THE EFFECTS OF MONITORING AND EVALUATION ON SUSTAINABILITY IN WATER PROJECTS IN LIWALE DISTRICT, LINDI REGION TANZANIA

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A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PROJECT MANAGEMENT

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CERTIFICATION

The undersigned certifies that she has read and hereby recommends for acceptance by the Open University of Tanzania a dissertation entitled: "***The Effects of Monitoring and Evaluation on Sustainability of Water Projects IN Liwale District in Lindi Region Tanzania"*** in partial fulfilment of the requirements for the degree of Master of Project Management of the Open University of Tanzania.

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Dr. Janeth Isanzu

(Supervisor)

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Date

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DECLARATION

I, **Ruhumbika Wegoro**, declare that, the work presented in this dissertation is original. It has never been presented to any other University or Institution. Where other people's works have been used, references have been provided. It is in this regard that I declare this work as originally mine. It is hereby presented in partial fulfillment of the requirement for the Degree of Master of Project Management of the Open University of Tanzania.

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Signature

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Date

DEDICATION

I dedicate this dissertation to my lovely mother, Zena Mashauri, my wife, Stella B. Kisoma, and my children, Rose Ruhumbika and Rayvan Ruhumbika. They are the driving force behind my successes.

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ABSTRACT

This study is about explaining the role of monitoring and evaluation in improving the sustainability in water projects. The study was conducted in Liwale District in Lindi region.The study had the following specific objectives, firstly to determine the current monitoring and evaluation practices applied in water projects, to determine challenges faced by water projects in implementing monitoring and evaluation practices and to find out the proposed best approaches to be used in improving monitoring and evaluation practices applied in water projects. A total of 100 respondents were drawn from different levels which included the officials in RUWASA, who are the project implementers, Village government members including water committees' members and local communities who are the water users and the project beneficiaries. Both Quantitative data obtained through questionnaires and Qualitative data from Interviews. Findings of this study showed that, the most applied monitoring and evaluation practices in water projects is field visit and meeting. The findings showed that, there are some challenges in implementing monitoring and evaluation practices including low budgetary allocation in monitoring and evaluation activities, lack of technical monitoring and evaluation staffs, low central government support, poor project reports and information systems, poor community participation. Lastly, the findings proposed on the use of best approaches to improve monitoring and evaluation systems including capacity building and training programmes, to establish an independent monitoring and evaluation unit in RUWASA- Liwale and adopting participatory approach.

Keywords: *Monitoring, Evaluation, Sustainability and Water projects.*

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LIST OF ABBREVIATIONS

APR	Annual Project Report
BACHINDU	Bachindu, Chimbuko, Ndunyungu
CBWSOs	Community Based Water Supply Organisations
CSOs	Civil Society Organizations
DBSA	Development Bank of Southern Africa.
GRT	Gruppo per Le Relazioni Transculturali
LFA	Logical Framework Approach
LGAs	Local Government Authorities
M&E	Monitoring and Evaluation.
MCA	Millennium Challenge Account
MIS	Management Information System
MoW	Ministry of water
MPP	Micro Project Performance
NGOs	Non-Governmental Organizations
PMM	Project Maintenance Management
PMO-RALG	Prime Minister's Office – Regional Administration and Local Government.
POM	Project Operation Management.
PRA	Participatory Rural (Rapid) Appraisal
ROAR	Result Oriented Annual Report
RUWASA	Rural Water Supply and Sanitation Agency
RWSSP	Rural Water Supply and Sanitation Programme.
SPSS	Statistical Package for Social Sciences

SRF	Strategic Result Framework.
UNDP	United Nations Development Program me
URT	United Republic of Tanzania
USAID	United States Agency for International Development
VRCWSP	Volta Region Community Water Supply Programme.
WSDP	Water Sector Development Programme.
WSPR	Water Sector Performance Report.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Evaluation of different social programmes including international development programs started to emerge as a distinct field in the late 1960's although it started to be practiced in early 1970's and mid 1980's. This came about due to various practitioners working in variety of disciplines in social-economic and political dimensions, using techniques obtained from a wide range of disciplines, began to interact each other. Many of the trends in evaluation practices that are working today evolve from the changes in the evaluation practices that took place in the mid 1980's (USAID, 2000).

Ocampo (2002) explains that, program evaluation that started to emerge in the 1960's became a distinct professional practice in the early 1970's and in 1980's program evaluation became the integral part of different social programmes from the early planning stage so as to assess the results of the programme. Magigi (2014) adds that, formal project and programme Monitoring and evaluation had begun in the early 1970's and 1980's and most of these activities were done while involving World Bank, USAID and ODA, and to the large extent the methodology and approaches in M&E had to develop through learning by practice. He put forward that, Monitoring and Evaluation of development projects and programmes are increasingly accredited as the core management responsibility for organization development in both developed and developing countries, this is because the

interested development stakeholders want to observe results and outcomes with the positive impacts for the development of the whole society. Ngasongwa,(2018) asserted that, the increase of different social and economic development programs or projects in many of developing countries during the first two decades after the Second World war was the human being concern to fight and overcome problems of hunger, poverty, malnutrition, ignorance and preventable diseases, some of the problems were successfully solved through the implementation of projects, but some problems failed to be addressed through projects due to absence of sufficient knowledge of designing, implementing and evaluating/appraising of these programmes or projects, among other continents, Africa was seem to have most serious implementation problems in the developing world.

In showing the importance of Monitoring and evaluation systems, UNDP (2019) adds that, good planning, combined with effective monitoring and evaluation, can help in enhancing the effectiveness of development programmes and projects. Also, good planning helps the management to focus on the results that matter, while monitoring and evaluation helps the management to learn from past successes and challenges and inform decision making so that the current initiative s could be used to improve future projects and people's lives as a whole. Problems that face unmonitored projects are lack of staff commitment which leads to delays in the implementation of projects and employees who do not want to be accountable to their work. Monitoring is seen as an obligation imposed from outside the organization, with project staff mechanically completing forms and project managers seeing the task merely as collection of data for writing up reports for donors

*(*http://www.ifad.org). Often monitoring and evaluation practices that do exist produce irrelevant and poor-quality information because sometimes they focus only on physical and financial aspects and ignore factors such as projects outreach, effects and impact. However, despite the important roles that M&E plays in development interventions, most of projects managers have not given it (M&E) enough weight in their day to day operations. In addition to that Forde & Sohm (1982) quoted by Chew affirm that, **‘‘**the survey of the United Nations systems conducted in 1965 revealed that, only 14% out of the 70 Third World countries surveyed, had conducted systematic evaluation and 55% of the countries had not undertaken any evaluation at all**’’**. Therefore Forde & Sohm (2012) ideas gives a true picture that, in most of developing countries in Sub-Saharan Africa does not put M&E practices in their project implementation.

Tadesse *et al* (2013) in their studies conducted in Adama area in Central Ethiopia confirmed that, the community participation in planning and implementation was very good while Monitoring Mechanism and management of established water supply schemes as well as community participation on choice of technology was very poor, also they found that, collection and control of water fee for sustaining water supply service to the particular area was also poor. In line with Tadesse ideas, it is quite true that, various water projects established and implemented by donors or governments fails to sustain due to poor community participation and less emphasis on Monitoring and Evaluation mechanisms. Furthermore, even East African countries also face the problem of ineffective Monitoring and Evaluation practices in most of the funded projects including Water projects, due to several assessments

made in the area of M&E by various development actors. Development Bank of Southern Africa (2016), revealed that, evaluation has yet to reach an acceptable level of operation in Kenya because they are carried out, deals more with inputs and outputs rather than with impacts. Major evaluations are driven by activists and donor demands. There is lack of professionalism on the part of qualified practitioners, and there are few academically trained evaluators and for those who carry out evaluations are influenced by social science research approaches. In most sectors within the Kenyan government including water sector, there is no central monitoring and evaluation (M&E) of programs and projects, except for financial auditing and monitoring that are done solely to audit and make submissions to the Ministry of Finance.

In Tanzania, there are a lot of challenges in performance and sustainability of water projects. The URT (2008), on Water Sector Performance Report (2007/2008) states that, ‘‘During the financial period 2007/08, the main challenges that were faced in the implementation of the water sector activities were, poor supervision, accomplishment, monitoring and evaluation together with late submission of reporting progress on water projects in time’’. In line with WSPR (2007/2008), it can be concluded that, all those challenges are highly catalyzed by limited and poor qualified and skilled staff in project Management at all levels including the Ministries, LGAs, small utilities, private sector and Civil Society Organizations, others includes inadequate equipment, office accommodation and transport facilities. Hence the situation hinders routine operations of utilities.

Apart from that, Jiménez & Pérez-Foguet (2010) noted that, the functionality by category showed that only 45.3% of hand pumps, 48.6% of gravity-fed systems and 44.4% of motorized systems were functional at the time of the survey. Some Water point's categories were found to be quite sustainable in some areas and to fail completely in others, this was due to the very limited role that decentralized government plays with regard to monitoring and evaluation regulation and technical support, among other factors.

1.2 Statement of the Research Problem

Monitoring and Evaluation (M&E) is a discipline of vast interest to planners, development practitioners, donor community and Government. In recent years M&E is increasingly recognized as integral and central management functions for organization development of the project implementation and also post-project management in both developed and developing countries. This is due to the fact that, development stakeholders (donors) expects to see desired results and outcomes with positive impacts and sustainability for societal development. Project sustainability is a major challenge in many developing countries, where as a large number of projects which are implemented at huge costs often tends to experience difficulties with sustainability, and one among other factors being Ineffective application of M&E practices.

Several recently conducted studies on sustainability in water project including, Jiménez & Pérez-Foguet (2010), on ‘‘Challenges for Water governance on rural water supply; Lesson learnt from Tanzania’’, and Ihuah *et al* (2014) in their study on

‘‘Rural Water Supply projects and Sustainable Development in Nigeria and Ghana’’ reveals the absence of longtime sustainability of Water projects is due to ineffective M&E practices. In connection to that, Liwale District particularly rural areas are faced by unfunctionable and unsustainable water points projects. So the study assumes that, poor M&E practices among other factors, contributes to deprived Sustainability of respective water projects. The study also aims at examining whether there is the presence of current M&E practices in water projects, the study also do not know, whether water projects in Liwale district have challenges in the implementation of M&E practices so as to improve sustainability in the respective projects. Therefore, the study centers in identifying the current existing M&E practices as basic tools in improving sustainability of water projects and also to examine challenges facing water projects in implementation of M&E practices and then to suggest better ways or approaches to improve the M&E practices.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study is to examine the effects of the Monitoring and Evaluation on sustainability of water projects in Liwale District, Lindi region.

1.3.2 Specific Objectives

i) To determine the current Monitoring and Evaluation practices in water projects in Liwale District

ii) To determine challenges faced by water projects in implementing Monitoring and Evaluation practice in Liwale District.

iii) To find out the proposed best approaches in improving Monitoring and Evaluation practices applied in water projects in Liwale District.

1.4 Research Questions

i) What is the current Monitoring and Evaluation practices in Liwale Water projects?

ii) What are the challenges faced by Liwale water projects in Implementing Monitoring and Evaluation practices?

iii) What are the proposed best approaches in improving M&E practices applied in water projects in Liwale District?

1.5 Significance of the Study

To increase knowledge and skills to project coordinators or managers and Local communities about guidelines on M&E practices in order to follow in the mitigation of challenges facing water projects. The beneficiaries of the research are the project managers and project coordinators, community and donors. Findings of the study is expected to provide t projects to assist them to understand the importance of Monitoring and Evaluation of Water Projects.

Also, the study results assist in the raising awareness of Monitoring and Evaluation process and its necessity within the projects. It will assist in the execution of monitoring and evaluation within water projects. The findings help in the designing of intervention to help in the improvement of monitoring and evaluation where it is in practice. The findings is expected to provide to individual projects with the

purpose of improving monitoring and evaluation already implemented, with the purpose of improving performance and sustainability and the accountability in terms of resources and the direction and whether projects are within track or not.

1.6 Scope of the Study

In recent years Project sustainability of development projects including water projects has become the major challenge in many developing countries including Tanzania, whereas large number of established projects which are implemented at huge costs frequently tend to experience difficulties with sustainability, and one among other factors which lead to poor sustainability is ineffective application of M&E practices. It has observed that, while trend with implementation of water projects is always showing significant improvement, but the trend with post implementation sustainability is rather disappointing - increasingly, this means that less number of projects are being sustained.

Therefore, this research is going to be conducted in Liwale District in Lindi region especially in rural areas (villages) where there is high trend of less function and unsustainable water projects due to inconsistency application of Monitoring and Evaluation practices like Regular field visit, Annual project report, Logical Framework Approach (LFA) and Participatory Rural appraisal (PRA).

1.7 Organization of the Study

The research involves only five chapters**,** whereas Chapter One covers various items including the Background of the research problem of Monitoring and Evaluation in

Water projects, the statement of the research problem, outlining of the research objectives (General and Specific objectives), then Research questions (General and specific questions), Justification or rationale of the research to the body of knowledge.

Chapter Two, covers several aspects like, Conceptual definitions i.e Monitoring, Evaluation, Sustainability and others. Next to that is Theoretical literature review, then Empirical literature review (from different studies), Policy review of Water sector in relation to M&E aspects, research gap left added in the body of knowledge, and lastly the Conceptual and Theoretical frameworks that guides study. Chapter Three includes Research philosophy/Paradigm and strategies, Survey population/ area of the research, which is (Liwale District, Lindi region), Sampling design and procedures, Variables and Measurement procedures, Methods of data collection and lastly the Data processing and analysis using the computer software SPSS. Chapter four includes the Analysis and Interpretation of the findings and lastly the Chapter five Summarize, concluding and providing the recommendations about the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter covers the overview of monitoring and evaluation with respect to project implementation. The main essentials that are discussed in this chapter includes, definitions of Monitoring, Evaluation and Sustainability, M&E in water projects, development/growth of M&E and purpose of conducting M&E. Other essentials are types of M&E, theories guiding M&E, Conceptual and theoretical frameworks. and Sustainability dimensions.

2.2 Conceptual Definitions

2.2.1 Monitoring

Monitoring is a management tool used to identify inconsistency between the plan and reality in order to take corrective measures, it ensures that all project activities are implemented as planned together with collecting information on the ongoing project interventions in order to identify whether projects meets objectives or not. In elaborating this concept, Bartle (2007) defines monitoring as ‘‘an observation and recording of activities taking place in a project or programme. It is process of routinely gathering information on all aspects of the project’’. Monitoring also involves feedback about the progress of the project to the donors, implementers and beneficiaries of the project. “The resulting information is used for decision making for improving project performance” (Bartle 2010). On the other hand, UNDP (2002)

explains Monitoring as a continuing function that aims primarily to provide the management and main stakeholders of an ongoing intervention with early indications of progress, or lack thereof, in the achievement of results. It is also an ongoing intervention to any project, programme or other kind of support to an outcome. Monitoring is the ongoing process by which stakeholders obtain regular feedback on the progress being made towards achieving their goals and objectives (UNDP (2009). Monitoring is a merely reviewing progress made in implementing actions or activities, focuses on reviewing progress against achieving goals. The term monitoring was further defined by Kusek (2004) as a continuous function that uses the systematic gathering of data on specified indicators so as to provide management and the main stakeholders of an ongoing development intercession with indicators of the extent of progress, achievement of objectives and progress in the use of allocated funds.

