of Dar es Salaam has been in a state of intermittent crisis over last fifteen to twenty years. This is due to inadequate water supply and production. Also there is lack of community participation in the management of the existing water supply schemes. Financial operating loss has resulted to leaking of water pipes. In addition there is a weak billing systems and poor revenue collections. As a result many parts of Dar es Salaam have very poor water supply services.

The communities living in peri-urban areas of Dar es Salaam, which are away from the existing public water supply network, receive little or no water supply at all. Water users in these settlements who are the most sufferers include women, children disabled. These people are being affected as they relay on unprotected water sources, water from vendors which are sometimes from unknown source and few depend on private boreholes. Water from vendors is sold at a higher price i.e. between 200- 500 Tshs per bucket. The price is much higher than that from the public water systems. (BTC, Project Identification Study, February 2004).

According to the World Bank Report of 1991, lack of clean and basic sanitation is the reason that diseases transmitted by faeces are common in developing countries. In 1990 diarrhoea led to 3 million deaths, 85% of them are children. Between 1990 and 2000, about 900 million people obtained access to improved water services just to keep enough pace with the population growth. In 2000, 1.2 billion people still lacked access to improved water sources, 40% of them were in East Asia and the Pacific while 25% were in Sub Saharan Africa.

It is targeted that, the number of people with access to safe drinking water must increase by 270,000 by 2015 and this means halving the proportion of people who are currently without clean and safe water. In addition increasing number of people with sustainable access to safe drinking water than it was the situation in 1987. It should also be noted that, the Millennium Development Goal number seven aims at ensuring environmental sustainability which among other things states that “Halve by 2015 the proportion of people without access to access to safe drinking water”.

3.2 Empirical Literature

Throughout the world there are different initiatives that are taking place in ensuring there is water for all and especially for the poor. Different development partners have been working with communities to ensure there is access to clean and safe water supply and such schemes are managed in a sustainable way.

According to a recent World Bank report, Bangladesh’s urban population grew from 2.6 million in 1961 to approximately 22 million in 1991, a nine-fold increase. Asian Development Bank study cited that the population of Dhaka grew from 3.5 million in 1981 to 6.95 million in 1991, a growth rate of 7.1 percent. Current estimates suggest that the total population of the Dhaka Metropolitan Area is over 10 million, with around 3 million of these people living in various slums on government and private land.

Water and sewerage services in Dhaka are organized and managed by the Dhaka Water Supply and Sewerage Authority (DWASA). Local NGOs initially had a hard struggle to persuade the DWASA and the Dhaka City Corporation (DCC) to provide access to piped water services to residents of informal settlements. DWASA had a policy of only providing connections to land-owners, on presentation of a 'holding number' related to their plot. This effectively excluded slum dwellers from the services.

In 1992, through continuous negotiations with DWASA, the local NGO, Dushtha Shasthya Kendra (DSK) was able to convince DWASA to give access to piped water systems to two *bustees* (slum communities). DSK organized the residents of the bustees to build shared water points, and then applied to DWASA to legally connect the water point to the DWASA mains. Each water point, which would serve 100 families had an underground storage reservoir and a concrete platform, with two simple suction hand pumps. DWASA agreed to provide the connections after DSK obtained permission from the Dhaka City Corporation to use the site, and after it paid a security deposit and guaranteed that the bills would be paid.

DSK introduced the water points to the residents as community owned and managed infrastructure for which the residents were to pay for the construction costs and security deposit to DWASA. The residents agreed to take out an interest-free loan of \$960 (£600) from DSK to cover the costs of water point construction and connection, payable in two years. In order to generate the revenue to pay off the loan, pay the DWASA water bills, repair the water point when necessary and employ a caretaker,

the community collects fees for water collection and water use. Fixed prices were agreed for collecting a *kolshi* of water (equivalent to 20 litres), taking a bath or washing clothes. Community members agreed to pay monthly or daily, depending on their circumstances.

Such was the success of this project that the DWASA and DCC agreed to undertake a piloting phase for this arrangement. In collaboration with WaterAid, the Water & Sanitation Programme, and later other international agencies like UNICEF and Plan International, further collaborations with DSK, and five other local NGOs, a total of 110 community-managed water systems had been established and running successfully, benefiting around 60,000 slum dwellers. The community managed water systems ensured DWASA regular revenue from the water they supplied to the slum communities, and limited the number of illegal connections (and therefore lowered the level of non-revenue water, a usual measure of water management efficiency).

It is not surprising then that further expansion of these arrangements is being planned by DWASA for one of the largest slum concentrations in Dhaka, which would potentially provide to over 250,000 slum dwellers. In addition, with communities having successfully demonstrated to the government that residents of informal settlements have the capacity to manage and maintain communal water points, the water authority is now allowing communities to apply for water connections on their own behalf, without the need for an NGO mediator.

