INFLUENCE OF GENDER MAINSTREAMING ON SUSTAINABILITY OF WATER, SANITATION AND HYGIENE(WASH) ACTIVITIES IN MARANDA DIVISION, BONDO SUB COUNTY, KENYA

By

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DECLARATION

This Research Proposal is my original work and has not been presented for any other award in any University.

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DEDICATION

This research project is dedicated to my beloved husband **Eliud M. Nzola** for his immense moral, financial and technical support he accorded to me during the development of this report. Further dedication goes to my daughters **Pascalia M. Musyoki, Neema N. Musyoki** and my son **David T. Musyoki**. They remained calm the most time they needed me.

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LIST OF ABBREVIATIONS AND ACRONYMS

BPFA	Beijing Platform for Action
CBO	Community Based Organization
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
DAC	Development Assistance Committee
ECOSOC	Economic and Social Council
FGD	Focus Group Discussions
GAA	German Agro Action
GoK	Government of Kenya
KNBS	Kenya National Bureau of Statistics
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
SIDA	Swedish International Development Cooperation Agency
SHGs	Self-Help Groups
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WRM	Water Resources Management

ABSTRACT

Mainstreaming gender is the process of assessing the implications for women and men of any planned action, including legislation, policies or programs, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. This study reviewed global, regional and the national background of gender mainstreaming and its effects on sustainability of WASH activities. The achievement of Millennium Development Goals (MDGs) and elimination of poverty is hinged on improved access to water supply and appropriate sanitation. Apart from health benefits, improved water service delivery increases the community's economic well-being because more time is dedicated to economically productive activities rather than searching and/or fetching water. The purpose of the study was to investigate the influence of gender mainstreaming on sustainability WASH activities in Maranda division of Bondo Sub County. This study was guided by the following objectives; first to establish the extent to which gender mainstreaming in WASH design influences the sustainability of WASH activities, secondly to assess the extent to which gender mainstreaming in WASH implementation influences the sustainability of WASH activities, thirdly to examine how gender mainstreaming in WASH monitoring influences the sustainability of WASH activities and lastly to establish how gender mainstreaming in WASH evaluation influences the sustainability of WASH activities. The study was conducted using the descriptive survey design which was used to establish the influence of gender mainstreaming on sustainability of WASH activities. The target population consisted of 291 heads of households selected from 25 community WASH groups. The study employed probability sampling design particularly simple random sampling techniques in selection of the respondents. Research instruments used comprised of questionnaires, for capturing quantitative data and in-depth interviews for collection of qualitative data. This study used ten respondents from the target population to pilot the research instruments. Reliability was ensured by carrying out a test and retest on the research instruments in selected group members and three key informants. The study used both quantitative and qualitative approaches in processing and analysing the data. Analysis was done using frequencies, percentages and content analysis. The findings indicated that equal participation of both women and men in the WASH life cycle would contribute towards operation and sustainability of such facilities. However, the community being patriarchal, it was felt that there is a lot which need to be done to bring a balance in the level of community participation as pertains the designing, implementation, monitoring and evaluation of the WASH activities. This involves sound community sensitizations and government policies. The revelations were considered in the study as contributions to body of knowledge. Few gaps came out during the study and hence policy and areas for further study were also suggested.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The concept of bringing gender issues into the mainstream of society was clearly established as a global strategy for promoting gender equality in the Platform for Action adopted at the United Nations Fourth World Conference on Women, held in Beijing (China) in 1995. It highlighted the necessity to ensure that gender equality is a primary goal in all area(s) of social and economic development.

Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programs, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality (UN, 1997)

Since 1995 gender mainstreaming as a strategy has been implemented in all sectors with varying degrees of success. Various tools have also been developed to support the strategy. Nonetheless continuing challenges remain especially linked to monitoring and evaluating the impact of gender mainstreaming on the condition of women and men. Some of these challenges are related to the absence of appropriate and context-specific indicators that can capture the impact of interventions to promote gender equality and the empowerment of women. Additional challenges

include the absence of methodologies that assist replicability of successful interventions in order to speed up the pace of gender mainstreaming

The visibility of European Union commitment to gender equality has risen considerably since the agreement at the Luxembourg summit in 1997 to include strengthening equal opportunities between men and women as the fourth pillar of the employment guidelines along those of employability, adaptability and entrepreneurship. The inclusion of a new guideline on gender mainstreaming in 1999 that required member states to consider the gender impact on all policies under each of the pillars provided a further major impetus to the integration of equal opportunities issues in the employment framework (Jill, 2002).

In April 2011, the Equality Act 2010 came into force across Great Britain, replacing specific public sector equality duties relating to gender, disability and race with a single public sector equality duty. This new general duty requires inter alia that public authorities have due regard to the elimination of discrimination, harassment and victimization directed at individuals with a protected characteristic and further that such authorities advance equality of opportunity and foster good relations between persons who share a relevant protected characteristic and persons who do not share it (Ilona, 2013)

The principle of gender equality is enshrined in the Indian Constitution in its preamble, Fundamental rights, Fundamental duties and Directive Principles. The Indian Constitution is one of the most progressive in the world, and guarantees equal rights for men and women. The Constitution not only grants equality to women, but also empowers the State to adopt measures of positive discrimination in favour of women. The national Commission for women was set up by an Act of Parliament in 1990 to safeguard the rights and legal entitlements of women. The 73rd& 74th

Amendments (1993) to the Constitution of India have provided for reservation of seats in the local bodies of Panchayats & Municipalities for women, laying a strong foundation for their participation in decision making at the local level. Maharashtra is one of the pioneering states to formulate Women's Policy in 1994 (Sangita).

Broadly speaking Ghana's gender movement has chalked some successes. The reform of the Marriage Ordinance Law (1951) relating to intestate succession led to the promulgation of Intestate Succession Law (PNDCL 111) in 1985. This law ensured that the spouses and children of men who died intestate would have a right to the property of the man (regardless of mediating factors such the state/nature of the marriage/union, cultural norms and practices. This law was a major piece of legislation that provided the needed fillip for women's groups in the democratic era (Amoah, 2005).

In 1995, the mainstreaming of gender was identified as a key process for instituting change to the new South African democracy. South Africa ratified the Beijing Platform for Action, an agenda towards female empowerment, and made a firm commitment to the mainstreaming of gender within the Public Service by creating the National Gender Machinery. However, appreciation for the diversity between men and women still remains limited in most government departments, and the processes currently in place are not making much of a difference (GoSA, 2006)

South Africa further attempted to pledge its commitment to the fight for gender equality through the Convention for the Elimination of All Forms of Discrimination Against Women, the Southern African Development Community Declaration on Gender and Development, the African Union Protocol on the African Charter on Human and People's Rights on the Rights of Women in Africa, and the Constitution of South Africa which clearly stipulates the rights of equality. The latter

came into effect in 1996. Following the Beijing Platform for Action, countries around the world set up institutions that would be responsible for the achievement of the aims of the agenda (Rai, 2008).

Tanzania recognizes that gender inequality is a major obstacle to socio-economic and political development of its peoples. In recognition of this fact the government of the United Republic of Tanzania has taken various measures to ensure equality of all its citizens and, in particular, gender equality and gender equity. The Ministry of Community Development, Gender and Children was established in1990 as the national machinery for spearheading gender development in the country. The Ministry, among other things, has facilitated the formulation of the Women and Gender Development Policy (2000). The aim of this policy is to ensure that the gender perspective is mainstreamed into all policies, programmes and strategies. In order to meet this objective, the national machinery initiated the establishment of gender focal points in ministries, independent government departments, regional and local authorities (URT, 2000).

Kenya signed and ratified CEDAW in 1984, the BPFA in 1995; it is also committed to MDGs (2000), United Nations declaration Violence against Women (1993), Nairobi Forward Looking Strategies for the advancement of women (NFLS)-1985 among others. In addition, Kenya has ratified two core labour standards of the ILO: Convention No.100 on equal pay for work of equal value and Convention No.111 on Discrimination (Employment Occupation Convention 1968). The commitment of the Government of Kenya to mainstream gender in national development for equitable growth and poverty reduction is evidenced by the establishment of different national machineries with different but complementary roles (GOK 2000).

Sydney (1985), states that the impetus for involving men in gender mainstreaming is based on the recognition that men are part of the problem and part of the solution. Men also pay significant costs for gender inequality, particularly to their emotional and physical health. Gender injustice will only stop when men join with women to put an end to it. Many men's attitudes and behaviours will need to change in order for gender equality to be achieved. Women should work with men as decision makers and service providers, integrating men into development. By men and women when they have choices from options an atmosphere where they are able to assess and change the direction of their lives.

Gender mainstreaming addresses gender in all cycles of developing, planning, implementing and evaluating a programme. It begins by identifying the gender gaps within the sector, works to eliminate them through programmes and measures effectiveness in terms of gender in the monitoring and evaluation stage. It also works to achieve gender balance such as more equitable task sharing. Achieving gender balance often calls for meeting the practical needs and interests of women and girls more effectively such as better access to water to reduce their workload as well as meeting strategic gender needs and interests of including women in community decision-making (Wakeman, 1995).

Women and men should, therefore, be included in the planning, design, and implementation of WASH interventions. Involving them in community water and sanitation-related decisions can be an empowering experience. This can improve their status, creating opportunities for income generation, as well as providing them with other public and influential roles thus potentially making gender equality a reality (Protos *et al, 2007*).

1.2 Statement of the problem

In a study conducted by Protos and SNV in 2007, it revealed that the obstacle to successful implementation of WASH projects has been the total lack of involvement of participants, specifically in relation to women, who transport and care for water. Women who take a lead in the implementation and management of their own WASH projects create the conditions for them to become the agents of their own development and empowerment. In involving women, there is a need for catching up action, as women have been historically marginalized. However, when women are brought into the water world they may be stigmatized for getting involved in men's business.

Poor targeting, inequitable distribution of benefits and burdens, and poor operation and maintenance of structures have hindered development projects aimed at addressing issues of sustainable development in water resources management. Community participation and management approaches have failed to address these issues largely because communities are often seen as a collection of people with a common purpose (UNDP 2006).

Maharaj *et al (*1999*)* in his findings revealed that a safe, adequate and sustainable water supply for all is one of the main social goals enunciated at global level in the past few years. One-quarter of the developing world's population still lacks clean water while millions die annually from water related diseases. As the world population continues to grow, the need and demand for water escalates. Water has become a strategic resource: its control is a source of power, a key to economic development, and a trigger to socio-political stress

In a study carried out by UNDP in 2006, it was also reviewed that women's participation was among the variables strongly associated with project effectiveness.

Further, it was also revealed that the failure to take gender differences and inequalities into account resulted in failed projects. As stated in this report, in India compost pits located outside villages went unused and women continued to deposit waste near their homes even when fined for doing so because they did not wish to be seen carrying loads of refuse to the outskirts of the village. If they had been consulted, perhaps this problem could have been avoided.

The achievement of Millennium Development Goals (MDGs) and elimination of poverty is hinged on improved access to water supply and appropriate sanitation. Apart from health benefits, improved water service delivery would increase community's economic well-being because more time will be dedicated to economically productive activities rather than searching and/or fetching water (WHO, 2012).

During the past 30 years management of water resources in most SSA countries was the responsibility of central government. Unfortunately, many large water projects that were established and managed by central government failed mainly due to lack of community participation in planning and implementation of such projects (Leticia 2008)

Monica *et a*l (1995), revealed that more than one billion people in developing countries lack access to safe water and nearly two billion do not have adequate sanitation. Where clean water is available, it is often located at quite a distance from the household where the poor, usually women and girls, spend long hours collecting it time that might have been spent more productively.

The United Nations further estimates that there are 2.5 billion people who still do not use improved sanitation facility and a little over 1 billion are practicing open defecation. However, current trends show sub-Saharan Africa and Southern Asia still

struggle with low sanitation coverage. In sub-Saharan Africa, 44 per cent of the population uses either shared or unimproved facilities, and an estimated 26 per cent practices open defecation while in Southern Asia, the proportion of the population using shared or unimproved facilities has declined to 18 per cent but open defecation remains the highest of any region (39 per cent). In Kenya, over 5.8 million Kenyans still defecate in the open [JMP 2013]. This increases the risk of diarrhoea, which is among the top five killer diseases in the country.

From the above arguments it is therefore clear that there is need for a study that will inform on the influence of gender mainstreaming and sustainability of WASH activities in Maranda division which is not exception from other regions of Kenya.

1.3 The purpose of the study

The purpose of the study was to investigate the influence of gender mainstreaming on sustainability of WASH activities in Maranda division of Bondo Sub County.

1.4 Objectives of the study

This section has outlined the following research objectives which have been used to guide this study.

i. To establish the extent to which gender mainstreaming in WASH design influences the sustainability of WASH activities.
ii. To assess the extent to which gender mainstreaming in WASH implementation influences the sustainability of WASH activities
iii. To examine how gender mainstreaming in WASH monitoring influences the sustainability of WASH activities.
iv. To establish how gender mainstreaming in WASH evaluation influences the sustainability of WASH activities.

1.5 Research questions

This section has highlighted the research questions derived from research objectives which have been used to guide this study.

i. To what extend does gender mainstreaming in WASH design influence the sustainability of WASH activities?
ii. How does gender mainstreaming in WASH implementation influence the sustainability of WASH activities?
iii. How does gender mainstreaming in WASH monitoring influence the sustainability of WASH activities?
iv. To what extend does gender mainstreaming in WASH evaluation influence the sustainability of WASH activities?

1.6 Significance of the study

The study may be of paramount importance to many development organizations who are working in Maranda division and in the neighbouring counties. It is hoped that the findings may create a baseline data that may be very essential to the organizations in their process of initiating/identifying and implementing WASH activities in the area. It would also assist them to establish whether gender mainstreaming in the overall design of WASH activities may lead to the sustainability of the same in the project area and in any other area of their operation.

Lastly it is hoped that the findings of this study would also be very resourceful to future researchers who may like to carry out research on the same or related topics for their future academic or career advancement.