2.2.2 Evaluation

Evaluation is the systematic collection and analysis of data needed to make decisions (http://www.evaluationwiki.org). It is a way of improving project performance and pin points accountability of resources and work. It develops human resources, improves management capabilities in planning. It measures the helpfulness and reliability of programmes and influences on future programmes, and helps in decision making (http://www.evaluationwiki.org). Also, Evaluation can be defined as the systematic and objective assessment of an ongoing or completed projects, program or policy in areas of designing, implementation and results, the aim being to determine the actual significance and realization of objectives, development

efficiency, effectiveness, impact and sustainability (Kusek,2004). In the combination of the two concepts (Monitoring and Evaluation), World Bank (2010) founded that, despite the complex in situational challenges, the public sector has a responsibility and commitment on various key points to strengthen plannings and to establish goals together with carrying out M&E systems for the purpose of providing potential feedback to the design and formulation of public actions. In addition to the previous explanation, the M&E system should provide the true evidence of the project outcomes and should be able to justify the project funding allocation. UNDP (2009) justified that, Monitoring and Evaluation can help the organization to extract relevant and viable information from past and ongoing activities that can be used as the basis for programmatic fine-turning, reorientation and future planning. It added that, without effective planning, Monitoring and Evaluation, it would be impossible to judge, if the work is going in the right direction, whether the progress and success can be claimed, and how future efforts might be improved.

Bartle (2007) argued that, **"**A project should go through several stages. Monitoring should take place at the beginning and should integrate into all stages of the project and the Sbasic stages should include project planning which covers the situation analysis defining objectives, formulating strategies, problem identification, designing a work plan and budgeting**''**.

2.2.3 Development of Monitoring and Evaluation

Monitoring and Evaluation (M&E) of several development projects and programmes are increasingly recognized as central management functions for organizations

development in both developed and developing countries (Magigi 2014). This is the discipline with the huge concern because interested development stakeholders want to see desired results or outcomes with positive impacts for societal development. M&E of most development projects have been undergoing some changes overtime. Kusak (2001) quoted (Mayne, *et al*,1997) put forward that, many development partners including governments have been transforming from the traditional way of monitoring and evaluating various activities to performance-based M&E, whereas the traditional way of Monitoring and evaluation was highly based on monitoring and evaluating inputs, activities and outputs of the project. The Performance-based Monitoring and Evaluation combines the traditional approach of Monitoring implementation with the assessment of results. This helps much the policy makers and planners to answer the questions whether promises were fulfilled and whether goals were achieved as it was planned. Kusek, and Rist (2004) pinpoints that, there is tremendous power in measuring performance, the ancient Egyptians regulary measured their country's output in grain and livestock production more than 5,000 years ago. So, in this sense Monitoring and Evaluation is certainly not a new phenomenon, most of new governments too have engaged in some form of Traditional monitoring and evaluation over the past few decades.

2.3 Theoretical Literature Review

This study combined major two theories including ‘‘Participatory theory’’ and the ‘‘Theory of Change’’.

2.3.1 The Participatory Theory

Participation theory has been defined by different scholar in the light of Project and program development. Jennings (2000) defined participation, as the total involvement by a local population and at times, addition stakeholders in the creation, content and conduct a program or policy designed to change their lives, built on the belief that, citizens can be trusted to shape their own future. So participatory developments always make use of local communities' decision making and capacities to guide and define the nature of an intervention. Jennings added that, participatory requires recognition and much use of local capacities and avoids the imposition of priorities from the outside. It increases the odds that, the program will be on target and its results will be more sustainable.

On the other hand, Greene (1987), describes Participatory theory in connection to evaluation that, participatory involves, active collaboration between key stakeholder groups in designing, implementing, and interpreting the evaluation. Stakeholder groups include all those who have a vested interest in the program and its evaluation, such as funders, program directors, line staff, families, and community members. Mathbor (2008), quoted Brager *et al* (1987) put forward that, participation is a means to educate citizens and to increase their competence. It is a vehicle for influencing decisions that affect the lives of citizens and an avenue for transferring political power. However, it can also be a method to co- opt dissent, a mechanism for ensuring the receptivity, sensitivity, and even accountability of social services to the consumers.

Participation has been changing overtime due to the change of the society needs, Duraiappah *et al* (2005) asserted that, in the late 1960's there was some exploration of different models of participation and their relationship to community development. In the late 1970's, participatory methods and techniques became central tools for community development. Participatory approaches to development are promoted on the basis that, they support effective project implementation and enhance the wellbeing of the poor. Duraiappah added that, by the 1990's to present, participation had become a mainstream, expected component of development.

Reid (2000), notes that, Community participation is one of the key ingredients of an empowered community as is the heart that pumps the community's life blood into the community business. So, it is more wisely for project management to in cooperate local community in project implementation so as to realize sustainability. There are principles which should be adhered by the project management as it think of participation at any level of community. Duraiappah (2005) presented six principles with regard to effective participation as follows Inclusion: It refers to the involvement of all people or representative of all groups who will be affected either direct or indirect by the project's outputs and outcomes. Equal partnership: Here is when every person has skills, ability and initiative and has equal right to participate in the process regardless of their status. Transparency: All participants of the project must help to create the environment conducive to open communication and building dialogue. Sharing Power: All authority and power must be balanced equally between major stakeholders so as to avoid the domination of one party. Sharing responsibility: All Stakeholders must have equal responsibility for decisions that are made within

the Project. Empowerment: Participants with special skills should be encouraged to take responsibility also to motivate others so as to promote mutual learning and empowerment. Co-operation: It involves sharing everybody's strength for the purpose of reducing people's weaknesses. So, these Principles for effective participation can be applied to all aspects of the development processor projects aiming at creating the environment for sustainability.

In the light of Duraiappah (2005) ideas, Project will be more effective and sustainable only if the whole community and other important stakeholders are involved in all phases of the project. In addition to that, Parks (2005) added that, through meetings and workshops, beneficiaries, project managers and members of staff have the space to give and share their views on project progress and performance. Views shared can rather be used for better decision making so as to realize its sustainability.

2.3.1.1 Weaknesses of the Participatory Theory

The theory of Participation somehow becomes difficult to be practiced and produce expected results fo the betterment of the project. The discussed challenges include, using Participation approach in M&E exercise may create tensions which cannot be resolved by the Management since each person would provide information which differ with others due to social, economic and political diversities. Also, it is hard to ensure that the most vulnerable people those who are directly affected by the problem are all present and their voices are heard. Lastly it is too difficult to make

clear standardization of the impact goals and indicators so as to allow competitive assessment during the collection of information from M&E activities.

2.3.2 The Theory of Change

This is another theory that guided the study. Different scholars have described the theory in various perspectives. According to INSP (2005) described the theory of change as ‘‘articulation of the underlying beliefs and assumptions that guide a service delivery strategy and are believed to be critical for producing change and improvement. Theories of change represent beliefs about what is needed by the target population and what strategies will enable them to meet those needs. They establish a context for considering the connection between a system’s mission, strategies and actual outcomes, while creating links between who is being served, the strategies or activities that are being implemented, and the desired outcomes.”

In describing INSP (2005) ideas, the ‘‘The theory of change’’ always consists of two major broad components, they includes, the Conceptualizing and operetionalizing the three basic frames of the theory which are Population to mean, who the project are serving, Strategies to mean the strategies a project will employ to accomplish the desired outcomes and lastly the Outcomes to mean what the project aim to accomplish. The Second component of the theory is Building an understanding of the relationship among the three basic elements. Corlazzoli and White (2013) describe the ‘‘Theory of Change’’ as the actions, the desired change, and the underlying assumptions or strategy is essential for Monitoring and Evaluating programmes and projects. The theory of change will help programme staff and evaluators to

understand what the project is trying to achieve, how, and why. By knowing this critical information, will enable the project staff and evaluators to monitor and measure the desired results and compare them against the original theory of change. When using the Theory of Change in Monitoring and Evaluation stage during the project implementation will provides feedback on whether a project, programme is on ‘‘track’’ so as to accomplish the desired change in the community and if the project is evolving as anticipated in the project design.

Corlazzoli and White (2013) also adds that, applying the theory of change in running the project or programme will provide an opportunity to ensure that project staffs, partners, and other key stakeholders all share a common understanding on how change is expected to occur and their contribution in that change.

2.3.2.1 Importance of the Theory of Change

There are various benefits of employing the theory in projects INSP (2005) put forward some benefits of theory of Change including, moving stakeholders from being passive collectors and reporters of information to active users of information for system planning and service delivery. Also, it gives project staff and system better understanding of the kind of evaluation information they need to make day-to-day decisions. Moreover, it also helps the evaluator to develop research questions that focus on changes that can occur given the particular strategies and lastly it facilitates the link between and achievement of outcomes.

INSP (2005) also added that, Monitoring and evaluation in social change programming needs knowing what changes and assumptions one expects to monitor,

and how these changes are expected to develop over the course of implementation. The Theory of Change guides Monitoring and Evaluation efforts to focus on the particular assumptions, outputs, outcomes, impacts, and even sustainability of a programme or Project. It also outlined major five practical steps on how the theory of Change can be used in M&E and during the different stages of project implementation, they include Developing indicators, Formulation of Baselines, Mid-term Evaluation, Evaluation and lastly Scale-up decisions.

2.4 Empirical Literature Review

Empirically, there are several influential studies that provides the useful framework for the purpose of analyzing the relationship between Application of Monitoring and evaluation tools or practices and sustainability especially in water projects. The studies include Jiménez & Pérez-Foguet (2010), Tadesse *et al* (2013), Montgomery (2009), Ihuah *et al* (2014), UNDA (2012) and many more others.

The basic idea of this literature is that, consistency application of Monitoring and Evaluation practices helps much in sustaining projects due to the fact that M&E systems emphasize on making statistically defensible measurements of project impacts and the project should be assessed primarily on the basis of their impacts and that impact should be understood as a change in the population compared to what would be expected in the project's absence.

2.4.1 Empirical Studies in the World

According to UNDA (2012) study on **''**Water quality in Central Asia**''**, aiming at reviewing relevance, effectiveness and efficiency of the project and to include

recommendations for possible further work on water quality cooperation. It observed the absence of Governments strong interest in allocating sufficient budget for Monitoring and Evaluation activities to ensure water quality and long term sustaining of water projects, as it acts as prerequisite for concentrated and mutually integrated efforts towards project progress and suggested to have understandable and common ground for evaluation and decision-making within the coherent and comparable framework of water quality monitoring, management and regulation.

2.4.2 Empirical Studies on Sub-Saharan Africa

Tadesse et al (2013) on the other hand, made studies on ‘‘Rural Water Supply Management and Sustainability’’ in Adama area in Central Ethiopia .The study aimed at assessing issues such as community participation, water committee empowerment, management and governance of water supply schemes, functional status of water supply scheme, external support, and Monitoring and Evaluation system of water supply schemes, whereas both Qualitative and quantitative data were collected from 4 samples of water schemes and a total of 148 representatives households and the findings, revealed that, the rate of community participation and implementation of water supply schemes was very good but the collection and control mechanisms as well as management of Monitoring and evaluation of the operation and management of the schemes were still very poor. The study lastly recommended on the provision of trainings and refresher training in order to scale up the capacity of water committee to manage the water schemes properly. However, Montgomery (2009), on his study on ‘‘Increasing Functional Sustainability of Water and Sanitation Supplies in Rural Sub Saharan Africa’’, goes further by identifying

most challenges facing Water projects in ensuring sustainability, including absence of systematic documentation of failed schemes or consequences for providers who invest in, and are at least partially responsible for, poorly functioning or unsustainable water and sanitation systems, also ineffective M&E system due to few allocated fund. Also, he cited the function ability and sustainability of water in various sub-saharan Africa, whereas in the study in South Africa documented that as many as 70% of boreholes in the Eastern Cape were not functional. Also, Montgomery (2009) quoted Haysom (2006) on survey of 7,000 wells and boreholes in Tanzania founded that an average of 45% were in operation and only 10% system that were 25 years old were still functioning. So, the Tadesse and Montgomery's studies are seem to be similar on problem of ineffective/poor sustainability of water projects caused by poor M&E.

Furthermore, Ihuah et al (2014) in their study on ''Rural Water Supply projects and Sustainable Development in Nigeria and Ghana''. The purpose of the study was to review the sustainability issues that are associated with rural community water provision and some of the challenges experienced in Niger Delta region of Nigeria within the context of project benefit sustenance. The study used Qualitative research methodology and undertaking comparative review of MPP in Nigeria and VRCWSP in Ghana. Later the study revealed that, there was ineffective Monitoring and Evaluation procedures and poor assessment of water projects, to be integrated into the implementation and post-operational management of hand pumps water supply systems, as a result it led to the absence of Sustainability and suggested on the use of community based and community driven project management options of the

community rural water supply as a credible alternative towards long-time water projects sustainability. Also, another suggestion was to encourage the post-project management approach plus monitoring, evaluation and reporting which is the pivotal to the other factors.

In addition to that, Nyakundi (2014) on his study on ‘‘Factors influencing implementation of monitoring and evaluation processes on donor funded projects’’ a case of Gruppo per Le Relazioni Transculturali -GRT project in Nairobi, Kenya. The objective of the study was to examine the extent to which stakeholder’s involvement influences the implementation of M&E in GRT in Nairobi, to find out how Budgetary allocation influences the implementation of M&E in GRT in Nairobi County, to establish the influence of staff technical skills on the implementation of M&E in GRT in Nairobi County and to establish the influence of M & E indicators in the implementation of M&E. The target population consisted of project stuff and stakeholders of GRT. The findings which were collected through Questionnaire and interview revealed that, there was small level of stakeholder’s involvement in the implementation of M&E of donor funded projects, also the study shows the inadequate allocation of budget for M&E hence leads to the failure in the implementation of to a large extent.

The study further recommended on the Stakeholder’s participation to be improved in M&E, as this will promote the implementation of M&E since there will be little resistance from stakeholders or project beneficiaries. Another recommendation was that, the project managers should provide the necessary resources and facilities for

M&E, this will facilitate effective implementation of M&E. The study also recommends that the staff should be trained and/or given in-service courses on monitoring and evaluation and lastly to increase the budget for M&E activities so as to improve performance and sustainability.