In undertaking these projects, WaterAid and its local NGO partners in Dhaka have also been exploring the particular problems associated with assuring that women's needs are addressed in the provision of water and sanitation services. Through the development of water user committees, local NGOs were determined to ensure that women were involved in decision making processes for the installation of water points, as it is predominantly women who will benefit from them. A women's NGO, Phulki, has had the most success in ensuring genuine women's participation in these mixed committees. They worked through whatever problems there were in relation to women's involvement in the committees. This took the form of gender training, working with men, not just women, in discussing different gender roles, and what individuals can do to try and address them. While there has not yet been significant evidence that this has led to more effective management systems, or to a more sustainable supply of water and sanitation services, as there has not been sufficient time passing to measure this, the fact of having mixed user committees has debunked a myth that women and men are not able to work within the same team for cultural reasons. This in itself is noteworthy.

In the early 1990's the Government of Ghana created the National Community Water and Sanitation Strategy and Action Plan (CWSP), the product of a national policy reform to which all donors signed. The first Ghana Community Water Supply & Sanitation project was intended to support the reform program and complement the existing activities of the central government water authority, which would focus on building larger systems.

The program evolved out of a set of national workshops on improving water supply and sanitation in Ghana. These workshops, which involved stakeholders from all sectors of society, produced a strategy and action plan for reorganizing the development of rural water supply and sanitation (the CWSP). It used the community-driven, demand responsive approach where rural communities identified their needs and the level of services they could manage and for which they were willing to pay. The new institutional arrangements included all levels of government, NGOs, communities, and the private sector to provide and co-manage services.

In terms of impacts, the rural water supply program more than achieved its physical targets. Beyond that, it increased the capacity of NGOs, so that they could provide technical assistance for water supply. It also built capacity of small entrepreneurs to supply equipment for the infrastructure. The increased competition, created in response to increased demand from communities, led to a 50 percent reduction in the price of boreholes. The project also made specific achievements in gender representation with women comprising 50% of water and sanitation committees (WATSANs). In addition, the WATSANs began diversifying into other areas – such as environmental services.

The follow-on project is helping the government scale up the approach to a national program. Progress began slowly with the first 18 months spent working with the government agencies and communities to learn and accept their new functions in the reformed system. Now two years into implementation, the project has taken off and is working simultaneously in 1000 rural communities. The program is also piloting

community contracts (currently the local government contracts) based on lessons learned at a World Bank international conference on CDD held in April 2002. District level agencies manage the program and now handle most of the procurement for infrastructure – now decentralized from the national level, and many districts are now supporting the operating costs for water supply themselves.

A case from Zambia shows that, in the past George Compound, one of the largest Peri-urban areas with a population of 120,000 had few houses connections and communal taps. These facilities were limited in capacity and extensively vandalized with no cost recovery. This made people resort to unprotected hand dug shallow wells as their source of water. In 1991-1992, there was a serious outbreak of cholera in Georgia compound. The Government of Zambia sourced aid from the government of Japan to embark on potable water project for the compound. The project is now half way to be completed. Zambia Water Supply Agency (ZWSA) is the implementation Agency. The agency is also involved in social and institutional aspects with technical assistance from CARE. ZWSA reached agreement with CARE to provide trainings necessary to build capacity of CBOs in the water supply areas of the project. The provided trainings and the established collaboration within different actors is a way of ensuring the established project is sustained.

In the effort of improving water services in the country, the government is stressing the involvement of private sector because the effort of the government alone cannot help to reduce the problem.

In Tanzania there are NGOs and CBOs which have been established to help to reduce the problem water supply these include Water Aid, Care Tanzania, Plan Tanzania, WEDECO and Others. Examples of CBOs include KIJICO and KIBEDEA. These NGOs and CBOs are operating both in urban and rural areas of Tanzania.

The government is recognizing NGOs and CBOs as powerful forces for social and economic development. An example of Rural Water Supply funded by JICA (Japanese International Cooperation Agency) implemented in Lindi and Mtwara Regions have helped to improve livelihood of the local communities because they are now having access to clean and safe water contrary to the past years whereby the communities were relaying on water from unsafe sources such as River Ruvuma.

Also in Dar es Salaam, NGOs such as Water Aid and Care have assisted the communities to reduce their household expenditure on water. For example in Temeke, people used to buy a bucket of 20 litres of water between 100 to 500 Tshs but after the new water projects, a bucket of water is now bought between 40 to 50 Tshs. Also the government through DAWASA is currently implementing a project aiming at improving community water supply services in peri-urban areas including Kigogo and Manzese. The implementation of this project is in line with National Strategy for Growth and Reduction of Poverty (MKUKUTA).

In Dar es Salaam, City Council through CIUP under the World Bank funding, the communities have been supported with the construction of boreholes in Mbagala Kuu, Tabata and Kinyerezi areas. The projects were located in areas where there is no water supply hence people were forced to spend most of their households' income

on water. Despite CIUP initiative the communities were involved fully in all stages of the project including planning on how to manage the existing facilities. Currently the communities are managing the existing facilities and are paying for water i.e. 100 Tshs per bucket. The collected cash is used for buying fuel and doing regular maintenance of machines. According to Sub ward leaders the communities are satisfied with the existing management system and has helped to reduce water problem in those areas. However Municipal Councils continue to provide technical support and providing trainings to water bodies.