1.7 Basic assumptions of the study

In the study it was assumed that weather conditions would be favourable during the exercise since most of the target population is in the interior where road network may not be accessible during the rainy season. Secondly it was assumed that respondents would cooperate and turn up during the exercise for the purpose of collecting accurate data. In such a case it was to ensure that the information gathered is true and therefore validity of the same not be a compromise.

1.8 Limitations of the study

The study sought to establish the influence of gender mainstreaming on the sustainability of WASH activities. This action was to require resources in terms of money, time and manpower to assist in carrying out the research. This may not be sufficiently available but the study cushioned this by working extra hours per day to reduce the number of days in the field.

The study faced uncooperative respondents who were suspicious of the exercise and were not willing to participate in the exercise before they understood its purpose but this was cushioned by providing a firm confidential statement to them and given the purpose of the study. Respondents expected to participate in the FGDs and the interviews may not fully turn up. This was cushioned by relying on other beneficiaries who have benefited from other WASH activities from the target population to get their views on the subject of study.

1.9 Delimitations of the study

The study was carried out within Maranda division in Bondo Sub County making sure that respondents are equally selected from the 25 community groups in the sub county. Community groups implementing/benefiting from community WASH projects were the central respondents in the study.

1.10 Definition of significance terms as used in the study.

For purposes of the study, the following terms have been used to express the meaning defined in this section:

Gender; this indicates the socially-created differences between men and women and changes in societies, cultures and even families over time. It also refers to the economic, social and cultural attributes and opportunities associated with being male or female. .

Gender mainstreaming; it is the process of assessing the implications for women and men of any planned action, including legislation, policies and programmes in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres, so that women and men equally and inequality by transforming the mainstream.

Sustainability; indicates that resources used in projects should be such that they meet the current needs while preserving the natural environment so that the indefinite future needs are met, that is, the current generation should not compromise the ability of future generations to meet their own needs**.** It also refers to the ability of projects to continue meeting the needs of the community far beyond the time external funding ends.

Project; this means a unique process consisting of a set of coordinated and controlled activities with start and finish dates undertaken to achieve an objective conforming to specific requirements including the constraints of time, cost and resources.

Sanitation; means measures necessary for improving and protecting health and well-being of the people. Sanitation is any system that promotes proper disposal of human and animal wastes, proper use of toilet and avoiding open space defecation

Hygiene; is a set of practices performed for the preservation of health. While in modern medical sciences there is a set of standards of hygiene recommended for different situations, what is considered hygienic or not can vary between different cultures, genders and etarian groups. Some regular hygienic practices may be considered good habits by a society while the neglect of hygiene can be considered disgusting, disrespectful or even threatening

WASH projects; this means the projects implemented that are geared towards provision of sufficient water, improved sanitation and hygiene

1.11 Organization of the study

This research paper is organized in three chapters. The first chapter highlights the introduction to the study which has nine sub themes. Under introduction the paper has discussed the background of the problem and advanced to state the problem and the purpose of the study. This section also includes research objectives, question and significance of carrying out the study. In the last parts of chapter one, the paper discusses limitations and delimitations to the study and finally outlines assumptions and defines key terms used in the research topic.

The second chapter highlights review of existing literature. This chapter constitutes introduction which discusses the existing literature /concepts that make up the independent variable and their impact on the dependent variable. The chapter includes as well the theoretical framework and the conceptual framework. Finally the chapter gives a summary of existing literature and a conclusion. Chapter three discusses the methodology used in the study. The chapter has seven sub themes

which include research design, target population, sample size and sampling process, data collection instruments and procedure, quality control in terms of validity and reliability, data analysis, and ethical considerations.

Chapter four has covered data analysis, presentations, interpretation and discussion. The chapter also presents the findings of the study which have been discussed based on questionnaire response rate, demographic characteristics of the respondents, research objective themes which include; gender mainstreaming in WASH design, implementation, monitoring, evaluation and its influence on the sustainability of WASH activities. Chapter five covers summary of the findings, conclusions and recommendations for policy action, suggestions for further studies and contribution to the body of knowledge.

CHARPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter has reviewed the past available information related to the research under the following sub themes: gender mainstreaming in WASH design, implementation, and monitoring and evaluation .The chapter also presents the theoretical and conceptual framework showing the relationship between the variables along with the theory that has been used to build the study.

2.2 Gender mainstreaming in the design of WASH activities

Gender mainstreaming is the process of assessing the implications for women and men of any planned action, including legislation, policies or programs, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated

According to a UNDP report 2006 among the shortcomings in development programmes and projects is that gender, poverty and environment are often included solely as an afterthought or as separate and mutually exclusive categories. If gender issues are addressed at project conception, they can more easily be incorporated in the design, implementation and evaluation. Programmes that do not take into consideration the differing needs of men and women and their social, economic, cultural, linguistic realities during all their phases run the risk of being ineffective, inefficient and unsustainable.

Under this objective the study sought to understand whether gender mainstreaming in the designing of WASH facilities can have any influence on the stainability of such facilities. Monica (1996) revealed that successful strategies for designing and implementing policies, programs, and projects in the water and sanitation sector relied on demand-driven, participatory approaches rather than supply-driven, blueprint approaches. Such strategies require the active participation of both men and women at all stages of the project cycle

Shoji (2003) further reveals that the quest for development has led to a consensus that participation by both men and women - not as objects of development but as equal partners – is essential for sustained interventions. This has encouraged the promotion and use of gender-sensitive approaches in water and sanitation programmes and, more recently, in Integrated Water Resources Management (IWRM). Forums such as the International Drinking Water Supplies and Sanitation Decade Review (1990), the Dublin Conference (1992), the World Summit on Sustainable Development (1992), the Beijing Conference (1995) and the World Water Conference (2000) have endorsed these concepts.

Wakeman (1995) in his finding he states that women's and men's involvement should begin during the first stage of the project process. If not included at this point, it is more likely that they will be excluded at later stages as well. It is also more effective to involve them in decision-making about technology and other choices rather than attempting later to have them utilize systems not suited to their needs. He further reveals that where inappropriate technologies have been installed, it has also been found that hygiene education makes little or no difference. Where projects did not involve women, the result has sometimes been a lack of access of poor women

to improved facilities. Quality as well as quantity is important when planning for and assessing participation.

The study further sought to understand whether having women participate as key informants on their needs as pertains water, sanitation and hygiene can in any way influence the overall designing of such facilities. The United Nations Charter (1945) and the Universal Declaration of Human Rights (1948) in its reports established the first official worldwide recognition of women's equality and non-discrimination on the basis on sex. However up until the late 1960's the focus was on women's reproductive roles, as women were seen as wives and mothers and their main issues were supposed to be obtaining access to food, contraceptives, nutrition and health care.

Abbot (1996) further emphasises the importance of community participation. It was revealed that most NGOs accept and understand the need to fully involve all members of a community in the planning and implementation of a water and sanitation project. It is only through participation that communities will get a sense of ownership and should, therefore, feel motivated to operate and maintain the system.

The study also sought to understand whether women appreciated the designs of the current WASH facilities in the area. In a UNDP report (2006) it revealed that women labour to provide water for household needs while men make decisions about water resources management and development at both local and national levels. It is therefore paramount to have projects, programmes and policies that address gender inequalities will enhance both water resources management and human development opportunities for both men and women.

Bunch (2006) in his findings revealed that since the 1990's the gender perspective is still struggling to be clearly set into the development agenda of international treaties or objectives such as the Millennium Development Goals. The principles only focus on gender equality and do not concentrate enough on women's centrality to other development areas. He further reveals that gender process is long and ongoing. Practitioners are still struggling to bring a consciousness of gender issues to development work that will change perceptions and bring about true equality between men and women. Much of the work in the water sector today is affected by gender inequalities and inappropriate development projects. Without giving a proper focus to gender issues, projects often end up disadvantaging the principal group of water users, thereby affecting the lives of an already vulnerable group of stakeholders.

The Dublin statement (1992), pays special attention to women as they play a central role in the provision, management and safeguarding of water implying not just gender equality but also empowerment and equity, their essential role in the concern for effectiveness and efficiency of water sector programmes, their importance for environmental sustainability and the absolute need to have gender-oriented analysis for the success of water resource projects.

Hunt (2004) reveals that during project programing, a gender analysis should be carried out in order to assess the impacts that a development project may have on females and males and on gender relations. In order to enhance the sustainability and effectiveness of the project's activities, the analysis should be used to ensure that neither men nor women are disadvantaged by the project, or to identify priority areas for action to promote equality between men and women. Gender mainstreaming in the projects design therefore becomes paramount otherwise there will be a risk that

inequalities could be exacerbated by, further enhancing the capacity of men who generally already have better skills and employment prospects. To avoid further disadvantaging women it is essential to factor into programme design the existing differences between men and women based on previous gender analyses.

Wakeman (1995)reveals that the focus on gender recognizes the fact that full benefits only accrue from WSS improvements when men are encouraged to become more involved with activities such as hygiene education and sanitation, and women have more influential roles in, for example, management committees, financial arrangements, and maintenance of installed facilities. Project contributions of time, labour and money need to be shared fairly and not expected of women alone.

2.3 Gender mainstreaming in implementation of WASH activities

According to Wakeman (1995) many projects are designed assuming that men are responsible for the 'public sphere' and women for the 'private sphere'. Yet experience shows that often such a strict distinction should not be made between the two. Women may have major say over management of water in the home, but they may also manage communal facilities and press community leaders for improvements. Men's support may be needed for improved household latrine systems. Men's and women's roles in these areas may change as well. Women may become more involved in community management of systems, for example. If women's public roles are not recognized by a project, it can result in women being left out of traditional areas of responsibility.

Under this objective the study to find out whether women and men are inclusively involved in all stages of WASH facilities implementation. Maharaj (1999) in his findings he reveals that participation of users in decision-making produces more efficient and more sustainable projects. When communities influence

or control the decisions that affect them, they have a greater stake in the outcomes and are more committed to ensuring success. Participation helps to breakdown the cycle of dependence which characterizes much top down development work.

In the World Bank report (1998), it was revealed that 40% of the water supply infrastructures that were built during the Water Decade (1981-1990) were not working by 1998. The reasons cited were lack of community participation and the use of inappropriate technologies. It is now one decade further on. Many efforts have been made to reconsider technologies, and to take into account the experience, knowledge, needs and expectations of local water users. Conservation agencies are increasingly recognizing the need to involve and negotiate with different stakeholders and establish joint management systems to protect and rehabilitate degraded or vulnerable ecosystems.

Wakeman (1995) reveals that identification and formulation phases allow for the compilation of a balanced set of ideas, giving special attention to male and female opinions on water use, locations, options, and technology and how to manage it. It addresses the potential impacts the project will have on the lives of women and men and identifies subsequent measures. It allows for the collection of necessary information on gender issues through indicators that will be useful later in assessing the impacts of the project (Wakeman, 1995).

UNDP (2006) report reveals that communities contain competing interest groups, the rich and the poor, farmers with fields and livestock to water, landless farmhands with children to care for, marginalized groups and members of minority religions, tribes or castes, businessmen who own industries which require water, conservationists committed to protecting freshwater ecosystems, housewives who need water for drinking.

Norah (1994) indicates that experiences in the rural areas related to water resource management, the value given to water for irrigation and domestic use, the politicization of water in the peri-urban areas, show how water relates to power and results in power struggling. Therefore water is not just a vital element people need for life but also an element that can lead them to economic resources. Power issues place women in a very disadvantaged position. Their limited access to formal power reduces their negotiation capacity to get water supply systems required for their practical needs.

Marja-Leena *et al* (2011), indicates that the project planning stage creates the basis for taking account of the gender perspective when implementing the project. Well-conducted assessment of the gender perspective regarding the various project stages creates the preconditions for succeeding in gender mainstreaming. Without consciously including the gender perspective in the planning of project goals, activities, communications and assessment, no account of the gender perspective can be taken in project implementation.

The study under this objective also sought to understand whether women are consulted on the technology to be applied during the project implementation processes. Women are responsible for preparing food, washing clothes, cleaning. Family hygiene is in their hands - and caring for the ill when hygiene is insufficient. In developing countries, women and girls spend an estimated 40 billion hours every year hauling water from distant and frequently polluted sources. Women have been reported to spend as much as 8 hours per day carrying up to 40.8 kg of water on their heads or hips. Yet when technology is improved, women's needs tend to be overlooked (UN Water 2006).

There can be a variety of constraints to gender-sensitive programming. There is often lack knowledge about women's and men's roles in the sector. Projects may be designed in an inflexible manner, using a blueprint approach. Gender planning may be marginalized, separated from mainstream planning. Hardware and software aspects of projects may be poorly integrated. There may be an inadequate number of female staff, limiting village women's involvement in areas where they may not meet with male staff. The time, duration, and location of training may not take women's needs into account. All these aspects can be diagnosed, and corrected, using published guidance documents. Sadly, that happens only rarely at the moment (Wakeman, 1995).

Participation in sanitation hygiene management was also a key issue in this study. It was revealed that women are not simply passive users of water. In most parts of the world, they are managers of the community water supply. They are the ones who select water sources and determine which should be used for drinking water and which for bathing and watering animals. They monitor water quality and devise strategies to conserve supplies in times of scarcity. They protect and manage water sources and quality standards (Narayan, 1995). .

Rita (1989) in her study she conducted in the United States of America, she points out that educated woman have recently been deliberately entering the field of water management because the quality of water supplied is so vital to their children's health. She cites the case of Susan Seacrest, who founded the Groundwater Foundation when she began suspecting that her child's illness was a result of pesticide pollution in ground water. Thus, external projects and programs which neglect indigenous management and treat women as beneficiaries and users, and not

as water and waste managers and decision-makers, hamper their results and diminish women's position.

2.4 Gender mainstreaming in monitoring of WASH activities

Hunt (2004) in his findings revealed that during implementation, monitoring and evaluation, gender analysis helps to assess differences in participation, the effect of the project on gender relations, and disparities in the benefits and impacts between males and females. This is not unexceptional while implementing WASH activities. In this objective the study sought to establish whether participatory monitoring in the implementation of WASH activities can contribute to the sustainability of the same. Gender analysis is a means by which the development objectives of achieving gender equality can be reached. it can be used to assess and build capacity in and commitment to gender-sensitive planning and programming in donor and partner organizations, and to identify gender equality issues and strategies at the country, sectoral or thematic programming level.