2.4.3 Empirical Studies in Tanzania

In Tanzania context, according to Jiménez & Pérez- Foguet (2010), on the study on ‘‘Challenges for Water governance on rural water supply; Lesson learnt from Tanzania’’, has the purpose of identifying and analyzing key issues that impact the governance of rural water services in Sub-Saharan Africa, Tanzania as a case study. The study analysis was based on the combination of Literature review, extensive fieldwork and research case studies which were carried out between 2005 and 2009. Both Quantitative data from Water point mapping studies, and also Qualitative data from fieldwork and interview which were conducted in four rural districts including Kigoma rural, Same, Iramba and Nzega, were all used as research methodology.

The study revealed the presence of weaknesses that continue to undermine the poverty eradication at different level (from local to national), they include lack of sustainability of constructed water infrastructure; difficulties for targeting the poor; and inadequate internal information systems. The suggestions were Policy recommendations to entail new paradigms for the provision of rural water supply, adoption of water supply as a service that is monitored, evaluated and supported by the government, needs-based allocation of projects at community level; and improving guidance for local government decision making. Jiménez & Pérez- Foguet

(2010), added that, the sustainability of rural water supply programmes remains a challenge especially in Sub-Saharan Africa, whereas in Tanzania, a recent study estimates that, 46% of public improved water points in rural areas do not work or function, the reason being, limited role that decentralized government with regard to Monitoring and Evaluation regulation and technical support among other factors. They added that, Tanzania had experiencing overtime decreasing functionality rate of various water points including hand pump, which decreased from 61% to 8% in the 30-year period, Motorized system from 79% to 17% in the same period and gravity fed system from 67% to 19%, and the reason among others being ineffective M&E systems.

Apart from that, Ole, T (1988) on his study on ‘‘Watering white elephants? lessons from donor funded planning and implementation of rural water supplies in Tanzania’’. The study covered the period from the mid-1970s to 1985 and it was based on case studies of the involvement of five donors: the Finns in Mtwara-Lindi, the Dutch in Morogoro, the Swedes in the Lake regions, the World Bank in Mwanza, and the Danes in Iringa, Mbeya and Ruvuma. The major purpose of the study was to focus on the preparation of long-term rural water supply plans in Tanzania and their subsequent implementation. The findings on that particular study revealed the presence of extensive data collection, detailed pre-implementation planning, little or no participation of beneficiaries (community), emphasis on fast implementation of new schemes, and bypassing of Tanzanian organizations. These approaches significantly contributed much to the non-use of their plans and non-sustainability of the schemes. This study by Ole (1988) suggested, on the application of a more

adaptive approach to planning and implementation including a comprehensive Management information system that could be used in continuous Monitoring and Evaluation activities together with effective Community participation in planning, implementation, and maintenance should be a part of donor's activities.

2.5 The Research Gap

Recent studies have been conducted focusing on the roles and implication of Monitoring and Evaluation as a basic tool applied in most of development projects including water projects, for the sake of bringing about the expected outputs, outcomes and impacts so as to solve challenges in the community. Those studies include, Loitare (2011), on ''role of M&E for improving performance of development projects in Tanzania'', also Ramothamo (2013) on ''M&E of HIV/AIDS donor funded projects in Maseru, Ethiopia'' and. Both of these Authors managed to assess the roles of M&E in bringing performance to Projects but unfortunately, they didn't clarify clearly the contribution made by M&E systems in improving the long-term Sustainability of those projects basing on the key sustainability indicators like Environmental, Financial, Social/Economic, Institutional and Technical Aspects.

Therefore, this study centers in fulfilling that gap, but more specifically in the Water projects found in Liwale District, since a number of studies on problem of M&E in sustaining water projects were conducted in other regions like Lindi, Mtwara, Kagera but the same kind of research has not been done in Liwale District in Lindi region. So the study has been conducted in this district aimed to identify the existence of

M&E practices or tools, its challenges and proposed approaches to improve the sustainability in water supply projects in rural Liwale district.

2.6 Conceptual Framework

A conceptual frame work is a set of a broad ideas and principles taken from relevant field of inquiry and used to measure a subsequent presentation (Reichel and Ramel,1987), According to Kombo and Tromp (2006), a conceptual framework must explain the relationship among interlinked concepts and also they explain the possible connection between the variables and answers the why questions. Fisher (2010), on the other hand, perceive it as a 'map' that draws together the concepts that students will use to guide their research and suggests how they are related. Fisher added that the conceptual frameworks are normally modification and development of model and theories found in the literature.

This study guided by the framework (see figure 2.1) below, the real assumption is that, M&E will ensure the project Sustainability if the organization is effectively committed in its operations, as well as ensuring that all current M&E tools or practices are put into practice with high efficiency. The tools include Field visit aims at measuring the project's progress, validate the results report by programmes and conducting meeting with project beneficiaries. Also, the other tool is LFA to measure success, failure and impact, to achieve RBM and involve stakeholders in designing and planning. Participatory Rural Appraisal (PRA), which is the tool for M&E that uses community engagement techniques to understand community views on a particular issue. It is usually done quickly and intensively over a 2 to 3-week period.

Methods include interviews, focus groups, and community mapping (Chaplowe, 2008). The next stage which is central part in enhancing smooth applicability of M&E tools, is the effective Participation of Local communities and other stakeholders in evaluation exercises of all kinds, in order to pursue the expected results. So long as Local communities is greatly involved right from the Project's designing, planning, implementation and monitoring and evaluating, it is obvious that, the particular project will realize Sustainability in various aspects including, Socio/economic aspects, Technological aspects, Institutional and Financial aspects.

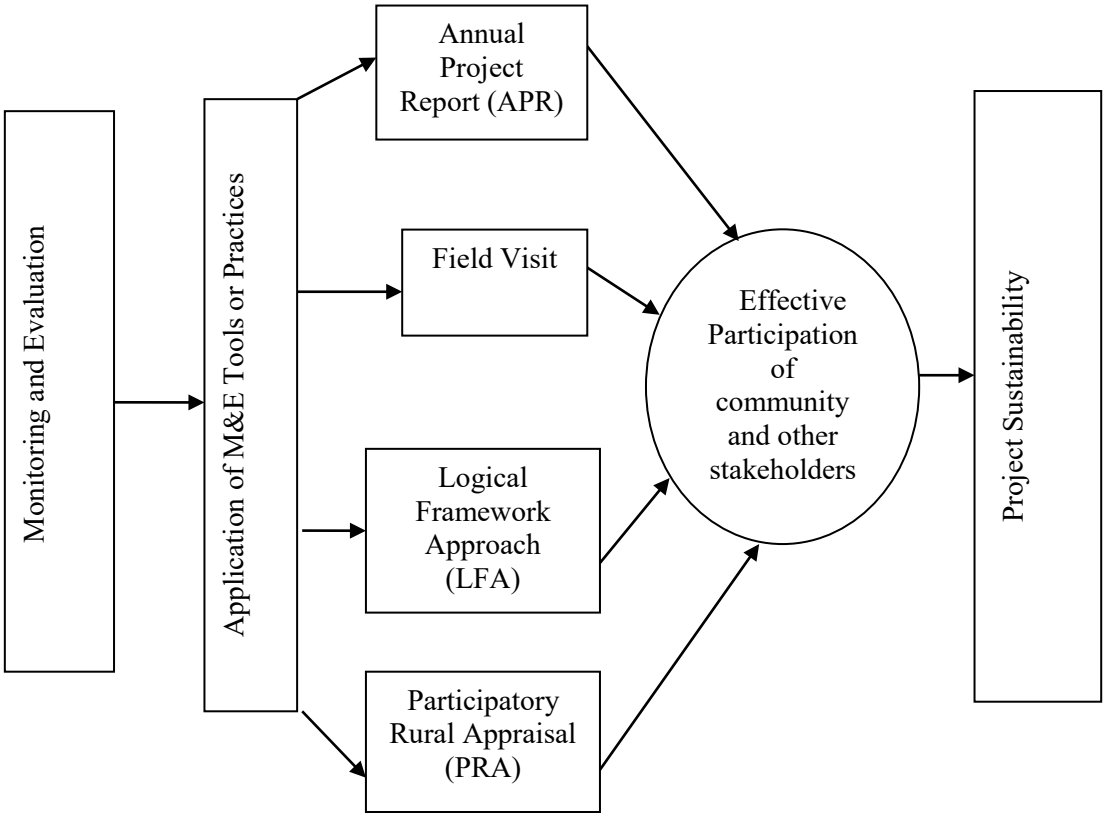

Figure 2.1: Conceptual framework for monitoring and evaluation

Source: Own constructed 2022

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter discusses the methodology that was used in conducting research. It covers the research Philosophy or Paradigm that guided the entire research, explanation on Survey population/Area of study, Sampling design and procedures, Variables and measurement procedures, methods of data collection and lastly the data processing and analysis using specified techniques.

3.2 Research Philosophy

The study used Positivism Research philosophy as a guiding paradigm. Saunders (2009) quoted Remenyi et al (1998) that, ‘‘Positivism prefers working with an observable social reality and that the end product of such research can be law-like generation similar to those produced by the physical and Natural scientists’’. The Philosophy of Positivism stands on the idea that, only phenomena that you can observe will lead to the production of the realistic information. Saunders (2009) put forward that, to generate a research strategy to collect data, one should use or apply the existing theory to develop hypotheses, which later was tested and confirmed in whole or refuted leading to the further development of theory and research.

In the light of Saunders ideas, the study used ‘‘Participatory theory’’ and ‘‘Theory of Change’’ in generating hypotheses of the research because through the guidance of these theories are much easily to produce the plausible data.

3.3 Research Design and Strategies

According to Saunder et al (2009), described Research design as the general plan of how the researcher will go about answering his/her questions basing on the clear objectives of the particular research. It also describes the sources from which the researcher intends to collect data and much consideration on constrains which are often inevitably like access to data, time, location and money. The study used Explanatory (causal relationship) design. Kothari (2004) adds that, hypothesis-testing studies (Explanatory studies) are those, where the researcher tests the hypothesis of causal relationships between variables and require procedure that reduces biases and increase reliability. The Explanatory design was very useful in the study because it permitted, drawing of inferences about the causality (relationship) between the two variables which are M&E and Sustainability.

On the other hand, the study employed ‘‘a case study’’ as the unique research strategy among other strategies. Saunders (2009) quoted Yin (2003) that, ‘‘within Case study strategy, the boundaries existing between the phenomenon being studied and the context within which was studied are not clearly evident’’. The reason behind choosing case study strategy was that, it was easily to produce answer to the questions of ‘why’, ‘how’ and ‘what’ in relation to the studied phenomenon.

3.3.1 Area of the Research Study

The study selected Liwale district found in Lindi region as the area of study on showing the role of Monitoring and Evaluation in improving sustainability in Water projects. Liwale is one among the district in Lindi region with a nature of Rural

setting, and is the district that faces the problem of unfunctional and poor sustainability of water projects, which is caused by inconsistency Monitoring and evaluation systems. Another reason is that, Liwale is the place where the researcher lives permanently and his working place, so selecting this district as the case study area, helped the researcher a lot in collection of genuine data due to the great familiarity of areas that I had after a long time living in Liwale

However, currently Liwale district is one among the fast-growing district in Tanzania. URT (2013), the 2012 Population and Housing Census estimated the population of Liwale district to be 91,380 people, The district faces unsustainable water supply projects despite its fast growing, is also another reason why the study was interesting in conducting research in this district.

3.3.2 Survey Population

The study on the role of M&E in improving sustainability of water projects in Liwale district, involved the people who mostly were found in rural areas like Local community (project beneficiaries) who are largely affected by unsustainable water project condition. Liwale district has 20 wards but villagers from 5 wards were be consulted for data collection, those wards includes Kibutuka, Kiangara, Mpigamiti, Mbaya and Liwale B. The study identified the research respondents including Village water committees from village offices and local communities (water users) from their households.

3.4 Sampling Techniques and Procedures

Before deciding on the better method that will be used for data collection there is a need to determine relevant sampling techniques (Dawson 2004).

3.4.1 Simple Random Technique

This research employed a Simple random sampling technique whereas all people within a research population had equal chance of being interviewed. The application criterion for this technique is because the study wished to explain the predicted or generalize results of the whole research population. In addition to that, illustration of this Technique (sampling) is to deal with a specific issue or problem and to show how the focus of the research and the methodology leads to the use of different sampling methods.

3.4.2 Purposive Sampling Technique

Purposive sampling was used to describe the existence and effective application of M&E practices in improving Sustainability especially in Water projects found in Liwale District. The study consulted Village government members including, Water Committees and District officials in Water Department (M&E staffs). The mixture of sampling techniques within one research was to figure out, eliminate and overcome the disadvantages found within different procedures.

3.5 Sample Size

Normally, the size of the sample should neither be excessively large nor too small as it should be optimum. An optimum sample is one which fulfills the requirements of

efficiency representativeness, reliability and flexibility. In order to get numerous perspectives in the area of my study on the issue of the Role of M&E in improving Sustainability in Water projects has consulted about 100 respondents. According to Magigi (2015) proposes the use of Slovene's formula to calculate appropriate sample of the study which is optimal. Therefore, the Solvene's formula can be stated as,

$n = N / (1 + Ne^2)$. Whereas:

n = number of sample, **N** = total population, **e** = Level of precision error

Then: **N** = 311,740 people, **e** = 10%, **n** =?

From the formula:

n = 311,740 / (1+ 311,740 *0.1^2) = **99.9679323** (because you can't sample a fraction of person or thing)

Therefore: n = **100**

To achieve these hundred samples, 60 villagers from five (5) wards were consulted and interviewed and were given Questionnaires, recruiting participants from those wards handled and identified by ward chairperson. The families included, were be both parent's (men and women) who are involving in implementing community projects. On the other hand, 5 district officers (M&E staffs) from RUWASA, who work as managers for projects, were consulted as key implementers of M&E practices. Lastly, about 35 Village government members (water committee) from respective villages were also consulted, as they hold a managerial position in protecting and maintaining water projects in their villages.

Table 3.1: Thee sample size for the study in wards found in Liwale District

NO.	Respondents	Number of Respondents
1.	Villagers (water users)	60
2.	Village government members	35
3.	District officials (M&E staffs)	05
TOTAL		**100**

3.6 Variables and Measuring Procedures

The research collected both qualitative and quantitative information that were gathered through semi-structured interviews, questionnaires, documentary reviews, and reflective journals. Both qualitative and Quantitative information from the research, were used to help the researcher in gaining access and developing trust with the community or respondents. The researcher wished to know the specific information collected from the respondents which were compared and constructed with information collected from various literature resources like Books, journals, dissertations and internets.

