

# DETERMINANTS OF WOMEN PARTICIPATION IN COMMUNITY BASED WATER PROJECTS IN HOMABAY COUNTY

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**Abstract:** The purpose of this study was to investigate the determinants of Women participation in Community based Water Development projects in Homa Bay County. The study was guided by the following objectives; to examine the influence of gender policy on the participation of women in community water projects in Homa Bay County, to assess how the level of education influenced the participation of women in community water projects in Homa Bay County, to evaluate the extent to which Socio-Culture influences participation of Women in Community based Water projects in Homa Bay County and to examine how project financing influences women participation in community water projects in Homa Bay county. The study used descriptive Survey. The study targeted 2000 members of registered water projects in all the eight sub counties of Homa Bay County, according to Ministry of Water and Irrigation report on inventory of water projects. The sample size was 200 women members of the entire committees of the registered water projects. 20 women from Suba Sub County were used for piloting. The data from the field were edited for accuracy, consistency and analyzed using descriptive statistical tools (Statistical Package for the Social Sciences V.17.0 and Excel). The findings of the research showed that women participation in water project was determined by gender of the people, level of education of women, culture and Financing of the projects. Therefore, it was concluded that: gender, level of women education, culture, and project financing promoted women involvement thus negatively determine women participation in the water projects in this study area. The study, therefore, recommended that, the level of education should be enhanced, cultural barriers be removed and allow women access and control of resources so as to have collaterals to borrow money to fund projects. The result of this study may be used by the development agencies, County Governments and communities in selecting and developing strategies to achieve full women participation that will ensure sustainability of rural water projects in Homa Bay County. This research was limited to women participation in the rural water project in Homa Bay County; therefore, the study recommends future studies to focus on other rural areas within Kenya with varied political, cultural and environmental contexts.

**Keywords:** Determinants of Women Participation in Community Based Water Projects.

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## LIST OF ABBREVIATIONS AND ACRONYMS

**HB:** Homa Bay

**ADB:** African Development Bank

**CSA:** Climate Smart Agriculture.

**GOK:** Government of Kenya.

**ICT:** Information Communications Technology

**KFS:** Kenya Forestry Services

**KNBS:** Kenya National Bureau of Statistics.

**MDG:** Millennium Development Goal.

**NGO:** Non-Governmental Organization.

**ROK:** Republic of Kenya.

**SCDO:** Sub-County Development Officer

**SSA:** Statistics South Africa

**UN:** United Nations

**UNDP:** United Nation Development Program.

**UNESCO:** United Nations Educational, Scientific and Cultural Organization

**USAID:** United States Agency for International Development.

**WB:** World Bank.

## 1. INTRODUCTION

### **Background of the Study:**

The Mexico City conference of 1975 identified the objective of integrating and full participation of women in development. The conference with the United Nations decade for women (1976-1986) opened worldwide dialogue on gender equality; a process was set to involve deliberation negotiation and setting development objectives by reviewing obstacles.

Women are the majority stakeholders in the Community Development projects. There has been marginalization, in project identification, planning and implementation that does not augur well with the sustainability of the projects. In many African societies, a lot of argument has been going on as far as the status of women is concerned. To many people, women belong to the kitchen and their most important role is to take care of their children and the husband. It's considered a waste of time and funds to educate a woman since she will be married out to another community and the parents won't benefit. Women ought only to be trained on domestic aspects that will enhance their being a good wife and mother, (Fafunwa, 1994; Oroka 1996). Due to limited resources, many families prefer to invest in the education of male child, as most African lineage are having their generations recorded and headed through males (Suara, 1999).

Due to their huge population, women education has attracted Global, Regional and National attention on their role in community development projects. Currently, development in both the urban and rural simply depends on the capacity building of the participants which is a major concern of development policies. Education is one of potential tool for the development of human capital. Recent studies on significance of human capital in development process, the education of every unit of the human resource of a nation cannot be down played in the path to development.

Oyebamiji and Adekola (2006) and Ugwu and Oyensehi (2009) posited that women even now, face numerous restrictions which hamper the acquisition of education. Eheazu (2009) states that it is common knowledge that females in many parts of the world experience education in equalities, this affects their participation economically and politically.

The reality is that there is an obvious disparity between men and women in the aspects of education, water, health, employment, land ownership, leadership, access control and ownership of resources. There are a lot more initiatives that need to be taken to ensure that women are placed in their rightful position, and strategies that need to be formulated to ensure that women are able to contribute fully to the development process (World Bank, 2014). Development policies world over seek to improve the living standards of the rural communities.

Sweden is one of the developed countries addressing gender equality and the government has taken a lot of initiative on improvement. Through the government policies, the women of Sweden have been empowered to address the gender inequality. Women form the majority of local majority workers at 64% and after the 2010, 45% of members of parliament are women. According to the government, women are the most affected by community development issues. The government is committed to increasing the participation of women in policy debates surrounding development.

According to the World Bank in 1991, "Women play an essential role in the management of natural resources, including soil, water, forests and energy...and often have a profound traditional and contemporary knowledge of the natural world around them". Whereas women were previously neglected or ignored, there was increasing attention paid to the impact of women on the natural environment and on the health and well-being.

Women's involvement in development has become a big issue in most of international forums. One of the forums that recognized the plight of the third world women's involvement in development and sustainability are the 1995 Nairobi forward looking strategies for advancement of women and the 1995 Beijing declaration and the United Nations Development Fund for women. Each member state was to promote women's economic independence, including access to resources and credit, the eradication of increasing poverty, malnutrition and poor health and illiteracy as was stated in most of the forums. Mostly women are traditionally involved in water supply and sanitation. Their traditional involvement demonstrates that women have a potential role in such projects which will benefit both the project and the women themselves and which will contribute to wider development (Adebowale, 2014).