Wakeman 1995 in his findings he further revealed that women's involvement in WSS sector activities springs from their traditional roles. Women are most often the users, providers, and managers of water in the household and may also be managers at local or community level. They are usually the guardians of household hygiene. They have a great deal of knowledge about water sources. Women and children will probably be the main users of any new or improved water systems; and women may be the main disseminators of new hygiene messages.

Wakeman 1995 further reveals that the benefits women may receive from improved WSS facilities can be classified into health and socio economic categories. Water sources which are closer to homes and which provide an adequate supply will decrease collection times, leading to gains in both time and energy. These gains may

be applied to a variety of activities, including leisure and income generation. Women may spend more time with their families or may improve the family's economic status through income generation. More convenient water can also reduce physical strain due to walking and hauling water long distances. Better quality water which remains uncontaminated helps to decrease water-related diseases. For some women, access to adequate sanitation ends their need to suppress urination or defecation until nightfall. Adequate sanitation also brings health benefits. Such important needs can be established if women and men's need are integrated in the project monitoring to identify any changes which needs to be made in the project cycle.

Protos *et al* (2007) indicates that a gender-sensitive WASH program will seek to go beyond the simple construction of facilities, addressing issues of maintenance and extended services. The fluid nature of the project is stressed, allowing for the incorporation of changes in the community and its surroundings, and new findings. Importantly, to be successful, the process of implementation and maintenance should be transparent and democratic.

Leticia (2008), states that it is known that household water provision is traditionally a female responsibility in most African communities. One would therefore expect that female members would dominate the bottom-most planning stage so as to correctly identify what they consider to be the key water problems worth considering in the planning business. Contrary to expectations, these so-called planning committees are overwhelmingly dominated by the male members of the community.

Wijk (2001) in his findings revealed that in segregated and secluded societies, it is often difficult or impossible for women to attend predominantly male meetings. Men heads of household represent the family and it is assumed that the women are

informed and influenced by their husbands. He further reveals that research shows that much communication is gender-segregated, and so male family members will keep the information to themselves. This hence affects any conclusions made during any monitoring process and that means most of the information is not shared among the project beneficiaries.

Leelamma (1998) reveals that the men are antagonistic towards the idea of women acquiring more facilities in their day-today life. The men thinks that from early morning to late at night women must be kept occupied with household responsibilities such as looking after children, cooking, cleaning, washing, attending other members of the family and animals and rendering a helping hand on the farms. This is a cultural bias against public participation, even in matters where women have more experience and expertise than men and hence affects women participation even in the monitoring of project activities.

Narayan 1995 revealed that women's participation was among the variables strongly associated with project effectiveness. Furthermore, he found out that the failure to take gender differences and inequalities into account can result in failed projects. For a case in India, compost pits located outside villages went unused, and women continued to deposit waste near their homes even when fined for doing so. They did this because they did not wish to be seen carrying loads of refuse to the outskirts of the village. If there had been consultation with women during the monitoring process, perhaps this problem could have been avoided and corrections made as required.

In many cases, water projects involve introduction and maintenance of new technology and construction work. These are not regarded as activities for women and they are often not offered the training necessary to equip them to enter these

fields. Though it is accepted that natural resource conservation and management cannot be achieved without the involvement of both men and women, women often miss out with regard to environmental education, extension services and job opportunities.

In a UNDP 2006 it is indicated that involving both women and men in integrated water resources initiatives can increase project effectiveness and efficiency. Participation by both women and men will improve project performance and improve the likelihood of sustainability. In other words, a project is more likely to achieve what planners hope it will achieve if women and men (both rich and poor) are active participants and decision makers.

Gender considerations therefore are crucially important at community level, where the partnership approach depends on all potential beneficiaries having a say in development activities. If women are to make their full contribution to sector development, they need to be involved also in professional and managerial roles at all levels. Because it is the potential scope of women's involvement and influence that has been neglected in the past, it is necessary for any discussion of gender issues to concentrate primarily on ways of stimulation and facilitating greater participation by women in WASH activities. This should not detract from the key point that the roles and responsibilities of women and men need to be considered together (Wakeman, 1995).

2.5 Gender mainstreaming in evaluation of WASH activities

According to White *et al* (1990), nowhere is it found widespread casual or indifferent evaluations of water sources. Most users have evaluative judgments and most are interested in ways of improving their supplies. Many projects have revealed that, when there are opportunities to improve water supplies, women participate

avidly, contribute labour, and are more diligent than men in maintaining installations and sources. It's simple self-interest but it benefits the entire community. Therefore if women are purposely involved in the assessment of relevance and the impacts of WASH facilities they can further contribute towards new learned lessons for future implementation of other WASH facilities.

Under this theme, the study sought to establish the benefits women and men have achieved with the presence of WASH facilities in the area. Wakeman (1995) in his findings revealed that there has been a rich collection of experience with women, water and sanitation during the last decade and many lessons have been learned. He indicates gender issues in the sector, rather than Women in Development (WID) issues. He further revealed that water and sanitation are issues for men, women and children. To achieve effective sanitation programs, men too must support and adopt improved hygiene practices. They must also take a fair share of the contributions in time, labor and money which so frequently are expected of women at present.

Wakeman (1995) revealed that the quality of participation is as important as the amount. Inclusion of women (and men) on management committees may not in itself provide for their effective participation. The way, in which committee members are chosen, whether they receive appropriate training and what their actual committee roles are all affect their degree of involvement and influence. Culturally sensitive approaches are also vital.

The 1992 Convention on Biological Diversity mentions the vital role that women play in the conservation and sustainable use of biological diversity and affirming the need for the full participation of women at all levels of policy making and implementation for biological diversity conservation.

Agenda 21 calls for the development of public participatory techniques and their implementation in decision-making, particularly the enhancement of women in water resource planning and management and urges that equality in all aspects of society particularly as pertains to access to resources, credit, property rights and agricultural input and implements.

Thomas et al (1997), continues to indicate that even a people-cantered approach does not automatically ensure that women and men's different needs and interests are reflected in development or conservation programming. If there is no explicit confrontation of gender equality issues, there will be no guarantee that women will receive the resources needed to contribute to development or conservation of the environment. True sustainability of these programs will only be achieved when women receive an equitable share of development and environmental resources and benefits.

Understanding the role of gender in water resource management requires attention to the complex relationship between productive and domestic uses of water, to the importance of participation in decision making of men and women, and to the equitable distribution of benefits and costs from improved infrastructure and management structures. It also requires an understanding of the interactions between institutional, socio-economic, cultural and environmental ecosystem functions, dynamics and systems.

World Bank, (1989), revealed that gender efficiency identifies women and men as the most important under-utilized resources, which programs and projects must incorporate for more effective and efficient development i.e. women and men are key factors in the various development sectors (water resource sector) throughout the

developing world. This would further contribute the long term operation of such facilities.

Through their direct involvement in projects, both as beneficiaries and participants, and through adequate planning and designing based on a proper understanding of gender differences, can ensure that projects achieve the immediate purpose and broad social economic goals and maximize returns on investment in these sectors. This report therefore holds that an all-inclusive approach if observed even up to the evaluation level, sound lessons will be drawn which will further influence the future deigns of any new WASH facilities to be implemented hence creating pronounced impacts to the beneficiaries.

2.6 Theoretical framework

The study was be based on Feminist theory which is one of the major contemporary sociological theories, which analyzes the status of women and men in society with the purpose of using that knowledge to better women's lives. Feminist theorists have also started to question the differences between women, including how race, class, ethnicity, and age intersect with gender. Feminist theory is most concerned with giving a voice to women and highlighting the various ways women have contributed to society (Ritzer *et al*, 2004)

This theory is based on four main types of feminist theory that attempt to explain the societal differences between men and women: Firstly, the gender difference perspective examines how women's location in, and experience of, social situations differ from men's. For example, cultural feminists look to the different values associated with womanhood and femininity as a reason why men and women experience the social world differently. Other feminist theorists believe that the different roles assigned to women and men within institutions better explain gender

difference, including the sexual division of labour in the household. Existential and phenomenological feminists focus on how women have been marginalized and defined as the other in patriarchal societies. Women are thus seen as objects and are denied the opportunity for self-realization (Anderson, et al 2009).

Secondly, gender-inequality theories recognize that women's location in, and experience of, social situations are not only different but also unequal to men's. Liberal feminists argue that women have the same capacity as men for moral reasoning and agency, but that patriarchy, particularly the sexist patterning of the division of labour, has historically denied women the opportunity to express and practice this reasoning. Women have been isolated to the private sphere of the household and, thus, left without a voice in the public sphere (Ashley Crossman-sociology.about.com).

Even after women enter the public sphere, they are still expected to manage the private sphere and take care of household duties and child rearing. Liberal feminists point out that marriage is a site of gender inequality and that women do not benefit from being married as men do. Indeed, married women have higher levels of stress than unmarried women and married men. According to liberal feminists, the sexual division of labour in both the public and private spheres needs to be altered in order for women to achieve equality (Ritzer *et a*l, 2004).

Thirdly, theories of gender oppression go further than theories of gender difference and gender inequality by arguing that not only are women different from or unequal to men, but that they are actively oppressed, subordinated, and even abused by men. Power is the key variable in the two main theories of gender oppression: psychoanalytic feminism and radical feminism. Psychoanalytic feminists attempt to explain power relations between men and women by reformulating

Freud's theories of the subconscious and unconscious, human emotions, and childhood development. They feel that conscious calculation cannot fully explain the production and reproduction of patriarchy.

Radical feminists argue that being a woman is a positive thing in and of it, but that this is not acknowledged in patriarchal societies where women are oppressed. They identify physical violence as being at the base of patriarchy, but they think that patriarchy can be defeated if women recognize their own value and strength, establish a sisterhood of trust with other women, confront oppression critically, and form female separatist networks in the private and public spheres.

Lastly, structural oppression theories posit that women's oppression and inequality are a result of capitalism, patriarchy, and racism. Socialist feminists agree with Karl Marx and Freidrich Engels that the working class is exploited as a consequence of the capitalist mode of production, but they seek to extend this exploitation not just to class but also to gender.

Inter-sectionality theorists seek to explain oppression and inequality across a variety of variables, including class, gender, race, ethnicity, and age. They make the important insight that not all women experience oppression in the same way. White women and black women, for example, face different forms of discrimination in the workplace. Thus, different groups of women come to view the world through a shared standpoint of heterogeneous commonality (Ritzer *et al*, 2004).

2.7 Knowledge gaps.

According to Wakeman 1995 there has been a rich collection of experience with women, water and sanitation during the last decade and many lessons have been learned. The most trending currently is gender issues in the water sector rather than Women in Development (WID) issues. It is recognized that water and sanitation are

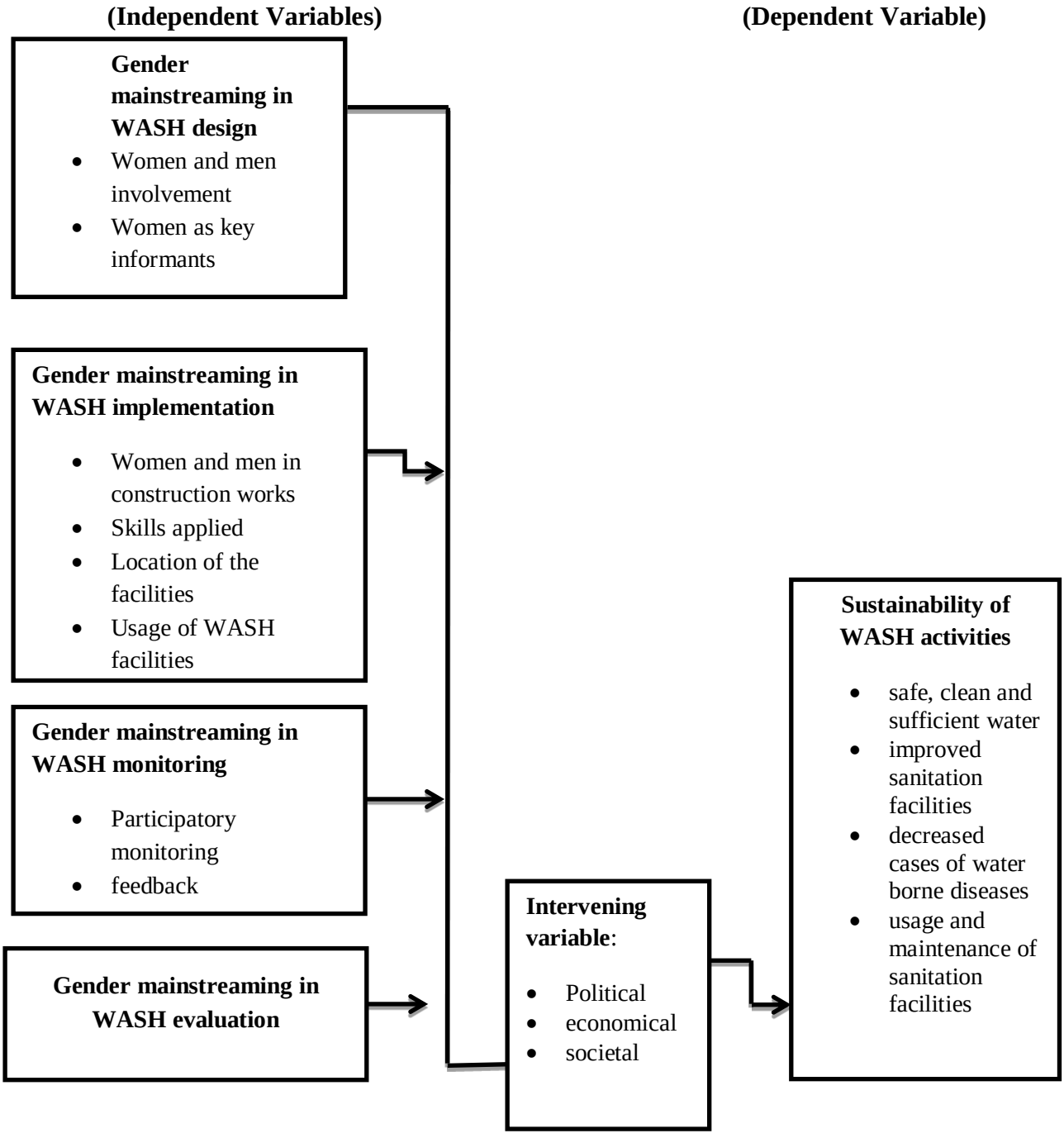
issues for men, women and children. To achieve effective sanitation programs, men too must support and adopt improved hygiene practices. They must also take a fair share of the contributions in time, labour and money which so frequently are expected of women at present.

