

**COMMUNITY PARTICIPATION AND SUSTAINABILITY OF NATIONAL
WATER PROJECTS**

**THE CASE STUDY OF CHALINZE WATER SUPPLY PROJECT IN
BAGAMOYO DISTRICT**

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Fulfilment of the Requirements for the Award of Master of Public
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CERTIFICATION

To School Board

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University a dissertation entitled “*Community Participation and Sustainability of National Water Projects: The Case Study of Chalinze Water Supply Project in Bagamoyo District*” in partial fulfilment of the requirements for the Degree of Master in Public Administration of Mzumbe University.

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DEDICATION

This dissertation is dedicated to my father Calist Shayo, and my mother Dionisia Shayo, for their moral, wisdom, spiritual and material support to the accomplishment of this tough work.

LIST OF ABBREVIATIONS

ADF	African Development Fund
BDC	Bagamoyo District Council
COM	Community Ownership and Management
COWSOs	Community Owned Water Supply Organizations
CWSP	Chalinze Water Supply Project
DPs	Domestic Points
DRA	Demand Responsive Approach
EMA	Environmental Management Act
EWURA	Energy and Water Utilities Regulatory Authority
FAO	Food and Agriculture Organization
GWP	Global Water Partnership
HTM	Handeni Truck Main
ICM	Implementation Communication Process
IEP	Information Education Planning
ICWE	International Conference on Water and Environment
KASHWASA	Kahama Shinyanga Water Supply Authority
LGAs	Local Government Authorities
MDGs	Millennium Development Goals
MKUKUTA	Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania
MoW	Ministry of Water
NAC	National Action Committees
NAWAPO	National Water Policy
NSGRP	National Strategy for Growth and Reduction of Poverty
NWSDS	National Water Sector Development Strategy
O&M	Operation and Maintenance
RWS	Rural Water Supply
UN	United Nations

VWC	Village Water committees
UNICEF	United Nations Children’s Fund
URT	United Republic of Tanzania
UWSAs	Urban Water Supply Authorities
UWSS	Urban Water Supply and Sewerage
WRMA	Water Resources Management
WUA	Water Users Association

ABSTRACT

The main objective of this study was to examine community participation and sustainability of National Water Projects with case study of Chalinze National Water Project, in Bagamoyo District. Specifically the study intended to (1) determine community's involvement in decision making in Water Supply Project; (2) examine community's contributions in development and sustaining Chalinze National water supply project; and (3) to assess the roles of the local government in sustaining Chalinze National water supply project.

The study was conducted in Chalinze whereby 130 respondents were selected to obtain both quantitative and qualitative data. Structured questionnaires, Focus group discussions, observations, interview of key informants and documentary reviews were used to obtain relevant information. Checklists and observation kits were used for interviews and Focus group discussion and observation.

It was that the community participation in planning and implementation Chalinze Water Supply Project was very poor while monitoring mechanism of operation and management as well as community participation on decision-making was poor. The Local government does not yet implement its role of building community capacity to manage Chalinze Water Supply Project. Community still knew that Chalinze Water Supply Project is government property and not theirs.

It was recommended that before implementation of any community based project, community must be educated on current government policy on community participation and involvement in decision-making. COWSOs as WAMACHA should have enough knowledge and skills required to manage water projects. They should financially be good and there must be well known established structures from the grassroots water users to the top management of the project. The Local government who is a main stakeholder must play its role of empowering and regulating Water User Association.

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1:1 Introduction

This chapter provides an overview of the problem investigated. The chapter comprises the introduction, background of the study, statement of the problem, objective of the study, research questions, significant of the study, scope of the study and the limitation of the study.

1:2 Background of the Study

Globally, water resource is very essential for socio-economic development and for maintaining healthy ecosystems. Properly managed water resources are a critical component of growth, poverty reduction and equity. Access to adequate, safe and clean drinking water is one of the basic human entitlements. National and International efforts have been in place with a view to ensuring availability and access to water because these aspects are directly linked to promotion of quality of lives of the people (United Nations, 2000). However, lack of access to safe water is not a technical problem. It is a human, logistics, funding and efficiency issue. Water resources management aims at optimizing the available natural water flows, including surface water and ground water, to satisfy these competing needs. Adding uncertainty, climate change will increase the complexity of managing water resources. In some parts of the world, there will be more available water but in other parts, including the developed world, there will be less.

In sub-Saharan Africa, about 250 million people (67%) lack safe accessible water while 81% of the rural population lacks sanitation facilities (Rose and Vincent, 1999). People spend 40 billion hours every year just walking for water. Women and children usually bear the burden of water collection, walking miles to the nearest source, which is

unprotected and likely to make them sick. Time spent walking and resulting diseases keep them from school, work and taking care of their families. Along their long walk, they're subjected to a greater risk of harassment and sexual assault. Hauling cans of water for long distances take a toll on the spine and many women experience back pain early in life. With safe water nearby, women are free to pursue new opportunities and improve their families' lives. Kids can earn their education and build the future of their communities. A clean water project nearby means more than safe drinking water to women and children in developing nations; it means time, freedom and incentive to change their communities (Kallabaka, 1989).

In Tanzania, the history of Water Sector dates back to 1930s when water supply was confined to urban areas and farming settlements owned by colonial settlers. In order to redress the urban bias created by the colonial government in water supply services, independent government of Tanzania proclaimed a 20 years Rural Water Supply Programme starting from 1971 to 1991 which aimed at providing access to adequate, safe, dependable water supply within a walking distance of 400 meters from each household (Kallabaka, 1989). Under this programme water was to be provided freely. Since early 1990s, the focus of water projects management shifted from technology transfer towards decentralized and user centred approaches which emphasized participation and local organizational development in the form of water user institution.

To emphasize this in 1991 the government launched the first National Water Policy (NAWAPO, 1991) which focused on participation and cost sharing during the process of water projects construction, operation and management of the community domestic water supply projects. This mainly aimed at including communities in all water project management stages, from that stage of planning, building, implementing/operating and evaluation. Then the Government of Tanzania introduced stakeholder participation in water projects management through 1998 Water Act and later on the Tanzania National Water Policy of July 2002 (NAWAPO, 2002). The water policies and the attendant Acts among other things insists on the following aspects:- "Ensuring full participation of

beneficiaries in planning, construction, operation, maintenance and management community water projects in rural areas”. Community participation meant to attain sustainability of water projects. Sustaining water projects need planning and use of comprehensive public representation, open and equitable access to information and direct participation of all affected interests in decisions about allocating those resources (ICWE, 1992).

In Bagamoyo District, the Chalinze Water Supply Project is among the big National Water Projects where communities are involved in the management of the projects. However, their involvements remain a big challenge and questionable. WAMACHA is a Water Users Association established in 2003 just immediately after the completion of Chalinze Water Project Phase I. WAMACHA is a legal entity, registered in accordance with the legal procedures and it was announced in National gazette No. 247 of 16/7/2004 with a registration number 0064. WAMACHA has the role to run the project daily. However, due to complexity of this water project, the operational services are currently under a team of experts from Ministry of Water in collaboration with Bagamoyo District Council (BDC). The aim of involving WAMACHA in the team of running and managing the project was to help them get relevant knowledge and build up their capacity and experience in operation and management of the project. Although, for about ten years now WAMACHA cannot yet run the project without the help from the government and some donors.

Generally, because of the history of this project, the infrastructures are still under the hands of Ministry of Water. This is to say the custodian of the infrastructure is the government on behalf of the community. However, the concept that the owner of the project is WAMACHA is still there but not working properly as they depend very much to the government and donors. This concept is already a problem due to lack of full community participation in decision- making and there is no commitment from the users to contribute in kind and cash. This they have done by not actively attending project meetings and contributing to decision- making processes, or by contributing in kind and

cash towards project expansion, high expression and expectations of payment is the real situation in the project, voluntarism as rendering free assistance to someone's problem and not theirs, too much dependence on the government to assist even the small things is still there hence the functioning of WAMACHA as a management organ of Chalinze Water Project is a grim same as all other National Water Projects in Tanzania.

The way that Water Users Associations have been introduced - from the top down and without sufficient technical and organizational back-stopping - has contributed to their failure to gain support and commitment among a "critical mass" of water users (Jairath, 2001). Water users have not "bought in" to the Water Users Associations. They do not feel it represents their interests, or that they have any responsibility to respect its authority (Mott, 2003). This is true for all well-being groups. The poor have tended to be overlooked; those in the middle lack confidence in leadership, and the better off have either used it to advance their own interests or disregarded it.

According to UNICEF (2008), apart from numerous investments made for thirty years since 1960s by 1990s millions of people globally were still without access to clean safe water. In 2008 it was estimated that 884 million people worldwide were living without access to clean and safe water while 205 billion people lacked adequate sanitation.

Water and sanitation is directly linked to the health and wellbeing of every person in the world. Clean water has the exact. One of the best ways to prevent poverty is to fight disease. Disease has a direct affect on every person, especially in the developing countries. Illness does not allow men and women to hold a job, keeps children from an education, and brings unneeded expenses to the family. The poorest people in the world are also the unhealthiest (WHO, 2007). Bringing clean water and proper sanitation methods to these people, dramatically increases their health, and leads to a dramatic opportunity for decrease in poverty. Water is ubiquitous; it is essential for all forms of life and virtually all economic activities. The United Nations has declared that a human right exist for reliable access to safe and clean drinking water and sanitation which, along with

other domestic purposes, accounts for about 7 to 10 per cent of all water use (Margaret Catley, 2012).

Tanzania like many other countries in the world suffers the same consequences as about 80% of its population live in rural areas, whereby only 53% have access to safe water (ADF/WB, 2006). Water is being implicated with almost 80% of all sickness and disease worldwide through inadequate sanitation, polluted water, or unavailability of water (WHO, 2007). At any given time it is being estimated that half of World's hospital beds are occupied with patients suffering from water- related diseases (WHO, 2007).

Governments and authorities in charge of water management need to act to reverse these trends and to make the water outlook manageable. A number of initiatives have already taken place. A more strategic approach can serve cost and accelerate favourable outcomes.

1.3 Statement of the Problem

A study by Kumar (2002) asserts that participation is a key instrument in creating self-reliant and empowered communities, stimulating village-level mechanisms for collective action and decision-making as well as aimed at increasing the sense of ownership over the water supply within community members. Another study by Ademiluyi & Odugbesan (2008) contends that community engagement is the solution to sustainability of water supply and sanitation services.

According to Kabudi (2005), it is difficult for rural communities to participate in solution giving to the project management. For sustainable water projects, stakeholders participation is recognised as an important component not to be neglected (Global Water Partnership, 2000). WAMACHA was established as a community entity to manage Chalinze Water Supply Project. However, there is insufficient information with regard to community participation and its implication on sustainability of water projects.

Therefore, this study sought to understand and disclose real situation of community involvement in running National Water Supply Projects. It is on this basis that the study will suggest a proper management and community structures needed in managing National Water Projects in Tanzania.

1.4 Objective of the Study

1.4.1 General Objective

The main objective of this study was to examine the contribution of community participation and sustainability of National Water Projects.

1.4.2 Specific Objectives

Specifically the study is organized to:

- i) To determine community's involvement in decision making in Water Supply Project.
- ii) To examine community's contributions in development and sustaining Chalinze National water supply project.
- iii) To assess the roles of the local government in sustaining Chalinze National water supply project.

1.5 Research Questions

- i) How is the community involved in decision making process at Chalinze national water supply project?
- ii) What is the contribution of the community in development and sustaining Chalinze National water supply project?
- iii) What are the roles of the local government in sustaining Chalinze National water supply project?

1.6 Significance of the Study

- i) The study will help the Government to establish the community structure which will ensure effective management of water projects.
- ii) The findings of the study will be used by the Government for sustainable National Water Projects.
- iii) The study will come up with suggestions for establishing community owned Organizations and creation of sense of community ownership towards water supply projects.
- iv) Findings from this study will be an area of references for National Water Projects on how to work hand in hand with communities when planning and implementing water projects.
- v) The study will help as a literature review for other students, researchers who might conduct the same study in Tanzania.
- vi) The study will provide knowledge to the public on the usefulness of community participation in National Water Projects.