Despite the fact that, the Government wants to ensure its people have access to clean and safe water but it should also consider the issue of sustainability. Sustainability of such projects could be achieved only if the communities are fully involved in all stages of the project and are educated on how to manage their own water schemes.

Also the involvement of CBOs such as KIBEDEA which is based and positively accepted by Mbagala Kuu residents could be one of the organisations stressing the importance of sustainability of water schemes. The main role of such CBO could be to provide technical advice and capacity building activities. This could be implemented through undertaking different types of training programs.

3.3 Policy Review

Tanzania is a signatory to the Millennium Development Goals (MDGs) The MDGs were established for the purpose of eradicating poverty. The MDG set out to have the portion of the population without access to safe drinking water or basic sanitation by 2015 (signed in Stockholm in 2000) and halving the proportion of people without

access to hygienic sanitation by 2015 (signed in Johannesburg in 2002). The MDGs also stresses the need of beneficiaries and different stakeholders to take part and collaborate in all processes of ensuring equitable access to safe drinking water to all. Some African countries south of Sahara are making good progress but some are still lagging behind, Considerable a number of capacity building activities to ensure good management and also additional investment in the development of water supply and sanitation systems and greater input with regard to operation and maintenance would be required to achieve the aforementioned objective.

In its ambitious and determined pursuit to fight poverty, Tanzania has adopted the MDGs and the National Strategy for Growth and Reduction of Poverty (MKUKUTA). Both are widely accepted among stakeholders and contain demanding, specific and quantified targets to be reached by 2015 and 2010, respectively. As the central strategic document for poverty reduction, MKUKUTA also identifies tailored cluster strategies and intervention packages which are well suited to attain both sets of targets. Thus, for Tanzania's development aspirations, there is consensus on what to achieve, and on how to achieve it.

Within this context, the MKUKUTA is fundamental because it aims at answering the question about what it will take to meet the targets of MDGs. Since the MKUKUTA is an essential policy tool, it is incorporated in the sectoral implementation strategy i.e. Education, agriculture, health as well as water and sanitation

Implementation of the project is in line with key issues stressed in MKUKUTA for the water sector. These include:

- To address cross-sectoral interests in water resources, watershed management and participatory integrated approaches in water resources planning, development and management.
- To lay a foundation for sustainable development and management of water resources in the view of the changing roles of the Government from service provider to that of coordination, policy and guidelines formulation, and regulation.
- To ensure full cost recovery in urban areas with considerations for provision of water supply services to vulnerable groups through various instruments including lifeline tariffs.
- To ensure full participation of beneficiaries in planning, construction, operation, maintenance, and management of community based domestic water supply schemes in rural areas.

In keeping up with the changing global trends in the water sector, and taking into account other national policy reforms, the government launched a revised National Water Policy in July 2002.

The NAWAPO of 2002, sets out future direction for the water sector in achieving sustainable development and management of the nation's water resources for economy-wide benefits and an increase in availability of water supply and sanitation services.

A National Water Sector Development Strategy (NWSDS) has been developed as a blueprint for prioritized timely and appropriate interventions to address water sector challenges in the process of achieving all targets narrated in the National Strategy for Growth and Reduction of Poverty, MKUKUTA by 2010, the millennium development goals by 2015, and contributing towards achieving the Tanzania Development Vision 2025 targets.

The NAWAPO of 2002, also stresses the need to improve water services and to ensure that, every Tanzanian has an access to clean and safe water. In that policy, there are things which have been stressed, these include community participation in all stages of development, need for community contribution both cash and in kind, pay for water because water is not free anymore, community ownership of the existing facilities, prevention of HIV/AIDS, and community participation on Operation and Maintenance of the existing water facilities. It should be noted that lack of clean and safe water contributes to an increased rate of poverty in our society.

The plan for rural and urban water supply and sewerage services are only achievable if secured water resources are available, protected and used in a sustainable way. Also in order to reduce poverty in Tanzania, every Tanzanian should take care of the existing water supply systems and schemes.

The Tanzania Development Vision 2025 was established as a challenge to all Tanzanians led by the Government, to prepare a new development vision which will guide economic and social development up to 2025. Before the establishment of this vision there was a number of lessons learnt from past efforts of eradicating poverty,

for example Arusha Declaration did not consider the issue of technological and rapid social changes taking place in the world. The declaration was based on state control all major means of production and to provide all basic needs free of charge, including water. the underlying factors and forces which have persistently impeded the realization of the goals of the development plans and programmes of the past visions.