The potential roles of women in these projects in the development of infrastructure shows that the contributions made by women to planning, design construction and management of improved water supply led to the study in relation to sustainability of community water development projects. The impact of development on rural women is quite different from that of the women in the urban areas. Most evidence indicates that the rural women are neglected in this process (Meer, 2014). Evidence also indicates that development policies and projects were formulated at the national level without the involvement of rural women. In most African countries majority of population in developing countries lives in rural areas where they play their role in many community development projects (Meer, 2014)

Development is not an isolated activity and it implies progress from a lower state to preferred higher one. Development is a process by which people are awakened to opportunities within their reach, development therefore starts with them and progresses through them. The reason why women need to be involved in participatory approaches is that they are the most marginalized group of people in the World though they contribute about 70% of development services such as food production in the rural areas (Pradiap 2014).

In Africa, women lack independence and control over their decisions and way of life. They are seen as a source of voluntary labor for development activities and their priceless socio-economic contribution goes unappreciated (Crenshaw, 2018). Women have been denied leadership roles and the right to participate in community based projects. In many occupations, the prevalent phenomenon of women going only so far and no further in their careers has come to be termed as useless. Women have capability and potential to occupy great positions of power but society based barriers discourage them from reaching the top in most of the developmental programs.

#### **Statement of the Problem:**

In Homa Bay County, the county government has put a lot of investment on developing of water infrastructure. Monitoring done by the Ministry of Water and Irrigation staff in liaisons with the Sub County water officers revealed that out of 80% water facilities developed, only less than 10% are operational others are broken down. Women who are the main users of the water facilities were not involve in planning, design, and implementation of the projects. The study seeks to find out the participation of women in relation to sustainability of the projects. Women always stay at home and hence understand the projects better than men since men who always move to the towns to look for greener pastures yet they are the main beneficiaries of caretaker trainings and the decision makers.

Despite much investment in water resources in this area, operation maintenance aspects are lacking sustainability. Despite the efforts advocating for the use of participatory methodology while dealing with community development project (Thakur and Brahmi 2011), the outcome of community participation in project planning and implementation have not been proportional to the budgetary support in water projects. The inter agency monitoring report (2012) indicated that, there could be some inherent factors hindering effective women participation in rural water projects in Homa Bay. This research investigated the factors determining women participation in the water projects in the eight Sub-Counties of Homa Bay County.

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Women play a pivotal role in the way of life in rural Kenya; assuming diverse responsibilities with regard to household support. In the course of their daily tasks, they have developed an intimate knowledge of natural resource management, which they put into practice for the benefit of both their communities and their environment. In time of scarcity of natural resources, while stress and hardship rise for everyone, it is women who are most burdened with the increased workload as they struggle to compensate. Despite this accumulated knowledge; women nevertheless, occupy a weak social and economic position in traditional African societies and their capabilities have not been fully recognized and they are often excluded from the decision making process not only at homes but also within the general community projects.

Women's involvement in development has become a big issue in most of international forums. Evidence has demonstrated that women participation in development projects have a potential role enhancing project completion, utilization and sustainable use which will contribute to wider development. The potential role of women in these projects in the development of infrastructure shows that the contribution made by women to planning, design, construction and management of improved water supply enhances sustainability. In most African communities, the collection, storage of water and provision of water at family level is the role of a woman. There is need that the gap between men and women on access and control of safe water be accessed. Women continue to be excluded in water management programs yet it is women and children that are greatly affected by water collection for household consumption. The under estimation of women's skills of such projects makes it hard for them to utilize those skills to better their lives.

Homa bay County has huge water resources. However there are serious challenges associated with access to safe water. The County has allocated a lot of funds to water infrastructure development. However of the entire water infrastructure projects financed and completed only a quarter are operational and the community is enjoying benefits. The exclusion of women is hypothesized to have compromised quality of the project, or biased objective of the project due to lack of practical knowhow such that the management of community development project is left to men who do not have vast knowledge on the community need. The county government has been obliged to give precedence to rehabilitations of existing systems over investment in new facilities. Women participation in planning, implementation and maintenance of water supply and sanitation facilities is a key factor in the success and sustainability of the community water projects.

### Objectives of the Study:

The study sought to achieve the following objectives

1. To examine the extent in which gender inequality and marginalization influences women participation in community water projects in Homa Bay County.
2. To assess how the level of education of women influences women participation in community based water projects in Homa Bay County.
3. To evaluate the extent to which Culture influences participation of Women in community based water projects in Homa Bay County.
4. To determine how project financing affects women participation in community water development projects in Homa Bay County.

### Research Questions:

1. What is the effect of gender inequality and marginalization on women participation in community water projects Homa Bay County?
2. What is the influence of level of education of women participating in community based water projects in Homa Bay County?
3. To what extent does cultural influence affects the implementation of community based water project in Homa Bay County.
4. How does project financing influence implementation and sustainability of community based water projects in Homa Bay County?

## 2. LITERATURE REVIEW

### **Participation of Women in Community Water Project:**

Apart from the growth of community development involvements and their growing popularity among policy-makers, there is no reliable data about the success of women participation in community water development programs. Studies show that participation in community based development projects improves women's socioeconomic status, raises their self-esteem, and guarantees their wellbeing within the community. Defiantly, other studies oppose this fact by stating that women's participation increases community conflict due to male superiority complex, leading to their susceptibility to marital violence since it intimidates men's traditional male-controlled family authority. Inconsistence data across studies related to challenges in women's dynamic participation in community based development projects and empowerment is also evident. However this needs to be studied further.