1.7 Scope of the Study

This case study was confined within five wards of Chalinze Constituency which reasonably represent other National Water Projects of such nature. This location was selected because is a potential experience area of researcher for getting adequate and relevant information related to the study. However the results and recommendations intend to serve Ministry of Water and local government authorities. Furthermore, the focused area was narrowed down where some few wards were selected as a representative of the whole constituency as the area is huge to be covered within the period allocated for this study.

1.8 Limitations of the Study

The study was limited to only one Project managed by COWSOs in Tanzania. Other limitations of the study were as follows;

When conducting research there are number of factors that hindered smooth operation for the task. Insufficient response, from the WAMACHA organization was a serious obstacle to the researcher in carrying out the study. Some respondents were not willing to cooperate and enable to fill the questionnaires as appropriate and return them on time.

The financial support expected from researcher's salary was limited, due to this limitation the researcher was not able to give some of respondent who were demand money in order to provide information for that case, the researcher tried to used convinced language and persuasion theory in order to collect the whole data from all respondents of the respective area and offices.

The important information was not disclosed easily to the researcher due to the privacy security and policy of Chalinze Water Supply. Moreover, since not everyone was a spokesman of the organization concerned, there was a situation where the respondents refrained from disclosing vital information to make the study of success. In tackling this limitation, the researcher insured confidentiality of the respondent by guarantee that all data to be collected shall be used for academic purpose and that names of respondents shall not be mentioned.

There was an ambiguity idea from respondents as a sample unit comprised different discipline with different level of understanding such water users, village leaders and ward councilors. Some respondent did not respond to the questionnaires because of unawareness on water policies, bylaws, laws, regulations and water project programmes. This limitation was off- settled by cross-sectional collection of data at various levels such as Ward level and village level.

There was less availability of respondents in some areas in some of the village researcher arrived during the agriculture season, some of respondent were very busy with agriculture activities and their farms were far from their homestead were researcher could not reach easily. This limitation was off-settled by re-visiting the village and meets the required respondents after late hours from farms. This made possible for researcher to collect required information to accomplish this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents both theoretical and empirical review related to the study. It reviews relevant literature on the “National Water Projects Management and Performance Challenges” with a particular focus on “WAMACHA” of Chalinze Water Supply Project. It focuses on critical issues of community water participation and new water management system. The chapter is comprised with main two areas. The theoretical literature review and empirical literature review. In the theoretical part there are definitions of key terms, the rationale for community participation in water projects, the National Water Policy, Concept of Access to clean and Safe Water, Water Supply and Sanitation in Tanzania, status and performance of National Water Projects in Tanzania. The empirical literature review contains experience from other parts of the world and general overview of reliable water management structures.

2.2 Theoretical Literature Review

2.2.1 Community Participation and Management

It is now widely accepted that community participation and management is a critical factor in the creation of an enabling environment for sustainable rural water supply and sanitation projects. Paul (1998) defines community participation as an active process whereby beneficiaries influence the direction and execution of development projects rather than merely receiving a share of project benefits. The definition emphasizes the participation of beneficiaries as a group and recognizes the project to be a process of generating goods and services rather than a product of goods and services. Community participation creates an enabling environment for sustainability by allowing users not only to select the level of services for which they are willing to pay, but also to make choices

and commit resources in support of the choices made by the community (Sara and Katz, 1998; Christine, 1995).

As summarized by Yacoob and Walker (1991), the concept of community participation has undergone dramatic perceptual changes over the past 30 years. Between the 1960s and 1980s, the success of community participation was measured as the amount of labor or up-front contribution by communities during project construction. Now, community participation means that communities are actively involved in project development activities, through making appropriate labor, time and financial contributions to both the initial and long-term operation and management of the projects. As noted by

McCommon, Warner and Yahalem (1990) community participation alone does not guarantee sustainability. Whereas community participation emphasizes beneficiaries' participation in the decision making process, community management refers to the capabilities and willingness of communities to take charge, influence and determine the nature of the project.

Community participation and management create both desires and capabilities within communities to influence and control the goods and services to be produced by the project during its life cycle.

Following Wright (1997), Narayan (1995b), Yacoob and Walker (1991), and McCommon, Warner and Yohalem (1990) indicators of community participation and management can be summarized as follows:

- Participation in decision making. All aspects related to project development and implementation has to be based on community preferences. The community has to communicate their needs and decide what is best for them. Issues such as project design, community contributions, external assistance, and user fees or tariffs have to be decided upon by the community or beneficiaries of the project. For water and sanitation programs, involvement of women in all stages of decision making is of paramount importance. Women constitute the major group of beneficiaries of water and sanitation programs. Thus, they need to be involved as equal partners and not as a special group of beneficiaries.

- . Informed choice. Communities must be informed on the available options or available alternatives and associated costs. Informed choice helps communities to make decisions concerning community capabilities to manage the project.
- .Community contribution. Communities should willingly contribute to the development and operation of the project if they are to feel that they own the project. Contributions such as monetary investment, material equipment, labor, and general. Participation in project related committees and meetings should be voluntary. Coercive contributions create hostility towards the project.
- . Representation. Water managers should represent the diversity within the community. They should be elected democratically representing all community members. Women representation as an important group should be clear.
- . Responsibility. The community should be ready take on the ownership and attendant obligations of the project. They should understand that the project belongs to them and its survival or collapse depends on community investments (i.e., in terms of human, physical and financial capital). Roles of each stakeholder should be clearly defined in order to avoid confusion in management or creating false expectations among community members.
- . Authority. The community has a legitimate right to make decisions regarding the project on behalf of the users. Interference from the donor or government should be minimal and occur only when requested by the community or when intervention is in the interests of the beneficiaries.
- . Control. The community is able to carry out major decisions and determine the outcome of the decisions. Donors or government agents can be involved in decision making through consultation.

However, these indicators may not be exhaustive and may mean different things to different authors, but represent the fundamentals of community participation and management for demand responsive water and sanitation programs. The indicators provide the basis of communities' satisfaction and community empowerment. They create a sense of community ownership, self-reliance and advancement within communities, and

they strengthen community organizational and management skills, mobilize resources from all stake holders, and help in determining the long-run sustainability of the project.

2.1.2 Community Participation in Water Projects

Participation in Water Projects is seen as a new direction towards service provision and maintenance. Participation is aimed at assisting stakeholders of Water projects to ensure populism, organizational and management capacities of the key institutions on which the support can be given (FAO, 1986). It is the issue of having Water Service Stakeholders that can be geared in serving the water to the community. The reason of using grass-root participation of community is to have “Community Water Owned Organizations (COWSOs) for fundamental development. Thus people play a critical role in rural water supply projects through their own formation. The point to remember is critical issues in decision-making, resource allocation and organization formation should lead to project sustainability Jakariya (2002). The idea that communities should be actively involved in the provision of water supply has become widely recognized as critical to the long-term sustainability of any water supply system Narayan (1995). Community participation has been identified as a primary determinant of project sustainability and its relationship to project effectiveness has been estimated both qualitatively. Lund (1990). Participation by community members in the identification, design, implementation and especially management stages can be understood in terms of the need and motivation of the community, as well as an indicator of community structure and cohesion.

According to Nagu (2004), one of the critical questions in rural development is how talents of local communities can be used in decision - making process to identify their own problems, find solutions and decide on how to implement them. The roots of contemporary owned entities can also be associated with Western democratic theory .World Bank (1989), stressed the need of involving stakeholders influence and share control over development initiatives and the decisions and resource that affect them.

In order to put this idea into operation, African countries established policies that emphasize cooperation, communitarians, socialism with elements stressing populist

values such as self-help and self- sufficiency. According to Broomley (1998), “The poor remain poor because the institutional arrangements rendered them poor before the development interventions”. These therefore call for the establishment of people centered organizations arrangements to benefit them.

Due to this new thinking idea and the World development pressure in 1990s Tanzania and other African countries entered into the era of public sector reforms (UTR, 2004). Those reforms aimed at changing the role of the state from direct engaging itself in production and service delivery. From that time the role of the state remains to that of policy formulation, coordination and creating an enabling environment for development stakeholders to participate and speed up community development.

In the Water Sector, National Water Policy of 1991 laid down a foundation for new system towards water service provision “The end of Free Water era” The URT (1991) among other things explains the importance of water beneficiary’s participation to ensure sustainability and the rehabilitation of the existing water projects.

2.1.3 Management of National water Projects

National Water Supply Projects are relatively big and the planning, design and construction were under the supervision of donors and the government. On completion, the projects were commissioned to the community to administer through trained organization commonly known as Community Owned Water Supply Organizations (COWSOs) example WAMACHA. COWSOs are established under Water Supply and Sanitation Act 2009. COWSOs are established through Local Government framework of village councils following the adoption of the Water Sector Development Strategy (URT 2006). However, as has been noticed, the big challenge facing these projects is the sustainability after being commissioned.

Experience has shown that National Water Projects do not perform according to plan and the government aim of providing water to the people is not met. Sometimes just after

commissioning the projects to the project management and the beneficiary/ community most projects fail to operate. The study therefore wants to explore the inefficiency factors of the National Water Supply Projects in service delivery especially those under COWSOs. The study has selected one National Water Project and will focus on the institutional set up, community involvement in planning, examining the structures of existing community organizations which have been given mandate of supervising the operation of the project, designing and implementation of the project and expenditures patterns. Chalinze Water Supply Project (CWSP) is selected for this study as it features most of the mentioned problems and is seen as good representative of other National Water Supply Projects. At the end the study shall come up with findings that will show the reasons for poor performance of National Water Supply Projects and suggest solutions that if adopted will rescue the projects.

2.1.4 Participation and Water Project Sustainability

It is believed that, the rolling-back of participatory approach in water service management will ensure sustainability. Many of conducted studies have suggested that where there is no community participation in water projects management the performance of water project is low hence less sustainability. Between 20-50 percent of all water projects in the world do not perform as designed (BNWP, 2009). Large amount of water projects failed just because of inadequate financial management (Annis, 2006). Another fail because of lack of routine repair (Reents, 2003).

According to Abrams (1998), sustainability implies the ability to recover from technical breakdowns of water projects. He defines sustainability as “Whether or not something continues to work overtime”. Thus sustainability pertains to multiple aspects of water project supply. It includes some dimensions such as institutional, social, technical, environmental and financial. Majority of water supply projects in Sub-Saharan Africa remains elusive of sustainability, hence a need for conceptual framework to capture the inter-linkages that relate to sustainability.

In any development projects, clearly defined indicators are essential for accurately and realistically measuring and evaluating results. For water and sanitation programs, a series of indicators have been identified to measure conditions relating to sustainability, and the effective use and replicability of the projects. Although there is no common agreement on a definition of sustainability, the principal idea contained in the various definitions is that any project is designed to produce a continuous flow of outputs/goods, benefits or services throughout its intended economic life cycle. Effective use and replicability means that water facilities are operating optimally and consistently, and the process of implementing them can be repeated successfully in other regions (Narayan, 1995a). In this study, sustainability is broadly defined as including effective use and replicability, that is, effective use and replicability constitute part of the sustainability indicators.

Following Narayan (1995b); Wakeman (1995) and Christine (1995) key indicators of sustainability can be divided into seven components as follows.

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- Reliability of the systems. For communal systems, the availability of spare parts and local skills to operate and maintain facilities play a critical role in ensuring that the system remains functional.
- . Human capacity development. Specialized training of project managers and operators is needed to build local capacity for operation and management. Since women in most cultures have a greater role than men in managing domestic water supplies, their involvement is important.
- . Local institutional capacity. Sustaining the efforts and results of participatory programs require relatively autonomous community and agency organizations. An appropriate management structure enables project managers to be flexible when taking necessary remedial measures.
- . Cost-sharing for operation and management. Apart from expressing what they want, users should contribute resources needed for the project to be sustainable.

The system may fail because the resources required for operation and management are too high for the community to provide.

- . Collaboration among organizations. A sustainable water and sanitation system can only be planned and implemented through interagency collaboration involving some combination of the community, government, NGOs, the private sector, research institutes, and other organizations. Interagency collaboration is needed both in the planning and implementation of activities.
- . Effective use. The water facilities have to be used optimally and consistently to maximize benefits and minimize negative consequences over an extended period of time. Unless water facilities are effectively used, there will be no positive impact in the community and the motive of installation will be questionable. Effective use is attained through involving the community in planning, implementation and management. Consistent use refers to the use of facilities throughout their life cycle, taking into account the pattern of use including seasonal cycles.
- . Replicability with local adaptation. This is the capacity to duplicate the processes and benefits of a set of development activities in new locations after their effectiveness has been demonstrated in one area. In other words, the experience gained can be useful for developing sustainable water facilities in other areas.