Questions were prepared well and distributed to every respondent during interview session. The variable like M&E and Sustainability were measured by observing the results and participation of the respondents. M&E as Independent variable was measured by providing Questionnaires, which intended to identify the presence of Technical expertise of M&E, Community participation, Consistency of project progress reports and the use of LFA. On the other hand, Sustainability as an Dependent variable was measured by identifying the number of functional and Unfunctional water projects in villages, together with examining whether the projects have sufficient funds to run themselves in a sustainable way. By measuring variables

through well framed Questionnaires, the Validity and Reliability of research findings had been ensured.

3.7 Methods of Data Collection

This research or study used two kinds of data namely, Primary data and Secondary data and the data that were collected were both Qualitative and Quantitative.

3.7.1 Primary Data

The Primary data are those which are collected afresh and for the first time, and thus happen to be original in character (Kothari, 2004). These are the original information collected directly from the respondents. The study obtained more of Primary data through interviews and questionnaires from various respondents. The data collected through primary sources included current M&E practices in water projects, challenges in implementing M&E practices and proposes better approaches to improve M&E practices in water projects found in Liwale district.

3.7.2 Secondary Data

Secondary data refers to the statistics that already exists Chuchil & Lucobucci (2002). The secondary data in this research were obtained from different sources including, M&E reports of respective water projects from RUWASA and village water committees in Liwale, Internet and Magazines. Generally, both Primary and Secondary data were collected by using the following techniques.

3.8 Data Collection Techniques

3.8.1 Questionnaires

The study used two types of Questionnaires namely; Close ended and Open-ended questionnaires. Open ended allows respondents to give any answer, while Close ended questionnaire, requires respondents to provide fixed answers by choosing the right one or the appropriate one. The study used these methods so as to offer a change of pace and help respondents to establish rapport in providing genuine information. The group of respondents that Questionnaires were distributed included, Local communities (water users) 60 questionnaires, Village government members (including water committee members) 35 questionnaires and Project officials (M&E staffs) in Water department in Liwale District office only 5 questionnaires. Apart from that, the study used Guided questionnaires written in Swahili language to villagers and Village government members because, most of ordinary respondents in Liwale have low understanding, low education level and most of them are using Swahili language in their daily communication.

3.8.2 Interviews

The study carried out the research using face to face interviews with respondents in selected water projects like Local communities (water users), Village water committees and Project officials (M&E) in Water department in District office. Both Open and Closed interview were used so as to allow respondents to express their opinions freely and be able to give out general views. In this research three (3) district officials were interviewed, five (5) village government members and few villagers were also interviewed. Cohen and Crabtree, (2006) say that, open ended

interviews are popular because they allow the interview to express views in their own way, they also provide reliable comparable information. The information collected from interview were used to supplement information gathered through Questionnaires.

3.8.3 Documentary Review

The study employed the documentary review in collecting data as Second hand information, it consulted studying written documents such as M&E reports from District offices and village committees.

3.9 Reliability and Validity of the Data

Reliability refers to the extent to which the data collection techniques or analysis procedures will yield consistent findings (Easterby-Smith *et al*. 2008).This means that, the measuring procedures to produce the same results on the other occasions and also the observation produced from the findings to be equal to other observers. The reliability of the research was ensured by preparing the questionnaires with the same questions (anonymity) to all respondents. Also, the analysis has been carefully done, to ensure that the data obtained to be similar to what i had thought and the time to collect data through interview and questionnaires where be neutral so as to avoid participant error.

Validity refers to refers to the extent to which a test measures what we actually wish to measure, it indicates the degree to which an instrument measures what it is supposed to be measured, Kothari (2004). Validity of this study was attained through

providing an adequate coverage of the topic together with choosing the appropriate sample of the universe which is 100 respondents. In addition to that, the study results were compared or associated with the set of other studies done by various researchers for the purpose of identifying how much the results matches with other researchers works.

3.10 Data Processing and Analysis

All responses to each question collected from the field study on the research were recorded in the special statistical software program called Statistical Package for Social Science (SPSS), but more specifically for Qualitative and quantitative data. In using SPSS in analyzing data, the study employed Descriptive methodology because it was simple to draw/display graphs, charts and tables. It also showed complete analysis in terms of Ratio, Age, education and others. Also descriptive methodology is simple to use and interpret data. Data assembling and recording were designed into the matrix form, providing the framework for analysis and interpretation in Chapter Four.

CHAPTER FOUR

ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter contained the detailed analysis and interpretation of research data about the roles of Monitoring and Evaluation in improving the sustainability of rural water projects found in rural Liwale district. The emerged results from the analysis, could be applied as an integral assessment for all institutions, National, International and local institutions, on how to improve sustainability of water projects and other development projects through effective Monitoring and Evaluation systems as one among key drivers of projects' sustainability in any developing nation.

4.2 Respondents Characteristics

The respondents were characterized in different categories like Gender (Sex), Age and educational status or level as both implementers of Monitoring and Evaluation tools or practices and key beneficiaries of projects' sustainability in their local areas. A total of 100 respondents were involved in this research study that derived a total of 45.0% percent number of Men (male) and about 55.0% percent number of Women (Female) as displayed in table 4.1 below. The highest number of Women (female) respondents in this study is attributed by the fact that, women especially in African societies are highly involved in preserving and maintaining water projects around their local areas for longer sustenance, while Men (male) are less involved in Monitoring water projects due to commitment of other family responsibilities. For this fact, women should be participated more than men, because they know more

how to monitor, preserve and maintaining water projects, so that they can exist for a fairly long time.

Table 4.1: Gender of respondents

Gender	Frequency	Percent
Female	55	55.0
Male	45	45.0
Total	**100**	**100.0**

Source: Field data (2022)

The Age respondents ranged from 18-25 years which constituted of about 9.0% as one among the beneficiaries who are also involved in a project. Age ranged from 26-35 years forms 23% of the surveyed population and most of them were very busy in farming activities. Also, the age ranged from 36-45 years forms about 40%, mostly were women who stayed homes while undertaking domestic activities and is the most affected group due to water projects problems.

An age 46-55 years constituted of about 19%, this group belongs to adult group and most of them were found nearby homesteads. Also, the age ranged from 56-65% which forms 07% and 66+ are the elder group which are involved very less in Monitoring and Evaluation of Water projects found in their local areas. Most of the surveyed population was found in rural areas in Liwale district.

Table 4. 2: Age of respondents

Age	Frequency	Percent
18-25	9	9.0
26-35	23	23.0
36-45	40	40.0
46-55	19	19.0
56-65	7	7.0
66+	2	2.0
Total	**100**	**100.0**

Source: Field data (2022)

On the other hand, Education level of respondents was also considered (table 4.3 below) whereas, the Primary level (STD seven) respondents forms 80% of the surveyed population because most of respondents targeted were in rural areas(villagers) and in general their education level is very low. Also, Secondary level respondents forms about 13% of the total respondents, the rate decreased because, few respondents have managed to get secondary education due to poor education awareness among Liwale rural residents. Diploma level constituted about 05% and Degree level constituted about 02%, most of them were found in RUWASA in Liwale District including District Manager, Engineers and Technicians.

Table 4.3: Educational level of respondents

	Frequency	Percent
STD 7	80	80.0
Secondary	13	13.0
Diploma	5	5.0
Degree	2	2.0
Total	**100**	**100.0**

Source: Field data (2022)

4.3 Monitoring and Evaluation Improvement on Sustainability in Water Projects

The question intended to measure the normal understanding to local community, water committees and district officials on whether M&E improves Sustainability in water projects or not. The results in (table 4.4) below identifies that, about 73% of respondents agreed, that effective M&E brings Sustainability of projects, in the sense that, community to be the part and parcel of that project, while 16% disagree that, M&E doesn't improve sustainability and only 11% did not say anything because they were less concern with water project issues.

Table 4.4: Sustainability and unsustainability rate of available water project in Liwale District

	Frequency	Percent
Yes	73	73.0
No	16	16.0
I don't know	11	11.0
Total	**100**	**100.0**

Source: Field data (2022)

4.4 Sustainability and Unsustainability Rate of Available Water Project in Liwale District

The study results have shown that, Liwale district had established various water projects in different areas depending on the nature of the environment on the specific source of water. Basically, the study identified major three (3) water projects including Wells with no hand pumps, Hand pump boreholes, water piped projects, all of which are supervised and monitored by the RUWASA Liwale district.

Furthermore, among the established water projects, some of them seem to be sustainable in terms of environment, financially, institutionally, but other seem to lack sustainability, to mean that some have already dead and other works under efficiency. Figure (4.1) shows that, 41% of respondents consulted said, wells without hand pumps (shallow wells) projects are unsustainable (not functioning well) due to several problems like drought, absence of strong management, poor security to mention a few, while 04% agreed that, they are still working and only 55% said that, the kind of project was not established in their local areas. On the case of Hand pump boreholes, 25% out of 100 respondents confirm the sustainability of project in their areas, but 46% said the projects lacks sustainability, because some were working poorly and other were not working at all (dead), the reasons for failures being lack of regular M&E, poor maintenances, poor community participation and 29% said the project was no established in their areas. Moreover, the presence of sustainability in extended water pipes projects, forms 32% of respondents who agreed on the presence of sustainability and 32% of people who said the projects in their areas lacks sustainability, because the infrastructures are poorly maintained and the flow of water from the tanks to water points are poor. The absence of these projects forms 36% of respondents. The water boreholes with submissible pumps projects have been established in few areas in the district especially in Mpigamiti, Kibutuka, Kitogoro, Mikunya and Kipule and the results showed that, only 02% of respondents said the projects were sustainable and are used as supplement source of water, that is they are not much depended by the community, 40% said ,the projects are not sustainable(not working) because of drought, directing herds into a boreholes,

deliberately destruction of water pipes, but 58% of respondents said the project was not found in their areas.

Lastly the RUWASA project using boreholes with submissible pumps project have serves almost the whole part of Liwale district, and the projects are seemed to be sustainable (functional) according to 81% of respondents, apart from being sustainable but other people did not hesitate to express their doubts on a new project of RUWASA, one the Kikulyungu villager, Hassan Kihaku said.

> ‘‘*...I have a doubt with sustainability of the new project (RUWASA) for a long time, because of running cost and continuing destruction of water pipes done by Pastoral society called ‘Wamang’ati’’*

and according to 13% or respondents said, the project is not sustainable because water services are not available throughout the time, and only 6% said the projects did not reach to their local areas.

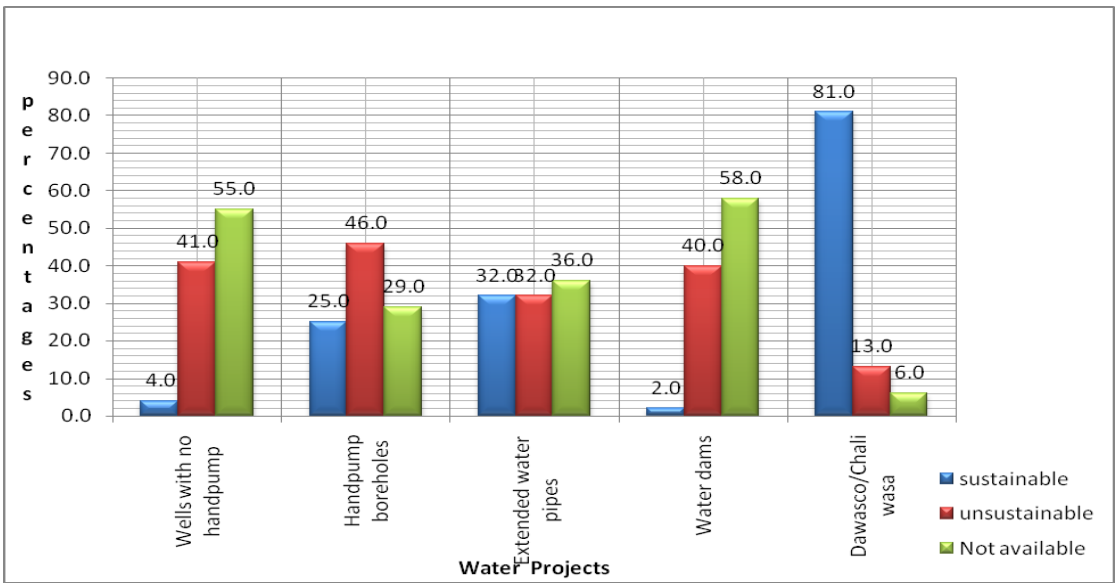

Figure 4.1: Shows the percentages of sustainable and unsustainable water projects in Liwale District

Source: Field data (2022)

4.5 Causes of Unsustainable or Non function Water Projects

Information gathered from Local communities, village water committees and RUWASA District officials shows that, many water projects established by the District government in collaboration with local communities do not sustain for a longer time because of the various reasons. When the research results are compared in a (table 4.5) below, 62% agreed that, Lack of Professionalism in running water projects, contributed much to the failures of many water projects around their areas, and the water committees themselves who acts as main managers of water projects do not receive any kind of training skills on how to Monitor and Evaluate projects in a standard way. And only 05% did not manage to answer the question's category because of poor readiness to attempt the question. About 60% agreed on the shortage of funds as a reason for failures of various established water projects especially Hand pump boreholes and extended water pipes projects. However, 81% respondents out of 100 people mentioned Poor Monitoring and Evaluation practices have led to the poor functioning of water projects around their areas. The interview conducted with the Village Chairperson of Kibutuka village in Kibutuka Ward, Mr. Ramadhan Mohamed who said that,

> ''*…since the drilling of Borehole, (locally called 'Kisima')* in 1992, *I didn't see any Monitoring and Evaluation team from the District government come to visit and observe the condition of the projects, thus why, the project did not function well up to date''.*

He rather continued to show his drought on the new implemented project of RUWASA that, once the projects will be handed over to the Government, it will not sustain for a longer time due to poor M&E, poor security of projects' infrastructures and low community awareness in contributing project's expenses. Also, about 48%

agreed on the presence of poor security, operation and maintenance of projects' infrastructures to have contributed to the poor sustainability of projects, while 46% disagree on that, because they see projects' infrastructures to have good condition and only 06% did not attempt the category due to low understanding.

Furthermore, the research reveals 38% of respondents, to agree on Poor community participation particularly after the Implementation of the projects, whereas they are not involved thoroughly to monitor, visit and evaluate the projects based on the set objectives and standards and lastly only 39% mentioned Drought as a major cause of poor sustainability of projects especially Water Dams, Hand pump borehole and Wells without hand pumps. The smallest percent on this factor, is due to the fact that, Liwale district has very few Water piped schemes especially in villages of Mlembwe, Naujombo, Makata and Mikuyu which all not functioning well due to prevailing drought condition attributed by the existing Climatic change. It is from the above findings which reveals, that absence of consistence M&E practices leads to the failure and lack of sustainability of water projects.