One of the targets of the vision 2025 is to achieve high quality livelihood of which universal access to safe water is one of the components. In order to achieve this target, the government is using new approach which has also been stated in this vision that democratization and popular participation, good governance are primacy in realization of this vision. Just as it was for the Arusha Declaration good governance is essential for the successful realization of the Development Vision 2025. It is essential that the leadership has a developmental mindset and be able to interpret these views in executing their daily duties. It is also essential for the leadership to have the capacity to build and support existence of an effective administrative system that would effectively follow-up and manage the implementation process. This also requires availability of a leadership which continuously learns, listens and which is tolerant to opposing views and opinions of various groups of the society. In this regard, appropriate measures to prepare the leadership to adapt to this new framework have to be put in place and or in those areas where these measures are already effective be strengthened. In addition to building capacities, it will be essential for the implementors to be of the same mindset and vision as their leaders All these have also been reflected in the NAWAPO of 2002.

CHAPTER FOUR: IMPLEMENTATION

This chapter explains about the project implementation based on the findings of the study. The chapter has included products and outputs, project planning which is a guideline for implementation, staffing pattern and their duties, and implementation itself.

4.1 Products and outputs

Project implementation is a very necessary step in ensuring all the expected outputs and the overall goal is achieved.

- The expected outputs of the proposed project are the following
- Management of the existing water facilities in Mbagala Kuu is known: In Mbagala Kuu area they are water facilities which are functional however many households do not benefit from those sources. An since many poor households earning between 30,000 -90,000 Tshs a month, spend their monthly income for buying water and others relay on unsafe water supply sources because they cannot afford water prices given water vendors, it was necessary to conduct a baseline study to assess how the existing water facilities are managed and how best to help the poor have reliable water supply from the existing facilities.
- Trainings on how to operate and manage community water supply to Water Committee has been provided

- Awareness on importance of having water fund and use of clean and safe water has been provided.
- Guidelines on O& M are in place.
- Communities involvement in O& M is increased

4.2 Project Planning

Table 5: Project Planning

	ACTIVITY	RESOURCES/ INPUT	RESPONSIBLE	DELIVERY TIMELINE
	Meeting with Municipal Community Development Officer, Water Engineer and Health Officer for the purpose of knowing water situation, water related diseases and Municipal plans on water supply improvement	Transport Stationeries e.g pen and notebook	CED Advisor (Dorah Neema)	Feb 2006
	Meeting with Ward and Street leaders in order to understand Community Water Situation, existing schemes and its management arrangements	Stationeries	CED Advisor, WCDO, KIBEDEA representative	Feb. 2006
	Conduct a survey to assess water situation vis avis economic satiation at household level, understanding of water management systems at the community level	Questionnaires, survey assistants (2), Allowances, Transport	Dorah Neema 2 survey assistances	April 2006
	Conduct focus group discussions to identify the existing problems on water management activities	Questionnaires Stationeries Transport Soft drinks	CED Advisor	April 2006
	Facilitate re-establishment of a water committee in a public meeting	Stationeries Transport	CED Advisor Street and Ward leaders	June 2006

	Provide training on how to operate and manage community water supply,	Venue Flip chart Stationeries Meals and soft drinks	CED Advisor	June 2006– January 2007
	Facilitate establishment of guidelines on water management, opening of bank account	Stationeries Transport	CED Advisor Community Development Officer Water Committee	June 2006 – June 2007
	Work with Municipal Water Engineer to explore ways of rehabilitate/ and constructing additional boreholes to increase water supply	Transport	Sub ward leaders Chairperson of Water Committee	December 2006

4.3 Staffing Pattern

The project's Water Committee comprises of 7 staff members. The position of these people is as follows:

Chairperson

He is the overall in charge of the project

- He has the responsibility of ensuring all activities are implemented as planned;
- He is a link between the project, municipality, local leaders, communities (water users) and different development partners, and.
- Sensitise the communities on the importance of using clean and safe water and sanitation issues.

Secretary

Reports to the chairperson

- He is responsible for reports writing and keeping all records in proper way
- Liaise with the chairperson in technical matters
- Prepares all meetings and take minutes of them

Treasurer

Reports to chairperson

- Responsible for taking care of water fund

- Taking money to the bank
- Responsible for ensuring all accounts are correct
- In collaboration with the chairperson inform the communities about the status of water fund.

Technical Team

This comprise of two people who are members of water committee. Their responsibilities include:

- To maintain water facilities
- To report to the chairperson and Water Engineer on problems requiring major maintenance
- To assist on revenue collection
- To keep recordings of maintenance done
- Sensitise the communities on the importance of using clean and safe water

Water Fee Collectors

- Two people will liaise with the treasurer to collect monthly water fees to be given to the treasurer.
- The will also be responsible for records keeping and issuing receipts to all who have paid the fees.
- Follow up of people who have not paid their water bills
- Sensitise the communities on the importance of using clean and safe water.

All staffs will be required to be trained on their roles and how to improve performance. The trainings include

- Report writing in order to increase their skills on report writing
- Maintenance of water facilities – This is because most of the water facilities have collapsed due to lack of regular maintenance. It should be noted that some minor maintenance can be done by the trained local people
- Records and accounts keeping- This will help them improve skills on records and accounts keeping. Lack of such skills contributes to misuse of funds
- How to prepare proposals for funding. In order to enable them prepare a proposal for securing fund required for the construction of additional water facilities

My role in the project was to provide regular advice (on monthly basis) on how to ensure smooth operation of the project.