The major objective of participatory evaluation is establishing whether the project is delivering anticipated goods and services in a sustainable manner and assessing the contribution of different levels of community participation and management for the sustainability of the projects. The aim is to identify positive factors that can be enhanced and to overcome identified/current weaknesses in order to strengthen the project. At the project level, scoring techniques are commonly used to quantify these indicators of community participation and management, and sustainability. As observed by Vickey and Lohr (1997), such qualitative tools are for informational purposes, to help determine the status of a project, and suggest directions for change, rather than to measure the degree of sustainability attained. Other quantitative techniques or economic tools are needed to

generate information that is understandable to all stakeholders. Such tools do not only indicate direction for change, but quantify the effectiveness of the project rules used in development, implementation, and management.

Following the inter-linkages for water project progress, it has been established that a beneficiary participation in any water project provides the most important factor that leads to effectiveness of a project. (Narayan, 1994). Lack of sense of ownership results in neglect or abandoning of maintenance services and repair of some pumps (Parry- Jones *et al.* 2001). Another thing is the on-going use of traditional source of water, poor system of collecting water tariffs, poor cost recovery and distance from improved source of water all these undermining the sustainability of water projects. Therefore, it is very obvious that, without proper management and community participation water project are unlikely to be sustainable even at a point where spare parts and repair technicians are available. This situation pushed the government to form National Action Committees (NAC) to coordinate sector activities and make policy guidelines for water sector improvement.

In 1991 various institutions were initiated to deal with rural water supply in Tanzania. These were a National Water Policy (NAWAPO), Village Water Fund (VWF) and Village Water Committees (VWC). From that time the government sopped to be the owner and operator of rural water supply projects and this lead to establishment of several Community Water Owned Organizations for water service provision.

2.1.5 Lack of Community Participation in Water Supply

Lack of community participation has led to poor operation, maintenance of the water projects. This is mainly because of inappropriate technology, incorrect location of supply systems, lack of affordability, and lack of social acceptability because of “poor” or “wrong” taste of new water supply or the presence of minerals. In some cases an inadequate survey led to sitting systems where mineral content has been detrimental to

other development in children. However, it is evident that communities could control and manage their systems and make them work efficiently. The proposition is for communities to take greater responsibility in the financial outlay for the development of the projects and recover of the cost incurred in the operation of the project is crucial.

2.2.6 Community Water Owned Organization (COWSOs)

Experience shows that, many studies focusing on the importance of Community Water Owned Organizations in the management of water projects have been conducted. From many studies concerning water management conducted, experience shows that there is a great need of water projects to be managed participatory. Community participation in the management of water projects is the keen approach that might enable sustainability when applied properly.

Some of these studies conducted by World Bank (1995) showed that, community participation approach in managing several projects was applied for the sake of fastening development. For example in Yemen, World bank conducted a study in year 2004 which showed that FAO implemented hundred of projects over 23 years ago using participatory approaches including a number of large scale rural development projects. Yemen was considered to be an example of community participation in water management in 1990s during the construction of small dams with donors support. It developed training activities to build their own management and technical capabilities. In Kenya experience showed that, about 30 percent of 10 million rural dwellers have access to improved water served by community managed water supply projects, many of which were developed by self-help groups.

Despite the appraisal given to usefulness of community participation in the realization of project sustainability, the studies accessed from empirical literature review have shown the importance of community participation in improved water service delivery. However, none of them show the extent to which the roles played by the community in these

projects have led their sustainability. These studies therefore, focused specifically on matters concerning community participation in the management of water projects or COWSOs. The discussion based on existing link between roles performed by the community which affect sustainability as applied indicators and attributes used in the literature review to measure the extent the COWSOs successful managed Water Projects in Tanzania, the challenges behind, the way forward and the suggested structures needed in managing water projects.

2.2.7 Tanzania Water Sector Reforms

Tanzania has undertaken various water sector reforms in order to address emerging challenges in water resources development and management. Major reforms include: the National Rural Water Supply Program (1985), the First National Water Policy (1991), the Water Sector Review (1993), the Rapid Water Resources Assessment (1994), and the River Basin Management and Small Holder Irrigation Improvement Project, which among other things revised the 1991 policy to a new National Water Policy (NAWAPO) which was approved by the cabinet in July 2002.

The thrust of the NAWAPO 2002 is among other things: to develop a comprehensive framework for sustainable development and management of the nation's water resources, putting in place an effective legal and institutional framework for its implementation, to ensure that beneficiaries participate fully in planning, construction, operation, maintenance and management of community-based domestic water supply projects, to address cross-sectoral interests in water and promote integrated and participatory approaches to water resources planning, development and management, to lay a foundation for sustainable development and management of water resources by changing the role government from service provider to that of coordination, policy and guideline formulation and regulation.

2.2.8 Community Ownership and Management for Water Supply Projects

Development efforts of many African countries immediately after independence saw an increasing extension of state authority in areas which had traditionally been the preserve of local custom and control (Korten, 1987). The result has largely weakened local capacity and a transfer of resources and power from local to national with a national treasury burden that is unable to deliver the expected services to the communities. In many countries, water was recognized as a public good and the governments undertook to cover all capital costs of investment (Maganga, and Butterworth, 2002). However, these early investments could not be maintained and many projects fell into disrepair. These systems of service delivery do not promote local initiative. Consequently in the 1970s and early 1980s, there was a move towards community participation (ibid). At the same time, evidence is accumulating that properly supported communities have the ability and the willingness to manage their own water systems (Evans & Appleton, 1993). This implies that state resources that were swallowed up in the provision and maintenance of ineffective services can thereby be diverted to a much more effective facilitating role, bringing greater cost-effectiveness and more widespread and sustainable benefits.

2.2.9 The Legal Frame Work for Management of Water in Tanzania

In Tanzania, legislation governing water sector is divided into two regimes i.e. water resources and water supply and sanitation services. The Water Resources Management Act (WRMA) No.11 of 2009 and the Water Supply and Sanitation Act No.12 of 2009 were enacted recently to repeal and replace Water Users Associations Cap 331 and Waterworks Act Cap 272, respectively (Kabudi, 2005). The two pieces of Water Legislation are implemented in parallel with other related pieces of legislation in the country, such as Environmental Management Act (EMA) No. 20 of 2004, Land Act No. 4 of 1999 and EWURA Act No.11 of 2001. The Water Resources Management Act (WRMA) No.11 of 2009 came into operation on 1st August 2009 vide GN. No. 235 published on 10th July 2009 (Kamugisha, 2010).

The objective of WRMA is “to ensure that the nation’s water resources are protected, used, developed, conserved, managed and controlled to meet the basic human needs of present and future generations”. The issues it addresses include: institutional and legal framework; principles for water resources management; prevention and control of water pollution; establishment of National Water Boards, management of catchments and sub-catchments; and offences and penalties in relation to water resources management. Kabudi (2005) introduced that WRMA was enacted as a result of the 2002 National Water Policy (NAWAPO), which emphasizes the principle of involvement of water user organizations and private sector so as to attain equitable, efficient and sustainable water resources management. According to the WRMA and NAWAPO, every Tanzanian has a stake and duty to safeguard and protect water resources. The right to use water from any water source is vested with Minister for Water and the preference for water allocation is given in order of priority to: domestic uses; environmental reserve; and socio economic activities depending on the availability of water (Kamugisha, 2010).

2.3 Empirical Literature Review

Tanzania, like many other countries in the world, suffers the same consequences as about 80% of its population live in rural areas, where only 53% have access to safe water (ADF/WB, 2006). From many studies concerning water management conducted, experience shows that there is a great need of water projects to be managed in a participatory way. A study by Haysom (2006) argues that community participation in the management of water projects is the keen approach that might enable sustainability when applied properly.

Kaminyoge (2008) conducted a research focusing on the assessment of citizen participation in decision making through village statutory meetings in LGA in Tanzania a case study of Mbarali district. The study found that there was poor citizen participation in decision- making since statutory meetings in sub council levels (village) were not held as required. There were some challenges hindering citizen participation such as inadequate

awareness of the importance of statutory meetings, leadership weaknesses and lack of feedback from above administrative organs. These challenges were regarded as reasons contributing to poor citizen participation in decision making.

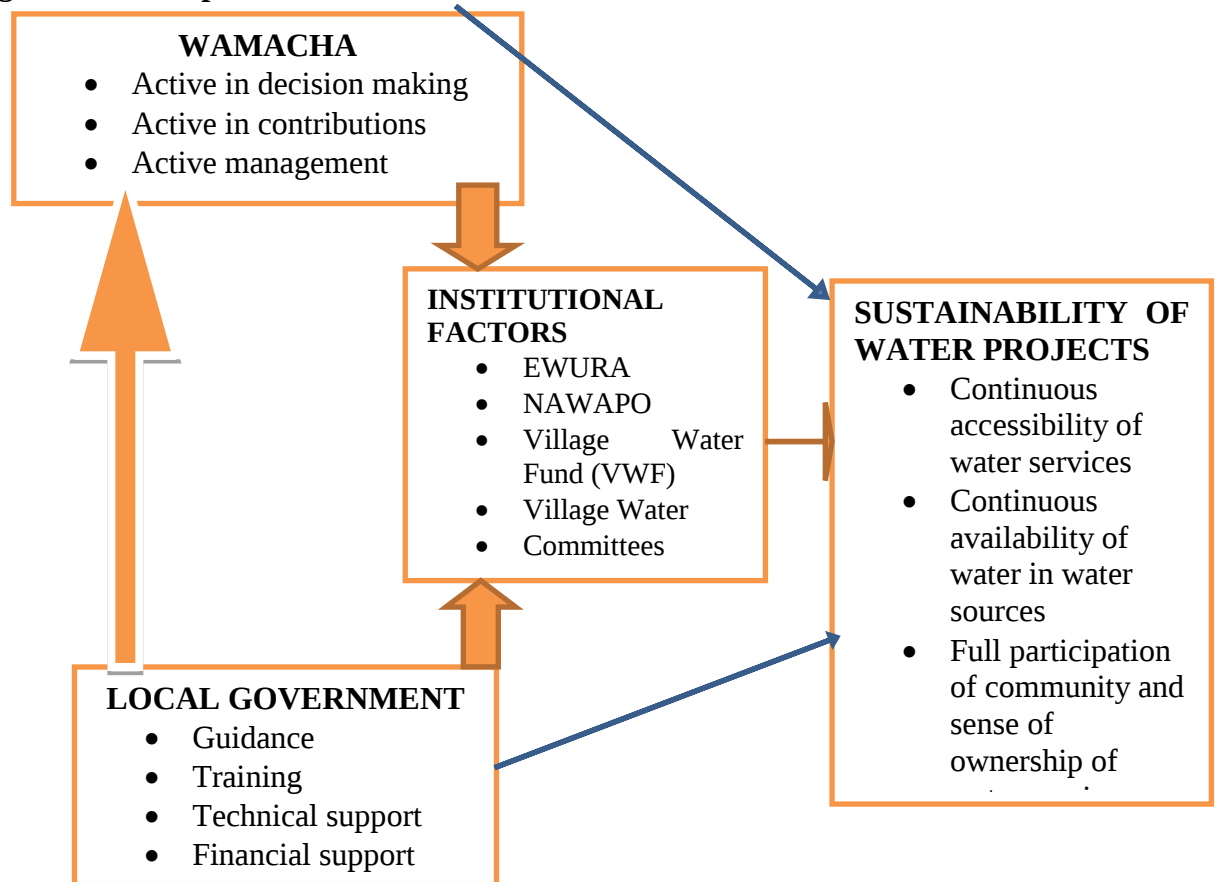
Another study by World Bank (1995) showed that, community participation approach in managing several projects was applied for the sake of fostering development. For example in Yemen, World bank conducted a study in year 2004 which showed that FAO implemented hundred of projects over 23 years ago using participatory approaches including a number of large scale rural development projects. Yemen was considered to be an example of community participation in water management in 1990s during the construction of small dams with donors support. It developed training activities to build their own management and technical capabilities. In Kenya experience showed that, about 30 percent of 10 million rural dwellers have access to improved water served by community managed water supply projects, many of which were developed by self-help groups.