Hunger Project (2000) observes that even though women are consulted and involved in the official planning of projects, it appears that they are usually considered ineffective without aid. However, as vital agents of change in rural transformation, women should register their participation in organizing and designing community based projects. It suffices to note that gender inequality and marginalization is the cause of inadequate women involvement in rural development (Momsen 1993). Unfortunately, our traditions favor men above women, fostering marginalization in the society (Kaplan 1993)

It is important to document that the 1994 African Common Position on Human Rights and Social Development Forum classifies women just like children, the elderly, the disabled and the youth as comprising the marginalized vulnerable factions of the population (NtomFutiZondo 1995). Mwamwenda (1994) encourages that women in developing regions should be susceptible to change. He adds that the community should embrace the participation of women in development, warning that it will be repugnant to social justice and equality if they are left out.

It is influential to record that the involvement of women in development work in rural areas contributes to social advancement besides ensuring economic growth in their regions. Importantly, in 2000, during a road construction, women were awarded equal hours of work to men. Evidently, in the KaziKwaVijanaProgramme of 2009, a similar consideration in working hours was given to both men and women. Also, the same criterion was utilized for the food for work programs throughout the project operations.

Traditionally, women's position has for long been determined to occupy the kitchen and their roles defined to purposely serve the interest and fulfill the desires of their husbands. Sadly, the role of making major decisions concerning development is a preserve of men, promoting women as incapable.

However, over the years, women have proved capable and worthy of making influential decisions that have impacted the globe. For instance, it would be proper to laud the contribution of the African woman in the person of Wangari Maathai for her input in changing the environmental scene, planting through her green belt movement over 30 million trees across Africa. Determinants of women participation in water project in Homa Bay County include:

### **The Effect of Gender in equality and marginalization on Women Participation in Community Based Water Projects:**

Serious issues of women participation in developments projects started with the organization of United Nations first women's conference in Mexico 1975. Reports indicated that most women don't participate in projects development thus the projects cannot be sustained properly; these are mostly water and sanitation, health and Education projects. This leads to high illiteracy and poor health. Poverty rate is also high amongst the women. There are no clear gender policies the women are always discriminated against, denied basic rights and suffer many forms of in equality compared to men. There is generally a disparity between men and women in most African communities mostly in Education and leadership where the male child is considered to be superior to the female child. Women who have been placed in leadership positions or elected to parliament have shown determination and innovation. The constitution of Kenya 2010 review created a situation where women could participate in the planning and implementation of development projects during the public participation. women are almost entirely absent from decision making process, meaning the effectiveness of women parliamentarians in general is far from clear (Frances, 1999).

The rapid population growth has resulted into shrinkage of land for subsistence farming. This has led to men moving to the towns to look for other employment leaving their wives at home. This Urban migration has led to shortage of labour in the rural areas which need to be replaced. This can only happen with the empowerment of women folk in the village. In the Greater Southern Nyanza, IFAD 2009, tried to carry out community trainings for water point caretakers for the completed Water projects, mostly men and the youth were trained. The projects stalled because most of the care takers went to town to look for greener pastures. This shows that if women who are the main beneficiaries of these facilities are accorded proper training on operation and maintenance, the sustainability problem would somehow be solved or enhanced.

Sustainable development has not been achieved in Kenya partly owing to poor institutional governance and unproductive development policies. Indicators of institutional failure in Homa Bay County include social and political marginalization and economic stagnation.

Customs have tended to formally create a division between men and women. In the past there were often complementary institutions, but today only those belonging to men exist. While most women have informal authority over the actions and decisions of their husbands, but this does not amount to an institutionalized space for women. The wife may not well influence what a man says or does an event. In many development projects started by the intervention of NGOs, women tend not to be in leadership positions. While government has made provision to include greater female and minority representation, there will be little change if this inequality is not addressed (Vorley, 2002).

Also, based on the traditional determination of gender roles, issues of financial limitations have rewarded boys with more preference as candidates of education in most families, considering them as future bread winners. On the other hand, girls are married off to other families. It is essential to mention the role of the government in improving the situation through rolling out the free primary and secondary education programs. Moreover, the government has introduced policies, facilitating the empowerment of the girl child. Additionally, the Millennium Development Goals propose equal opportunity for the education of both boys and girls.

In many African countries food production is left to the women, nearly all tasks connected to food production are left to women. Schultz et al. (2001).found that 90% of women in developing world, where most of the planets biological wealth is found, depend on their land for survival. Women head 30% of the households in developing countries, 80% of food production in Sub – Sahara is done by women,60% in Asia and 50% in Latin America Despite all this, the women does not have control of land as men are always the owners. Women cannot make decisions on land as far as the African culture is concerned.

It is important to document that there are universally accepted development strategies to deal with development issues, notwithstanding that some aspects have their particular concerns. Meer (2015) strongly considers that women in poor communities are unlikely to profit from promising development policies, except when there is determination to organize them around their common interest. Also, Friedman (2015) indicates that development plans should entail guidelines for procedure and practice of delivery to contest imbalanced power relations.