Table 4.5: The Causes or reasons for unsustainable water projects

		Lack of professionalism in projects	Shortage of funds	Poor M&E practices	Poor operation and Maintenance	Poor community participation	Drought
Valid	0	5	3	4	6	4	10
	Yes	62	60	81	48	38	39
	No	33	37	15	46	58	51
	Total	100	100	100	100	100	100

Source: Field data (2022)

4.6 The Current Monitoring and Evaluation Practices Applied in Water Projects

The study has revealed the diverse tools and methods applied in Monitoring and Evaluation in water projects found within the district. From the (Figure 4.2) below, 86% of respondents agreed on the existence of Field visit as one among the M&E tools used to validate the results reported by the project, 09% did not agree on the existence of Field visit in their local areas and only 05% did not attempt the question because of less involvement in their water projects. On the other hand, 65% out of 100 interviewed accepted the on the Preparation of Annual project Reports as a way of assessing the performance of water projects in terms of their contribution to expected outcomes and outputs, and 27% said the tool is not applied at all because they are not fully participated in overall project. Also, 49% agreed on the application of Rapid/Participatory Rural Appraisal (PRA) as a tool or practice of M&E, that involves a range of observation and, interviewing people to know their views and share information, on the progress of the project and about 41% of respondents rejected on the application of PRA on their projects because of the less involvements in the progress of the project, immediate after the completion of the particular project and 10% did not attempt the question because they know nothing about PRA.

Lastly, only 15% agreed on the application of Logical Framework Approach (LFA) as an analytical tool of approval in terms of success, failures and impact of an ongoing water project at local level, and higher rate of 66% rejected on the application of LFA, because participation of villagers in planning, implementing and regular follow-up or Monitoring and Evaluation is at lower level, this fact was

proved by the interview done with the RUWASA District Manager Eng. Bakari Njaro who argued that,

> ‘‘*...we do not use the formal* LFA *in implementing and evaluating our water projects, because there is no an independent M&E unit in our department and the specialist of M&E, so we often plan, implement and monitor them basing on our knowledge in water engineering’’.*

About 19% did not attempt the question due to poor knowledge on project. Also, there are no any other M&E practices mentioned by the respondents.

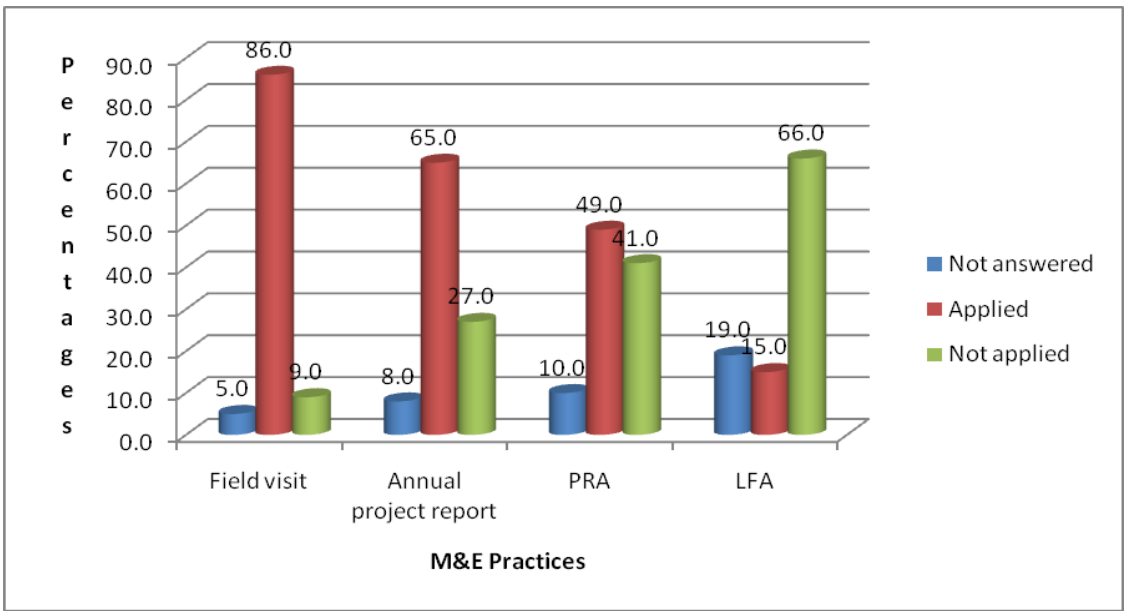

Figure 4.2: The current monitoring and evaluation practices applied in water projects

Source: Field data (2022)

4.7 Extent or Level to which M&E Practices or Tools are Applied in Water Projects and the Condition of Monitoring and Evaluation of Water Projects in General

In order to realize Sustainability especially in established water projects, the higher level of applying M&E tools also must be emphasized, this fact is contrary to water

projects in Liwale district whereas, 66% respondents said M&E tools are averagely applied, means that the level is not much satisfactory, due to some existing challenges, 15% said there is poor application of M&E tools because they are less concern with water projects,09% agree on good application of M&E tools and only 05% said on Very good use of M&E tools but only 05% didn't attempt the question due to poor knowledge on M&E activities.(table 4.6) below. On the other hand, the Condition of Monitoring and Evaluation in Water projects in Liwale district is not encouregable, despite the increasing failures of established water projects. The study reveals that, 51% of respondents said the condition of M&E is average, means that the responsible stuffs are not serious in Managing and Monitoring of water projects, while 28% said the condition of M&E is good, means that, they are satisfied with the follow up done by village water committees in water projects and 05% said M&E is done very good.

The study also showed 15% of respondents, who were not satisfied with the condition of M&E and said it is poor and only 01% said the condition is very poor. When the results on the extent of applied M&E tools and the general condition of M&E in water projects are compared, there must be immediate corrective actions to be undertaken for the purpose of improving the level of M&E tools and the condition in general without ignoring effective involvement of local communities as major project beneficiaries.

Table 4.6: The Extent to which M&E practices are applied and condition of M&E in water projects in general

	Frequency	Percent		Frequency	Percent
Very good	5	5.0	very good	5	5.0
Good	9	9.0	Good	28	28.0
Average	66	66.0	Average	51	51.0
Poor	15	15.0	Poor	15	15.0
I don't know	5	5.0	Very poor	1	1.0
Total	100	100.0	Total	100	100.0

Source: Field data (2022)

4.8 Frequency of M&E team to Conduct Field Visit and Meeting in Water Projects

In order for a project to be sustainable in all aspects, the M&E team should conduct regular field visit and where possible to conduct meeting with water committees and other stakeholders to evaluate the condition of the project. Field visit can be done Monthly, quarterly, semi-annually or annually depending on the nature of the project. Study results as presented in (table 4.7) below, found that, 45% of respondents said that the M&E team, conduct field visit in few times, and it visit the project only if there are technical problems in project's infrastructures, on the other hand 24% said the field visit is done many times, and is for the areas with frequency infrastructures problems, only 02% said there was no field visit in their water projects. About 16% didn't attempt the question, because of poor awareness on water projects. Eng. Bakari Njaro who is a water Engineer confirmed that

> ''*…. we do not have a regular routine/schedule to conduct Field visit as part of M&E in our water projects, but rather we rarely visit projects and it is immediate after receiving the 'call' (when required) CBWSOs, in case of any technical or mechanical problems on water* infrastructures*, and not as timely as it is required''.*

This fact stands as a big challenge towards improving sustainability in water projects.

Table 4.7: Challenges facing Water Projects the Implementation Monitoring and Evaluation Practices

	Frequency	Percent
0	16	16.0
Few times	45	45.0
Many times,	24	24.0
No field visit	2	2.0
I don't know	13	13.0
Total	**100**	**100.0**

Source: Field data (2022)

4.9 Challenges facing Water Projects the Implementation Monitoring and Evaluation Practices

In maintaining the sustainability of a project, there must be effective Monitoring and Evaluation systems, failure to implement effective M&E will lead to poor progress of the project. Basically, there are wide range of difficulties or challenges connected with establishing and even implementation of effective Monitoring and Evaluation systems at the project level. The study results presented on the (Figure 4.3) below reveal a number of challenges, whereas 84% agreed on the presence of very low M&E budget, as it acts as barrier towards fulfilling the project's goals and objectives. However, Eng. Bakari Njaro who is the Acting District Manager of RUWASA said that

> *''...always. the government centers in allocating huge budget for constructing water projects, but it ignores to allocate sufficient budget for Monitoring and Evaluation, operation and Maintenances of project infrastructures''.*

About 13% of respondents said the budget for M&E is sufficient. In addition to that, the interview conducted to the Chairperson BACHINDU-CBWSOs, Mr. Juma Mbaya said that,

> ‘‘…. *there is no any amount of funds, given to the* Community Based Water Supply Organisation (CBWSO) *for M&E activities* including *visiting our water projects, what we are doing is just volunteering in visiting, Managing and Monitoring the projects in our village’’.*

The study continued to show that about 82% of respondents agreed on the Lack of Technical M&E personels for projects, and added that as a great factor that contributes more to the failure of many established water projects in their areas, but only 16% said there is technical M&E personels. This fact is evidenced by the interview carried out with the RUWASA Water Engineer Eng. Bakari Njaro who said that,

> ‘‘…. *there is no an independent unit with M&E stuffs, but rather the technical personnel in Water and civil* engineering *who always acts as M&E personnel and perform project’s responsibilities but with poor knowledge and skills on M&E’’.*

Furthermore, 55% out of 100 respondents agreed on the presence of low community participation which is unsatisfactory in all phases of the project and even on to make regular follow-up for an ongoing project in order to improve credibility and sustainability, but also 44% of respondents agreed on the presence of high community participation in all stages of the project. From the interview conducted with the acting RUWASA acting District Manager (DM), Eng. Bakari Njaro said that,

> ‘‘…. *most of water projects are constructed without the villager’s initiatives, hence they lack the sense of ownership to* these *projects, so sometimes they(villagers) deliberately destroy water infrastructures, thinking that the project is owned by the government and not them*’’

In addition to that 47% said there is Low central government support (Ministry of water) in providing the financial and training support on how to undertake M&E

activities well and only 48% accepted on the presence of good government support. On the case of Poor project reports as a challenge, about 58% of all respondents agreed, whereas the report especially financial reports are poorly prepared and submitted to the RUWASA District level not on time. Eng. Bakari Njaro, acting District Manager complained on the unwillingness of some village water committees to submit financial reports trends of the collected funds, hence creates a problem to evaluate financial status of projects, thus affects is sustainability.38% agreed on the presence of good prepared project reports, and most of them were the water committees in villages.

Lastly, 60% of respondents mentioned on other factors that limits proper M&E in their areas. They include Lack of consistency Trainings and advocacy towards stakeholders(community) participation, reluctance of some villagers to attend village meetings regarding water issues, poor community contribution (cost sharing) in running other project's expenses like infrastructures maintenances, absence of strong and committed water committees in some villages, poor community awareness on managing and maintaining water projects, for example, some pastoral societies like 'Mang'ati tribe' to direct their herds in village water source particularly in Kimambi, Ngorongopa and Lilombe villages, hence they later became destroyed and unfunction at all. But only 03%, 02%, 01%,05%,04% and 08% in all challenges did not attempt the question because of their less interest in water projects.

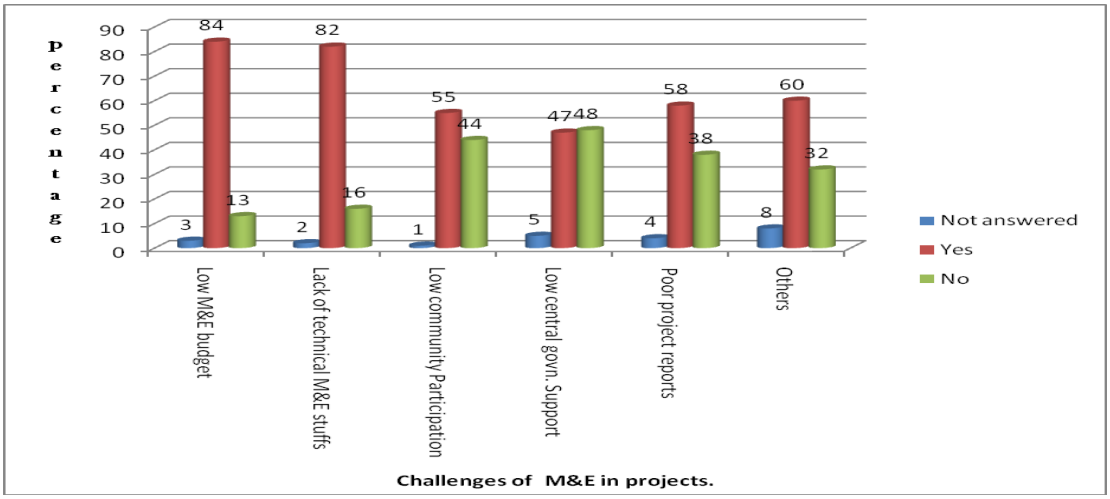

Figure 4.3: The challenges facing implementation of M&E practices in water projects

Source: Field data (2022)

4.10 Adequacy of Monitoring and Evaluation Staff or Personnel

The question wanted the respondents to say whether the number of Monitoring and Evaluation staffs were enough or not by considering the geographical area of Liwale district, and the study findings showed in (table 4.8) below that, 77% out of 100 respondents said no, to mean that, the number of M&E staffs responsible in visiting and evaluate the progress of the project are not enough. Engineer Bakari Njaro, acting District Manager said that,

> ‘‘*.... there are no specialists of M&E, instead we use water engineers and technicians who always acts as* Evaluators *and supervisors of the project, but they are not enough, whereas there is only 1 engineer and* 3 *technicians in the whole District level’’*

and he suggested at least to have 10 technicians and 3 engineers to cover the whole district, while only 05% said that the number of staffs were enough and 18% of respondents said they don’t anything about the adequacy of M&E personels. But the

local community needed enough personels so that they can monitor the projects well in collaboration with Community Based Water Supply Organisation and villagers.

Table 4.8: Availability of technical skills and knowledge on M&E

	Frequency	Percent
Yes	5	5.0
No	77	77.0
I don't know	18	18.0
Total	100	100.0

Source: Field data (2022)

4.11 Availability of Enough Technical Skills and Knowledge on Monitoring and Evaluation

The aim of the question was to determine whether the available staff who works on water projects have technical skills and knowledge or not, and the study findings (table 4.9) below revealed that, 82% of respondents including the district officials said, there is no technical skills through regular trainings on M&E given to officials and even Community Based Water Supply Organisations, hence become difficult to evaluate the progress of projects properly. Eng. Bakari Njaro and Mr. Stephano Malila, who are District officials both of them, admitted on the use of ‘‘accidental M&E staffs’’ who are the water engineer and technicians and they lack sufficient trainings on how to Monitor and Evaluate water projects. Not only that, Mr. Juma Mbaya, Chairman of Barikiwa Community Based Water Supply Organisations in Barikiwa ward, claimed on the absence of regular trainings given to the committee on how to monitor and manage their project. Only 15% of respondents agreed on the availability of technical skills on M&E and only 03% didn't know the theme of the question.