Baboon (2008) carried out the study on citizen participation in policy making and implementation in Mauritius with reference to Port Louis' local government. The study applied survey questionnaire, interview, qualitative participative observation study and comprehensive literature as method of data collection. The finding of the study shows that citizen participation in policy making and implementation in Port Louis' local government is regarded to responsiveness of public needs. Ultimately, citizen participation at local levels is affected by the mechanism of control. However the study found that the present citizen participation at Port Louis' local government is not adequate. The study provides the principal factors that can contribute towards the improvement of citizen participation in the making and implementation of policy in Port Louis' local government. Those factors are as follows: effective information dissemination, provision of civic education, effective communication and publicity of public hearing.

2.4 Conceptual Framework:

Currently community participation is considered as key component of community management, not only because of its potential democratizing impact but also because of its positive effect on governance. In the case of public services, especially in rural areas and small municipalities, community intervention can contribute efficiently to the establishment of policies and the technical and economic sustainability of basic water supply and sanitation services. Towards this end, it is necessary to understand the environment, and to know the organisational structures that guarantee good services, transparency and participation.

Figure 2.1 Conceptual Frame Work.



Source: Researchers own Construct, 2013:

The study assumed that sustainability of water projects is the products of many things among them are the followings;

WAMACHA as the management organ of the Chalinze water project on behalf of the citizens should have members who participate actively in decision making in establishing and maintenance of water projects. WAMACHA also should have members who have technical, managerial and financial skills. WAMACHA should be greatly involved in financial contributions and water sources preservation for maintenance of the projects. The lack of sense of ownership results in neglect or abandoning of maintenance services and repair of some pumps (Parry- Jones, *et al.*, 2001). Another thing is the on-going use of traditional source of water, poor system of collecting water tariffs, poor cost recovery and distance from improved source of water all these undermining the sustainability of water projects.

It was further assumed that local government authority will provide guidance, training, technical support and financial support to WAMACHA.

It was also assumed that WAMACHA and the Local Government Authority should collaborate and operate through the guidance of Institutional factors such as EWURA, NAWAPO, VWF and Village Water Committees.

Lastly, the study assumed that if WAMACHA and Local Government Authority perform well their functions under the guidance of the Institutional factors sustainability of water supply project will be achieved. The indicator were assumed to be continuous accessibility of water services, continuous availability of water in water sources, full participation of the community and sense of ownership of the project by the community.

For participation to serve as an opportunity to decide on the community's collective well-being and as a means to decide on the provision of water services, persons are needed

with technical knowledge, sense of property, negotiation skills and the capacity to call meetings where participatory decisions can be taken. All of this can be achieved through the development of a process centred on people, which involves community and institutional actors in the project cycle.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research Methodology is the process used to collect information and data for the purpose of making business decisions. The methodology may include publication research, interviews, surveys and other research techniques, and could include both present and historical information. This chapter provides the study methodology which was adopted in the study thus divided into several sections including:- Introduction, study area, research design, population and sample size, sampling procedures, data collection methods, and data analysis techniques.

3.2 Research Design

This study adopted survey as the method to employ questionnaires as data collection technique involving Chalinze National Water Project as case study. Survey was selected as it is the most common and popular in social science research (Galala and Yusof, 2013). This method has become highly valued for its ability to provide insights that cannot be obtained by using any other means (Peter, 2009). Survey is inexpensive way to get information (Mark, 2008), flexible and can collect data in a wide range of information. It is also a standardised method and is thus the efficient means of gathering information from a significant number of participants beside often free from many types of measure errors (Babbie, 2008).

Yin (1984) defines the case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used. Since phenomena are essentially contemporary, it involves operating within specific contexts and thus, the case study method becomes more

appropriate. Similarly, as Norgaard (1994) emphasizes that the case study research is the preferred one done when control on the subjects of the study is neither feasible nor desirable.

Surveys are appropriate for studies that are descriptive, explanatory, and exploratory (Babbie 2001: 238). Furthermore, survey research is “the best method available to the social researcher who is interested in collecting original data for describing a population which is too large to observe directly” (Babbie 2001: 238).

3.2 Area of the Study

The study was carried out in Chalinze which is in Coastal Region in Bagamoyo District. The rationale for choosing this project was due to the fact that, the project has got almost ten years of operation under COWSO known as WAMACHA and this time frame provides was found to be convenient for the researcher to examine community participation in ensuring sustainable water projects. Also Chalinze area is the researcher’s area of experience, and the fact that Chalinze Water supply Project is among seven big National water projects in Tanzania. Chalinze Water supply Project (CWSP) was designed to cater for acute water shortage in Chalinze Province in Bagamoyo District and nearby villages at Kibaha and Morogoro Rural Districts. Before the project the community used water from traditional wells, springs, ditches streams, shallow wells and surface catchments water reservoirs. These sources were polluted, unreliable and some of them had no water in the dry season.

Therefore, the purposes of Chalinze Water Supply Project is to ensure that the community of 67 villages of Chalinze Water Supply Project gets adequate, clean and safe water at a reasonable distance from their homestead; ensure that the water supply and sanitation services are sustainable in all aspects that is, financially, administratively and technically (quantity and quality); educate and assist the community to protect their surroundings and the advantages of protecting our water source; assure good relationship with our

stakeholders and cooperate with them to achieve our goals; and monitoring the performance of our services to community and assess their satisfactions.

Figure 3.1 Shows the Source of Chalinze Water Supply Project near Wami Bridge



Source: Field Data, 2013:

3.3 Study Population and Sample Size of the Study

These are the unit of inquiry in which the researcher took in his study. Is the whole population from which sample was selected (Clare, 1962).

The target population of the study will be stratified into the following groups: WAMACHA members, CWSP Management team, Ward councillors, Village government leaders and community/beneficiaries. Table 3.1 summarizes the distribution of respondents.

Table.3.1: Shows the Distribution of Respondents in the Study

Categories of Respondents	Population	Sample Size	% of sample Population
WAMACHA, members	120	60	50
CWSP Management team	5	3	60
Village Chairperson	20	20	100
Domestic users	1352	40	3
Ward Councillors	9	4	44
Big water users	34	3	9
Total	1540	130	

Source: Field Data, 2013:

The population for this study was made up by inhabitants of Chalinze and the sample size comprised of 130 respondents in the study area. The sample size was distributed as follows; Members of WAMACHA were 60 which is equal to 50% of WAMACHA members in the area, CWSP Management team were 3 which is 60%, 20 Village government leaders which is 100%, 4 Ward councillors 44% and community/beneficiaries where big water users were 3 which equal to 9% and domestic water users were 40 equivalent to 3%. The composition of the respondents from each stratum was as follows: within nine wards of CWSP, the researcher selected four wards to represent the others. In each ward, 5 villages were randomly selected and six members of WAMACHA from each village picked. Four Village Chair Persons in each ward was selected; three respondents were picked from Chalinze Water Supply Project Management Team, Also three big water users in the area and two normal domestic users in each village were selected. Finally, four Ward councillors were selected from nine Wards.

3.4 Sampling Procedures

Sampling is the process of selecting units (e.g., people, organizations) from a population of interest so that by studying the sample we may fairly generalize our results back to the population from which they were chosen. It is the procedure a researcher uses to gather

people, places or things to study Orodho and Kombo, (2002). This study used both purposive and random sampling.

3.4.1 Purposive Sampling Technique

Purposive Sampling is a non-probability sampling technique whereby the researcher selects participants on the strength of their experience of the phenomenon under study. Fenny *et al.* (2001:33). It is also called judgmental or deliberate sampling. The choice of the sample elements depends exclusively on the discretion of the researcher/investigator (Milanzi 2009). Purposive sampling was used in this study to choose 3 Chalinze Water Project Management Team, 60 Members of WAMACHA, and 20 village chair persons as it is believed that they have relevant information for this study.

Purposive sampling was used in this study since it suited both quantitative and qualitative methodology Kombo and Tromp (2006). Purposive sampling was selected since it was capable of selecting information-rich cases for in-depth analysis relating to the role of communities in improved management of water supply system. The researcher employed purposive sampling in selecting respondents to be involved in in-depth interviews and focus group discussions.

3.4.2 Random Sampling

Is a sampling method in which all members of a group (population or universe) have an equal an independent chance of being selected. Saunders et al, (1996) define random sampling as a sampling method in which all members of a group (population or universe) have an equal and independent chance of being selected as representative of the population. Random sampling was useful in this study because there were about 81 villages which benefit from CWSP and due to time and financial constraints not all villages could be reached hence 20 villages selected by using randomly sampling method.

As such representative of the population (villages) was selected using random sampling to identify 30 percent a true agreed representative of the population.

According to Zikmund (1997), a good sample should constitute 30 percent of the population frame. Lottery style in choosing the sample was applicable here as is the best way of choosing population as it avoids biasness. In case of this study random sampling was used to select 20 villages from 81 villages to be involved in the study.

3.5 Data Collection Tools / Techniques

The most commonly used data collection tools in researches consist of self-administered surveys or questionnaires, personal interviews and/or focus groups. This study employed questionnaires, focus group discussion and interviews as primary data collection methods while on the other side documentary review was used in collecting secondary data.

3.5.1 Questionnaires

Saunders *et al.* (1996 p. 224) defined questionnaire as a method of collecting data where respondents are asked to respond to the same set of questions in a predetermined order. The general advantage of the Questionnaire method is that it allows collection of a large amount of data from sizeable population in a highly economical way, Kothar (1990 p. 78). Questionnaire method has the following advantages: time and money saving, if the research covers large area. According to Cockburn and Mackenzie (2000), “The main attraction of questionnaires is the relative ease of gathering a large set of responses. The use of questionnaires is good for respondents who cannot offer audience to the researcher and who most probably this study apparently will meet.

The use of questionnaire method was quite most useful approach used in this study for those respondents who were difficult to approach due the nature of their work. For example, it was very difficult to gather together the selected members from WAMACHA and the village councillors. As such strategic questionnaires contained standardized

questions was prepared for the intended interviewees. The use of semi-structured and unstructured questionnaires gave detailed answers to the problem of running the project. The questionnaires administered ratio assisted in capturing the respondents' opinions related to the behaviour under study. The questionnaire technique was also relevant to the study since the intended population was skilled.

Questionnaire was selected and used as the data collection instruments for several reasons. One, being anonymity which usually is assured when using a questionnaire and it is critical in a situation where a researcher is also the assessor of the respondents. This is the main reason as why an interview was administered to few respondents due to the possibility of undue influence and bias (Sarantakos, 1998). The questionnaire allows quick and efficient data collection providing a stable, consistent and uniform measure without variation.

3.5.2 Interviews

An interview is a purposeful discussion between two or more people, Saunders *et al.* (1996:86). The use of interview was selected by the researcher to gather valid and reliable data. This enabled the researcher to obtained data direct from the respondents and obviously was relevant to research question(s) and objectives of the study. The researcher deployed structured, semi-structured and unstructured kind of interviews in this study. Semi-structured was arranged and used to interrogate CWSP management team. Structured interview which uses questionnaires based on predetermined and standardized or identical questions was also used in this study. Unstructured interview which is informal as no predetermined list of questions to work through this was also applied to villagers/community. Use of this technique in this study had a number of advantages; the presence of the interviewer greatly increased the percentage of the interviews that resulted in satisfactorily completed questions; and increased accuracy. The process of observing

the interviewer helped the researcher to collect information that was expected to be refused by the respondent in answering questions.

During interviews rapport was created by starting with general questions to make respondents feel relaxed in answering questions. The approach was used in line with the argument that, “if the researcher and the subjects have established good rapport the subjects will be cooperative and will have enough confidence in the research to pass on information about themselves, ranging from the details of daily life to sensitive matters” (Sharraf, 1991; Dean and Eichhorn, 1969; Wax, 1971, cited in Ryan, 2002: 337). This situation enabled the researcher to get useful information from the respondents successfully.

This mixed approach helped to balance the broader, more prescriptive survey questions, providing participants with an opportunity to give more spontaneous, in-depth accounts of their information seeking situations. The interviews were sorted to reduce the shortcomings of the questionnaire noted above. Three (3) Management team members of Chalinze Water Project, 6 village leaders, and 12 WAMACHA leaders were selected and involved in the interview.

3.5.3 Focus Group Discussion

A focus group discussion was conducted to users of water from the selected villages of Chalinze Water Supply Project to gather information relating to the way they were involved in improving water supply systems in the Chalinze Water Supply Project. This has helped the researcher to gather data much more quickly and at less cost than would be the case if each individual were interviewed separately.