It is of interest to record that comparatively, women residing in rural areas should be supported to attain some degree of development as their colleagues in urban set ups (Madonsela2015). Moreover, it is of chief consideration to ensure the necessities, rights and distresses of the rural women are incorporated into every country's development plans to benefit the sectors of the population entirely. Even though women are not consulted and involved in the official planning of projects, it appears that they are usually considered ineffective without aid. However, as vital agents of change in rural transformation, women should register their participation in organizing and designing community based projects (Hunger Project 2014)

It suffices to note that gender inequality and marginalization is the cause of inadequate women involvement in rural development (Momsen2013). Unfortunately, African traditions favor men above women, fostering marginalization in the society. It is important to document that the 1994 African Common Position on Human Rights and Social Development Forum classifies women just like children, the elderly, the disabled and the youth as comprising the marginalized vulnerable factions of the population. Mwamwenda (2014) encourages that women in developing regions should be susceptible to change. He adds that the community should embrace the participation of women in development, warning that it will be repugnant to social justice and equality if they are left out.

It is influential to record that the involvement of women in development work in rural areas contributes to social advancement besides ensuring economic growth in their regions. Traditionally, women's position has for long been determined to occupy the kitchen and their roles defined to purposely serve the interest and fulfill the desires of their husbands.

Sadly, the role of making major decisions concerning development is a preserve of men, promoting women as incapable. However, over the years, women have proved capable and worthy of making influential decisions that have impacted the globe. For instance, it would be proper to laud the contribution of the African woman in the person of Wangari Maathai for her input in changing the environmental scene, planting through her green belt movement over 30 million trees across Africa.

#### **Level of Education on Participation of Women in Community Based Water Projects:**

In many African societies, a lot of argument has been going on as far as the status of women is concerned. To majority of the members, women's place is the kitchen and their major role is to take care of their children and the husband. It's considered a waste of time and funds to educate a woman since she will be married out to another community and the parents won't benefit. Women should only be trained on domestic aspects that will enhance their being a good wife and mother, (Fafunwa, 1994; Oroka 1996). Due to limited resources, many families prefer to invest in the education of male child as most African lineage are having their generations recorded and headed through males (Suara, 1999). Due their huge population, women education has attracted Regional and National attention their role in community development projects. Currently, development in both the urban and rural simply depends on the capacity building of the participants which is a major concern of development policies. Education is one of potential tool for the development of human capital. Recent studies on significance of human capital in development process, the education of every unit of the human resource of a nation cannot be down played in the path to development. Oyebamiji and Adekola (2006) and Ugwu and Oyensehi (2009) posited that women even now, face numerous restrictions which hamper the acquisition of education. Eheazu (2009) states that it is common knowledge that females in many parts of the world experience education in equalities, this affects their participation economically and politically.

It is observed that more than half of the worlds illiterate are women of which majority are found in Africa (UNFPA, (2006). According to United Kingdom Department for International Development (DFID) in Okoli (2011) two thirds of the world population are women or female. This also reflects that it's two third of the over one billion people who live in abject poverty. In the Sub Saharan Africa, the Pacific and Southern Asia 83% of the girls don't go to school. And according to (NEPAD (2002) in the twenty first centuries, 50% of the women population in Africa are illiterate. Oyebamiji and Adekola (2006) claims that not only numbers should be considered, but the social and economic activities the women does in their societies. Adebosoye-Makinwa (1991) explains that the education of women can revive, strengthen traditional skills and build confidence in women in their development arena. She blames traditional barriers and burden of family as constraints to women attaining education and participating and contributing optimally to national development.

Literacy level in 1998 in Kenya was that of female 65% against 84% of their male counterparts

In Homa Bay County especially in poverty stricken areas around the lake and islands of Mfangano and Rusinga many households prefer to educate the boys and marry off their daughters when they are very young. This attitude needs to be addressed if female education is to be achieved in Homa Bay, especially in the rural areas. According to the World Bank, education of women and girls is "one of the best investments a country can make towards its future growth and welfare" (Moraa, 1999). In agreement with this statement, Margaret Lwanga says that, "in developing countries women are more involved in micro economy" (2001, p.8). This reflects the position of women in our country. Women involvement in Community development will boast the economic growth of the country as most women are involved in micro economy development in the rural areas.

Education is a tool that controls male dominance structures and it empowers women to a level where they can influence policy. This can be addressed by tackling; household socio-economic status and constraints, socio cultural attitudes and the value addition to female education, division of labour at the household which over-burden the girl child in the African context. The curriculum should be addressed to favour women's education to improve their participation in development projects. According to Prof. George Eshiwani, Few educational programs on the continent have demonstrated the

flexibility needed to accommodate the multiple roles of women and girls. Indeed, most programs are so rigid in organization and timing that they fail to meet the needs of their intended target groups. Gender-stereotyping in educational materials including the misrepresentation and undervaluing of the roles of women and girls serves as a distinctive, lowering the aspiration of girls because of the socio-political and economic roles of women (Eshiwani, 1983, quoted in FAWE, 1991). The situation tends to improve seems with the current demographic studies showing an upward movement in Urban Areas.

My opinion is that women should not only be trained on household production but be empowered to to participate in development activities. This will bring equitable distribution of resources for the benefit of the whole community.

It is noteworthy that women have suffered a setback in attaining formal education. It is practically influenced by the construction that women's role was basically, taking care of their children and husbands in addition to other gender duties. Also, the design that produced men to be the sole providers, unkindly restricted women from participating in the economic activities of the community. Therefore, this basis has rendered most women, forming more that 50% of the population illiterate. It is observable that most women do not contribute actively in the course of project planning of the economic activities of the community due to lower levels of education. The education challenges amongst women make it difficult to even understand trainings (Adler and Izraeli, 2014)

Also, based on the traditional determination of gender roles, issues of financial limitations have rewarded boys with more preference as candidates of education in most families, considering them as future bread winners. On the other hand, girls are married off to other families. It is essential to mention the role of the government in improving the situation through rolling out the free primary and secondary education programs. Moreover, the government has introduced policies, facilitating the empowerment of the girl child. Additionally, the Millennium Development Goals propose equal opportunity for the education of both boys and girls.