Table 4.9: Participation of local communities and the level/extent of local community partion participation in water projects

	Frequency	Percent
Yes	15	15.0
No	82	82.0
I don't know	3	3.0
Total	**100**	**100.0**

Source: Field data (2022)

4.12 Participation of Local Communities and the Level/extent of Local Community Portion Participation in Water Projects

The respondents were required to say whether there is an effective community participation or not, because participation of community enhances decision making and capacities in designing, implementing, monitoring and evaluating the established water projects, thus promoting the sustenance of the projects. From the study findings presented in the (table 4.10) below showed that,71% of respondents agreed on the Participation of community in discussing water projects in general village meetings and only 29% said there is no community participation. On the other hand, despite the existence of community participation in discussing and making decisions related to water facilities, but the level of participation is not good, whereas 51% of respondents said the participation is at average level, to mean that, it is not much satisfactory, because they are normally involved at early stage of project only. About 07% of respondents said the participation is at good and very good level and only 05% said there is poor participation, but 29% did not attempt the question because they said, there was no community participation in water projects.

Table 4.10: The existence of community participation and the level of community participation in water projects

	Frequency	Percent
Yes	71	71.0
No	29	29.0
Total	100	100.0

Source: Field data (2022)

4.13 Availability of Independent Monitoring and Evaluation Unit in RUWASA District Level

The question was given to the RUWASA District technical officials, aiming to findout whether there is an independent M&E unit responsible for undertaking regular follow-up in water projects, whereby five (5) technical staffs were consulted and the results in(table 4.11) below showed that, 4 staffs which is equals to 80% out of 5 respondents said, there is no a formal independent M&E unit with qualified personels of M&E, instead the department uses ‘‘accidental M&E stuffs’’(technical staffs) to perform M&E activities, while only 1 staff (20%) said there is an independent M&E unit having a task of oversee the progress of the project. The interview conducted with the District Manager, Eng. Bakari Njaro and the water Technician Mr. Stephano Malila proved that, the RUWASA Liwale lacks an Independent M&E unit with professional skills for a long time and advice on the establishment of an official M&E unit in water department.

Table 4.11: Availability of Independent M&E Unit in RUWASA

	Frequency	Percent
Yes	1	20.0
No	4	80.0
Total	5	100.0

Source: Field data

4.14 Proposed best Approaches in Improving Monitoring and Evaluation Practices Applied in Water Projects in Liwale District

Several approaches were suggested aiming at improving the condition of Monitoring and Evaluation so as to bring impact on the progress of water projects, not the way it is practiced now days, where it is done few times, absence of professional M&E personels, poor allocated budget in water projects and the absence of an independent M&E unit within the District. The proposed approaches to be considered are as follows, Establishment of an Independent Monitoring and Evaluation Unit within the district to oversee the condition of water projects before and after the implementation so as to identify the success and challenges facing the projects. This approach was proposed during the interview with the District Manager, Eng. Bakari Njaro who said that

> ‘‘*….there is a need to establish an Independent M&E unit in the future, as a third party and specialized people who will be responsible for evaluating the results and outcomes of the water* projects *against the planned goals and objectives, and to provide the M&E reports in order to help the district as a whole to assess herself on the performance of projects in which they are implementing’’*

The Second proposed approach is, Sensitization of local community approach. This involves provision of education so as to raise awareness to villagers on how to manage, protect their projects in a sustainable way and the particular education should be given during and after the implementation of the projects. An interview conducted with the DM Eng. Bakari Njaro who confirmed about the need for sensitizing people who are the project beneficieries through education provision during the implementation and after the completion of the project so as realize their sustainability.

The Third proposed approach, is enhancing Capacity building and Training programmes. These short and long trainings to District officials, CBWSOs as well as local communities are necessary because trainings help to impart into them the basic knowledge on project Monitoring and Evaluation. Also, it enables the whole community to create the culture of their own, on consistency M&E activities of their projects, even when the M&E district officials will not do regular follow-up. Mr. Stephano Malila, a planning officer and head of Operation and Maintance in RUWASA Liwale said that

> **‘‘***…. trainings and capacity building programmes like financial records keepings are highly needed to Boards of* CBWSOs *especially in this* time *of operating projects, whereas objectives in terms of expected sales of water service, volume of water to be produced will be compared to the actual outcomes or outputs of the project***’’.**

The same necessity was also shown by the Chairperson Mr. Juma Mbaya of BACHINDU CBWSO in Barikiwa ward, who insisted on the provision of regular trainings and capacity buildings on how to Monitor and evaluate well their projects, so that they could function for a long time. The forth proposed approach is promoting the Participatory approach. This approach involves the active collaboration of key project stakeholders who benefit or affected by the project like local communities, CSOs and NGOs in designing, implementing, Monitoring and evaluating the progress of water projects. Participation of stakeholders in M&E will help in local decision making and capacities to guide and define the nature of an intervention. An interview conducted with a number of villagers including Shaweji Name, a Barikiwa villager asserted that,

> ‘‘*…there is necessity of us as local communities to be fully informed and participated by the* Government *in planning, implementing and*

evaluating water projects in our areas for better performance and sustainability''.

It is high time now, whenever possible the Private sectors are supposed to be participated in conducting M&E which will be free from bias and thus could add value in improving water projects sustainability. The fifth proposed approach is the change from National policies and plans from an Infrastructure to a service approach. This means that, the government should not concentrate in constructing new projects alone; it should also allocate enough resouces including funds, professional staffs and transport facilities so as to enable effective operations, management and evaluation of water services to the community .The RUWASA DM, Eng. Bakari Njaro indicated that, the government should change his approach, by creating good environment to sustain water projects, by providing adequate funds, M&E facilities like transport and recruit M&E professionals to enable proper maintenances and monitoring of water projects, rather than utilizing huge funds in constructing new water projects.

4.15 Discussion of the Findings

Monitoring and evaluation is the fundamental tool of good programme management at all levels because it provides data on project progress and the effectiveness of activities. Monitoring and evaluation improves on project management and decision making and allows accountability to stakeholders. Monitoring and evaluation provides data which is useful for policy-making and advocacy. Monitoring and evaluation gives indicators on whether the project is progressing or not and if there are any obstacles that needs corrective measures (http://www.theglobalfund.org).

The study findings revealed that, most of rural based water projects established in Liwale district, like Hand pump projects, water pipes schemes face the problem of sustainability. Among other factors, the ineffective Monitoring and Evaluation was seen to be the most significant factor that, leads to poor sustainability in water projects. This finding is in line with Montgomery (2009) study on ‘‘Increasing Functional Sustainability of Water and Sanitation Supplies in Rural Sub Saharan Africa’’, which revealed a lot of challenges facing water projects sustainability including absence of systematic documentation of failed schemes or consequences for providers who invest in, poorly functioning or unsustainable water and sanitation systems and ineffective M&E system due to few allocated funds. However, Montgomery (2009) findings do not differ much with findings of Ihuah *et al* (2014) on their study on ‘‘Rural Water Supply projects and Sustainable Development in Nigeria and Ghana’’ as they mentioned ineffective Monitoring and Evaluation procedures and poor assessment of water projects to be integrated into the implementation and post-operational management of hand pumps water supply systems as a problem contributed to the absence of Sustainability in various water projects. According to research findings on existing M&E practices applied, Field visit came to be the most applied M&E practice among other practices, because it helps in appraising the progress of the project, its results and possible constrains that hinder the project and often includes conducting visit to the projects so as to get quick information’s.

The use of Field visit as one among the M&E tool is similar to Water Sector Performance Report (WSPR) of 2007/2008 which showed the importance of Field visit as a tool for M&E undertaken to assess the performance on programme implementation

including financial management, procurement, quality of works; capacity of the entity and safeguard issues, whereas in 2007/2008 two joint Field visits involving the MoWI and PMO-RALG, were conducted in water projects in LGAs using the monitoring check list prepared. Other tools like Annual Project Reports, Participatory Rural Appraisal are moderately applied, while the Logical Framework Approach (LFA) is not applied at all due to the absence of M&E unit and professional M&E personnel. Ignoring the use of LFA, become a challenge in tracking the progress of the projects in terms of fulfilling its goals and objectives, outputs and better outcomes of the project.

Despite the presence of M&E tools used in water projects, but the implementation of these poorly applied M&E practices, seem to face lot of challenges, whereas Low budgetary allocation in M&E activities and absence of technical and professional staffs of M&E are the leading significant challenges facing water projects, others are unsatisfactory community and other stakeholder participation, limited role played by the central government in providing human and financial support to M&E activities, poor information collected on the M&E and general progress of the project, poor community contribution on project's expenses to mention a few. The challenges facing the implementation of M&E from the research finding are somehow similar to other findings including the study by Nyakundi (2014) on ''Factors influencing implementation of Monitoring and Evaluation processes on donor funded projects'' which revealed the several challenges including, the presence of small level of stakeholder's involvement or participation in the implementation of M&E of projects, the inadequate allocation of budget for M&E, lack of trained M&E staffs and shortage

of M&E resources and facilities, absence of technical skills on M&E and poor prepared project reports.

On the other hand, the district water department itself, does not have an independent M&E unit and lacks qualified professionals of M&E to conduct project responsibilities, instead the department uses water engineers and technicians as M&E personnel's and bad enough is that, these engineers and technicians do not receive any regular practical trainings on M&E of projects. This fact stands as big problems in many LGAs in Tanzania, that's why many projects fail to sustain for a long time after the end of its implementation or completion. This fact is similar to Loitare. L (2011) study on the ‘‘role of Monitoring and Evaluation for improving performance of Development Projects in Tanzania’’ which revealed the absence of M&E unit even in some NGO's that implement several development projects including water supply projects, whereas some of these organizations uses all organization staffs to perform M&E responsibilities, and still stands as problem facing both Government institutions including LGAs and Private institutions like NGO's and CSO's. The research findings also revealed on the presence of local community participation in implementing M&E of their water projects, but unfortunately, the level of local community to participate or rather to be participated by their local authorities was averagely done, and most of the villagers confirmed that, were not fully satisfied with the way, their village and district governments, participate them in managing, monitoring and evaluating the projects available around their areas. This fact was also showed in Tadesse *et al* (2013) study on ‘‘Rural Water Supply Management and

Sustainability'' which proved on the presence of good community participation and implementation of water supply schemes in Adama area, Central Ethiopia.

Moreover, some good and best approaches aiming to improve the use and implementation of M&E practices in water projects were proposed by respondents, they include, enhancing the strong Participatory approach to be more practical rather than theoretical, whereas key stakeholders like Community, LGAs, CSOs, NGOs and other private institutions who have the strong interest in water services to be fully engaged in all project's phases. This approach was also put forward by Cooper and Jones (2008), on their study on ''social housing management'' who insisted on the development to be sustainable when attention is given more to greater community engagement; deliberative forums to help people live more sustainable lifestyles; investigating ways in which stakeholders can influence decision-making, so this approach is important it helps to achieve more results. Another approach to be taken is Capacity building and Training programmes, which should be enhanced from District level to community level so as to impart skills and knowledge on M&E activities and how to apply its tools or practices. This fact resembles to Tadesse *et al* (2013) who put more insist on the provision of trainings and refresher training in order to scale up the capacity of water committee to manage the water schemes properly in order to sustain for a long time. The approach found in Tadesse *et al* (2013) is also seen in the URT (2008) on its Water Sector Performance Report(2007/2008),which insisted on the use of comprehensive Capacity building and training program for water sector personnel based on the Institutional Strengthening and Capacity Building Framework, by taking into consideration the minimum staff requirements at all levels.

Also, to change of National policies and plans from an Infrastructure to a service approach, so that they can provide the expected outputs to the community, and it is possible only by allocating more resources including funds in the total management, monitoring and evaluation of projects, rather that utililizing more funds and other resources in the construction of projects as it done nowdays. This approach is very similar to Jiménez & Pérez- Foguet (2010), study on ‘‘Challenges for Water governance on rural water supply; Lesson learnt from Tanzania’’ who propose on the total change of National plans and policies from an infrastructures oriented to service oriented, by allocating more resources for operation and maintenances of services and bringing the balance between end users in the management of services together with adequate support from government institutions including LGAs.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Liwale district where the study has been conducted, is one of the districts found in Lindi region. Also, is the district with high investment in water projects like hand pump boreholes, water piped projects but unfortunately, they lack regular Monitoring and Evaluation which leads to poor sustainability of these projects. This chapter consists of summary of the findings from the research, implication of the findings, conclusion, recommendations and areas for further research.

5.2 Summary of the Findings

5.2.1 Causes of Unsustainability of Water Projects in Liwale District

The research aimed at identifying the major causes of increasing rate of unsustainability especially for the established community-based water projects in rural Liwale like Hand pumps boreholes, water pipes schemes, wells with no hand pumps. The findings in (table4.5) revealed that, the leading reasons are the absence of consistency Monitoring and Evaluation practices, which forms about 81% out of 100 respondents. Lack of Professionalism (skills and knowledge) in running water projects, carried 62% and shortage of enough funds to run the projects constituted about 60% of 100 respondents. This finding resembles to the findings provided by Jiménez & Pérez- Foguet (2010), on challenges of sustainability of water projects in Tanzania, which mentioned ineffective M&E system as one among the reason for poor sustainability of water projects. In addition to that, the same finding is similar to

Tadesse *et al* (2013, which indicated Poor management of Monitoring and evaluation of the operation and management of the water schemes as a factor for poor sustainability of available water projects in Adama, Ethiopia. Also, the study conducted by Ihuah *et al* (2014), mentioned ineffective Monitoring and Evaluation procedures and poor assessment of water projects, to be integrated into the implementation and post-operational management of hand pumps water supply systems as major cause or reason among others in contributing to poor sustainability of water projects.

5.2.2 Does Monitoring and Evaluation Improve Sustainability in Water Projects?

The research findings showed that, about 73% of respondents (table 4.4) agreed, that effective M&E brings Sustainability of projects, in the sense that, community to be the part and parcel responsible for making follow-up on the progress of the project. This finding resembles to the argument given by Harvey *et al* (2004), that, Monitoring, evaluation and reporting is the mortar that holds the other factors of sustainability and the post-project management phases together, providing for their proper integration and interlocking. He(ibid) added that, Sustainable community hand pumps operated water supply benefits is achievable, through regular monitoring, evaluation and reporting of the various sustainable factors and the post-project management approach. Therefore monitoring, evaluation and reporting is important to ensure project standardization, effectiveness, efficiency, replicability and equity in the communities.