Focus group discussions were also conducted with four groups of water users, who were found in public water kiosks. Focus Group discussions were conducted in an impromptu way. Groups of water ranged from 4 to 6. The discussions were moderated by

the researcher who was also taking notes. Discussions were not taped due to limited time. Focus group discussions were used because of the following advantages:

- They enable the gathering of data much more quickly from a large number of people without wasting more time.
- They are convenient for a group of people who have been found together.
- They allow interaction directly with the respondents. This provides opportunities for the clarification of responses, for follow-up questions and for probing purposes.
- They provide an opportunity to obtain large and rich amount of data in the respondents' own words. This according to Krueger & Casey (2000) not only yields rich, qualitative information but also discloses what should be done, what will work and what will not, and why. This helped to identify respondents' views and attitudes about the sustainability of National Water Projects
- They allow respondents to react to and build upon the responses of other group members. This synergistic effect of the group setting resulted in the production of useful data that were not obtained through individual interviews.
- The results of the focus group were easy to understand, and therefore the researcher clearly understood the verbal responses of most respondents in the discussions.

3.5.4 Documentary Reviews

A number of documents were reviewed in the cause of conducting this study, such data were collected from the area of study's documentaries, libraries, records & statistics, strategic plans, books, journals (both published and unpublished), research reports and conference proceedings; and theses and dissertations National Water Projects were reviewed. The researcher obtained secondary data from the area of study's files from the minutes and reports of meetings on various matters related to National Water Projects

implementation like water policies, business plans, strategic plans, suggestion box and workshop reports. This has helped in cross- checking the consistence of information obtained through other methods. Most secondary information in this study was obtained from Ministry of Water library and some in CWSP library.

3.6 Data Analysis and Presentation

Data collected were summarized, coded and analyzed both qualitatively and quantitatively. Then the data were processed by Statistical Package for Social Sciences (SPSS). Frequency distribution, percentages, figures and tables were used to describe major variables.

Quantitative data were analyzed by using descriptive statistics. Qualitative data from interviews and observations were analyzed using content analysis (by analyzing texts regarding authenticity, or meaning from respondents' responses on "Who said what, to whom, why, to what extent and with what effect?"). According to Holsti (1969) cited by Kumar (2002) content analysis is used into three basic categories:

- i) Make inferences about the antecedents of a communication
- ii) Describe and make inferences about characteristics of a communication
- iii) Make inferences about the effects of a communication.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSIONS OF FINDINGS

4.1 Introduction

This chapter presents analyses and discusses the data collected to address the three objectives of the study as stated in chapter one. Quantitative data were analyzed using SPSS and Microsoft Excel Spread Sheet. In most cases descriptive statistics were derived and shown in frequencies and percentages. Creswell (1998:201) states that data analysis is the process of moving from raw data to evidence-based interpretations that the foundation for published reports. Since numbers from quantitative information by themselves do not give adequate meaning, qualitative information which is relevant to the issue being studied was used to supplement them. There are different ways of analyzing qualitative data as argued by different authors such as Gill and Johnson, (2002). In this research content analysis was used for the qualitative data, where theory was compared to practice. Direct quotations were used to show what respondents said about the issue being analysed, thereby supporting the statistical information.

4.2 The Socio and Economic Characteristics of the Respondents

The characteristics considered were gender, age, education and occupation. The findings were as summarized in table 4.1

Table 4.1 Social economic Characteristics of the Respondents

Variable	Category	Number	Percent (%)
Gender	Male	74	57
	Female	56	43
Age (Years)	18-28	10	8
	29-30	12	9
	31-40	46	35
	41-50	38	29
	51-60	19	15
	60 and Above	5	4
Education Level	Primary	104	80
	Secondary	22	17
	College/University	4	3
Occupation	Farmer	77	59
	Livestock keeper	3	2
	Petty traders	4	3
	Government employees	3	2
	Others	43	34

N=130**Source: Field Data, 2013:**

Out of 130 respondents in the study area, (57%) were males while (43%) were females. With regard to age, 84 (64%) of the respondents were 31-50 years old while 22 (17%) of respondents were aged 30 years and below. The rest, 24 (19%) of the respondents were above 50 years of age. With regard to occupation, 77 (59%) majority of respondents were farmers while 4 (3%) respondents were petty traders. With regard to education, 104

(80%) of the respondents had primary education while 22 (17%) of respondents had primary education and 4 (3%) had college or university education.

From these findings, the researcher found that low level of education was the dominant characteristic of the respondents in the study area. Moreover, the major economic activity in the study area was farming, therefore most of the people in the study area practice farming. Table 4.1 summarizes the results.

4.3 Community Involvement in Decision Making Process in Water Supply Projects

The study was interested to understand community involvement in decision making process in water supply projects. The study intended to know communities involvement in designing, implementation, monitoring and evaluation of water supply projects.

4.3.1 Community Involvement in Designing and Establishing Water Projects

According to Thwala (2010) proper evaluation and understanding of community involvement can be better achieved when it is viewed against a theoretical framework built on decision-making. People's involvement in decision making leads to the sense of ownership of the project whose outcome is sustainability of the project. The study was interested to know whether the community was involved in the designing and establishing water supply projects. The respondents were asked if they were involved in decision making in water supply projects. The results were as shown in Table 4.3.

Table 4.2 Community involvement in Decision making process

Involvement in Decision Making Process	Frequency	Percentage (%)
Yes	45	35
No	85	65
Total	130	100

Source: Field Data, 2013:

Table 4.2 shows that the 85 (65%) respondents disagreed that they were involved in decision making while 45 (35%) respondents agreed that they were involved in decision making in Chalinze water supply project. The researcher learned that majority of respondents were not involved in decision-making. This is in line with the study by Odhiambo (2009) that the sustainability of rural water projects is greatly affected by low degree of community participation in establishing water system from technological selection to the supply and management arrangement.

In interview with the village leaders such as village chair persons, ward councillors and members of WAMACHA it was found that the government had made feasibility studies on the project area and used its own experts from the Ministry of Water to design, formulate and found donors to get funds for the construction of the project. The study found that during this processes communities were just observers of what was taking place in the project area and did not take part on making any decision on formulating and designing. The government was the sole initiator and provider of the service.

In the group discussion it was revealed that most of the community members expected to be involved in designing and implementing the project but they were just observing the government experts on their feasibility studies as one respondent contended:

“We were not involved in designing and implementing this project we only saw the government experts from the Ministry of water at the project area then later on the construction of the project began. During the construction of the project then our youths were taking part in constructing as daily labourers paid by the Chinese company which was responsible in construction of the Project”.

Moreover, in discussion three women respondents complained that participation and involvement of women in decision making process in the initial stage of constructing Chalinze Water project was very low. They said they came to hear about this Project

during mobilization period to form water user association (WAMACHA) just because the formation of this association needed women representatives’.

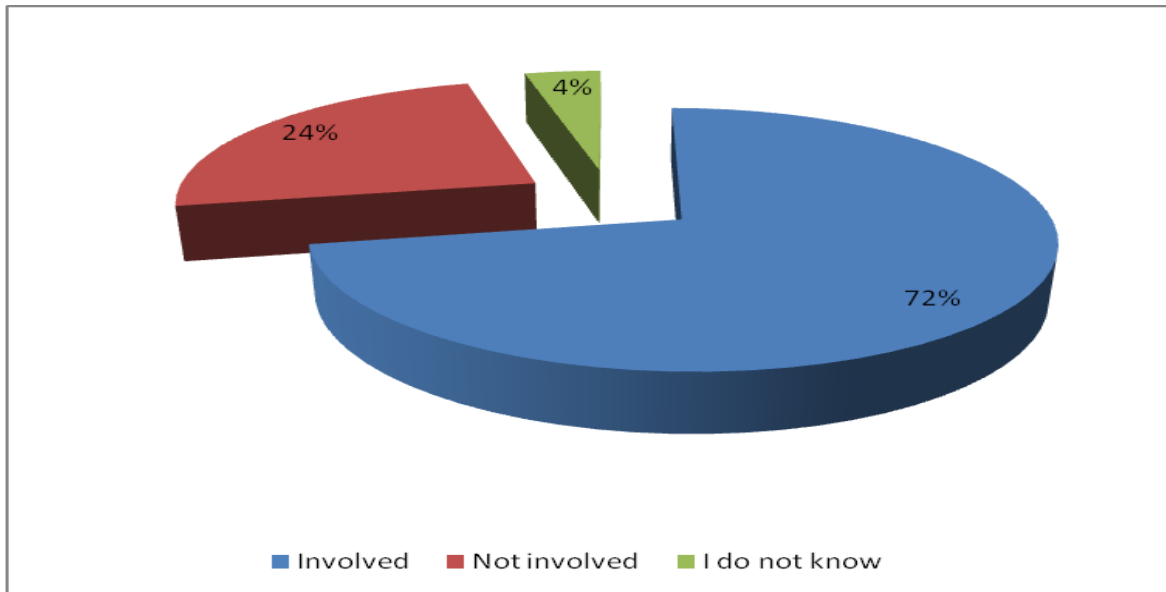
4.3.2 Community Involvement in Implementation of Water Projects

Implementation is an important stage of the project cycle. The study by URT (2005) stipulates that various forms of community involvement and responsibility for rural water supply projects which have been implemented involving communities have led to the increased projects sustainability. Thus, intensifying community involvement in the implementation of rural water supply projects will increase the sustainability of investment.

The study was interested to know whether the communities were involved in implementation of Chalinze water supply project. Respondents were asked how were involved in the process of implementing Chalinze Water Supply Project.

Figure 4.1 indicates that 94 (72%) respondents said that they were involved in implementation of the projects while 31 (24%) contended that they were not involved in implementation of the project when 5 (4%) respondents said that they did not know whether they were involved or not involved.

Figure 4.1: Community Involvement in Implementation of Water Projects



Source: Field Data, 2013:

In interview with one of the village leaders, it was revealed that after the project was formulated by the government, it was given to the communities to be implemented. In this process, an awareness campaign and mobilization was done by the government via the Ministry of Water and the District Council of Bagamoyo to all the villages in which the water projects were designed. This led to the creation of the management organ known as WAMACHA from the grass root level. Moreover, it was revealed that the aim of involving WAMACHA in project implementation was to help them to get relevant knowledge and build up their experience in operation and management of the water supply project. Each water kiosk was subcontracted to an agent who sold water and collected daily revenues. This could imply that through buying water by the community members in kiosks was the means to give their contributions for the development of water projects.

When the researcher wanted to know about roles and responsibilities it was revealed that the collected revenue was to be sent to the management for the project implementation. These agents received ten percent (10%) of the revenue collected by the management of water supply project in each two weeks. It was found that there were no clear and defined roles and responsibilities of water stakeholders in the villages (the communities). This implies that there was no active involvement of the community since the agent represented the rest of the community members in selling water but the water project management still held a strong power and responsibility on financial and other managerial functions of the project, for that case control mechanisms and opportunity of the community to actively participate was denied.

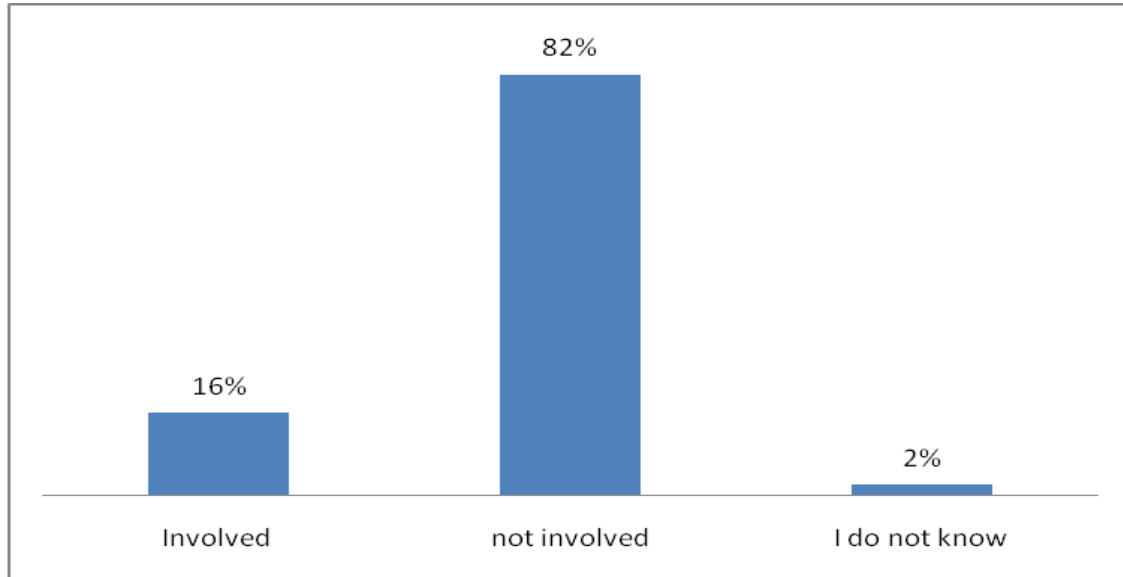
These findings are against the study by EWAREMA (2008) indicates that communities can participate in project implementation by generating funds for spares if all are committed to water supply. This can be done through setting water tariffs and control mechanisms and by giving them opportunity to actively participate. The study recommended that the committee members should be identified and should be made fully responsible for their kiosk while being answerable and accountable to village and councils and water users associations.