Thus the study will provide information to project implementing agencies, stakeholders, the government, scholars and the researcher on the influence of gender mainstreaming and how it will effect on the sustainability of the WASH facilities.

2.8 Conceptual framework

The study was be guided by the following conceptual framework;

Figure 1; Conceptual framework



Source: Researcher

The framework clearly indicates that women's and men's involvement should begin during the first stage of the project process. If not included at this point, it is

more likely that they will be excluded at later stages as well. It is also more effective to involve them in decision-making about all the processes and other choices rather than attempting later to have them utilize systems not suited to their needs. Where inappropriate technologies have been installed, it has also been found that hygiene education makes little or no difference. Where projects do not involve women, the result has sometimes been a lack of access of poor women to improved facilities. Quality as well as quantity is important when planning for and assessing participation (Wakeman W, (1995),

Implementation of WASH activities should also take consideration on the technologies to be used and how it will affect both women and men. Involving and motivating the women and men participate in the construction works will also allow both parties to be acquainted with all the technological aspects of the WASH activities. Operation and maintenance aspects of the WASH structures will not be an issue once the projects are completed. If one gender is fully involved leaving the other definitely there will deviation in the usage and sustainability of the WASH activities.

Monitoring of the WASH activities needs also to be very inclusive. Practices and technologies applied during the project process needs to be fully understood by both men and women. Existing WASH supply practices need also to be thoroughly investigated, including types of technology, and what water sources are used by whom, when. The findings from the investigation need to be distinguished for different user a category that is men, women and occupational income groups. It is during this process that any deviation of on the usage and adoptability is corrected and action taken so that sustainably is ascertained early enough. Otherwise if this is neglected it might not be corrected in the future.

Projects that go through the appropriate steps in the design and implementation phases will take less time between approval and implementation, and significantly reduce the risks involved in implementing a project. Budgeted resources are more likely to be used to implement activities and achieve the intended results and objectives. Project sustainability beyond the project duration and replicability of the project strategy and methodology should be borne in mind throughout the implementation period.

Evaluation is a time-bound exercise that attempts to assess the relevance, performance and success of current or completed projects, systematically and objectively. Evaluation determines to what extent the intervention has been successful in terms of its impact, effectiveness, sustainability of results, and contribution to capacity development. Evaluation, more than monitoring, asks fundamental questions on the how and why of the overall progress and results of an intervention in order to improve performance and generate lessons learned. When carried out after project completion, evaluation can contribute to extracting lessons to be applied in other projects. Evaluations at the midpoint of the project or programme also provide timely learning that can suggest mid-course adjustments.

Equal involvement of both women and men in all stages and at all levels of the project operation is very critical especially in the management, organization, construction, operation, and maintenance. Projects designs should be gender sensitive and accessible by all. Knowledge management especially organization of trainings and information availability should be well distributed to the women and men benefiting from the WASH programs activities.

In the framework, political issues may also affect the functionality and sustainability of any implemented WASH activities. Where politics influence the

adoption of new WASH technologies this may also affect the implementation process of the WASH activities. it may take longer time than planned and hence cost escalation may arise leading to uncompleted projects.

An effective approach needs to be understood as a ‘learning approach’ and not a one-size-fits-all ‘blueprint’. The benefits to women of enhanced water access are decided by the degree to which they are consulted. This can influence the design, location and use of water supply and waste disposal facilities. Small aspects of design can make a big difference to whether or not a facility is used by the community. For example, where a washing slab is not situated in close proximity to a water source, women are more likely not to use it. Instead they will use natural water resources, such as rivers and lakes, as they can wash clothing on the shores without having to carry excess water long distances.

2.9 Summary of literature review

This chapter has reviewed the past available information globally and locally which is related to the research on gender mainstreaming and sustainability of WASH activities. The chapter has also reviewed related literature on WASH designing, implementation, monitoring and evaluation of WASH facilities. Reviewed literature indicated that involving both women and men in the WASH life cycle would positively contribute towards the sustainability and operation of such facilities hence producing the intended impacts. . Hunt (2004) further indicates that during implementation, monitoring and evaluation, gender analysis helps to assess differences in participation, the effect of the project on gender relations, and disparities in the benefits and impacts between males and females.

It also came out that the shortcomings in development programmes and projects is that of gender, poverty and environment are often included solely as an

afterthought or as separate and mutually exclusive categories. Thus if gender issues are addressed at project conception, they can more easily be incorporated in the design, implementation and evaluation. It also emerged that programmes that do not take into consideration the differing needs of men and women and their social, economic, cultural, linguistic realities during all their phases run the risk of being ineffective, inefficient and unsustainable (UNDP 2006). Hence gender mainstreaming is inevitable throughout the WASH facilities life cycle.

Lundqvist (1994), indicated that the objective of water projects is not to build a dam or to install a pump. It is to ease the burden and drudgery of those who have to draw water from unsafe and far-away sources. It is to improve health, boost production, stabilize income etc. And for that to happen and for the positive results not to wither away quickly, the projects must function, be used, and perhaps most important, they must be part of a more general process of social change

Maharaj 2003revealed that a safe, adequate and sustainable water supply for all is one of the main social goals enunciated at global level in the past few years. One-quarter of the developing world's population still lacks clean water while millions die annually from water related diseases. As the world population continues to grow, the need and demand for water escalates. Water has become a strategic resource, its control is a source of power, a key to economic development, and a trigger to socio-political stress.

Related literature on WASH activities and practice of community participation in project design has been reviewed. Participation of users in decision-making produces more efficient and more sustainable projects. When communities influence or control the decisions that affect them, they have a greater stake in the outcomes and are more committed to ensuring success. Participation helps to breakdown the

cycle of dependence which characterizes much top down development work (Niala M. *et al*). The study has closed the identified gaps highlighted in this section and provided an avenue for further research activities.

CHAPTER THREE:

RESEARCH METHODOLOGY

3.1 Introduction

This chapter has been arranged in eight sections as follows: research design, target population, sample size and sample selection. The fourth to the eighth sections comprises of research instruments (with both ways of maintaining instrument validity and reliability), data collection procedure, data analysis techniques and lastly ethical considerations

3.2 Research design

The study used a descriptive survey design which is an arrangement of conditions for collecting and analysing of data in a way that gives a mix of relevance to the purpose of the study (Kothari, 2004). The design is well suited to studies in which individuals are used as a unit of analysis in order to measure generalizations (Gall and Borg, 1999). The design was more relevant for this study since it is the most widely used technique to gather information which describes the nature and extent a specified set of data ranging from physical counts and frequencies (Oso and Onen, 2005.)

Questionnaires were directly administered to the respondents who were gathered at a particular place agreed by the respondents' and the researcher. Respondents were guided through to fill in the questionnaires. Once they completed the task, the questionnaires were collected. To reach more respondents in a day, it was scheduled in a way to have at least three groups visited in a day. A time schedule was drawn merging the groups near to each other for easy accessibility. This ensured that the time taken to reach all the respondents was minimized hence reducing the overall cost.

3.3 Target population

Mugenda and Mugenda (1999) define target population as that population to which the researcher wants to generalize the results of a study.

For the purpose of this study, 25 community groups benefiting from WASH projects were used. Each group had an approximate of 50 heads of households making a total of 1250 heads of households. (Source: table 1-Water department, Bondo sub county 2009-2013).

3.4 Sample size and Sampling process

This section discussed sample size and the sampling process. According to Welman and Kruger (2001), a sample size can be defined as a finite part of a statistical population whose properties are studied to gain information about the whole population. Sampling is the process of selecting units (e.g., people, organizations) from a population of interest so that by studying the sample we may fairly generalize our results back to the population from which they were chosen.

3.4.1 Sample size and sampling process

The study adopted simple random sampling procedure where 291 heads of households from the 25 community groups were selected as respondents to this research (Krejcie and Morgan1970 and Cohen (1969). Snow balling sampling technique was applied where one group was to offer direction to the next available group.

3.5 Research instruments

The study used questionnaires, for capturing quantitative data and in-depth interviews for collection of qualitative data, as the main tools for collecting data.

The questionnaire was designed to take a structured form. It was divided into two sections with section A capturing the respondents bio data and socio demographic

information (age, education level, gender). Section B was further sub divided into subsections, each addressing specific research objectives.

In-depth interviews through focus group discussions with key informants were also conducted to gain an in-depth understanding of WASH activities in the area

3.5.1 Pilot testing

According to Teijlingen and Hundley (2001), the term pilot study is used in two different ways in social science research. According to him a pilot study can be the pre-testing or 'trying out' of a particular research instrument.

The pilot testing was done using ten respondents from the target population. This happened after an authorization from the relevant authorities. The results were carefully reviewed with the supervisors to identify the weak areas in the research instruments that needed to be rectified.

For further refining of the instrument a second pilot study was also conducted with the same respondents. The findings were further discussed with the supervisors to ensure that the instrument is within the set standards.

3.5.2 Validity

Validity is the accuracy and meaningfulness of inferences which are based on research results. It is the degree to which results obtained from the analysis of the data actually represent the phenomena under study. It has to do with how accurately the data obtained in the study represents the variables of the study (Mugenda &Mugenda, 1999).

The research instruments were subjected to review by supervisors to ensure they captured the relevant data. The tools were subjected to peer review by colleagues. This facilitated revision of research questions which were not clear,

hence improving their validity. The researcher developed clear questions guided by research objectives which captured precise and relevant information ensuring research instruments measured what they were intended to measure Tariq (2009).

3.5.3 Reliability

Reliability is defined by Mugenda and Mugenda (2009) as the degree to which a research instrument yields consistent results after repeated trials. Reliability is an indication of the stability and consistency with which the instrument measures the concept and is influenced by random error.

Joppe, (2000) defines reliability as the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable.

Cooper and Schindler (1998) also note that, reliability is a situation where results are consistent when repeated measures of the same persons using the same instruments are undertaken. Reliability in research is influenced by random error which can be defined as deviation from true measure due to factors that have not been effectively addressed by the researcher. The study ensured reliability by carrying out a test and retest on the research instruments with ten selected respondents, five key informants among the target beneficiary and three relevant government officials in the division.

3.6 Data Collection Procedure

Both quantitative and qualitative techniques were used during the study. Trained research assistants were used to collect the data using data collection instruments described in section 3.5. The research instruments were returned each day for editing before submission for analysis. The data collection took three weeks.

3.7 Data analysis techniques

According to Kothari (2004), data processing implies editing, coding, classification and tabulation of collected data to enable analysis while analysis refers to the computation of certain measures along with searching for patterns of relationships that exist among data groups. To ease analysis, data coding was done through sorting and editing filled questionnaires to find out any inconsistencies. Verified data from the questionnaires was analysed through descriptive statistics. The study used both quantitative and qualitative approaches in processing and analysing the data. Quantitative data analysis was done using frequencies and percentages aided by Microsoft Excel. Qualitative data was analysed by use of content analysis.

3.8 Ethical Considerations

The study sought permission from the Kenya National Council for Science and Technology upon an online presentation of one PDF copy of approved research proposal. All the ethical aspects of research, which include getting informed consent of respondents to participate in the research, ensuring anonymity, privacy and confidentiality, were observed.

Participants were informed of the intentions of the study so that they can participate willingly. The researcher collected and analysed data professionally and did not distort information to conform to any preconceived opinions. The identities of the respondents were protected by reporting data as a block and not highlighting individual cases.

CHAPTER FOUR

ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSIONS

4.1 Introduction

This chapter presents the findings of the study which have been discussed based on questionnaire response rate, demographic characteristics of the respondents, research objective themes which include; gender mainstreaming in WASH design, implementation, monitoring, evaluation and its influence on the sustainability of WASH activities.

4.2 Questionnaire response rate

The study administered 267 questionnaires to household heads out of the targeted 291 household heads. This marked a 92% response rate. This was reached due to the fact that some groups produced less targeted members as requested. The response rate of the group members ranged between 9 to 12 members and this contributed to the reduction of the response rate by approximately 8%. The 8 % came about because the members of the groups were not available during the time of the study. The response arrived at is acceptable according Rubin and Babbie (2008) because a response rate of over 50 % or more is generally considered as an acceptable response rate; hence in this study the response rate was acceptable.

Table 0.1: Questionnaire respond rate

Response rate	**Frequency (f)**		**Percent (%)**	
	Male	**Female**	**Male**	**Female**
	101	166	38	62
Target respondents	291			
Achieved response	267			
Percent (%)	**92**			

4.3 Demographic characteristics of the respondents

This section presents the background information of the respondents who were the target in the study. This included distribution of respondent by; age, gender and level of education

4.3.1 Distribution of respondent by age

Age was considered an important aspect since this would determine the quality of information and also understanding on the issues of gender mainstreaming. This would also determine the availability of the respondents to participate actively in WASH implementation activities in providing skilled and unskilled labor. The results of the distribution of the respondents by age is as represented in table 4.2

Table 0.2: Distributions of respondents by age

Age of respondents in years.	Frequency (f)		Percent (%)	
	Male	**Female**	**Male**	**Female**
21-30 yrs.	13	25	5	9
31-40 yrs.	50	13	19	5
41-50 yrs.	25	65	9	24
51-60 yrs.	13	25	5	9
over 60 yrs.	0	38	0	14
Total	**101**	**166**	**38**	**62**

Source: household heads (bondo sub county, Maranda division)

The results from table 4.2 indicates that out of the 267 respondents interviewed, 13(5%) men and 25(9%) women aged between 21 to 30 years, 50 men (19%) and 13 women (5%) aged between 31 to 40 years, 25 men (9%) and 65 women (24%) aged between 41 to 50 years, 13 men (5%) and 25 women (9%) were aged between 51 to 60 years while 0 men (0%) and 38 women (14%) aged over 60 years. From the table it is indicating that as the ages increase in men their number also decreases (from 50 to 13). At the prime age of 31-40 years the men are available and therefore being the head of the household you can only administer the questionnaire to him giving few chances for the women of the same age to get the opportunity to express their views on the topic of study. As the age advances for women, more are available which means their availability may not contribute to active participation in the implementation process of the WASH activities. At the age of over 60 years the study indirectly found out that most of the respondents were widowed and illiterate and therefore the question of whether they can make informed

decision on the implementation processes of the WASH activities. These being aged women raised the issue of their capability in participating in manual work required during the implementation process of the WASH facilities.