The education system fulfills a significant objective in the economic development of any society. It is necessary that to ensure efficacy in community based development projects, the education provided should meet the needs of the community. Owing to the trending nature of women's involvement in the development projects, UNESCO, World Bank and the third world countries have developed sensitivity towards women participation in national development. It is of significance to document that the women in the rural areas require to be educated to improve their social welfare. Most research has revealed that enhanced women education improves their overall life, warranting better nutrition, developed hygiene, low fertility rate, mortality rate, and economic expansion (Brown and Barret 2015).

Importantly, education produces wholesome women who are finely nurtured and reared with mannerly social skills. On the contrary, lack of basic education aids the non-performance of women in the community based developments as a result of low self-esteem. Education is vital to the nerve of the economic status of any community. It provides the population with the needed skills, knowledge, and trainings for the implementation of the development plans. Also, education enlightens the populace on their rights and gives them a medium for their exercise. For example, it is imperative to inform that less than 15% of the entire women population in Democratic Republic of Congo possesses the basic education with only 5% as teachers (Obonyo and Kaudia, 2014).

Furthermore, in Ethiopia women are less involved in extension services due to their low education status, women led households had never been visited by agricultural extension officers, unlike the male farmers who got regular visits (German, 2014). This indicates that men are more involved in project activities than women.

#### **Information on participation of women in community water projects:**

Water projects development is a response to water source scarcity for domestic and animals, a lot of information is needed for community members to develop new practices that will help in development of new water points. One of these sources of information is ICT in hydromet stations. It is becoming a more popular option of information use. The number of ICT literate persons in a community therefore is important as high number of ICT literate persons will contribute significantly to the projects performance. The uses of ICT enable the use of real time information and will generally involve the use of latest technology. In Africa owing to their distinct cultural roles, men and women farmers do not always share the same information needs. Appropriate content is therefore needed to be developed for each of them, separately, depending on their cultural background. In Zambia, for example, information is necessary for the diffusion of new technological

interventions (Ajayi and Otuya, 2006). It is noted however, that more men than women are engaged in these extension services and are in position to apply these agro forest practices in the community project.

In East Africa and Latin America, according to (Mwangi et al, 2011), mixed groups, tend to do more monitoring than male dominated ones and female dominated ones are unlikely to conduct any monitoring as well. The access to information on rainfall patterns, diffusion of information as well increases participation of members in the community. In Indonesia and Vietnam men are involved in agricultural training and extension services more than women (Reyes, 2008).

Information as an asset in project planning and management would thus be skewed toward the women in these areas. The situation is patterned in Uganda, where women have had 1.13 contacts with extension officers compared to men's 2.13 (Katungi et al, 2008). This has indeed led to the increased in participation by men in community based projects than women participating in water projects due to their increased leveled of education. The Uganda government has therefore instituted policy and legal frameworks in an attempt to stimulate the active participation of women in their projects (Mukasa et al, 2011). This presumes that men are more engaged in these projects than women in Uganda.

Diffusion is largely affected by the information available on the innovation (Sudath, 2008). More information means increased diffusion and that more members of the community will benefit from it. It is therefore necessary for information dissemination to effectively take place. Since women and men play different roles as per by their cultural background, there is need for various sources of information to be used to help them make informed choices. The general agreement is that women are key beneficiaries of water projects, thereby involving them in these projects would ensure that community members benefit as well as from the information.

Compared to women, men have more to access to land labour, information, education, training and inputs. This makes men have an added advantage with respect to their participation in water projects as more information leads to an increased participation in the projects. There is need to have an increasing number of women, with literacy skills in the community based water projects. A meaningful use of extension services need to be taken into account. According to (Kiptot and Franzen, 2011), women in Africa receive more extension visits than men and participate in more field days and other extension activities off farm. The reasons given for this high involvement of men is the bias of extension workers towards women, socio-cultural barriers, limiting communication between many extension workers and women's lack of time to participate in extension activities off farm.

This scenario gives women an upper hand in information dissemination and diffusion to other members of the community thereby influencing their participation. In a study done in Meru, women are diffusing information to greater-number of people than men, though their diffuse to similar sources (Kristin and Negash, 2007). Therefore the involvement of women implies that information will reach a larger number of community members involved in the water projects. Given their ability to reach greater numbers, this definitely enhances their participation as leaders as well. Women generally have lower levels of education and their ability to use technical information is limited (Kiptot and Franzen, 2011). Women attend this information meeting less frequently than Men as many of them are socially and culturally discriminated, thus rarely given time to participate in the extension activities of the farm (Kiptot and Franzen, 2012).

In Homa Bay, the Kenya Forestry Service and the Ministry of Water and irrigation are involved in diffusion of information to community based water project groups through organized workshops and seminars (SNV, 2014). The participation of both men and women is encouraged, through the Women are more active in attending these forums as compared to men. Much of the training sessions, seminars and workshops are attended by women. Field trips and Field days organized in the constituency have also attracted more Women than men.