4.4 Budget

This refers to the fund required for the implementation of the project. Since the project is for academic purpose, the project will be implemented for three to four month. The fund required for the project have been distributed as per table below:

Table 6: Budget

No.	Activity	Quantity	Unit Cost in Tshs	Total
1	Logistics	Transport expenses Telephone expenses Stationeries	100,000 100,000 20,000	220,000
2	Meetings with Municipal Official, Ward, street leaders and KIBEDEA leaders	Transport	30,000	30,000
3	Conduct baseline study to assess socio-economic situation including water situation in the study area	2 assistants for 2 weeks	10,000 x 14 x 2	280,000
	Report writing	Transport Stationeries (pens, questionnaires and notebooks)	50,000 50,000	50,000 50,000
4	Training Activities As mentioned previously and leaflets preparations	Stationeries Meals Transport Reports writing	200,000 160,000 30,000 100,000	1, 490,000
5	Follow –up activities	Transport	100,000	100,000
			Total	2,220,000

4.5 Project Implementation

The project was successfully implemented though there was a need to continue with capacity building activities through provision of different training in order to ensure both water users and the committee continue to manage the scheme in a sustainable way.

4.5.1 Implementation process

After consultations with key stakeholders i.e. water users, Municipal Officials and sub-ward leaders the project advisor started implementation of the project. The implementation of the project was based on the results of the baseline study and needs assessment/ identification process.

4.6 Project Implementation Report

Implementation of the project in the presence of the CED Advisor was conducted for nine months. Based on the findings of the study, the following were implemented:

4.6.1 Establishment of O & M Guidelines

The activity was done with municipal water department, community development officers from the Ward and Municipal offices (2 people), KIBEDEA treasurer, CED Advisor, Sub Ward Chairperson, Women representatives (5), men representatives (5). After preparation of the draft guidelines, water users were required to go through them in a public meeting.

Necessary changes were made especially on the period that water committee should be in leadership, the team proposed five years while the communities said five years is a long period as some of them might not be hard working member, so the approved period was three years.

Preparation of guidelines required input from the Municipal Water Engineers and the Community Development Officer. Preparation of Guidelines is expected to be completed on June 2007.

4.6.2 Sensitization meetings on O & M

During the study period a total of 134 households out of 200 have been sensitized on the importance of their participation on the O& M of their water scheme. During these sessions participants were also educated on hygiene and sanitation issues. In addition, a total of 200 leaflets on O& M issues were distributed. The CED advisor, community development officers, KIBEDEA staff took part in these sensitisation meetings

4.6.3 Collection of water fund

This was successfully implemented although there were some delays to some households on timely payment. Each household was required to pay 1000 Tshs per month. Until December 2006, the amount of water fund was 1,060,000 Tshs. Water fund is kept in bank. The collected revenue is for operations and maintenance of the existing water facilities.

4.6.4 Training to Water Committee

Two training sessions on records and reports writing have been provided to the WC. Provision of these training aimed at building management capacity of the WC members in order to increase efficiency. The training was supervised by the CED advisor and Temeke Municipal Community Development Officer.

4.6.5 Collaboration between Municipal Water Office and the Communities

Frequent communication and information sharing between both parties has increased their collaboration and relations. The community leaders are now of the municipal systems of operations in connection to the O& M of community water supply. The Municipal Engineer is assisting the communities to secure funding required for the maintenance of the two broken water facilities.

CHAPTER FIVE: MONITORING, EVALUATION AND SUSTAINABILITY

This chapter is about monitoring and evaluation of the project. Monitoring helps to ensure project activities are implemented as planned and where required adjustments are done. The chapter has also included the approaches used in monitoring and evaluation. Activities of monitoring and Evaluation have also been incorporated.

5.1 Monitoring

Monitoring is an ongoing process designed to check the progress of a project against its plan and modify the plan if deemed necessary. Monitoring keeps the track of the achievements of the project, centering on activities, outputs and the project purpose and makes adjustments or changes to the activities or any other aspects as necessary after taking into consideration inputs and external condition.

5.2 Monitoring Methodology

The project was implemented using participatory approach i.e. through involving water users, sub-ward leaders, municipal officials and the water committee. Participatory monitoring is the systematic recording and periodic analysis of information that has been chosen and recorded by insiders with the help of outsiders. Throughout the project, participatory monitoring was done and would continue to be done in order to ensure good management of the existing water scheme so that poor people in Mbagala Kuu have access to clean and safe water.

Monitoring is done through assessing execution of daily activities including collection of water funds from water users, check accounts books to assess if all income and expenditure have been entered in proper books of accounts. Also assessing if the planned meetings between water committee and water users to discuss the progress of their water scheme. The main methodologies were key informant interviews to scheme accountant, sub ward leaders and CDO. Also Water Engineer was consulted in order to assess if the existing boreholes are properly maintained.