5.2.3 The Current Monitoring and Evaluation Practices Applied in Liwale Water Projects

One of the objectives of this study was to identify the current Monitoring and Evaluation practices applied in water projects found in Liwale District. The findings revealed that, the M&E practice that is mostly applied in available water projects is Field visit as indicated by 86% of respondents (Figure 4.2) which involved an assessment of progress, results and problems that encounter water projects, although it was done few times in a year, together with no formal schedule of visiting projects. This finding is similar to UNDP (2009) argumentation that, field visit validates the results reported by programmes and projects and they are of particular importance to large, key programmes and projects.

That are essential for outcomes and they involve an assessment of progress, results and problems that encounter projects. Also, is similar to Water Sector Performance Report (WSPR) of 2007/2008 which showed the importance of Field visit as a tool for M&E undertaken to assess the performance on programme implementation including financial management, procurement, quality of works; capacity of the entity and safeguard issues, whereas in 2007/2008 two joint Field visits involving the MoWI and PMO-RALG, were conducted in water projects in LGAs using the monitoring check list prepared. Also, respondents by 65% also identified the use of Annual Project Reports (APR) as another tool in M&E of water projects involving a self-assessment that should be done by water department, serving as the basis for assessing the performance of projects in terms of their contribution to intended outcomes. This is similar to UNDP (2009) findings that, APR provides an accurate

update on project results, identify major constraints and propose future directions and is a part of oversight and monitoring of projects and a key building block of the annual review. Moreover, few percentages as shown in (table 4.7) mentioned Participatory Rural Appraisal (PRA) by 49% and the Logical Framework Approach (LFA) by 15% as another M&E tools used in water projects, whereas respondents especially District officials do not apply and even to have any knowledge and skills on the use the LFA as M&E tool.

5.2.4 Extent/Level of Applied M&E tools/Practices and the General Condition of M&E in Water Projects

Despite the fact that, Water project are evaluated and Monitored by responsible project officials, but the level or extent of Monitoring and Evaluation do not show any signs of maintaining the sustainability of water projects, since the findings revealed that, 66% indicated that the level or extent of applying the identified tools is average, while only 5% said the tools are very good applied and only 9% said tools are good applied, this give an indication that there is a serious problem in implementing these M&E tools for the sake of improving their sustainability. On the other hand, the findings showed that, the general condition in Monitoring and Evaluating on the available water projects in rural areas is not encouragable, since about 51% of respondents indicated that, the condition in M&E is average undertaken, while 28% said it is good and only 15% said the condition is poor (table4.6).This is due to the fact that, the RUWASA District level lacks qualified M&E personnel's with sufficient skills and knowledge on M&E activities, but rather RUWASA uses ''accidental M&E staffs'' who are water technicians and engineers,

also Lack of M&E facilities like cars, motorbikes to facilitate easy field visiting of remote rural areas and shortage of funds allocated specifically for M&E activities.

5.2.5 Challenges Facing Water Projects in the Implementation of M&E Practices

This was also another objective of this study, aimed at describing the challenges facing the proper implementation of M&E practices in water projects. Respondents indicated a number of challenges, whereas out of 100 respondents, 84% identified the lack of enough funds allocated for M&E activities in water projects as a great challenge hindering proper implementation of M&E, while 82% mentioned the challenge on lack of technical M&E personnel with enough trained skills on how to monitor and evaluate variety of projects especially water projects. This is similar to report of Development Bank of Southern Africa (2000) which revealed that, evaluation has yet to reach an acceptable level of operation in Kenya, due to various challenges including lack of professionalism on the part of qualified practitioners, and there are few academically trained evaluators and for those who carry out evaluations are influenced by social science research approaches.

Also, another challenge was the Low community or stakeholder's participation which constituted of about 55% of respondents, in making decision on the implementation as well as Monitoring the water projects and Low support from the central government in terms of financial and human. Other challenges like poor security on project infrastructures, low community awareness, shortage of M&E facilities like cars, motorbikes to mention a few, formed 60% out of 100 respondents

(Figure 4.3). The above findings are very similar to the study done by Nyakundi (2014) which revealed the several challenges including, the presence of small level of stakeholder's involvement or participation in the implementation of M&E of projects, also the inadequate allocation of budget for M&E as it led to the failure in the implementation of to a large extent without ignoring the lack of trained M&E staffs and shortage of M&E resources and facilities, absence of technical skills on M&E, poor prepared project reports were found to be the most significant challenges facing the implementation of M&E in water projects. Not only that, the Water Sector Performance Report(WSPR)-2007/2008 of the URT(2008) provides the same findings on challenges, as it indicated that, during the financial period 2007/08, the main challenges that were faced in the implementation of the water sector activities were; Limited number of competent, qualified and skilled staff at all levels including the Ministries, LGAs, small utilities, private sector and Civil Society Organizations, in addition to that, the institutions have inadequate equipment, office accommodation and transport facilities. Also the financing commitments for 2007/2008 WSDP implementation were below the expected financing envelope as originally planned. Hence this entire situation hinders the routine operations of utilities, supervision, accomplishment and monitoring and reporting progress on water projects in time.

5.2.6 Adequacy of Monitoring and &Evaluation Staffs or Personals in Water Projects

The research findings indicated that, the number of Monitoring and Evaluation staffs in RUWASA were not enough at all, as compared to the geographical area of Liwale district, as represented in (table 4.8) that, 77% out of 100 respondents who were

consulted said, the number of M&E staff responsible in visiting and evaluate the progress of water projects in all areas are very few. This problem is dominating much due to the fact that, the district lacks a consistency program of recruiting sufficient personel on M&E activities. This finding is very similar to the Water Sector Performance Report (WSPR)-2007/2008 of URT(2008),which clarified that, during the financial period 2007/08, the main challenges that were faced in the implementation of the water sector activities were; Limited number of competent, qualified and skilled staff at all levels including the Ministries and Local Governments authorities(LGAs), hence the situation hinders routine operations of utilities, supervision, accomplishment and monitoring and reporting progress on water projects in time.

5.2.7 Participation of Local Communities and the Level/extent of Local Community Participation in Water Projects

Research findings on effective community participation, 71% of respondents as shown in (table 4.10) indicated that, the communities are participated in discussing and making decision in the level of implementing, monitoring and evaluating water projects during the general village meetings. On the other hand, the findings revealed on the level of community participation to be average or moderate as indicated by 51% of respondents in (table 4.13) who were consulted, because the community are not fully participated by their LGAs, in all stages of projects including implementation stage and post implementation stage of project. The above findings are in line with the study findings of Tadesse *et al* (2013) which clarified that, the rate of community participation and implementation of water supply schemes was

very good but the collection and control mechanisms as well as management of Monitoring and evaluation of the operation and management of the schemes were still very poor. This gives a clear indication that, although the communities are participated by their authorities including village governments and district in a average level, but the problem still exist in Managing and Monitoring the water projects due to the influence of other factors like absence of trained M&E staffs and low budget allocated to facilitate M&E activities.

5.2.8 Availability of Independent Monitoring and Evaluation Unit in RUWASA

The research findings on the question of the availability of an Independent M&E unit in water department revealed that, 4 staffs equals to 80% out of consulted 5 RUWASA officials (table 4.11) said, there is no a formal independent M&E unit with qualified personels of M&E, responsible for undertaking regular follow-up in water projects, instead the M&E activities are placed under the programme department which uses ‘’accidental M&E staffs’’ who are water technicians and engineers. This finding is equivalent to the study by Loitare. L (2011), which identified, the absence of M&E unit even in some NGO’s that implement several development projects including water supply projects, whereas some of these organizations uses all organization staffs to perform M&E responsibilities. So, the problem of not having an Independent M&E unit is facing both Government institutions including LGAs and Private institutions like NGO’s and CSO’s.

5.2.9 Proposed best Approaches in Improving Monitoring and Evaluation Practices applied in Water Projects in Liwale District

The research study managed to came up with best approaches for the purpose of improving Monitoring and Evaluation in water projects found in rural areas. The findings revealed the following approaches;

The change of National policies and plans from an Infrastructure to a service approach. This is due to the fact that the Government invests more in constructing new water projects but do not allocate enough funds for its operation, Management and Evaluation hence the projects do not sustain for a long time. Eng. Bakari Njaro indicated that, the government should set adequate funds and M&E professional staffs to enable proper maintenances and monitoring of water projects so that, they can be sustainable. His idea is similar to Jiménez & Pérez- Foguet (2010), on his study on who propose on the total change of National plans and policies from an infrastructure oriented to service oriented, by allocating more resources for operation and maintenances of services and bringing the balance between end users in the management of services together with adequate support from government institutions including LGAs.

The use of Participatory approach as a means to improve the Monitoring and Evaluation in water projects, in which the participants like local communities, private institutions, CSOs and NGOs become agents of change and decision making with regard to M&E in water projects. This finding resembles to Cooper and Jones (2008), on their study on ‘‘social housing management’’ who argue that, development will

be sustainable when attention is given more to greater community engagement; deliberative forums to help people live more sustainable lifestyles; investigating ways in which stakeholders can influence decision-making.so this approach is important it helps to achieve more results with greater benefits to the whole community. The establishment of an Independent Monitoring and Evaluation unit within the district, was suggested as another means to in improve M&E systems. This unit should be tasked to monitor and evaluate water projects together with collection of quality informations as well as preparing reports which will be disseminate to other key stakeholders who have interests with water service provision. This finding is also in line with the study done by Loitare (2011), which provide the recommendation on the establishment of M&E department in organizations to monitor and evaluate projects, ensure quality data collection as well as producing reports and make sure that, the reports are shared within organization, before disseminated to outside stakeholders. Enhancing comprehensive Capacity building and Training programme approach. This involves the provision of long and short training courses to project staffs so as to equip them with the basic skills and knowledge on project Monitoring and Evaluation, as it will help them to monitor and evaluate their projects in a proper way. This finding is very similar to the proposed approach put forward by Tadesse *et al* (2013) who insisted on the provision of trainings and refresher training in order to scale up the capacity of water committee to manage the water schemes properly. Also the URT (2008) on its Water Sector Performance Report (2007/2008), recommended on the use of comprehensive capacity building and training program for water sector personnel based on the

Institutional Strengthening and Capacity Building Framework, taking into consideration the minimum staff requirements at all levels.

5.3 Conclusions

On the basis of research findings and analysis, the research study revealed that, the current M&E practices applied in water projects in Liwale district are, Field visit and meetings, Annual project reports, Participatory Rural Appraisal (PRA) and Logical Framework Approach (LFA), and no any other extra M&E practices identified. But among the four M&E tools identified, Field visit seen to be the mostly applied tool, while Annual reports and Participatory Rural Appraisal are less applied and the LFA which is a tool used to describe the logical relationships between project's objectives, expected results, outputs, performance indicators, assumptions and risks is not formally applied at all due to lack of M&E technical experts. On the other hand, the findings revealed that, most of community-based water projects in rural areas like shallow wells, hand pump boreholes, water dams and extended water pipes schemes faces the problem of un sustainability, whereas some projects are working under the efficiency while others have already dead (un function).

Among other factors for the failure of projects to provide the expected results or outputs for long time were, shortage of funds to run the projects, ineffective M&E practices and poor community participation in managing projects. The research findings revealed a number of challenges facing the implementation of M&E, including low budget allocated by the Government for M&E activities in water projects, also there is a serious problem of absence of qualified technical experts on

M&E as a result, RUWASA uses water technicians and engineers as M&E staffs who have poor skills on Monitoring and Evaluation.

Low community participation is also another challenge, whereas communities are not fully participated in designing, implementing, monitoring and evaluating water project in whole project lifetime. Also, low support paid by the central government and poor prepared project reports, that addresses progress towards achieving the objectives or outcomes based on the indicators and service delivery improvements milestones. Other challenges, were poor security in water infrastructures, poor community contribution in water projects expenses to mention a few. In addition to that, the findings showed the absence of an Independent M&E unit in RUWASA District level, absence of regular Trainings and capacity building programmes, given to water committees and district officials so as to have adequate skills or capabilities on how to monitor and evaluate their water projects in an effective way and also poor routine or formal field visit as part of M&E tool. Lastly, the study findings, came up with the best approaches in order to improve the M&E practices so as to realize sustainability of water projects. They included, the establishment of an Independent Monitoring and Evaluation Unit within the district, having the duty to supervise, monitor and evaluate water projects regularly basing on the set indicators, for the aim of identifying the success, challenges facing the projects. Also findings proposed the change of National policies and plans from infrastructure approach to service approach, where the government should centre in allocating adequate funds for operation, maintenances and management rather than continuing constructing new projects with huge expenses.

Moreover, the findings proposed on the use of Participatory approach, that seeks to involve local communities and other key stakeholders like CSOs, Private institutions in decision making regarding the designing, implementation and monitoring and evaluation of water projects. Capacity building and Training programmes is another approach that was suggested by respondents, where the central government should develop a culture of providing trainings to District officials together with water committees on how to monitor and evaluate water projects in proper way to improve their sustainability.

5.4 Recommendations

5.4.1 Recommendations for RUWASA and Central Government

The central government (Ministry of water) should allocate sufficient resources both financial resource (funds), human resources and physical resources like transport facilities in order to simplify the effective implementation of Monitoring and Evaluation activities, contrary to the current situation whereas the government allocates a huge amount of money for constructing new water projects, but ignoring allocating adequate funds for undertaking Monitoring and Evaluation.

Any water project should not be implemented in any particular area especially in rural setting without preparing a strategic approach for its maintenance, Monitoring as well as Evaluation. This will help the villagers, CBWSOs and district officials as a whole to make easy follow-up of their project in case of any challenge. It is also required that, every community should set-up their own management committee to look after the on-going operations and maintenance of their respective projects

(Parry-Jones et al., 2001). There is also a need to effectively Monitoring and Evaluation together with regulation of services, but accompanied by the provision of technical support to water committees at community level. This is due to the fact that CBWSOs are people with poor education level and poor technical skills on water projects, so both Central and Local governments have the responsibility in providing sufficient skills to these water groups, who are stands as managers of projects at community level. Jiménez & Pérez-Foguet (2010) argued that, above all, the will of having reliable monitoring systems in the water sector should become a real priority for international donors and governments. Furthermore, to enhances Management of water schemes at the lower community level. This is due to the fact that, the present and past established water projects in rural areas shows poor performance and sustainability, so there is a need to shift to a more user-centred approach, where there is strong popular participation. This idea is similar to NAWAPO (URT, 2002) which put forward various management alternatives such as Water User Group (WUG), a Water User Association(WUA), a Board of Water and others, they were suggested aiming to create community water entity that could work more independently out of village Government structures, and which shall be responsible to collect community contributions properly, to be useful for various operations and maintenances of water infrastructures in case of any damage.