#### **The Effect of Socio- Culture on Participation of Women in Community Based Water Projects:**

The conception embedded in the Kenyan society of women being inferior to men, hinders the women from achieving their full potential. Initially, the women never owned property nor were beneficiaries of their parents wealth. The patriarchal set up rested upon males the power to make decisions within the community. Also, women can only cultivate the land that remains in the ownership of the man. It is also important to mention that the inability of women to own land has contributed to the difficulties in borrowing loans as they lack collateral. The inaptitude has prevented women from participating in project planning, leaving it for male domination (Jamali, Sidani, and Safieddine, 2015),

It is founded that the participation of women in community based water development projects is critical for the sustainability of the projects. In understanding sustainable development, World Commission Environment and Development (WCED, 2017) defines it as the development that meets the needs of the present generations without compromising the possibilities of future generations to meet their needs.” Indeed, the idea of sustainable development would bear no meaning without the contribution of women. The late president of Tanzania Mwalimu Nyerere engages a wholesome approach in the understanding of development by saying that development is for the people by the people of the people

It is of tremendous significance to relate that project development by and for women is among the ways of building their self-confidence, cultivating their skills and fulfilling their needs through collective action. It is necessary to encourage women into leadership positions as this will ensure their involvement in the development projects in the community. The participation of women in community projects will safeguard their interests in the society (Jamali, Sidani, and Safieddine, 2015).

In Kenya for women to break Socio-Cultural barriers, they should have representation at all policy-making levels so as not be marginalized; Most policies tend to favour men. Women try making steps towards advancement; But their efforts are thwarted by the male counterparts basing on the wrath of culture. In most African cultures, women have never enjoyed equality they have always been considered inferior intellectually and physically to men. These attitudes are derived from the original traditional gender relations. They are like property to be handed over from fathers to husbands. Dr. Edda Gachukia says, “the value of most African cultures assume and reflect the generally accepted inferiority of women embedded in mythology and ‘wise’ sayings (proverbs) that assign the female personality inferior, stereotypical characters as simple minded, lacking in basic knowledge, wisdom and logic” (Gachukia and Kabira, 1991). Women are portrayed as lacking in originality and genius. My contention here is that, there is need to challenge these stereotypes on which the African socialization systems thrive. One way of challenging the situation is by use of more credible depictions of the many positive roles of women including profiles of positive role models. These should be documented and used as readers or background learning/teaching materials at local contexts. This will have a far-reaching effect on changing the low societal images of women and hence encouraging women’s participation in developmental activities.

Bible is another way of encouraging women participation by citing the biblical examples of women who broke the religious barriers imposed by their religion. A good example of this is the story of the Syrophoenician woman who against all the requirements to stay indoors, went out and touched Jesus’ garments (Mark 5:25-34) and was healed of her disease. According to my interpretation, the women have power and the potential to act in empowering themselves.

Cultural considerations still play a salient role in determining work experiences and environments (Mead 2010) In Kenya; the women are seen as mothers and homemakers. Women have to challenge authority in a patriarchal environment that imposes restrictions on their daily behavior. (Al-Lamki1999).

A woman in employment in Kenya faces many challenges, same as those of most African women. It is an expectation that man should be the head of the household and should be responsible for the maintenance while the wife take care of the kids and other household chores.(Kibwana and Kabeberi 19920).According to Ely and Meyerson(2000) studies indicated that, despite the role played by the cultural forces, media and organizations, the change has to be catalyzed by women themselves.Women’s success will depend on their hard work. Some people have a preconceived idea that women enjoyed a particular prominence under Communism both in the workplace and in political life (Jamali et al. 2005). The reality, however, was that men dominated in government, the party and state enterprises. There were quotas for the representation of women in elected bodies, but this was superficial, as the representatives were, appointed, and the bodies were more or less powerless. Gender equality under communism went unfulfilled, as did the assurance of real power and control. With a national democracy regained and cultural traditions revived, there is concern that, a revitalization of patriarchal values might choke the voices of women (Risebrorough 2008). There is also a broader risk that during transition women’s interests will be subordinated to, rather than integrated into, national agendas for change.

Working with women to solve specific development issues enhances and empower women participation. Homa Bay County has uneven rainfall distribution. The highlands receive more rainfall than lowland areas around Lake Victoria. Underground water potential is high in most regions; present are scattered water springs in the sub counties; there are many rivers which drain into Lake Victoria.

**The Effect of Project Financing on Women Participation in Community Based Water Projects:**

The high poverty level in the rural Kenya remains one of the biggest challenges facing the Country's development agenda. According to Kenya social policy report (2012), about 46 % of Kenya's population lives below the poverty line. This situation is marred by large income disparities between regions and people in the country. The challenges may undermine sustainability of user charges or community contributions among the poor sections of water consumers, especially in the Arid and Semi-Arid Lands regions (MoW&I report, 2017). Development projects in the communities require resources for implementation and operation of water projects (Munger et al, 2008).

In order for rural communities to play an active role in the community development, it is necessary for them to have access to resources (Nissen-Pettersen, 2016). Weak financial position of local communities not only reduces their capacity to participate in development projects, but also affect their ability to pay for water services (Kakumba and Nsingo, 2014). Lack of adequate knowledge and skills by the community members due to the high level of illiteracy have limited the scope of community participation in rural water development and thus perpetuating continues lack of safe and clean water within many communities (Kakumba and Nsingo, 2008).

Nissen-Pettersen et al (2006) in their study based on rural water projects in Kitui, asserts that gender mainstreaming is important in the management of rural water projects to ensure sustainability. Therefore this research would like to understand how socio-economic of the community influence their participation in rural water development. Policy formulation for the funding of community projects by empowering Women members' access small scale loans for the development of water projects. They should also be granted access, control and ownership of resources that can act as collaterals to burrow loans from banks or other agencies.