Regular meetings help to identify problems at early stage and immediately solve them. In addition such meetings help to create sense of ownership to water users.

Another approach for monitoring was through house to house visit. During the project time 30 households were visited in order to assess if they get water from the existing boreholes and if they pay water fees accordingly.

5.3 Findings of the Monitoring Activities

During the household survey, 25 households reported to be satisfied with water services how ever 2 households which were headed by women responded that, they fail to pay water fees due to very low income they have and requested to be considered to get free water services. Currently they are forced to walk long distances to obtain water from mosque where water is free. The matter was reported to the sub ward leaders for discussion during the coming public meeting.

Monitoring activities were and it was advised these activities continue for the sustainability of the project:

5.3.1 Water Committee Monthly Meetings

A total of six meetings have been conducted between May 2006 and February 2007. Members of the committee reported that, a total of two meeting were not conducted as both chairperson and treasurer were away attending seminars for capacity building.

5.3.2 Monitoring Monthly Water Fund Collection

This is an important routine activity to ensure that, all water users pay their monthly fees which was a monthly fixed rate of 3,000 Tshs per household. Each household was required to pay to the treasurer, and the treasurer was required to keep proper account of all collections. However, at first people were slow to pay their fees, therefore members of water committee through sub-ward leaders made regular follow up to ensure water users pay their fees. Until January 2007, members of water committee were still making regular follow up in order to ensure that, every household pays its water fees on time.

Table 7: Monitoring Plan

Objective	Activity	Indicators	Data Source	Methods/ Tools	Responsible
Re- establishment of Water Committee	Prepare qualities and conditions for the establishment of Water Committee Conduct public meetings to elect water Committee members	Guidelines are in place Public meeting has been conducted and number of participants took part in a meeting Every member of the WC	Sub ward Chairperson WCDO	Assessment of the existing water committee	Sub Ward leaders WDCO KIBEDEA staff
Ensure reliable water supply through raising communities awareness on O & M activities	Conduct Quarterly public meetings to educate the communities on O & M	3 meetings have been conducted between April 2006 – Jan 2007 A total of 200 leaflets	Sub ward leaders WC	Field visits Assessment of community meetings' minutes	Water Engineer, Community Development Officer

	Prepare and distribute leaflets on the management of water facilities to the communities	have been distributed to the communities		WC reports	Water Committee
To ensure fund for O & M is available	Collect monthly Fees Keep proper records of revenues and expenditure	Ledger on accounts is in place Number of households paid water fees Receipts paid and expenditures	Water Committee Sub ward Secretary	Assessment of cash books Discussions with water users	Treasurer

<p>To build capacity through trainings to the WC in order to ensure good O & M of the community water scheme.</p>	<p>Prepare training manuals</p> <p>Communicate with Municipal Officials i.e Water Engineer and Community Development Officer when preparing manuals and to provide training</p>	<p>Training manuals are in place</p> <p>3 trainings have been provided to the WC</p>	<p>Municipal Water Engineer and Community development officers</p>	<p>Assessment of training manuals</p>	<p>CED Advisor</p>
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Preparation of proposal for funding required for major maintenance of 3 boreholes	Prepare proposal	Proposal is in place however to date no proposal has been prepared			Municipal Water Engineer, KIBEDEA Manager
To ensure guidelines on O & M are in place	Prepare guideline by involving the communities, experts and local leaders	Guideline has been prepared and followed properly	Community Development Officer, Water Committees	Assessment if guidelines have been established	MCDO, KIBEDEA team

5.4 Evaluation

Evaluation is designed to ascertain the outcome of a completed or ongoing project for the purpose of improving implementation of the project as well as drawing lessons learnt for other projects. The mid term evaluation was done by the CED project Officer and one Community Development Officer from Temeke Municipality.

5.4.1 Methodology and Evaluation Questions

Methodology used in evaluation includes field visit to the existing boreholes to assess if they operate in a proper way. FGDs were conducted to a total of 30 people who took part in separate meetings. The aim of FGDs was to assess if households' expenditure on water has decreased. Also Key informant interviews were conducted to Municipal Water Engineer, Community Development Officer, KIBEDEA representative, Sub-Ward leader and Sub-Ward Community Development Officer. A hired survey assistant took part in the mid term evaluation. In addition views on how to improve O & M of the water scheme were provided by the respondents. The mid term evaluation for this project was conducted in January 2007. The objectives were to:

1. To get views from water users if they have reduced their expenses on water and if their general lives are better off than before.
2. To assess the satisfaction of water users and sub ward leaders on the O& M of the project.

3. To assess if the established system of conducting quarterly public meetings and coordination meetings have improved the provision of water services including transparency.
4. To assess and get views of the Municipal Official on how the project was implemented and how should be improved for sustainability purposes.
5. How to improve the O & M of the community water scheme.