To establish and promote a more comprehensive communication framework or rather the Management Information System (MIS) in projects together with encouraging other key stakeholders including civil societies, Non-governmental organisations and private sectors so as to play a more prominent role in providing the quality

Monitoring and Evaluation information, to improve the function ability as well as sustainability of water projects. This recommendation is similar to URT (2008) on its Water Sector Performance Report (2007/2008) and Ole, T (1988) on his study on ‘‘Watering white elephants**?** lessons from donor funded planning and implementation of rural water supplies in Tanzania’’.

5.4.2 Limitation for the Study

- The limitation of this study is, limited results from both literatures whereas there are very few studies done on the area of M&E in water projects especially in Sub Saharan Africa.
- Lack of personnel or respondents’ assistance especially in Rural areas and in District officials, whereby individuals were either too busy, or unavailable to provide the required information during data collection.
- Experiencing biases from explanation given by respondents, by hiding some of required and essential information due to wrong perceptions about the study and existence of accidental M&E staffs like water technicians and Engineers.
- In some cases, the researcher collected some blank questionnaire during research processes due to the less interests of local communities in water projects related issues.
- Remoteness of some villages, where some water projects were allocated, as it consumed a lot of resources including money and time.

5.4.3 Recommendation for further Research

This study was conducted at time when Monitoring and Evaluation particularly in

rural based water projects is necessary requirement to enhance project sustainability. The assumption behind the poor sustainability of water project is that, the local community and other key stakeholders are not fully engaged in planning and implementing M&E activities in order to meet project's goals and objectives. However, this idea needs to be researched to find out how the stakeholders are participated in M&E. Thus, a research to be done should be on the assessment on community and key stakeholders' participation on the effectiveness of Monitoring and Evaluation.

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APPENDICES

APPENDIX I: Questionnaires for The Water Users (Community) And Village Government Members

INSTRUCTIONS

Where applicable, please tick or fill in the space provided with a correct answer. We expect that you will answer the questions as frankly as possible.

I. PERSONAL PROFILE

1. Designation / Title ……
2. Location (District) ……...Village……
3. Age

   18 – 25years…….26 – 35years……36 – 45years……

   46 – 55years……56 – 65years…….……66 and above years…….
4. Sex ……
5. Occupation / employment…….
6. Experience ……
7. Education level……

   i) Primary level and below ( ) ii) Secondary level ( )

   iii) Post-Secondary certificate ( ) iv) Diploma holder ( )

   v) Degree holder ( )

II. DATA ON M&E OF WATER PROJECTS

1. What type of water projects among the following are available in your village?

   i) wells without hand pumps ☐

   ii) Hand pump boreholes ☐

   iii) Extended water pipes from a water tanks. ☐

   iv) Water dam ☐

2. Who sponsored the above selected water project(s)?

   i). Government ☐ ii). NGOs☐ iii). Villagers initiatives ☐

3. Who is responsible for supervising and monitoring the above-mentioned village water projects?

   i) M&E staffs from Village governme☐

   ii) M&E staffs from District . ☐

   iii) M&E stuffs from the Region ☐

   iv) M&E staffs from Village and District ☐

   v) M&E staffs from village, District and Region ☐

   vi) I don't know ☐

4. What is the general condition of Monitoring and Evaluation of water projects around your region?

   i). Very good ☐ ii) Good ☐ iii) Average ☐ iv) Poor ☐

   v). Very poor ☐

5. Does Monitoring and Evaluation helps in improving Sustainability of water projects in your region?

   i). Yes ☐ ii).No ☐ iii). I don't know ☐

6. Identify the functional water project and unfunctional (dead) water projects by putting a (√) sign

No.	Type of water project	Functioning Project	Unfunctioning project
1	Wells without Handpumps		
2	Hand pump boreholes		
3	water piped Schemes		
4	Water dams		

7. What is the existing condition of Sustainability of the water projects in your region?

   i). Very good ☐ ii). Good ☐ iii). Average ☐ iv). Poor ☐

   v). Very poor ☐

8. For unfunctional (dead) water project, what are the reasons(causes) for their failures?

   i) Low professionalism in management of water projects ☐

   ii) Lack of enough funds to run the projects ☐

   iii) Poor M&E practices in respective water projects ☐

   iv) 4. Poor operation and maintenance of project's infrastructures ☐

   v) Poor community participation in designing and monitoring of projects ☐

   vi) Drought……

9. Do water projects in your areas have enough number of M&E staffs

   i). Yes ☐ ii).No ☐ iii). I don't know ☐

10. Are you aware of the M&E practices (tools) of water projects in your village?

    i). Yes ☐ ii). No ☐ iii). I don't know ☐

11. If YES which among the following M&E practices you often applied in your village?

    i) Field visit and conducting meetings ☐

    ii) Providing Annual Reports on project's progress ☐

    iii) Rapid Rural Appraisal in villages ☐

    iv) The Logical Frame work Approach ☐

    v) Others……

12. To what extent those M&E practices are applied in your water projects?

i). Very good ☐ ii). Good ☐ iii). Moderate ☐ iv).Poor ☐
v).Very poor ☐

13. Are there any challenges in implementing M&E practices in water projects in your district?

i). Yes ☐ ii).No ☐

14. If YES which among the following could be the possible challenges?

i) Low budgetary allocation in M&E department ☐
ii) Shortage /absence of technical and professional staffs of M&E ☐
iii) Low level of stakeholder (community) participation in implementation of M&E ☐
iv) Limited role played by the central government with regard to M&E regulation. ☐
v) Poor information collected on the progress of the project from village water committees ☐
vi) Any others……

15. How many times does Village water committee call meetings in your village?

i). Few times ☐ ii) Many times ☐ iii). I don't know ☐
iv). We don't call at all ☐

15. How many times in a year M&E team go to visit, monitor and evaluate water projects?

i). Few times ☐ ii). Many times ☐ 3.No field visit ☐
iv). I don't know ☐

16. Do the M&E team have adequate technical skills and knowledge on how Monitor and evaluate Water projects?

i). Yes ☐ ii).No ☐ iii).I don't know ☐

17. Do Local community fully participate or participated in planning, implementing, Monitoring and Evaluating water projects?

    i). Yes ☐ ii). No ☐ iii). I don't know ☐

18. If **YES** to what extent or level do you participate or participated planning, implementing, Monitoring and Evaluating water projects?

    i). Very good ☐ ii). Good ☐ iii). Average ☐ iv).Poor ☐ v).Very poor ☐

19. What is your opinion or suggestion to be used so as to improve Monitoring and Evaluation practices in water Projects?

    i) ……

    ii) ……

Thank you for your Cooperation

APPENDIX II: Questionnaires for RUWASA Liwale

INSTRUCTIONS

Where applicable, please tick or fill in the space provided with a correct answer. We expect that you will answer the questions as frankly as possible.

I. PERSONAL PROFILE

1. Designation / Title ……
2. Location (District) ……
3. Age

   18 – 25years……26 – 35years……36 – 45years……

   46 – 55years……56 – 65years……..66 and above years……
4. Sex ……
5. Occupation / employment……
6. Experience ……..
7. Education level……

   i) Primary level and below ii) Secondary level ( )

   iii) Post-Secondary certificate ( ) iv) Diploma holder ( )

   v) Degree holder ( )

II. DATA ON M&E OF WATER PRO JECTS

1. What type of water projects among the following are established in Liwale district?

   i) Wells without hand pumps ☐

   ii) Hand pump borehole ☐

   iii) Extended water pipes from a water tanks. ☐

   iv) Water dam ☐

2. Who is responsible for supervising and monitoring the above mentioned village water projects?

   i) M&E staffs from Village government ☐

   ii) M&E staffs from District . ☐

   iii) M&E stuffs from the Region ☐

   iv) M&E staffs from Village and District ☐

   v) M&E staffs from village, District and Region ☐

   vi) I don't know ☐

3. What is the general condition of Monitoring and Evaluation of water projects around your region?

   i). Very good ☐ i). Good ☐ iii). Average ☐ iv). Poor ☐

   v). Very poor ☐

4. Does Monitoring and Evaluation helps in improving Sustainability of water projects in your region?

   i). Yes ☐ ii). No ☐ iii). I don't know ☐

5. Which among the following established water projects are still functioning up to now and which are not function? (Fill the chart below by putting a (√) sign)

No.	Type of water project	Functioning Project	Unfunctioning project.
1	Wells without hand pumps		
2	Hand pump boreholes		
3	water piped projects		
4	Water dam		

6. What is the existing condition of Sustainability of the water projects in your region?

   i). Very good ☐ ii). Good ☐ iii). Average ☐ iv). Poor ☐

   v). Very poor ☐

7. What reasons (causes) you think have contributed to the failure of the above identified

   Unsustainable / un function water projects?

   i) Low professionalism in management of water projects ☐

   ii) Shortage of enough funds allocated in M&E activities to run the projects. ☐

   iii) Poor M&E practices in respective water projects ☐

   iv) Poor operation and maintenance of project's infrastructures ☐

   v) Poor community participation in designing and monitoring of projects ☐

   vi) Drought ☐

8. Do you apply M&E systems/practices in your district office in managing water projects?

   i). Yes ☐ ii).No ☐ iii). I don't know ☐

9. If YES which among the following M&E practices you often applied in your District?

   i) Field visit and conducting meetings ☐

   ii) Providing Annual Reports on project's progress ☐

   iii) Rapid Rural Appraisal in villages ☐

   iv) The Logical Frame work Approach ☐

   v) Others……

   vi) No any M&E practice applied ☐

10. To what extent those M&E practices are applied in your water projects?

    i). Very good ☐ ii). Good ☐ iii). Moderate ☐ iv). Poor ☐
    v).Very poor ☐

11. Are there any challenges in implementing M&E practices in water projects in your district?

    i). Yes ☐ ii). No ☐

12. If **YES** which among the following could be the possible challenges?

    i) Low budgetary allocation in M&E department ☐
    ii) Shortage /absence of technical and professional staffs of M&E ☐
    iii) Low level of stakeholder (community) participation in implementation of M&E ☐
    iv) Limited role played by the central government with regard to M&E regulation. ☐
    v) Poor information collected on the progress of the project from village water committees ☐
    vi) Any others…….

13. How many times in a year M&E team go to visit, monitor and evaluate water projects in villages?

    i). Few times ☐ ii). Many times ☐ iii). No field visit ☐
    iv). I don't know ☐

14. Do the M&E teams have adequate technical skills and knowledge on how Monitor and evaluate Water projects?

    i). Yes ☐ ii). No ☐ iii). I don't know ☐

15. Do Local community fully participate or participated in planning, implementing, Monitoring and Evaluating water projects?

    i). Yes ☐ ii). No ☐ iii). I don't know ☐

16. If **YES** to what extent or level do you participate local community planning, implementing, Monitoring and Evaluating water projects?

    i). Very good ☐ ii). Good ☐ iii). Average ☐ iv). Poor ☐

    v).Very poor ☐

17. Do you have an independent Monitoring and Evaluation Unit in RUWASA district level?

    i). Yes ☐ ii). No ☐

    If YES how many M&E staffs does your department have? …….

18. Do you think the number of M&E staffs is enough to perform M&E responsibilities in Water Projects found in your district?

    i). Yes ☐ ii).No ☐

19. Which courses you have studied as an M&E staff?

    i). Sociology ☐ ii). M&E ☐ iii). Project management ☐

    iv). Political science ☐ v). Short courses ☐ vi). Others…….

20. Do you have and apply the Logical Frame work Approach (LFA) which helps you in M&E of water projects?

    i). Yes ☐ ii). No ☐ iii). Idon't know ☐

21. If YES to what extent you apply the Logical Framework Approach in water projects?

    i). Very good ☐ ii). Good ☐ iii). Average ☐ iv). Poor ☐

    v). Very poor ☐

22. Do you receive or prepare project report (Informations) on the progress of water projects from villages? i). Yes ☐ ii). No ☐ iii). I don't know

23. At what time interval you receive or prepare Project reports on the progress of water schemes in a year?

    i). Few times ☐ ii). Many times ☐ iii). I don't know ☐ iv). We don't receive/ prepare ☐

24. What ways (approaches) you can suggest to be used so as to improve Monitoring and Evaluation Practices in order to improve Sustainability of water projects in your district?

    i) ……

    ii) ……

    iii) ……

    iv) ……

    v) ……

Thank you for your Cooperation

APPENDIX III: Research Clearance Letter

THE OPEN UNIVERSITY OF TANZANIA

DIRECTORATE OF POSTGRADUATE STUDIES

P.O. Box 23409
Dar es Salaam, Tanzania
http://www.openuniversity.ac.tz

Tel: 255-22-2668992/2668445
ext.2101
Fax: 255-22-2668759
E-mail: dpgs@out.ac.tz

Our Ref: PG202001698
District Executive Director,
Liwale District Council
P.O. Box 420
Lindi

Date: April 3rd, 2022

RE: RESEARCH CLEARANCE

The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1st January 2007.In line with the Charter, the Open University of Tanzania's missionis to generate and apply knowledge through research. To facilitate and simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania.

With this brief background, the purpose of this letter is to introduce to you **Mr. Ruhumbika Wegoro, Reg. No: PG202001698** pursuing a **Master of Project Management (MPM).** We hereby grant this clearance to conduct research titled ***"The Effects of Monitoring and Evaluation on Sustainability in Water Projects in Liwale District, Lindi Region Tanzania"***.

He will collect his data in your area from 5th, April 2022 to 4th, June 2022. If you need further information, kindly do not hesitate to contact the Deputy Vice-Chancellor (Academic) of the Open University of Tanzania, P.O. Box 23409, Dar es Salaam.Tel: 022-2-2668820.Lastly, thank you in advance for your assumed cooperation and facilitation of this research academic activity.

With kind regards,

Prof. Magreth Bushesha

DIRECTOR OF POSTGRADUATE STUDIES

APPENDIX IV: Acceptance Letter

Scientific Research Publishing
www.scirp.org

Scientific Research

Journal of Human Resource and Sustainability Studies

Acceptance Notification

May 8, 2023

Dear Author,

Thanks for your contribution to *Journal of Human Resource and Sustainability Studies*. We are pleased to inform you that your paper:

ID: 2923852
Title: THE EFFECTS OF MONITORING AND EVALUATION ON SUSTAINABILITY IN WATER PROJECTS IN LIWALE DISTRICT, LINDI REGION TANZANIA
Author(s): RUHUMBIKA WEGORO AND JANETH ISANZU

has been accepted for publication. Congratulations!

This article will be ready for publication in **Vol. 11, No. 2 of June issue 2023** in *Journal of Human Resource and Sustainability Studies* if the following procedures are completed no later than May 10.
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