### 3. RESEARCH METHODOLOGY

**Research Design:**

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in the procedure, Orodho (2002). Kothari (2001) defined research as an arrangement of conditions for collecting, analyzing and interpreting research findings. In this study, a descriptive survey method was used to investigate factors determining the participation of Women in community water projects in Homa Bay County. This research design is probably the best method available to social scientists and other educators who are interested in collecting original data for the purposes of describing a population which is too large to observe directly, (Mugenda and Mugenda, 2003).

The research design helped collect data from the sampled population and determined the current status of that population with respect to the variables (Mugenda and Mugenda, 2003). The design was chosen by the researcher due to its suitability for determining the influence of the selected factors on the participation of women in community based water projects in Homa Bay County. The descriptive research design also describes and portrays characteristics of women participating in community based water projects in relation to the determinants under study.

**Target Population:**

A target population describes the accessible population from where a study sample is drawn and upon which the results of the study will be generalized, Mugenda and Mugendsa (2003). The target population for the study was the female committee members of community based water projects in Homa Bay County. This population comprised of 2000 women committee members in registered community based water project groups, Homa Bay County Department of Water and Environment (2015).

**Sample size and Sample selection:****Sample size:**

According to Kothari (2003), sample size refers to the number of items to be selected from the target population. The sample size should be optimum to fulfill the requirements of efficiency, reliability, representation and flexibility. The study adopted a probability sampling design in which each item of the target population is accorded equal chances of being included in the final sample. According to Airy et al, (1972), a sample of 10-20% is acceptable. For the study, the researcher used 10% of the target population of 2000 respondents, giving the sample size of 200 respondents.

**Sample Selection:**

The researcher selected a representative sample by coming up with a sampling frame. The sampling frame is a list of the women in various water projects, which were stratified according to the wards they belong to. The list of women in these community based water project groups were randomized to enable the researcher use stratified random sampling to select the samples from each ward giving rise to a sample size of 200 respondents.

**Data collection Instruments:**

Relevant data that addressed the objectives of the study, the data collection instrument was selected appropriately to avoid collecting irrelevant information, Henry (2004). In this study, Questionnaire was developed and used to collect both quantitative and qualitative information, as the study adopted a mixed method research paradigm.

Closed ended questions are preferred for the collection of quantitative data while open-ended ones are designed for the collection of qualitative data. There is also a set of questions for the focus group discussions with a selected few. The questionnaire was divided into two sections, with section A focusing on the demographic characteristics of the respondents and section B based on the study objectives. A questionnaire was preferred as it is easy to administer, cheap and timely in use.

**Pretesting of the instrument:**

Instruments pre-testing or piloting is a preliminary study conducted on a small scale to ascertain the effectiveness of the data collection instrument, (Kothari, 2005). A pre- test sample should be between 1% and 10% depending on the sample size (Mugenda & Mugenda, 2003). In the study, a pre- test sample size of 1% was used giving 20 respondents. The researcher prepared copies of questionnaire and self- administered to the respondents. The findings from the pre-test was significant as they helped to reveal aspects of ambivalence depicted by the questionnaire items that were subsequently reframed relative to the responses obtained from the respondents.

#### 4. DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

**Time taken to participate in water projects development:**

The Participatory process discussions of women in community based water project signified the interest of the respondents in the project. It disclosed the respondents' interaction and exposure over time to water projects over time, and gaining knowledge informally. The respondents were asked in this view, to indicate how long they had participated in the projects. Their responses are indicated in table 4.1.

**Table 4.1: Period of participation in water projects**

No. of years	Frequency	Percentage
0-4	92	47
5-6	61	31
7-9	31	16
Above 10	13	7
<b>Total</b>	<b>197</b>	<b>100</b>

As table 4.1 revealed 92 (47%) of the respondents had been engaged in water project in the community for a period of less than 4 years, while 61 (31%) had been participating for 5-6 years, 31 (16%) for 7-9 years and above 10 years at 13 (7%). The implication of this is that at least half of the respondents had participated in these projects for over 4 years thereby gaining useful hands on experience and informal education.

**Influence of education level of respondents on participation of women:**

This variable was a critical element of the study. It was believed by the researcher that the level of education was indeed an important factor of participation. The execution and implementation of water project activities is determined by the level of education. The measurement of level of education was done by considering the number of women with college level education in the community group, the number of those who could read and write basic water project instructions.

**The number of women with college level education:**

The assumption in this study was that college level education would be pivotal in enhancing effective participation of women in these projects. This is owing to their ability to research extensively and intensively on water infrastructure information, compare analysis disseminate and utilize the information. In the questionnaire respondents indicated the number of women in their community based group with at least college level education; the average number of members in these groups being fifteen.

**Table 4.2: The number of women with college level education**

No. of years	Frequency	Percentage
None	78	40
1-3	64	32
4-6	32	16
7-10	21	11
Above 10	2	1
<b>Total</b>	<b>197</b>	<b>100</b>

Referring to table 4.2, many groups of the respondents with college level of education had very few groups with ten members and above, 2 (1%) those with over 10 having attained college education 1-3 at 78 (40%), those with 7-10 at 21(11%), and 4-6 at 32 (16%), and 1-3 at 64( 32%) of members having college level education. This implied that majority of these respondents' had very little members with college level education and sometimes none. Water development being rural based the groups with ten members had the least educational qualification. The rural basing of majority of group members brought the marginalization in the level of education. An alternative for trained individuals was in other engagement other than in water projects.