4.3.3 Community Involvement in Management of Water Supply Projects

Management is a crucial aspect in the implementation of water projects. Failure to form a good managerial structure becomes a starting point for the failure of the project and problem to meet its goals. The study expected to find out whether the project involves communities in management in order to ensure smooth implementation of the project. In managing water supply projects the involvement of the community is very essential to ensure maintenance of water supply equipments, effective revenue collection and effective mechanisms for active participation of all water users and other stake holders. The study was interested to understand the on whether there was community involvement

in managing Chalinze Water Supply project in the study area. Respondents were asked if they were involved in management practices and the results are as shown in figure 4.2.

Figure 4.2: Involvement of the Community in Water Supply Management Projects



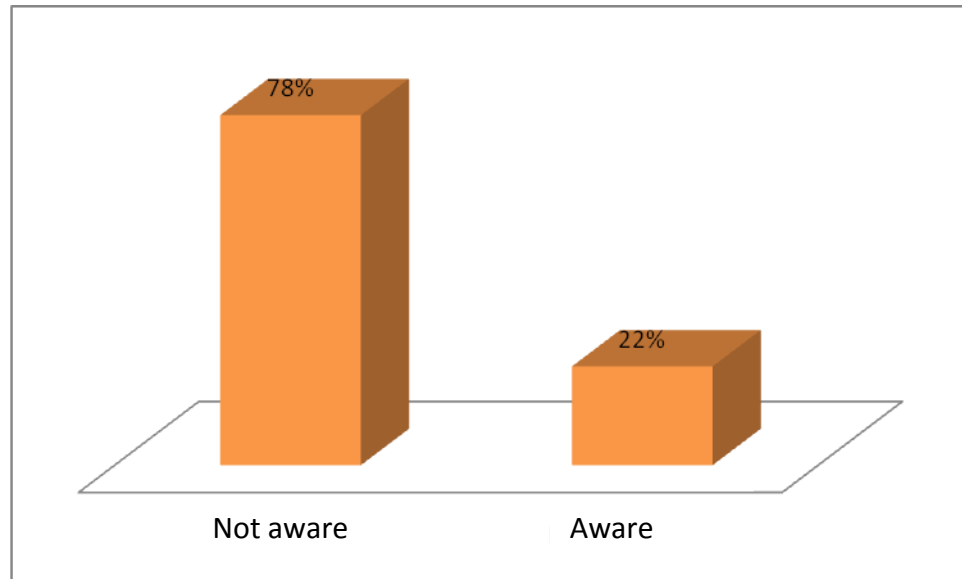
Source: Field Data, 2013

The findings as shown in figure 4.2 shows 107 (82%) respondents disagreed on the involvement of the community in management of water projects while 21 (16%) respondents agreed on the involvement of the community in managing water supply project when 2 (2%) respondents said that they do not know.

These results could imply that there is a lack of the base at the grass root level in power and authority in managing the project. The respondents' low involvement in the project management can be attributed to their low level of education and lack of technical skills and other managerial skills of the project. Thus, they are neglected to take part in managing the project.

Moreover, respondents were asked if they were aware of the organization structure of the project management. The findings are summarized in figure 4.3 below

Figure 4.3: Respondents awareness of the organization structure of the project



Source: Field Data, 2013:

It was found that 101 (78%) respondents reported that they were not aware of the management structure and hierarch of power and authority while 29 (22%) respondents reported to be aware.

From these findings, the researcher observed that WAMACHA had limited management practices for that case the management decisions were arbitrarily implemented by project management team. Moreover, the researcher found that there was no proper documentation and stored information system example filling system, visitor's book, various reports, meetings minutes and other managerial requirements. For that case, WAMACHA was not responsible and anywhere. This indicates that there was no proper organization structure for the project management and the whole management was based to the government.

However, in discussion with the respondents it was reported that water users did not know what was WAMACHA, its establishment, leadership and its roles. This could imply that

there was limited interaction between the water users and leaders and there was no clear organization structure. This led to the lack of confidence to the community members to actively participate on the project implementation. The findings conquer with EWAREMA (2009) that if the community has been mobilized and well empowered from initial stage, confidence gained help the community to minimize downtime. The confidence in community own resource persons have great relationship with sustainability of the system.

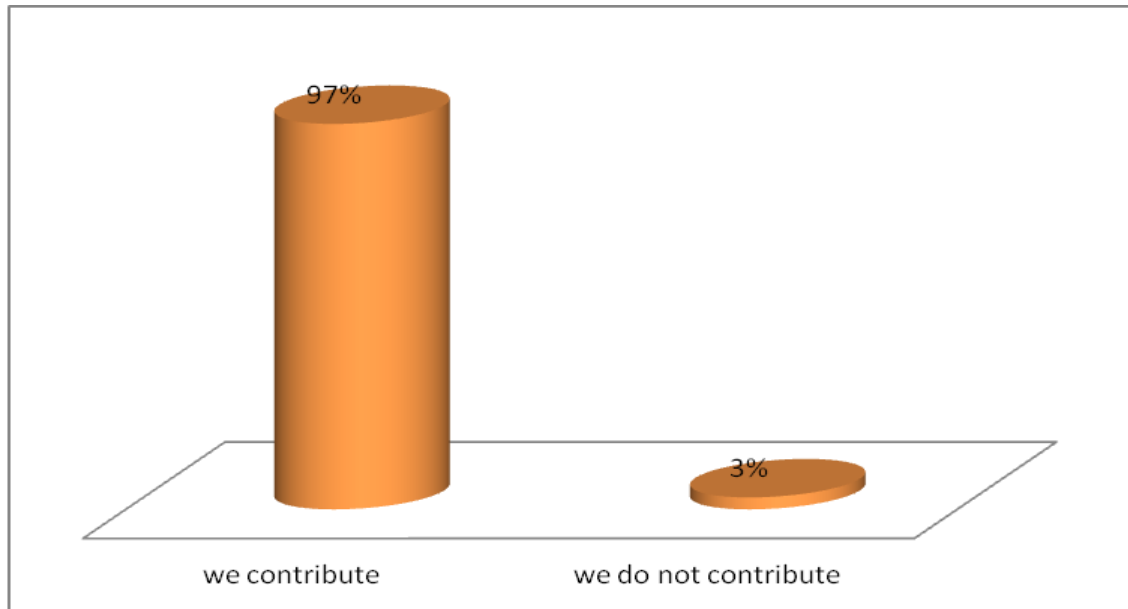
4.4 Community's Contributions in Development and Sustaining Water Supply Project

According to URT (2002) water resources management entails a variety of technical, administrative and legal activities that cost money, manpower and infrastructures. In order to realize these aspects water users with their internal and external supporters need to give their contributions. The study was interested to understand the community's contributions in development and sustaining water projects.

4.4.1 Financial Contributions of Communities

According to the national water policy water is the basic right for every person. Yet the communities do not have the financial means to meet the capital costs. Therefore, the policy urges the communities to pay a portion of the costs both in financial and kind. The respondents were asked to mention their means they use to give their financial contributions. The results are summarized in the Figure 4.4 below.

Figure 4.4: Communities' financial contributions



Source: Field data, 2013:

The results show that of all, 126 (97%) respondents reported that they contributed through buying water that was sold by agents in the kiosks. On the other hand 4 (3%) respondents said they do not know if they contribute or not. It was further reported that water was sold at the price of Tshs 50/= per bucket (20 litres). During an interview with one of the project officials it was reported that where there was demand and water availability, house connections were allowed whereby beneficiaries do pay the full costs connected to the higher services level through water bills which were paid in monthly basis.

Moreover, the researcher wanted to know the revenue collected and the expenditure for the second quarter of 2012. It was revealed by the technical manager that the total cost to produce 20 litres of water including electric charges, chemicals for water treatment, labour charges and other operating costs worth a total amount of Tshs. 1200/=. Table 4.3 indicates the revenue from water service collection and the expenditure in second quarter of 2012 as follows;

Table 4.3: Contributions and Expenses Report from Water Supply projects in the second Quarter (Oct- Dec, 2012):

Contributions		Expenditure	
Water Sells	259,679,140	Electricity charges	181951262.80
New connections fees	110,475,526	Water Chemicals	25688000.00
Reconnection fees	630,000	Salaries and Allowances	107149794.00
Fees for application forms	405,000	Administration	42119880.00
Credit collections	78,270,088	Maintenance	98175759.00
Other Collections	2,715,063	Development	13311870.00
Total	452,174,817		468,396,565.80

Source: Field Data, 2013.

With this high cost of operations to supply water it was found that the contributions made by the beneficiaries of the service 50/= for one bucket of twenty litres out of 1200/= (were still low to sustain the operation of such a project thus the government had to subsidize the remaining cost of operations which is 1150/= to sustain the project. Apart from that, it was found that whenever there was any fault of water pipes and other equipments at any kiosk where community used to get water every day there were no any technical initiatives undertaken by the communities on fixing the problem as they do not have such skills. Instead they provide information to the project management through WAMACHA and wait for the project technician to go and fix the problem. From these findings, the researcher could learn that the Chalinze Water Supply Project highly depended on financial support from the government and external donors for its sustainability.

4.4.2 Communities' Contributions in Kind

The expectations of the study were that the communities were responsible to contribute for the implementation of the project financially and in kind. The study was interested to know contributions given by the communities apart from financial contributions. The respondents were asked if there were other contributions they were giving apart from financial contributions. The results are summarized in Table 4.4 below.

Table 4.4: Community contribution in Financial and kind

Contribution by	Number of respondents (N=130)	Percent (%)
Safeguard water infrastructures	80	62
Report illegal water connections	46	35
Report those who destroy water sources	4	3
Total	130	100

Source: Field Data, 2013:

Findings from Table 4.4 show that 80 (62%) respondents contended that they contributed through providing safeguarding the water infrastructures while 46 (35%) said that they were responsible to report illegal water connections when found when 4 (3%) respondents said that they contributed through reporting those who tended to destroy water sources. Respondents could report that the contribution they were giving were to safeguard the project and to report the leakages of water pipes to the project management. It was further found that history of the project show that infrastructure was handed to the ministry of water with the hope that water users could not be able to contribute anything in managing the project. Respondents were asked to mention the custodian of the project.

The results and observation could suggest that lack of commitment of the community members' roots from the lack of participation in decision making. This leads to lack of commitment to contribute in kind. In interview with the project officials it was revealed that the community members are not committed to the extent that they do not actively participate in project meetings. It was reported that the people were not ready to contribute in kind for project expansion. The people were not ready for voluntarism and rendered for free services and high dependency for the government.

Discussing with the community leaders it was revealed that communities had their constitutions that directed them what to do for the development of the water projects. In

these constitutions the community members are required to report any leakage of water infrastructure. They are also demanded to be the custodians of the water infrastructures in matters pertaining to theft of infrastructure, illegal connections and other external destructions.