4.3.2 Distribution of respondents by gender

The study sought to understand the gender that was available in the area in case involvement is required during implementation and decision making on WASH activities and how they would influence the sustainability of such activities.

Table 0.3: Distributions of respondents by Gender

Gender of respondent	Frequency (f)	Percent (%)
Male	101	38
Female	166	62
Total	**267**	**100**

Source: household heads (bondo sub county, Maranda division)

From table 4.3 it is indicative that out of the 267 respondents, 101 (38%) were men while 166 (62%) were women. This implies that women could be readily available to provide either skilled or unskilled labour as required. However Wakeman (1995), states that women's and men's involvement should begin during the first stage of the project process. If not included at this point, it is more likely that they will be excluded at later stages as well. It is also more effective to involve them in decision-making about technology and other choices rather than attempting later to have them utilize systems not suited to their needs and therefore affecting the sustainability of the WASH facilities. Women who are the key users of water needs to be engaged from the very first stages of the project cycle. Adoption of the

technology applied is more likely to be achieved if women are inclusively engaged with the men at the early stages of the WASH conceptualization.

4.3.3 Distribution of respondents by educational level

The study sought to establish the educational level of the respondents available in the area. The purpose of this was establish the skills available and whether the respondents can make informed decisions pertaining to the type of WASH facilities being implemented in the area. As well the level of education could also determine whether both genders could make choices on the sanitation management at the household level.

Table 0.4: Distributions of respondents by education level

Level of education	Frequency (f)		Percent (%)	
	Male	Female	Male	Female
Primary	38	115	14	43
Secondary	25	51	9	19
Tertiary	38	0	14	0
Total	**101**	**166**	**38**	**62**

Source: household heads (bondo sub county, Maranda division)

As revealed in table 4.4, the respondents with primary school level were 38 men (14%) and 115 women (43%) respectively. 25 men (9%) and 51 women (19%) had attained secondary school level. Only 38 men (14%) with no women had attained tertiary educational level. From the table it is also indicative that most women fell in the primary education category raising questions on their technical capability to participate in the implementation of the WASH facilities.

4.4 Gender Mainstreaming in the design of WASH activities

This was the first objective of the study which sought to understand whether gender mainstreaming in the designing of WASH activities would contribute towards the sustainability of the same. To establish this the respondents were asked whether both men and women were involved during the designing process of the WASH activities, whether they were asked what they like and don't like about their current WASH facilities, whether women were directly approached as informants on their own particular roles, needs, problems and possibilities and whether this was done during the current identification of the current WASH facilities.

4.4.1 Involvement of women and men during the design process

The study sought to establish whether both women and men were involved during the design process of WASH activities. Involvement of women and men during this process marks a very critical indicator whether both would continue to be involved at all levels of the activities cycle. Monica et al (1995) indicates that successful strategies for designing and implementing policies, programs, and projects in the water and sanitation sector rely on demand-driven, participatory approaches rather than supply-driven, blueprint approaches. Such strategies require the active participation of both men and women at all stages of the project cycle. The results of the responses are as indicated in table 4.5

Table 0.5: Involvement of women and men in WASH activities

Response	Frequency (f)		Percent (%)	
	Male	**Female**	**Male**	**Female**
Yes	76	90	28	34
No	25	76	9	28
Total	**101**	**166**	**38**	**62**

The results from table 4.5 revealed that 76 males (28%) and 90 females (34 %) agreed that both men and women were involved during the designing process of the WASH activities. They indicated that being involved in the initial contact meeting between the implementing agencies contributed to their involvement in the entire implementation process of the WASH activities. The study further revealed that 25 male (9%) and 76 females (28%) did not agree to whether both men and women are involved during the design of WASH activities. The researcher went further to establish why some respondents did not agree and the response to this was that the community is still patriarchal and the technical trainings are given to men.

4.4.2 What they like and do not like about the current WASH facilities

The purpose of this sub theme was to investigate whether the existing designs of the WASH facilities suit the needs of both men and women and whether redesigning can be of necessity in the development of new WASH facilities. Wakeman (1995), continues to state that women's and men's involvement should begin during the first stage of the project process. If not included at this point, it is more likely that they will be excluded at later stages as well. It is also more effective to involve them in decision-making about technology and other choices rather than attempting later to have them utilize systems not suited to their needs. Where

inappropriate technologies have been installed, it has also been found that hygiene education makes little or no difference. The results or the responses are as indicated in table 4.6.

Table 0.6: What women and men like and do not like about current WASH facilities

Response	Frequency (f)		Percent (%)	
	Male	**Female**	**Male**	**Female**
Yes	101	151	38	57
No	0	15	0	5
Total	**101**	**166**	**38**	**62**

The results from table 4.6 revealed that 101 men (38%) and 151 women (57%) agreed that they were being asked what they like and don't like about their current WASH facilities. Only 15 women (5%) disagreed to that. This indicates that if they are being involved then the existing and any upcoming WASH facilities would be of ideal use to them and this would promote the overall purpose of having the WASH facilities in the communities. This supports Shoji (2003) who postulated that participation by both women and men should not be objects of development but rather equal partners and this would lead to sustained interventions.

4.4.3 Women directly approached as informants on their own particular roles, needs, problems and possibilities on WASH activities

This sub theme was to investigate whether women in particular can make their own informed decision on the roles to play, their own special needs pertaining the design of WASH facilities, the problems they encounter in the usage of any existing WASH facilities. The Dublin statement (1992), pays special attention to women as

they play a central role in the provision, management and safeguarding of water. It also stresses on their essential role in the concern for effectiveness and efficiency of water sector programmes, their importance for environmental sustainability and the absolute need to have gender-oriented analysis for the success of water resource projects. Having women make informed decision on the technology to be applied when designing some of the WASH facilities would determine if they will continue to participate in the long-term management and operation of such facilities. The results of the responses are as outlined in table 4.7.

Table 0.7: Women approached as informants on their own particular roles, needs, problems and possibilities on WASH facilities

Response	**Frequency (f)**		**Percent (%)**	
	Male	**Female**	**Male**	**Female**
Yes	13	38	5	14
No	88	128	33	48
Total	**101**	**166**	**38**	**62**

Source: household heads (bondo sub county, Maranda division)

From table 4.7 it is clear that women are not fully involved as their own in deciding the kind of designs to be applied when developing the WASH facilities. 128 of the respondents who were women (48%) said that they were not approached as informants during the designing of the WASH facilities. 88 (33%) of the respondents who were men also indicated that women are also not approached as informants on the designs of WASH facilities. They indicated that being in a patriarchal society; women still don't have voice of their own and therefore cannot make decision which can affect a whole community. Therefore the question still

remains when and how shall we have an all-inclusive society which can function either with or without the both genders. As Abbot (1996) revealed in his findings, many project implementing organizations have issues of community participation in project papers. This means that community participation is compromised and therefore the sense of ownership and motivation to operate and maintain the systems after project completion is not guaranteed. For meaningful community participation, flexible policies and procedures to allow communities explore ideas and make their own decisions is necessary.

4.4.4 Whether women were approached as key informants during the identification of the current WASH programs

The study further sought to know whether women were involved as key informants in any of the current WASH activities. Neglecting the woman who has the sole management of the WASH facilities will automatically have an adverse effect on the sustainability of the same. Bunch (2006) further indicates that gender process is long and ongoing. Practitioners are still struggling to bring a consciousness of gender issues to development work that will change perceptions and bring about true equality between men and women. Much of the work in the water sector today is affected by gender inequalities and hence inappropriate development projects. Without giving a proper focus to gender issues, projects will often end up disadvantaging the principal group of water users, thereby affecting the lives of an already vulnerable group of stakeholders i.e. women. The results were as outlined in table 4.8.

Table 0.8: women approached as informants during the identification of the current WASH facilities

Response	Frequency (f)		Percent (%)	
	Male	**Female**	**Male**	**Female**
Yes	15	13	6	5
No	86	153	32	57
Total	**101**	**166**	**38**	**62**

Table 4.8 indicates that 153 (57%) women and 86 (32%) said that women were not involved as key informants in the identification and design of the current WASH activities. Only 15men (6%) and 13(5%) women indicated that there was any involvement. It is quite evident that women have been seen as wives and mothers and their main issues was supposed to be obtain access to food nutrition and health care. Their productive and community service functions have not been fully recognised. This is as indicated in the UN charter (1945) and Universal Declaration for Human Rights (1948). Projects and programmes need to address gender inequalities for purposes of sustained water resource management and overall human development (UNDP 2006)

4.5 Gender mainstreaming in implementation of WASH activities

This was the second objective of the study which sought to understand whether gender mainstreaming in the implementation of WASH activities would contribute towards their sustainability.

To establish this the respondents were asked whether women and men were equally involved in in all stages and at all levels of WASH activities implementation, whether men and women have been consulted about the technology to be employed,

whether women are equally free to participate in all aspects of construction, whether women are trained in actual construction, operation and long-term maintenance of the facilities, whether facilities are conveniently located for men and women, whether men and women equally participate in the maintenance of WASH facilities, whether men are encouraged to assist in maintaining WASH facilities, whether men and women carry pour flush for general cleaning of latrines, whether both men and women are included in hygiene trainings and whether both men and women participate equally in decisions for upgrading and improvement of WASH facilities.

4.5.1 Equal women and men involvement in all stages and at all levels of the WASH activities implementation

The study sought to understand whether both men and women are involved at all stages and processes of WASH activities implementation. Having men and women participate in the construction, operation and maintenance gives a very strong backup as pertains to functionality and sustainability of such facilities. Maharaj (1999) postulates that participation of users in decision-making produces more efficient and more sustainable projects. When men and women influence or control the decisions that affect them, they have a greater stake in the outcomes and are more committed to ensuring success.

Participation helps to breakdown the cycle of dependence which characterizes much top down development work. In his study, Wakeman (1995) indicates that many community WASH facilities are designed assuming that men are responsible for the public sphere and women for the private sphere. Yet experience have shown that often such a strict distinction should not be made between the two. Women may have major say over management of water in the home, but they may also manage communal facilities and press community leaders for improvements. To

establish participation of both women and men in the implementation process, the results revealed as presented in table 4.9

Table 0.9: Equal women and men involvement in all stages and at all levels

Response	Frequency (f)		Percent (%)	
	Male	Female	Male	Female
Yes	25	90	9	34
No	76	76	28	28
Total	**101**	**166**	**38**	**62**

Results from table 4.9 reveal that, 25 men (9%) and 90 women (34%) indicated that both men and women were being involved though out the implementation process of WASH activities. However 76 men (28%) and 76 women (28%) felt that both men and women were not being involved in the entire implementation process of WASH activities. Cumulatively the number of respondents who indicted no participation were higher than those who responded to participation. Technological capacities barred either of the gender to fully participate in the entire implementation process. Some men and women also believed they should not do the hard work of digging the trenches for cases of pipeline extensions. Respondents from urbanized areas of Bondo tended to be more involved because their level of empowerment varied from the women and men from the sub urban areas.

4.5.2 Women and men consulted about the techniques to be employed

According to a World Bank (1998), 40% of the water supply infrastructures that were built during the Water Decade (1981-1990) were not working by 1998.

The reasons cited were lack of community participation and the use of inappropriate technologies. In this sub theme, the study sought to investigate whether men and women were being consulted on the technologies to be employed while implementing the WASH activities as this would determine the usability and operation of the activities. Efforts are being made to reconsider technologies, and to take into account the experience, knowledge, needs and expectations of local water users. The results of the responses are as outlined in table 4.10

Table 0.10: Women and men consulted about the techniques to be employed

Response	**Frequency (f)**		**Percent (%)**	
	Male	**Female**	**Male**	**Female**
Yes	25	64	9	24
No	76	102	28	38
Total	**101**	**166**	**38**	**62**

Source: household heads (bondo sub county, Maranda division)

Results as presented in table 4.10 reveals that, 38% of the respondents (102 women) and 76 men (28 %) indicated that there were no consultations on the technology to be employed during implementation of the WASH activities. Use of external contractors was a major concern because respondents indicated that they could see artisans working on the WASH facilities yet they have local artisans who could be engaged to do such works. 25 men (9%) and 64 women (24%) indicated that there was consultation on the on the technology to be applied during the construction processes of the WASH activities. In this category those consulted had some basics of technical skills but their contributions to the designs did not justify being adopted but the contractors would work within their own designs and

processes. It is therefore ideal to recognise the need to involve and negotiate with relevant stakeholders on the techniques to be applied for purposes of running sustainable ecosystems.

4.5.3 Free equal women participation in all aspects of construction

In this sub theme the researcher wanted to establish whether the women can be free to participate at any construction stage of any WASH facility for instance digging a shallow well, mixing concrete, erecting walls, making bricks or accommodating external labourers who might be working on the projects. The essence here is to have the woman also participate independently in the maintenance of such facilities in case of breakdowns. In most world societies women are the main water users and also responsible for preparing food, washing clothes and cleaning. Family hygiene is in their hands and takes care for the ill when hygiene is insufficient. Women have been reported to spend as much as 8 hours per day carrying up to 40.8 kg of water on their heads or hips. Yet when full application of technology is needed, they tend to be overlooked or they don't believe in their capabilities (UN Water 2006). The respondents were asked whether women can freely participate in all aspects of construction and the results are as represented in table 4.11

Table 0.11: Free equal women participation in all aspects of construction.