All these objectives were turned to evaluation questions which includes

- Has the household's expenditure on water decreased?
- Is the established Water Committee doing regular maintenance of the existing facilities as planned?
- What are the better ways of improving O & M of the existing facilities?
- Is the established system of conducting quarterly meetings satisfies water users?
- What are your recommendations in improving O& M of the scheme?

Despite the fact that, the project was reviewed since April 2006, the communities who are water users reported that, there has been improvement in the management system however water is still a problem due to drought, thus making them to sometimes relying/ buying water from vendor. More findings on the results of the project have been included in the results of mid term evaluation held in January 2007

5.4.2 Findings of the Mid Term Evaluation

Guidelines on O & M

Guidelines on the Operations and Management of Community Water Scheme

This was a difficult exercise which involved different stakeholders. Establishment of O & M is still underway since there are issues including maintenance procedures which require the attention of Municipal Officials and other technical people. However until December 2006, some guidelines on how much pay should a household made per month was agreed i.e. 1000 Tshs a month. The amount was seen to be reasonable and affordable by most of the households. Also water users agreed to re-establish WC which has 10 members, five of whom are women. Existence of a Water Committee helps to collect water fund. Full set of Guidelines would be completed by June 2007. The Municipal Water Engineer and the Community Development Officer are responsible for the supervision of the exercise.

Decreased Household Expenditure on water

During the focus group discussion, it was reported that, most of the households have reduced their expenditure on water due to the monthly pay fees. However there was slight reduction because of scarcity of ground water. As sometimes water is inadequate in the two boreholes and there is also a power problem. The reduction was reported to be 25% to 30%. For the household that used to spend between 60,000 to 90,000 Tshs a month, it now spends between 30,000 and 45,000 Tshs per month. The additional amount despite paying monthly fees is for buying water from vendors.

Improved Records Keeping and Water Fund Collections

Until January 2007, four training sessions on accounts and records keeping have been provided to the WC. Those training sessions had contributed to increased skills and competencies on the management of community water fund. Until end of January 2007, the amount of water fund in the bank account was 2,002,000 Tshs. Also through quarterly meetings, water users were informed how much money has been collected and used. The established transparency has contributed to an increase in the amount of community water fund.

Functioning of the Existing Water Facilities

During the evaluation exercise, site visit was done in order to assess proper functioning of the existing boreholes. The existing facilities were reported to function properly due to regular maintenance done by the water technician in collaboration with the trained water committee members. Major breakdown was reported to occur once however the matter was reported and the Municipal Water Engineer's office assisted to purchase the broken spare part and fixing it.

5.5 Reliability and Validity

These were very important things when assessing improvement of Management of community water supply scheme. This was through checking validity of evaluation questions if were designed to cover everything that needs to be evaluated.

Evaluation exercise was proved to be reliable as information was obtained through key informant interviews, FGDs with water users and the WC. Also reports from WC and Sub ward leaders were evaluated. Also availability of clean and safe water was assessed through visiting water facilities and households to check how water is stored and its availability.

However the communities and WC said that, in order to have reliable water supply there is a need to construct additional 3 boreholes as some communities are walking long distances up to 45 minutes to the nearest water point. Also reliability of water supply would continue if the communities continue to pay water fees and water funds are properly managed.

5.6 Sustainability

5.6.1 Sustainability Elements

Management of Water Fund

Sustainability of the project is based on the already established water fund which is used in different things including buying fuel required in running the machine, conducting regular service of the water pumps and incurring other project expenses.

It should be noted that, since the establishment of the project, water users were sensitized and have water fund. Revenue is collected on monthly basis. As at 14th February, the amount of water fund in the bank was 2,010,000 Tshs. Existences of

water committee which make follow up of these activities and remuneration provided to them has proved to be a way of achieving sustainability.

Regular maintenance of the water facilities

The already established system of regular maintenance of the existing water facilities if continued will help to reduce regular breakdown and reduce regular maintenance of the existing water machines.

In order to ensure regular servicing, there is a need to regular trainings and supervision of the existing water facilities. Also, the Municipal Water Engineer and his staff need to work closely with the trained communities. In case of major maintenance, water committee and sub ward leaders should immediately report to the water engineers.

Coordination Meetings:

The already established system of conducting coordination meetings between the sub ward leaders and the water committee was reported to increase openness and ensure all parties are well informed about the progress of the scheme. During these meetings different issues are discussed, these include progress of the project, amount of water fund, quarterly expenses, problems and achievements. Also activities for the coming quarter and who should do what is always discussed. Municipal water Engineer is normally invited to participate in these meetings.

Management System

The established water management system has assisted to ensure water is available to the communities. Well trained water committee has contributed to increased efficiency and performance of the committee. Also collaboration and coordination between the committee, Sub Ward leaders, KIBEDEA staff and Municipal officials has created a sense to togetherness in ensuring good O& M of the existing facilities. Also the established guidelines if well followed by each part would contribute a long-term sustainability. It is important for all parties involved to adhere to the established guidelines. Also there is a need to make a close follow up in order to ensure funds are collected, well kept in bank and is properly spent. In addition, it is important to conduct quarterly meetings with all water users in order to inform them of the available water fund and how it is spent. Transparency will help to build good relationship at all levels and hence achieve sustainability.