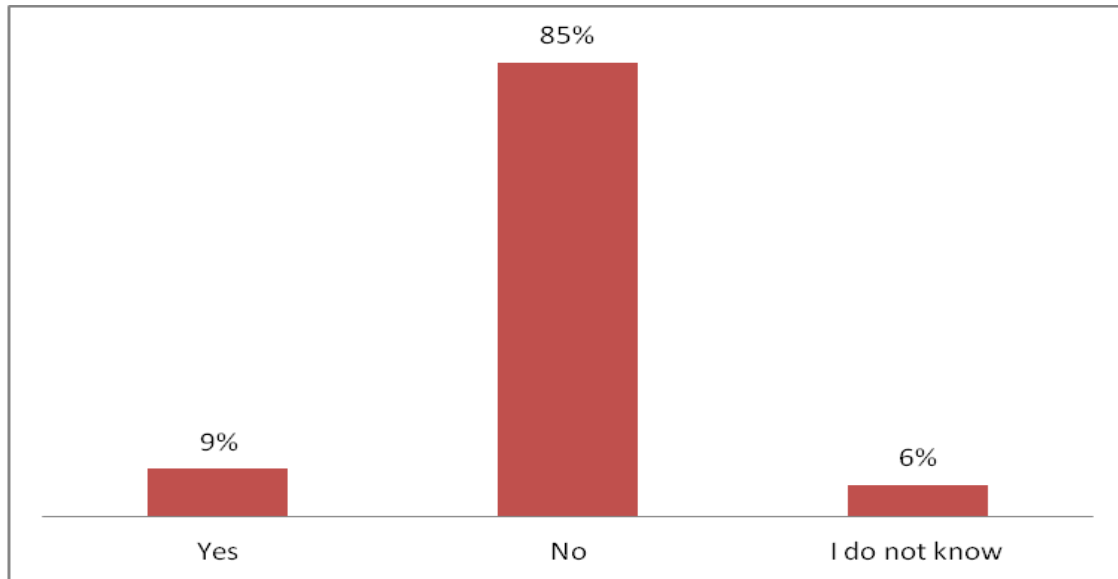
4.5 The roles of local government in sustaining water supply projects

The core to successful water resource management lies on building the knowledge, skills and institutional base at the national, water project and local level to utilize relatively new and multidisciplinary tools of integrated water resources management. (URT, 2006). The study was interested to understand the roles of local government in sustaining water supply projects. It involved a critical assessment of the roles of the local government in ensuring that there is a sustainable water supply project in the study area. In assessing this researcher examined the following roles of the local government which are to execute coordination, finance and facilitate functions of the management. Implementing the defined regulatory roles and approved by laws to protect water sources, community organization and service providers. Also monitoring and regulating COWSOs on behalf of MoW.

4.5.1. Coordinating and Facilitating Management of Water project by Local Government Authorities.

The study was interested to understand the role played by the Local government Authority in ensuring coordination and facilitation of the management of Chalinze Water Supply Project. The respondents were asked on whether there was coordination of and facilitation of the LGA in ensuring smooth management of the project and the results were as shown in figure 4.5.

Figure 4.5: Whether the LGA Coordinated and Facilitated Management of CWSP



Source: Field Data, 2013

The results in Figure 4.5 show that 110 (85%) respondents disagreed and 12 (9%) respondents agreed while 8 (6%) respondents said they do not know. Majority of the respondents disagreed because there were no sustainable strategies which were undertaken by the local government authority to ensure coordination and facilitation in managing water projects, this was manifested in an interview with the project officials who contended that the Bagamoyo District Council provided only two (2) staffs to join the project officials and provided community mobilization to ensure the formation of the management organ of the project (WAMACHA). After the formation of WAMACHA the Bagamoyo District Council provided one day training which involved only few members of WAMACHA due to the reason of shortage of fund to facilitate the training of all members. Since the training of WAMACHA was incomplete, up to date the management organ faces lot of problems such as lack of Bank account, handling of financial aspects, proper management structure and project status and had no association's treasury and did not know their membership.

Also WAMACHA did not have powers and authorities as far as project decisions were concerned. For that case, the role of the Bagamoyo District Council in ensuring effective and smooth management of Chalinze Water Supply Project has not been effective. This is against the Water Supply and Sanitation Act, (2009:455) which states that LGAs have the role of mobilizing communities and providing technical and financial support in implementation of water projects.

4.5.2 Implementing the Defined Regulatory Roles and Approved by laws

In order to ensure sustainability of water supply projects there must be defined regulatory roles and approved by laws to protect water sources and service providers. The study was interested to understand the role of the LGA in implementing the defined regulatory roles and approved by laws to ensure sustainability of water supply project. The researcher asked the respondents on whether the LGA had a role in implementing the defined regulatory roles and approved by laws. Table 4.5 presents the results as follows;

Table 4.5 Whether LGA Implements the Defined Regulatory Roles and Approved By-laws

Responses	Frequency (N=130)	Percentage (%)
Yes	42	32
No	88	68
Total	130	100

Source: Field Data, 2013:

From Table 4.5 shows that majority of the respondents 88(68%) disagreed and minority of respondents 42 (32%) agreed. This results are due to the fact that does not effectively implement the defined regulatory roles and the approved by laws. In an interview with the project officials it was revealed that Chalinze District Council did not effectively implement the defined regulatory roles and approved by laws. The project official explained that WAMACHA was legally established as a management organ with its

constitution in which the bylaws for protecting water sources, environment and water users were stated.

These regulatory roles and by laws depends on the local government authority to be implemented, surprisingly the Local Government Authority had been a toothless bull dog in implementing these by laws because villagers had been cutting trees for burning charcoal and other domestic uses. The District Council had been reluctant to take legal measures against those who destroy water sources and the environment to the extent of the project officials to assume this role through patrolling the water sources for the aim of taking action to those who destroy the environment.

Unfortunately this has not been effective due to lack of support from the Bagamoyo District Council. This situation has led to drying up of some natural water sources like Mkombezi, Hondogo, Manderu and river Mberera in Msoga just to mention a few.

Apart from that the District Council had permitted two companies for crushing stones upstream. These mechanical actions of breaking the stones in a long run were technically anticipated to destroy Wami River- the main source of Chalinze Water Project. These arrangements to permit the stone crushing companies were done without the involvement of the water project management and the communities who are the main stakeholders of the project. This showed how the LGA was not committed to implementing the bylaws and supporting the conservation of water sources and controlling water users.

4.5.3 Financial Support of LGA to Water Supply Project

One of the roles of LGAs is to provide financial support in implementation of water development programmes URT (2009). The study was interested to assess the role of Bagamoyo District Council in Supporting Chalinze Water Supply Project. The researcher asked the respondents who were Ward Councillors and project officials on whether the

BDC plays any role in providing financial support to the project. Table 4.6 presents the results.

Table 4.6: Whether there is Financial Support from the LGA

Response	Frequency (N=130)	Percent (%)
There is financial Support	125	96
There is no financial support	3	2
I do not know	2	2
Total	130	100

Source: Field Data, 2013:

The findings showed that 125 (96%) respondents disagreed while 3 (2%) agreed and other 2 (2%) respondents said that they did not know.

The results revealed that Bagamoyo District Council did not provide any financial support to the project. This could mean that the District in its fund for Community development there is no any part of the fund which is directed to Chalinze Water Supply Project. However, in the interview with the project officials, village leaders and Ward Councillors it was found that the District Council did not provide any fund in cash but it had only been sending its Village Executive Officers (VEO) to verify the revenue collected from each agent contracted at each kiosk. From these findings the researcher learnt that the LGA had no any commitment of financial support to the water supply project. This makes the sustainability of the project to be questionable.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusions and recommendations and area for further studies. The study was concerned with examining the role of Community Participation and Sustainability of National Water Projects: the case study of Chalinze Water Supply Project. The chapter comprises four sections. The first section provides the summary of the study. The second section provides the conclusion. The third section provides the recommendations for policy consideration and the fourth section presents the area for further studies.

5.2 Summary of the Findings

This study was conducted to examine community participation and sustainability of National Water Project in Tanzania, a case study of Chalinze Water Supply Project. In this study 130 respondents were selected as a sample and this sample included 3 water project officials, 4 Ward Councils, 20 village leaders, 60 members of WAMACHA, 40 normal domestic water users and 3 big water users. The study used both primary and secondary methods of data collection in which the questionnaires, interviews, focus group discussions were used to obtain the primary data. Also the study used documentary review to obtain the secondary data in which the different water regulatory and management policies, office documents of Chalinze water supply project and other documents and guidance for managing water supply in the country were used. Also the researcher goes through other water research documents to obtain reliable data of what others said on community participation and sustainability of National Water Projects.

The findings of this study involved three objectives as follows; the first objective dealt with determining the community involvement in decision making in water supply project. Community involvement was observed in designing the project, implementation and management of the project. From this objective the findings of the study revealed that Chalinze water supply project did not involve the community in decision making during the designing and establishing the project instead the government through its experts was the sole initiator and designer of the whole project and the communities were just observers when the project was being designed and initiated. Again on the phase of implementation the government after completing the construction of the project mobilized people to form a management organ (WAMACHA) which would take part in managing the project on behalf of the community. The study revealed that the management organ had no any authority and power on managing the project and the whole management was on the part of the project officials who were the government employees. Apart from that the study found that WAMACHA had no technical, financial and managerial skills of the project and even some members of the community were not aware of this organ and its organization structure simply because it was formed under the influence of the government and not the idea rooted from the communities.

The second objective of the study dealt with examining the community's contribution in development and sustaining water supply projects. The assessment was done by examining financial contribution and contribution in kind. The study revealed that the community had little financial contribution to the project since the only contribution given by the community was the charges on water at each kiosk in which every member of the community bought water at the price of Tshs 50/= per every 20 litres of water. However, the study found that this contribution was almost nothing compared to the operational cost which was Tshs 1200/= per each 20 litres where the other costs were subsidized by the government. In regard with contribution in kind the study found that the community contributed only on water source preservation through WAMACHA though their contribution had no any notable effect since WAMACHA and the community at large had

not been so committed in this role since there had been various human activities such as cutting trees for charcoal and the water sources were continuing to dry up. Also the community sometimes played the role of providing information for any destruction of environment and water sources to the management of the project.

The third objective dealt with assessing the role of the local government in sustaining water supply project. The assessment was based on looking at the role of the coordinating and facilitating management of the project, implementing defined regulatory roles and approved by-laws and financial support. The study found that Bagamoyo District Council had done some efforts in supporting the project since it mobilized the community to form the management organ (WAMACHA) and conducted a one day training to some members of the organ but the training was not sufficient for building the required capacity since the members of the organ lack necessary skills for water project management.

Apart from that the District Council also provided only two workers to join the project officials on managerial activities. On the part of implementing regulatory roles and approved bylaws the local government facilitated the formulation of the by-laws on the constitution of the WAMACHA but it has not been committed in implementing them effectively since there were various destructions of the environment and water sources taking place in the study area. Moreover, the study found that the District Council permitted two stone crushing companies to operate upstream which was anticipated to destroy water sources in some years to come. Again on the part of the financial support the study found that the District Council had no any significant financial contribution since it had no any amount of fund in its community development fund set specific for supporting water supply project, the only contribution done was through sending the Village Executive Officers to verify the fund collected by agents in different kiosks. The study concluded that the LGA had not been providing any significant support to the project in coordinating and facilitating management, implementing the regulatory roles and approved bylaws as well as financial support to ensure sustainability of the project.

5.2 Conclusions

Based on the study objective and analysis of the findings it can be concluded that the Chalinze Water Supply Project (CWSP) did not involve the community during the designing and establishment of the project, the community came to be involved after the formulation of the project in which the government mobilized the community to form a management organ known as WAMACHA to take part in managing the water project in collaboration with the project officials. The management organ which was formed lacked necessary managerial skills, financial management skills and other required skills for managing water project. Therefore, this management organ is just a symbolic representation of the community since no sufficient capacity building like training of the members was done. These in turn had weakened community participation in decision making and management of the project and make the project solely depend on the project officials employed by the government.

Furthermore, the study concludes that community participation on the project was very weak since the community was not committed in preservation of waters sources, the environment and other infrastructure because they had not been taking direct role apart from providing information to the management team of the project. Also on the part of their financial contribution their contribution only was on water user charges which did not suffice the operational cost, this means there is no any other contributions done by the community to support the operational cost. Therefore, the project greatly depended on the government funding for its operation and this makes its sustainability questionable.

On the part of the LGA support to the project the study concluded that the Bagamoyo District Council had no any significant contribution to the project on matters pertaining to training of WAMACHA, implementing the regulatory roles and the approved by-laws to ensure water source and environmental preservation for sustaining the project since destruction of water sources and environment was still in progress. Apart from that it had permitted two stone crushing companies to operate their activities upstream. All these

showed that the LGA was not committed in supporting the project and make its sustainability questionable.