Response	Frequency (f)		Percent (%)	
	Male	**Female**	**Male**	**Female**
Yes	76	52	28	19
No	25	114	9	43
Total	**101**	**166**	**38**	**62**

Source: household heads (bondo sub county, Maranda division)

Results from table 4.11 revealed that 76 men (28%) and 52 women (19%) agreed that women were free to participate in all aspects of construction. The findings also revealed that 25 men (9%) and 114 women (43%) did not agree to women being free to fully participate in all aspects of construction. The general reason given was that most construction works is considered as men's work which is regarded as heavy and risk especially digging of shallow wells and pit latrines. It also came out that women can participate in feeding labourers and doing lesser jobs like supplying water and bricks to the construction sites.

4.5.4 Women being trained in the actual construction, operation and long-term maintenance of the facilities

In this sub theme, the study sought to understand whether women are trained in the actual construction works like erecting pit latrines walls, installing concrete rings in shallow wells, erecting water tank walls, lying of pipes in a pipeline extension project including being trained on the overall operation and maintenance of such facilities. The results are presented in table 4.12.

Table 0.12: Women trained in the actual construction processes

Response	Frequency (f)		Percent (%)	
	Male	**Female**	**Male**	**Female**
Yes	9	39	3	15
No.	92	127	35	47
Total	**101**	**166**	**38**	**62**

Source: Household heads (Bondo sub county, Maranda division)

The results from table 4.12 indicates that 9 men (3%) and 39 women (15%) indicated that women undergo training on the actual construction process of WASH facilities while on the other hand 92 men (35%) and 127 (47%) women indicated that women are not trained in the actual construction processes. The reasons given for this is that traditionally men have been taken to poly-techniques to undergo such trainings and therefore women had not been given such opportunities. Thus even during the project implementation processes women still are yet not factored into the community trainings which are organized for the purposes of including all the stakeholders during the project implementation process. However as Narayan (1995) revealed in his findings, women are not passive users of water. They can also be good managers of water supplies and this can only be achieved through capacity enhancement.

4.5.5 Convenient location of the WASH facilities for men and women

The study sought to investigate whether the WASH facilities specifically pit latrines were conveniently located for both men and women. Interestingly it came out that the parents and their sons/daughters in law could not share the same pit latrines and there was also the specific location where the pit latrine had to be

constructed. The sons and their wives who could not construct just pit latrine anywhere within the compound had to look for their convenient time when to use the facility so long as they will not meet with their parents (in laws).

In other cases it also appeared that the two could not completely share the facility and therefore the question was then where do they release themselves? For cases of shallow wells and other water structures the respondents felt that they were currently conveniently located as compared to previous times and therefore time spent during water collection had reasonably been reduced. The results of the responses are as represented in table 4.13

Table 0.13: Convenience location of facilities for men and women

Response	Frequency (f)		Percent (%)	
	Male	Female	Male	Female
Yes	89	102	33	38
No	12	64	4	24
Total	**101**	**166**	**38**	**62**

Source: Household heads (Bondo sub county, Maranda Division)

From table 4.13, 89 men (33 %) and 102 women (38%) felt that the facilities were conveniently located especially the shallow well and the pipeline extensions which had facilitated water to close proximity. For fit latrines they felt they were also conveniently located apart from the cultural issues affecting the sharing of the facility. 12 men (4%) and 64 women (24%) felt that the accessibility of some of these facilities was not convenient to all members of the household. A pit latrine is a very vital facility in a household if water borne diseases are to be controlled. Barring

family members its accessibility has its own merits and demerits. Father and daughters-in-law not meeting at the facility has its own culture-social merit of respect but on the on the other hand it has its demerits because open defecation would be the remaining option which could lead to compromise in sanitation and hygiene management.

4.5.6 Equal participation for men and women in maintenance and upgrading of WASH facilities

The study sought to understand whether men and women can equally participate in the maintenance of WASH facilities particularly pit latrines and shallow wells. The results are presented in table 4.14.

Table 0.14: Men and women in maintenance and upgrading of WASH facilities

Response	**Frequency (f)**		**Percent (%)**	
	Male	**Female**	**Male**	**Female**
Yes	24	26	9	10
No	77	140	29	52
Total	**101**	**166**	**38**	**62**

Source; Household heads (Bondo Sub County, Maranda division)

From table 4.14 it revealed that 24 men (9%) and 26 women (10%) indicated that there was equal participation for men and women in the maintenance of WASH facilities. 77men (29%) and 140 women (52%) indicated that men and women do not equally participate in the maintenance of the WASH facilities. For pit latrines and shallow wells the women can attend to the less technical tasks while the men can attend to the heavier tasks like deepening and servicing of the water pumps. As Maharaj (1999) revealed in his findings, safe, adequate and sustainable water supply

is one of the main social goals enunciated at global level for the pat years. This can only be achieved if we have well maintained WASH facilities particularly sanitation facilities like the pit latrines.

4.5.7 Encouragement of men to assist in maintaining sanitation facilities

The study sought to find out whether men in particular are encouraged in maintaining sanitation facilities like pit latrines and toilets in case one misuses or finds misused. The results are as presented in table 4.15

Table 0.15: Men to assist in maintaining sanitation facilities

Response	**Frequency (f)**		**Percent (%)**	
	Male	**Female**	**Male**	**Female**
Yes	101	114	38	43
No	0	52	0	19
Total	**101**	**166**	**38**	**62**

Source: Household heads (Bondo sub county, Maranda division)

From table 4.15, 101 men (38%) and 114 women (43%) revealed that men are being encouraged to maintain sanitation facilities. However 52 women (19%) felt that still men may not take up the initiative because maintenance of pit latrines is taken as women and girls work.

4.5.8 Whether men carry water for pour flush and for general latrine cleaning

Under this sub theme, the study sought to understand whether men can carry water for pour flush facilities. The results are as represented in table 4.16.

Table 0.16: Men carry water for pour flush and for general latrine cleaning.

Response	Frequency (f)		Percent (%)	
	Male	**Female**	**Male**	**Female**
Yes	0	0	0	0
No	101	166	38	62
Total	**101**	**166**	**38**	**62**

Household heads (bondo sub county, Maranda division)

From table 4.16, it indicated that 101 men (38%) and 166 women (62%) did not agree to men carrying water for pour flush. Most of the facilities are pit latrines which may have cemented floor or earthen floor. Whether of either floor it is the duty of the woman to ensure that the general cleanliness of the latrine is maintained. As Wakeman (1995) states, women are most often the users, providers, and managers of water in the household and are also be managers at local or community level, they are usually the guardians of household hygiene. This leaves them with no other option but to ensure comprehensive maintenance of household hygiene.

4.5.9 Inclusion of men and women in hygiene trainings

This section sought to understand whether there is always inclusion of both men and women when there community hygiene trainings being conducted in the area. The results were as presented in table 4.17.

Table 0.17: Inclusion of men and women in hygiene trainings.

Response	Frequency (f)		Percent (%)	
	Male	**Female**	**Male**	**Female**
yes	101	141	38	53
no	0	25	0	9
Total	**101**	**166**	**38**	**62**

Source: household heads (Bondo sub county, Maranda division)

The response as indicated in table 4.17 reveals that 101 (38 %) and 141 women (53%) agreed to the fact that men and women are included and invited to any hygiene community training. However 25 women (9%) felt that men were not being motivated to attend such training which has affected the inclusiveness in general hygiene management.

4.6 Gender mainstreaming in monitoring of WASH activities

This was the third objective of this study under which the study sought to understand how gender mainstreaming in monitoring of WASH activities would contribute to their sustainability. To establish this, respondents were asked whether both women and men were involved in the monitoring of the WASH activities progresses, whether monitoring was done with sufficient frequency so that necessary adjustment are made and thirdly they were asked whether the information/data collected during the monitoring was fed back to the project beneficiaries.

4.6.1 Women and men involvement in the monitoring of the WASH activities progresses

The study sought to understand whether men and women are being involved during the WASH activities monitoring particularly implementation of community WASH facilities like shallow wells, earth dams/pans and pipeline extensions. The results are as presented in table 4.18

Table 0.18: Women and men involvement in the monitoring

Response	Frequency (f)		Percent (%)	
	Male	**Female**	**Male**	**Female**
yes	22	36	8	13
no	79	130	30	49
Total	**101**	**166**	**38**	**62**

Source: Household heads (Bondo sub county, Maranda division)

The results as represented in table 4.18 revealed that 22 men (8%) and 36 women (13%) supported the fact that both men and women were involved during the monitoring of progresses of the WASH facilities. However 79 men (30%) and 130 women (49%) felt that they were never involved during the implementation of most of the community WASH facilities. Wakeman (1995) postulated that women involvement in the water sector springs from their traditional roles. They are the users and can be the managers at local or community level. Therefore it is quite paramount for them to be involved during the monitoring processes if major impacts are to be achieved.

4.6.2 Monitoring done with sufficient frequency

The study sought to establish whether monitoring was done with sufficient frequency so that any necessary adjustments can be made during the process of the WASH implementation. The results are as presented in table 4.19

Table 0.19: Monitoring done with sufficient frequency

Response	Frequency (f)		Percent (%)	
	Male	Female	Male	Female
Yes	37	38	14	14
No	64	128	24	48
Total	**101**	**166**	**38**	**62**

Source: household heads (Bondo sub county, Maranda division)

The results as indicated in table 4.19 revealed that 37 men (14%) and 38 women (14%) agreed that monitoring of the WASH activities was being done with sufficient frequency. 64 men (24%) and 128 women (48%) felt that monitoring was not being done frequently. In a UNDP report (2006), it was revealed that involving both women and men in integrated water resources initiatives can increase project effectiveness and efficiency. Participation by both women and men improves project performance and improves the likelihood of sustainability. In other words, a project is more likely to achieve what planners hope it will achieve if women and men (both rich and poor) are active participants and decision makers. Therefore the process of implementation and maintenance should be transparent and democratic (Protos 2007).

4.6.3 Data/information collected fed back to the community/project beneficiaries

This study sought to establish whether information collected during the monitoring process is shared with the project beneficiaries. This was important because the beneficiaries could give information on what should be improved or to have the facility re-designed. The results are as presented in table 4.20.

Table 0.20: Feeding back of information to beneficiaries

Response	**Frequency (f)**		**Percent (%)**	
	Male	**Female**	**Male**	**Female**
Yes	14	51	5	19
No	87	115	33	43
Total	**101**	**166**	**38**	**62**

Source: household heads (Bondo sub county, Maranda division)

The results presented in table 4.20 revealed that 14 men (5%) and 51 women (19%) felt that the information gathered during the monitoring of project activities was shared back with the project beneficiaries. However 87 men (33%) and 115 women (43%) felt that the information gathered during the monitoring process was not shared with the project beneficiaries.

4.7 Gender mainstreaming in Evaluation of WASH activities

This was the fourth objective of this study which sought to understand whether gender mainstreaming in evaluation of WASH activities would contribute to the sustainability of these WASH activities and possibly create any possible impacts to the beneficiaries. To establish this the respondents were asked to rate through a five

point Likert scale whether the project has increased women productivity, whether women have derived economic/productive benefits from saved time, whether the project has increased the women's access to and control of resources, whether involving both women and men in the project design will contribute to the short and long term operation of the project and whether the project has adversely affected the women's situation in some other ways.

4.7.1 How would you rate the following rate of impacts?

4.7.1.1 The presence of WASH facilities has increased the women's productivity

The study sought to establish whether the presence of WASH facilities in the area has in any way increased the women's productivity in terms of attending into other community productive and economic activities. Presence of the WASH facilities like water sources within their reach can allow them to engage into other productive activities which can improve their economics status. Attending to nearby markets and engage in business activities can contribute to their improved economic status. The results of the responses are represented in table 4.21

Table 0.21: WASH facilities have increased the women's productivity.

Responses	Frequency (f)	Percent (%)
Strongly disagree	0	0
Disagree	0	0
Neither disagree nor agree	0	0
Agree	191	72
Strongly agree	76	28
Total	**267**	**100**

Source: household heads (Bondo sub county, Maranda division)

From table 4.21, the results indicate that 191 (72%) of the respondents agreed that the presence of WASH facilities within their reach has greatly contributed to the increased productivity of women. As well 76 (28%) of the participants strongly agreed that presence of the WASH facilities has strongly increased the productivity of the women in the area. This has contributed to them engaging in other small scale businesses like trading vegetables and cereals in the market which has remarkably improved their economics status. Agenda 21 postulates that involving women water resources management forms the basis of sustainable development where resources become more efficient, user focused, financially viable and environmentally sustainable hence improving economic development. This is very clear from the revelations and therefore women's productivity has improved immensely.

4.7.1.2 Women have derived economic/productive benefits from saved time

The study sought to investigate whether women derived any economic/productive benefits form the saved time. The saved time could have been

derived from getting water for human and livestock consumption from nearby sources. The results are as presented in table 4.22

Table 0.22: Women have derived economic/productive benefits from saved time

Responses	Frequency (f)	Percent (%)
Strongly disagree	0	0
Disagree	0	0
Neither disagree nor agree	0	0
Agree	25	9
Strongly agree	242	91
Total	**267**	**100**

Source: household heads; (Bondo Sub County Maranda division)

From table 4.22, the results revealed that 242 (91%) of the respondents strongly agreed, 25 (9%) agreed while none strongly disagreed, disagreed and neither disagreed nor agreed. With the availability of the WASH facilities within their reach they have been able to engage themselves in other productive activities. Direct involvement of women in WASH projects both as beneficiaries and participants can ensure that projects achieve the immediate purpose and broad social economic goals and returns are maximised from the same investment. As revealed in a World Bank report (1989), time saved from looking for WASH services from nearby can increase women's equitable participation in economic decision making and economic independence.

4.7.1.3 The presence of WASH facilities in the area has increased the women's access to and control of resources

The study sought to understand whether the presence of the WASH facilities within their proximity has in any way increased the women's access to and control of resources. The types of resources included the high valued resources like land, permanent houses, livestock and the low valued resources like household items, poultry. The results are as presented in table 4.23.