5.7 Sustainability Plan

5.7.1 Institutional Plan

The overall supervision of the project is under the management of the sub ward leadership. The sub ward chairperson is responsible to ensure good management of the existing water facilities are their proper functioning. The existing water committee which is elected after every three year is responsible to report the progress if the scheme is functioning properly and also to ensure that, the communities who are the beneficiaries are timely informed about the progress of their scheme including the existing water fund. It should be noted that, lack of regular communication and

transparency contributes to the collapse of many projects especially when people are not informed on how fund is utilized.

KIBEDEA CBO would continue to provide training and advise on technical matters. Also they would attend various coordination meetings as part of stakeholders. The experience has shown that, KIBEDEA staffs have contributed to successful implementation of the project. Through out the presence of CED advisor, the staffs have been active in providing guidance to the sub ward leader and the water committee.

The Water Engineer's office would continue to make visits to Mgeni Nani and Mbagala Kuu areas in order to ensure that O & M is properly taking place. Also the Municipality through its auditing department should assist in auditing whether water fund is properly kept and spent. In addition, Municipal Water Engineer and the Community Development Officer should work closely with Sub ward leaders in order to mitigate any problems which might arise.

Regular trainings on the roles and responsibilities of water committee and those involved in the management of water scheme is very crucial. These should be provided by the municipal officials. They should also collaborate with other organisations with expertise on water management like Water Aid, which operates in the same Municipality.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

This chapter explains results of the mid term evaluation which on how the project was implemented and it further gives the recommendations for the aim of achieving sustainability.

6.1 Conclusion

After conducting the mid term evaluation of the project, the following results were reported and observed as at January 2007.

6.1.1 Guidelines on O & M

Guidelines on the Operations and Management of Community Water Scheme

This was a difficult exercise which involved different stakeholders. Establishment of O& M is still underway since there are issues including maintenance procedures which require the attention of Municipal Officials and other technical people. However until December 2006, some guidelines on how much pay should a household made per month was agreed i.e. 1000 Tshs per month. The amount was seen to be reasonable and affordable by most of the households. Also water users agreed to re-establish WC which has 10 members, five of whom are women. Existence of a Water Committee helps to collect water fund. Full set of Guidelines would be completed by June 2007. The Municipal Water Engineer and the Community Development Officer are responsible for the supervision of the exercise.

6.1.2 Decreased Household Expenditure on water

During the focus group discussion, it was reported that, most of the households have reduced their expenditure on water due to the monthly pay fees. However there was slight reduction because of scarcity of ground water. As sometimes water is inadequate in the two boreholes and there is also a power problem. The reduction was reported to be 25% to 30%. For the household that used to spend between 60,000 and 90,000 Tshs per month, it now spends between 30,000 and 45,000 Tshs per month. The additional amount despite paying monthly fees is for buying water from vendors.

6.1.3 Improved Records Keeping and Water Fund Collections

Until January 2007, 4 trainings on accounts and records keeping have been provided to the WC. Those trainings had contributed to increased skills and competencies on the management of community water fund. Until end of January 2007, the amount of water fund in the bank account was 2,002,000 Tshs. Also through quarterly meetings, water users were informed how much money has been collected and used. The established transparency has contributed to an increase in the amount of community water fund.

6.2 Recommendations

In order to ensure communities living in peri-urban areas of Mbagala Kuu area have reliable supply of safe and clean water, it is important for the water committee to

work in effective and efficiency way. WC should make sure that, they liaise with responsible sub-ward leaders during monthly fee collection. This is because sub ward leaders know better their people and would help to deal with problems which might hinder smooth collection of water fund. All funds that are collected must be kept in the bank for safety purposes and must be used in O & M of the project and not otherwise.

It should be noted that, Dar es Salaam City has a problem of water supply for both domestic and industrial use due to the scarcity contributed by drought and other technical problems. The amount of water supply which is scarce does not meet the demand of the rapidly increasing population and other developments, and water is increasingly being an expensive commodity and yet a basic human need. Therefore proper management and use of the existing water facilities is crucial in ensuring a big portion of the communities are benefiting from the existing boreholes. Both women and men should play a vital role in the management of the existing water systems and schemes. However women who are the main water users should take the lead. If the communities especially the poor will have a sense of ownership towards managing their water schemes, the price of water will be reduced and then minimised expenditure on water then improved livelihood especially to the poor.

Follow up and close collaboration among different actors is very important in order to ensure good O & M then sustainability of water schemes, especially those managed by people who have no expertise on water issues.

Regular training to WC should be conducted in order to increase their skills which could assist improve performance in operations and management of the project. Such trainings should be provided by Municipal Officials, KIBEDEA staffs and other development partners.

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