5.3 Recommendations for Policy Considerations

From the findings and discussions of the study recommends the following;

- i) The local communities should be educated on the current government policy on community participation in rural water projects. This can be done through conducting seminars, training on community participation, environmental preservation and water sources, collect revenue for provision of service, contract and manage service providers as well as supervising design and construction of water projects.
- ii) The water management organ WAMACHA should be provided with the required capacity building training such as financial management, office practices and procedures, water project management skills to have active participation in management of the project.
- iii) There must be village fund for minor maintenance of water infrastructure such as fixing leakages and paying security guards of the water infrastructure and training some community members on basic skills of maintaining water infrastructure.
- iv) LGA should do the following
 - a) Support the implementation of the bylaws on destruction of water sources, environment and regulating water sores.
 - b) Withdraw their permit on the two stone crushing companies on conducting their activities upstream.
 - c) Provide the percentage of the fund from the community development fund to support the water supply project.
 - d) Support in defining the constituencies of water user associations.
- v) The water user committees should take full responsibility and should be accountable to water issues.

5.4 Areas for further Studies

This study based on examining community participation and sustainability of National Water Supply Projects: the Case study of Chalinze Water Supply Project. This study based only in examining community participation in only one of the National Water Project, therefore the study recommends that research can be conducted on other National Water Projects of same nature or different nature from the Chalinze Water Supply Project to make a comparative study and come up with the overall recommendations for better community participation that enhance sustainability of Water projects in Tanzania.

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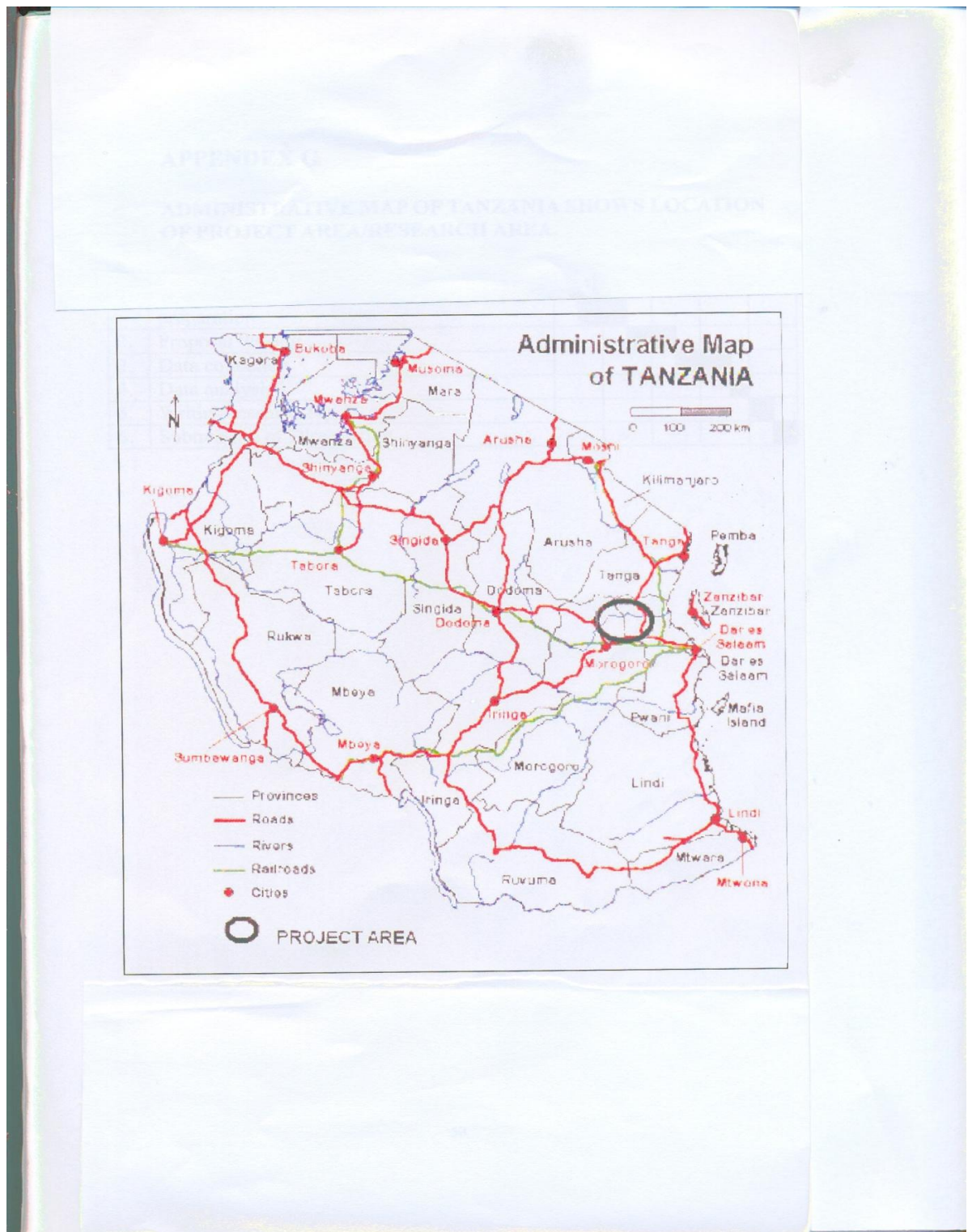
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Map of Tanzania shown the project area



[illegible]



New constructed water tank as an extension of the project



A researcher discussing something water issues with water stakeholders during research



A reseacher with water users collecting water from one of the domestic water point



APPENDICES

QUESTIONNAIRES AND INTERVIEW GUIDE QUESTIONS

Dear Respondents,

I am Deogratias Shayo, a student from Mzumbe University, conducting a research as partial fulfilment of the requirement for Masters of Public Administration (MPA)

Dear respondents, the purpose of these questionnaires is to collect information regarding **community participation in sustainability of national water projects: the case study of Chalinze Water Supply Project**. I kindly request you to respond to the question such that the researcher will obtain as much relevant data as possible. It is my hope that you will spare part of your valuable time to fill this questionnaire to the best of your knowledge. I strongly believe that your response will assist me arrive at reliable, unbiased, valid and meaningful conclusion. The researcher ensures you that the information obtained will be for academic purpose only and will be handled confidentially. You are allowed to use the back of questionnaire or any for further information if (any).

THANK YOU FOR YOUR COOPERATION

Deogratias C Shayo

MPA Student at Mzumbe University 2012

APPENDICE I

QUESTIONNAIRES FOR VILLAGE CHAIRPERSONS

SECTION A:

1. Respondent information.
 - i. Name of respondent.....
 - ii. Age.....
 - iii. Sex: Male.....Female.....
 - iv. Education.....
 - v. Primary school []
 - vi. Secondary school []
 - vii. Higher school []
 - viii. Occupation.....

Questions for village leaders/Chairpersons

SECTION B:

Assessment of water facilities in the area.

1. Is there any water facility available in your area? (tick yes or no)
Yes []
No []
2. How many sources of water do you have in your place?.....
3. Which do you think is the best source?
4. Why is the best source? Give reasons
i)
ii.....
5. Do you get water services from Chalinze Water Supply Project?
Yes []
No []

6. If yes how do you find the services ? (Please tick one)

Good []

Very good []

Excellent []

7. What role you play as a village leader in making sure that service is available

i.....

ii.....

8. Do you have any structure to manage water service in your area?

Yes []

No []

What is it and how it works?

.....

.....

9.What are challenges they face in managing water services in your village

i.....

ii.....

iii.....

10. Did community participate in preparing plans such as budget, strategic plan and other water use plans regarding water services in the area?

Yes []

No []

If yes how many times did they meet in the year

THANK YOU FOR YOUR COOPERATION

APPENDICE II

INTERVIEW GUIDE FOR WATER SUPPLY PROJECT OFFICIALS

SECTION A:

Respondent information.

1. Name of respondent.....
2. Age.....
3. Sex: Male.....Female.....
4. Education.....
1. Primary school []
2. Secondary school []
3. Higher school []
5. Occupation.....

SECTION B:

Assessment of water facilities in the area.

1. Is there any water facility available in your area? (tick yes or no)
 1. Yes []
 2. No []
2. How many sources of water do you have in your place?.....
3. Which do you think is the best source?
4. Why is the best source? Give reasons
 - i).....
 - ii).....
5. Do you supply water services at Chalinze Water Supply Project?
 1. Yes []
 2. No []

6. If yes how do you find the services? (Please tick one)

1. Good []

2. Very good []

3. Excellent []

7. What role you play as a project official in making sure that service is available

i.....

ii.....

8. Do you have any structure to manage water service in your area?

1. Yes []

2. No []

If the answer is YES, What is it and how it works?

.....

.....

9.What are challenges they face in managing water services in your department

i.....

ii.....

iii.....

10. Did community participate in preparing plans such as budget, strategic plan and other water use plans regarding water services in the area?

1. Yes []

2. No []

If the answer is YES, how many times did they meet in the year

.....

.....

THANK YOU FOR YOUR COOPERATION

APPENDICES III

QUESTIONNAIRES FOR MEMBERS OF WAMACHA

SECTION A:

1.0 Respondent information.

- i. Name of member.....
 - ii. Name of village.....
 - iii. Age.....
 - iv. Sex: Male.....Female.....
 - v. Education.....
 - vi. Primary school []
 - vii. Secondary school []
 - viii. Higher school []
 - ix. How long have you been a member of WAMACHA in your village/area
 - x. How did you get that position? (please tick the appropriate one)
 1. By appointment []
 2. By Election []
1. Can you mention some of your responsibility in the management of your water users association?
- i.....
 - ii.....
2. What are the challenges did you face in your responsibilities of serving the community as member of WAMACHA particularly in your village/area?
- i.....
 - ii.....
 - iii.....
3. Did you manage to get any education on how to manage your association?
1. Yes []
 2. No []

If the answer is YES, who provides such knowledge?.....

When and how?.....

4. How many meetings does the association conduct during the year and for which interval?

i.....ii

.....iii.

5. Does the association having a governing executive committee?

1. Yes []

2. No []

a) If the answer is YES, how is it formed?

.....

b) How is it works?.....

6. Did they have power to question or to change the management team during mistakes?

1. Yes []

2. No []

7. Did you think is good to involve community in the management of water projects?

1. Yes []

2. No []

If yes please explain why?

i.....

ii.....

8. What is the contribution of WAMACHA in development for sustaining water supply project?

i.....

ii.....

iii.....

THANKS FOR ANSWERING THE QUESTIONS.

APPENDICES IV

QUESTIONNAIRES FOR WARD COUNCELLORS

SECTION A:

Respondent information

- i. Name of Councillor.....
- ii. Name of Ward.....
- iii. Age.....
- iv. Sex: Male.....Female.....
- v. Education.....
- vi. Primary school []
- vii. Secondary school []
- viii. Higher school []
- ix. How long have you been a councillor in your Ward?.....

1. Is there any plan in your ward which is related to clean and safe water supply?

1. Yes []

2. No []

If the answer is YES, how is it about?

.....

a) From which source?.....

b) If no is there any plan to get clean and safe water?

2. Is your ward one among those wards that get water from Chalinze water supply project?

1. Yes []

2. No [].

If the answer is YES, how do you find this service?

1. Good []

2. Very good []

3. Excellent []

3. As a representative of your people in the ward how is the community participate in the decision making in establishing water supply project in the ward?

.....

4. Do you have planned to ensure sustainability of this service?

1. Yes []

2. No []

If the answer is YES, how do you do it ?

i.....

ii.....

5. What do you think are management challenges' facing Chalinze Water Supply Project?

Please mention five of them.

(a).....

(b).....

(c).....

(d).....

(e).....

6. Is there any effort from your District Council to solve these challenges?

Yes []

No []

If yes how.....

.....

7. Is there any relationship between District council leaders and the Management team of Chalinze Water Project?

1. Yes []

2. No []

If yes what kind of support provided by District council to this project? Please mention any

i.....

ii.....

8. Please give your suggestions about proper structure you think if applied well may enable the sustainability of Chalinze Water Supply Project and Other National Water Projects

i.....

ii.....

iii.....

THANK YOU FOR YOUR COOPERATION