Table 0.23: Increased access to and control of resources

Responses	Frequency (f)	Percent (%)
Strongly disagree	0	0
Disagree	165	62
Neither disagree nor agree	38	14
Agree	64	24
Strongly agree	0	0
Total	**267**	**100**

Source: household heads (bondo sub county, Maranda division)

From table 4.23 it was revealed that 165 (62%) of the respondents disagreed, 38 (14%) neither disagreed nor agreed and 64 (24%) agreed that women have access to and control over resources. None of the respondents strongly agreed or strongly disagreed that women have access to and control over resources. From the discussion it came out clearly that the man is always the final decision maker in case of any property disposal. Even the less valued item like chicken cannot be slaughtered in the absence of the man in the household. Some special parts are also

spared for the man. This applied mostly to the women in the interior rural set up. The 64 respondents who agreed that the woman can access and control resources were from the nearby market centres/town and were elite to certain extend. However they still have limitation on what kind of property they could control. Leelamma (1998) in his findings he revealed that men were very antagonistic towards women acquiring more facilities in their day to day life. Women were only to be occupied with household responsibilities like looking for children, cooking, cleaning, washing, attending to other household members and animals. Wijk (2001) further revealed that men are the heads of households and hence influence their women in any kind of decision. Therefore this cultural barrier prevents women from involvement in modern water management

4.7.1.4 Involving both women and men in the WASH facility design will contribute to the short-term and long-term operation of WASH activities.

The study sought to understand whether involving both women and men during the design of the WASH would contribute to the short-term and long-term operation of the WASH facilities. The results are as presented in table 4.24

Table 0.24: Involvement of both women and men in the WASH facility design

Responses	**Frequency (f)**	***Per*cent (%)**
Strongly disagree	0	0
Disagree	0	0
Neither disagree nor agree	0	0
Agree	64	24
Strongly agree	203	76
Total	**267**	**100**

The results in table 4.24 revealed that 203 (76%) of the respondents strongly agreed, while 64 (24%) of the respondents agreed the fact that involving both men and women during the design of the WASH facility would contribute to the long-term operation of the same. However none of the respondents strongly disagreed, disagreed and neither disagreed or agreed the fact that involving both men and women during the design of the WASH facilities would contribute the short-term and long-term operation. In his findings, Wakeman (1995) revealed that women and men involvement should begin in the first stage failure to which exclusion can be experienced at the later stages and this can compromise the short and long term operation and functionality of such facilities.

4.7.1.5 The presence of the WASH facilities has adversely affected the women's situation in some other ways

The study sought to understand whether the presence of WASH facilities in the proximity had in any way adversely affected the women socially, economically and politically. Where such facilities are existing and operating have positively

contributed to the economic growth of women. This is postulated by the Dublin statement (1992). The results are as presented in table 4.26.

Table 0.25: WASH facilities have adversely affected the women's situation in some other ways

Responses	**Frequency (f)**	**Percent (%)**
Strongly disagree	25	9
Disagree	242	91
Neither disagree nor agree	0	0
Agree	0	0
Strongly agree	0	0
Total	**267**	**100**

The results in table 4.25 reveals that 25 (9%) of the respondents strongly disagreed while 242 (91%) disagreed that the presence of WASH facilities had adversely affected the women's situation in some other ways. The results revealed further that, none of the respondents neither disagreed nor agreed, agreed or strongly agreed.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides summary of the findings according to the themes derived from research objectives; gender mainstreaming in WASH design, implementation, monitoring, evaluation and its influence on the sustainability of WASH activities. The chapter further has conclusions, recommendations for policy action, suggestions for further studies and contribution to the body of knowledge.

5.2 Summary of findings

This section is organized in line with research objectives. The study had four research objectives; gender mainstreaming in WASH design and its influence in the sustainability of WASH activities, gender mainstreaming in WASH implementation and its influences in the sustainability of WASH activities, gender mainstreaming in WASH monitoring and its influence in the sustainability of WASH activities and gender mainstreaming in WASH evaluation and its influences in the sustainability of WASH activities.

5.2.1 Gender mainstreaming in the design of WASH activities

Under this objective four areas were assessed against the respondents which included; involvement of women and men during the design process of WASH activities, what they liked and didn't like about the current WASH facilities, women being directly approached as informants on their own particular roles, needs, problems and possibilities on WASH activities and whether this was done during the identification of the current WASH programs.

The study findings revealed that 76 males (28%) and 90 females (34 %) agreed that both men and women were involved during the designing process of the WASH activities. The study further revealed that 25 male (9%) and 76 females (28%) did not agree to whether both men and women are involved during the design of WASH activities. This was because the community is still patriarchal and technical jobs are given to men.

The study findings also revealed that 101 men (38%) and 151 women (57%) agreed that they were being asked what they liked and didn't like about their current WASH facilities. It was also revealed that 128 of the respondents who were women (48%) said that they were not approached as informants during the designing of the WASH facilities. As well 88 (33%) of the respondents who were men also indicated that women were also not approached as informants on the designs of WASH facilities. Only 15 women (5%) felt that they were approached as key informants during the design of the WASH activities.

The study further revealed that 153 (57%) women and 86 (32%) said that women were not involved as key informants in the identification and design of the current WASH activities. Only 15men (6%) and 13(5%) women indicated that there was any involvement in the identification of the current WASH activities.

5.2.2 Gender mainstreaming in implementation of WASH activities

Under this objective nine areas were assessed against the respondents which included; equal women and men involvement in all stages and at all levels of the WASH activities implementation, women and men consultations about the techniques to be employed, free equal women participation in all aspects of construction, women being trained in the actual construction, operation and long-term maintenance of the facilities, convenient location of facilities for both men and

women, equal participation for men and women in maintenance and upgrading of WASH facilities, encouragement of men to assist in maintaining sanitation facilities, men carrying water for pour flush facilities and for general latrine cleaning and inclusion of both men and women in hygiene trainings.

The study findings revealed that 25 men (9%) and 90 women (34%) indicated that both men and women were being involved though out the implementation process of WASH activities. However, 76 men (28%) and 76 women (28%) said that both men and women were not being involved in the entire implementation process of WASH activities. 38% of the respondents (102 women) and 76 men (28 %) said men and women were not consulted on the technology to be employed during implementation of the WASH activities. However 25 men (9%) and 64 women (24%) felt that there was consultation on the on the technology applied during the construction processes of the WASH activities. In levels of participation, 76 men (28%) and 52 women (19%) felt that women were free to participate in all aspects of construction. The findings also revealed that 25 men (9%) and 114 women (43%) did not agree to women being free to fully participate in all aspects of construction. 9 men (3%) and 39 women (15%) indicated that women undergo training on the actual construction process of WASH facilities while on the other hand 92 men (35%) and 127 (47%) women felt that women were not trained in the actual construction processes.

The study further revealed that 89 men (33 %) and 102 women (38%) felt that the facilities were conveniently located especially the shallow well and the pipeline extensions which had facilitated water to close proximity. For fit latrines they felt they were also conveniently located apart from the cultural issues affecting the sharing of the facility. 12 men (4%) and 64 women (24%) felt that the

accessibility of some of these facilities was not convenient to all members of the household. As well the study revealed that 24 men (9%) and 26 women (10%) indicated that there was equal participation for men and women in the maintenance of WASH facilities. 77men (29%) and 140 women (52%) indicated that men and women do not equally participate in the maintenance of the WASH facilities.

101 men (38%) and 114 women (43%) indicated that men are being encouraged to maintain sanitation facilities. However 52 women (19%) felt that still men may not take up the initiative because maintenance of pit latrines is taken as women and girls work. As well it was indicated that 101 men (38%) and 166 women (62%) did not agree to men carrying water for pour flush. 101 (38 %) and 141 women (53%) agreed to the fact that men and women are included and invited to any hygiene community training. However 25 women (9%) felt that men were not being motivated to attend such training which has affected the inclusiveness in general hygiene management.

5.2.3 Gender mainstreaming in monitoring of WASH activities

Under this objective the study assessed three areas which include; women and men involvement in the monitoring of the WASH activities progresses, sufficient frequency in monitoring of project progresses and giving feedback to the community about the data/information collected from the field.

22 men (8%) and 36 women (13%) supported the fact that both men and women were involved during the monitoring of progresses of the WASH facilities. However 79 men (30%) and 130 women (49%) felt that they were never involved during the implementation of most of the community WASH facilities.

37 men (14%) and 38 women (14%) agreed that monitoring of the WASH activities was being done with sufficient frequency. 64 men (24%) and 128 women (48%) felt that monitoring was not being done frequently.

The study also revealed that 14 men (5%) and 51 women (19%) felt that the information gathered during the monitoring of project activities was shared back with the project beneficiaries. However 87 men (33%) and 115 women (43%) felt that the information gathered during the monitoring process was not shared with the project beneficiaries.

5.2.4 Gender mainstreaming in Evaluation of WASH activities

This was the fourth objective of the study and it assessed five areas including the following; presence of WASH facilities has increased the women's productivity, women have derived economic/productive benefits from saved time, presence of WASH facilities in the area has increased the women's access to and control of resources, involving both women and men in the WASH facility design will contribute to the short-term and long-term operation of WASH activities and the presence of the WASH facilities has adversely affected the women's situation in some other ways.

The study revealed that 191 (72%) of the respondents agreed that the presence of WASH facilities within their reach has greatly contributed to the increased productivity of women. As well 76 (28%) of the participants strongly agreed that presence of the WASH facilities has strongly increased the productivity of the women in the area. 242 (91%) of the respondents strongly agreed, 25 (9%) agreed while none strongly disagreed, disagreed and neither disagreed nor agreed. With the availability of the WASH facilities within their reach they have been able to engage themselves in other productive activities. 165 (62%) of the respondents

disagreed, 38 (14%) neither disagreed nor agreed and 64 (24%) agreed that women have access to and control over resources. None of the respondents strongly agreed or strongly disagreed that women have access to and control over resources.

203 (76%) of the respondents strongly agreed, while 64 (24%) of the respondents agreed the fact that involving both men and women during the design of the WASH facility would contribute to the long-term operation of the same. However none of the respondents strongly disagreed, disagreed and neither disagreed or agreed the fact that involving both men and women during the design of the WASH facilities would contribute the short-term and long-term operation. 25 (9%) of the respondents strongly disagreed while 242 (91%) disagreed that the presence of WASH facilities had adversely affected the women's situation in some other ways. The results further revealed that none of the respondents neither disagreed nor agreed, agreed or strongly agreed.

5.3 Conclusions

The purpose of this study was to investigate the influence of gender mainstreaming on sustainability of WASH activities in Maranda division of Bondo Sub County, Kenya. According to the stated research objectives and after data analysis and discussion on the findings, the following emerged:

The findings revealed that gender mainstreaming in the design of WASH activities would positively contribute the overall participation of the beneficiaries in the entire WASH project cycle which would eventually contribute to the operation and sustainability of the WASH activities.

Gender mainstreaming in the implementation process of the WASH activities would as well contribute towards the operation and functionality of the WASH activities. Having men and women participate in the construction, operation and

maintenance will give a very strong backup as pertains to operation, functionality and sustainability of such facilities. This would enhance total participation in the maintenance of the WASH facilities in case of any breakdowns.

The findings also revealed that gender mainstreaming in the monitoring of the progress of the WASH activities would positively contribute to making any noted adjustments for the purposes of ensuring quality of the produced WASH products. Monitoring done with sufficient frequency would ensure prompt adjustments are made during the process of the WASH implementation so that there is no compromise of the quality of the WASH activities.

Gender mainstreaming in assessing the impacts created by existence of the WASH activities in the area and in the lives of the beneficiaries, would also ensure comprehensive documentation of lessons learnt from existing and previous WASH programs. This would ensure that best practices are applied in the designing and implementation of future WASH projects.

These findings indicate that the factors that were being assessed sufficiently satisfied the condition that gender mainstreaming in the designing, implementation, monitoring and evaluation of WASH activities had a positively influence on the sustainability of WASH activities in the area.

5.4 Recommendations

Having done evaluation of theoretical framework based on Ritzer *et al*, 2004, Feminist theory which is most concerned with giving a voice to women and highlighting the various ways women have contributed to society, the conceptual framework which defined the variables under study and literature review, this study gives the following recommendations:

Gender mainstreaming in the design of WASH activities should always be encouraged clearly from the conceptualization of the project. This involves engagement of all the users of these facilities as the design of the facility would determine whether the intended users will adopt it or not. Location of the facility would also determine its accessibility. Where women and children cannot comfortably access the facility during the day and the night, it raises the question of usability and long term operation of the facility.

Under objective two, an all-inclusive strategy for the implementation process of the WASH facility needs to be clearly designed. Having men and women participate in the construction, operation and maintenance gives a very strong backup as pertains to functionality and sustainability of such facilities. This would be enhanced by ensuring trainings in the operation and maintenance of the facilities. If both the women and men are trained in the operation and maintenance of such facilities, it would ensure operating and sustainable facilities.

Under objective number three, the study sought to understand gender mainstreaming in monitoring of WASH activities progresses. The findings revealed that majority of the beneficiaries were not being involved in the monitoring processes and the frequency was also questioned. Findings based on this recommends that direct beneficiaries and all the stakeholders of the facilities be trained on how conduct participatory monitoring activities and develop indicators that would assist to gauge the project is on the right tract. This would enable the development of strategies that would right track any deviations and way forward drawn.

In objective four, the study sought to establish the possible impacts that have been created by the existence of the WASH facilities in the area. The finding

revealed that most of the respondents felt that positive impacts have been created by the existence and proximity of the facilities to the intended users. However culture restricts them from sharing some facilities like pit latrines and this could jeopardize the quality of hygiene and sanitation. Therefore this study recommends that meetings be organized to sensitize the target beneficiaries on the effects of the retrogressive cultures before commencement of any WASH activities. This would therefore ensure adoption and usability of such facilities.

5.4.1 Suggestion for policy issues

Mainstreaming a gender perspective in the project designing, implementation, monitoring and evaluation has been seen to have a great positive influence towards the sustainability of WASH facilities and any other community interventions. Assessing the implications for women and men of any planned action, including legislation, policies or programs, in all areas and at all levels could greatly contribute to the ownership and sustainability of the same facilities.

During the study it came out clear that one of the greatest barrier to the ownership and sustainability of the WASH facilities in the region was the retrogressive culture being practiced by the residents of the area. Taking for instance the cases where pit latrines are not shared among the parents and their sons/daughters in laws this can serious jeopardize the hygiene and sanitation and therefore affect the quality of drinking water in the area. Cases of waterborne diseases would be on the rise and hence affect the general health of the residents.

From these findings it is there ideal for organizations and government institutions concerned with implementation and promotion of WASH facilities take a key note to sensitize the community and the targeted beneficiaries the importance of such facilities otherwise white elephant projects will be created for no use. It is also

ideal to make women's as well as men's concerns and experiences an integral dimension during the design, implementation, monitoring and evaluation of such facilities so that women and men benefit equally and inequality is not perpetuated.

5.4.2 Suggestions for Further Research

Based on the scope and limitations in time and resources of the study, this study did not explore on the effect of Food for Work/Cash for Work as token paid for working on the WASH project cycle and how it would contribute towards sustainability of the same facilities. As well the study did not explore on the effects of local governance trainings to the WASH facilities beneficiaries and how it will positively contribute towards the operation and functionality of such facilities. Thirdly the study did not explore how the sustainability of the WASH facilities would effect on the improvement of livelihoods to the target beneficiaries. Based on this, the study suggests the following areas for further research;

1. A study should be carried out to establish the influence of food for work/cash for work on the sustainability of community WASH facilities. This would as well inform the level of ownership of such facilities by the community beneficiaries.
2. A study should also be carried out to determine the influence of local governance trainings on the operation and functionality of the community WASH facilities. This would inform about the existence of sound management systems within the group organizations and how they will operate the facilities for their long term benefits.
3. Finally a study should be conducted to establish if there is any influence of the sustained WASH facilities to the improvement of livelihoods of the target beneficiaries.

5.5 Contribution to Body of Knowledge

The study has identified the following areas based on research objectives and the findings as presented in table 5.1:

Table 0.1: Contribution to body of knowledge

Objectives	Contribution to body of knowledge
To establish the extent to which gender mainstreaming in WASH design influences the sustainability of WASH activities	Gender mainstreaming in the design of WASH facilities has positively contributed to the sustainability of such facilities through ensuring that women and men participate in the designing of the facilities.
To assess the extent to which gender mainstreaming in WASH implementation influences the sustainability of WASH activities	Gender mainstreaming in the implementation processes of the WASH facilities has positively contributed to the total ownership of the facilities hence their long term operation and functionality.
To examine how gender mainstreaming in WASH monitoring influences the sustainability of WASH activities	Ensuring gender mainstreaming in the monitoring process of the WASH facilities would ensure prompt corrective measures to the designs and adjustments made as per the need.
To establish how gender mainstreaming in WASH evaluation influences the sustainability of WASH activities	Making women and men participate in the mid-term evaluation, end of project evaluation and ex-post evaluation would ensure an all-inclusive lessons learnt drawn which can be applied in the implementation processes of future WASH programs.

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APPENDIX 1: LETTER OF TRANSMITTAL

Damaris Kamanthe Josiah

University of Nairobi

Kisumu Campus,

P.O Box 825-40100

Kisumu

26th April, 2014

Dear respondent

RE: DATA SURVEY COLLECTION

My name is Damaris Kamanthe Josiah, a student from University of Nairobi. I am carrying out a research for my master's proposal and i am requesting for your kind attention and participation. All the information you submit will be treated with utmost confidence and will only be used for purposes of this research only.

The research focuses on establishing the influence of gender mainstreaming on sustainability of WASH activities in Bondo sub-county, Maranda division, Kenya.

This exercise will only take 15 to 20 minutes and the results from this study will be used in partial fulfillment of the requirement for the award of the degree of Master of Arts in Project Planning and Management of the University of Nairobi.

With regards

Damaris Kamanthe

APPENDIX 2; RESEARCH TIME TABLE

No.	Activity	Time
1.	Pre-testing of questionnaires.	July 2014
2.	Mobilization focus group discussion/interviews	July 2014
3.	Administration of questionnaires to the respondents	July 2014
4.	Conducting the interviews/focus groups discussions	July 2014
6.	Handling blank questionnaires and coding of questionnaires	August 2014
7.	Categorizing information/data	August 2014
8.	Entering data in the computer system	August 2014
9	Production of research findings	August/September 2014
10	Handing of the project paper/proposal to the department	September 2014

APPENDIX 3; RESEARCH BUDGET

Item	Description	Unit	No. of units	Unit price	Total
TRAVEL	Personnel costs-lunches	visits	10	1,500	15000
FUEL	field visits	liters	100	110	11000
OFFICE MATERIALS	Stationery				4000
AIRTIME	Mobile and modem airtime				2000
GRAND TOTAL					**32,000**

APPENDIX 4: RESEARCH QUESTIONNAIRE

Name of the enumerator	
Name of the Supervisor	
Time Interview started	
Time Interview ended	

Introductory remarks

My name is _____ I wish to request for your sincere participation in giving information required in this questionnaire for purposes of academic research. Your input into these questions will be treated with utmost confidence.

The assessment will take approximately 15 -20 minutes of the respondent's time.

SECTION 1.0: BACK GROUND INFORMATION

1.1 Name of the respondent_____ (Optional)

1.2 Age of the respondent _____Years(tick as appropriate)

i. 21-30yrs ☐

ii. 31-40yrs ☐

iii. 41-50yrs ☐

iv. 51-60yrs ☐

v. Over 61 yrs. ☐

1.3 Gender of the respondent (*Tick as appropriate*);M ☐ F ☐

1.4 What is your highest level of education (tick as appropriate):

i. Primary level ☐

ii. Secondary level ☐

iii. Tertiary level ☐

SECTION 2.0: QUESTIONS RELATED TO RESEARCH OBJECTIVES

2.1 Gender Mainstreaming in design of WASH activities

2.1.1 Are both women and men involved during the design process of WASH activities? Yes____ No____

2.1.2 If no why_____

2.1.3 Are they asked what they like and don't like about their current WASH facilities Yes _____ no_____

2.1.4 If no why _____

2.1.5 Are women directly approached as informants on their own particular roles, needs, problems and possibilities on WASH activities? Yes_____ No____

2.1.6 If no why_____

2.1.7 Was this done during the identification of the current WASH programs? Yes____ No ____ (tick as appropriate)

2.1.8 If in 2.1.6 is no, why? _____

2.2 Gender mainstreaming in implementation of WASH activities.

2.2.1 Are women and men equally involved in all stages and at all levels of the WASH activities implementation? Yes____ No____

2.2.2 If no in 2.2.1, why? _____

2.2.3 Have women and men been consulted about the techniques to be employed? For example whether to use small contractors or self-employed labour for production of materials, such as bricks or thatch. Yes____ No____

2.2.4 If no in 2.2.3, why? _____

2.2.5 Are women equally free to participate in all aspects of construction? For example, in the case of latrines, in digging, erecting walls, manufacturing

materials to be used in construction, as well as housing and feeding laborers from outside the area? Yes_____ No_____

2.2.6 If no in 2.2.5., why? _____

2.2.7 Are women trained in the actual construction, operation and long-term maintenance of the facilities? Yes_____ No_____

2.2.8 If no in 2.2.7, why? _____

2.2.9 Are the facilities conveniently located for men and women? Yes___, No____

2.2.10 If no in 2.2.9, Why? _____

2.2.11 Do men and women participate equally in maintenance of WASH facilities? Yes_____ No_____

2.2.12 If no in 2.2.11, Why? _____

2.2.13 In particular, are men encouraged to assist in maintaining sanitation facilities? Yes_____ No____

2.2.14 If no in 2.2.13, why? _____

2.2.15 Do both men and women carry water for pour flush facilities and for general latrine cleaning? Yes____ No_____

2.2.16 If no in 2.2.15, Why? _____

2.2.17 Are both men and women included in hygiene trainings? Yes____ No_____

2.2.18 If no in 2.2.17, why? _____

2.2.19 Do both men and women participate equally in decisions for upgrading and improvement of WASH facilities? Yes_____ No____

2.2.20 If in 2.2.19 is no, why? _____

2.3 Gender mainstreaming in monitoring of WASH activities

2.3.1 Are women and men involved in the monitoring of the WASH activities progresses? Yes____ No____(tick as appropriate)

2.3.2 If in 2.3.1 above is no, why? _____

2.3.3 Is the monitoring done with sufficient frequency so that necessary adjustments can be made during the project process? Yes____ No___ (tick as appropriate)

2.3.4 If in 2.3.3 above is no, why? _____

2.3.5 Is the data/information collected during monitoring fed back to the community/project beneficiaries? yes___ No___ (tick as appropriate)

2.3.6 If in 2.3.5 above is no, why? _____

2.4 Gender mainstreaming in Evaluation of WASH activities.

Rating Scale: 1=Strongly Disagree, 2=Disagree, 3=Neither Disagree Nor Agree, 4=Agree, 5=Strongly Agree

1.0.1 How would you rate the following rate of impacts;

Impact	**Rating**				
	1	2	3	4	5
The project has increased women's productivity	[ ]	[ ]	[ ]	[ ]	[ ]
Women have derived economic/productive benefits from saved time	[ ]	[ ]	[ ]	[ ]	[ ]
The project has increased the women's access to and control of resources.	[ ]	[ ]	[ ]	[ ]	[ ]
Involving both women and men in the project design will contribute to the short and long term operation of the project.	[ ]	[ ]	[ ]	[ ]	[ ]
The project has adversely affected the women's situation in some other ways.	[ ]	[ ]	[ ]	[ ]	[ ]

Thank you

APPENDIX 5: IN – DEPTH INTERVIEW

Introduction to the discussion:

The focus of this study is to establish the influence of gender mainstreaming on sustainability of WASH activities for purposes of academic research. This discussion seeks to involve the Key Informants selected from key individuals from the group members. Your input into these questions will be treated with utmost confidence

1. What do you think should be done to encourage women's participation in water, sanitation and hygiene (WASH) projects?
2. What is the take of the local leaders and project management towards gender sensitive programming?
3. Do these parties explicitly view women's involvement both as a condition for the success of project improvements and as a prerequisite for genuine advancement of women's interests?
4. Will this be reflected in plans for training project beneficiaries?
5. What percentages of women are on management committees and what role do they play?
6. Can women participate in line with their own potential, without harm, and undertaking new tasks and opportunities?
7. Do women and men have individual or organized influence on the operations, maintenance and management of water, sanitation and hygiene services?
8. What roles do women and men play in these areas mentioned in 7 above?
9. Are women's knowledge and experience effectively harnessed and employed in the project cycle?
10. Are participatory techniques employed to ensure the above?

11. Have existing WASH supply practices been thoroughly investigated, including types of technology, and what water sources are used by whom and when?
12. Have findings been distinguished for different user categories: men, women and occupational income groups?

APPENDIX 6: NON-DISCLOSURE GUIDELINES.

The researcher here by abides to the fact that the research contains pertinent information pertaining gender mainstreaming and sustainability of WASH activities in Bondo sub county Siaya County. These research findings will first be shared with key government line ministries, key informants and other selected respondents who will have participated in this study. Care will be taken to ensure details obtained from the various respondents are held by the University of Nairobi and the researcher.

Sign_____Date_____

Damaris K. Josiah

(Signature of interviewer certifying that there will be non-disclosure of information from the respondents)

APPENDIX 7: LIST OF COMMUNITY WASH GROUPS

No.	Name	No of household	Respondents selected	No of respondents attained/reached
1.	Kibuye shallow well	50	11	12
2.	Migot shallow well	50	11	10
3.	Bondo community	50	11	10
4.	Ichron shallow well	50	12	12
5.	Sunrise shallow well	50	12	11
6.	Saruma shallow well	50	12	11
7.	Adongo shallow well	50	12	10
8.	Nyabenge shallow well	50	11	10
9.	Lokogima shallow well	50	12	12
10.	Kuchilo shallow well	50	12	10
11.	Yaue shallow well	50	11	10
12.	Owuor shallow well	50	11	9
13.	Urusi shallow well	50	12	10
14.	Udundo shallow well	50	12	12
15.	Ahila shallow well	50	12	11
16.	Siruama borehole	50	11	9
17.	Rasinde A borehole	50	12	10
18.	Rasinde B borehole	50	12	11
19.	Kawino shallow well	50	12	10
20.	Rakoro shallow well	50	12	12
21.	Majiwa community well	50	11	11
22.	Usire Rommana Water supply	50	11	10
23.	Kapiyo pipeline extension	50	12	11
24.	Komoto community well	50	12	11
25.	Matangwe community water supply	50	12	12
Total		**1250**	**291**	**267**

APPENDIX 8: RESEARCH AUTHORIZATION

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

Date:

27th August, 2014

NACOSTI/P/14/8721/2812

Damaris Kamanthe Josiah
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Influence of gender mainstreaming on sustainability of wash activities in Maranda Division, Bondo Sub County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Siaya County** for a period ending **26th September, 2014.**

You are advised to report to **the County Commissioner and the County Director of Education, Siaya County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. S. K LANGAT, OGW
FOR: SECRETARY/CEO

Copy to:

The County Commissioner
The County Director of Education
Siaya County.

APPENDIX 9: RESEARCH PERMIT

CONDITIONS

1. **You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit**
2. **Government Officers will not be interviewed without prior appointment.**
3. **No questionnaire will be used unless it has been approved.**
4. **Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
5. **You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.**
6. **The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.**

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A 3008

CONDITIONS: see back page

THIS IS TO CERTIFY THAT:
MS. DAMARIS KAMANTHE JOSIAH
of UNIVERSITY OF NAIROBI, 0-100
nairobi,has been permitted to conduct
research in *Siaya County*

on the topic: *INFLUENCE OF GENDER MAINSTREAMING ON SUSTAINABILITY OF WASH ACTIVITIES IN MARANDA DIVISION, BONDO SUB COUNTY, KENYA*

for the period ending:
26th September,2014

Permit No : NACOSTI/P/14/8721/2812
Date Of Issue : 27th August,2014
Fee Recieved :Ksh 1,000

.....
Applicant's Signature

.....
Secretary
National Commission for Science, Technology & Innovation