**The number of women who can read and write:**

Water project development is a practice that can be learned informally. However, the researcher felt that formal learning is critical and translated to a more effective participation by the respondents. Some basic instructions on water project development practices when read and those written by participants enhance successful implementation and sustainability by these community initiatives. The respondents were asked to state the member of the women in their groups that could read and write basic water infrastructure basic implementation procedures..

**Table 4.3: Number of women who can read and write instruction**

No. of members	Frequency	Percentage
1-3	9	5
4-6	14	7
7-10	34	17
Above 10	46	23
All	94	48
<b>Total</b>	<b>197</b>	<b>100</b>

Table 4.3 illustrates that 94 (48%) of the 197 respondents stated that all members of their group could read and write basic instructions, 46 (23%) indicated that above 10 of their members could read and write water project instructions, 34 (17%) indicated that 7-10 of their members could do so, 14(7%) indicated that only 4-6, could read and write and the 1-3 bracket was indicated by only 9 (5%). More than often, community members who understand and interpreted instructions translated the projects to successful community initiatives. The implication of the statistics cited is that majority of the respondents groups was constituted of women who had basic literacy skills.

**Number of ICT literate members:**

In project management ICT is an important tool for gathering information and making decision. The researcher sought the number of ICT literates in each group. A good number of ICT Literate women indicatives the group ability to utilize ICT facilities for collecting project information for making decision.

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The respondents were required to ascertain their level of ICT literacy through questionnaire. The response was as expressed in table 4.4

**Table 4.4: Number of ICT Literate members**

No. of members	Frequency	Percentage
1-3	55	28
4-6	40	20
7-10	84	43
Above 10	15	7
All	3	2
<b>Total</b>	<b>197</b>	<b>100</b>

From the table ICT Literate members of the community based group the 197 respondents stood at 84 (43%) for those between 7 and 10, 55 (28%) for group with 1-3 ICT Literate members, 40 (20%) reflecting an ICT literacy of 4-6 members in the group, while those above ten ICT literate members was 15 (7%) and all being ICT literate at 3 (2%). Over 7 and above registered 51%: (7-10) above 10 and all at 97 (59%).

There was an indication by implication that the category of the least subscription by the respondents was that fewest groups had all their group members being ICT literate. It was adduced that that over half these groups having 7-10 members and above with ICT literacy respondents' groups could process information and its utilization to community based water project group findings.

**The level of education of women and participation:**

This parameter is a strong Determination of the effective participation of women in community based projects is based on this parameter. Questionnaire was passed to the respondents were asking them whether they felt that level of education of women in their group influenced their participation. Table 4.9 reveals the responses.

**Table 4.5: Level of education of women versus participation**

Made	Frequency	Percentage
Strongly agree	50	25
Agree	83	42
Disagree	47	24
Strongly disagree	17	9
Other	0	0
<b>Total</b>	<b>197</b>	<b>100</b>

Table 4.5 shows that, out of the 197 respondents, 50 (25%) strongly agreed that the level of education determined women's participation, 83 (42%) agreed, 47 (24%) disagreed and 17 (9%) strongly disagreed with this disposition. Due to the fact that 130 at 65% of the respondents agreed and strongly agreed validates the assumption women's participation is influenced by the level of education.

This implies that majority of the respondents who elicited these responses indicated that those with a higher level of education were more involved in other interests for occupation while those with lower levels of education were less involved in project activities. This is due to the fact that more rural based educated women had occupations based there and had adequate time for involvement in development projects.

**Influence of social culture on participation of women:**

Community initiated projects are often affected by the culture which is an inherent perspective of any society and underlies various social activities undertaken by the communities. The impotents of this parameter warranted its use by the researcher to determine the factor of women participation. Homa Bay County's being conservative patriarchal in nature, manifest their cultural stereo-types in enhancing women's participation in water projects. The respondents were requested to sample various aspects of culture such as leadership, decision making, involvement, and community land ownership within their community based projects. It was found out that all aspects of culture had effects on women's participation.

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**Stereotypes of Socio-cultural manifestation:**

Cultural stereotypes of the community were identified and respondents were asked to find out which of them they felt manifested itself most in their community based water projects. The results illustrated in Table 4.6.

**Table 4.6: Projects Stereotypes of Socio-cultural manifestation**

<b>Stereotype</b>	<b>Frequency</b>	<b>Percentage</b>
Leadership positions	42	21
Key decisions	38	19
Project Activity involvement	104	52
Ownership of community land	16	8
<b>Total</b>	<b>197</b>	<b>100</b>

As the statistics in Table 4.6 indicate out of the 197 respondents 42 at 21% held the view that leadership positions were the most crucial gender stereotype manifested in the community while 38(19%) felt that culture propagated the decisions made by women, 104(52%) viewed that women participation was more than that of men but influenced the factors of decision making and land ownership in water projects activities. It was noted that paltry 16 (8%) were of the view that cultural manifestation was felt most in ownership of land by women. The implication was that women’s participation in community activities was influenced by Socio-culture. This translated to poor participation by women in community based project, due the fact that decision making and leadership was prerogative of the male counterparts. Women held few key leadership positions in these groups which resulted into their poor involvement in project decision making.

**Number of leadership posts:**

Cultural and traditions undertones determined the leadership structure of community based projects. Largely, this signified that women being none patriarchal leaders did not hold key positions in these projects. The questionnaire asked respondents to indicate the total number of leadership posts they had in their community projects and to indicate how many of these posts were held by women. These results are presented in Table 4.7 and Table 4.8

**Table 4.7: Number of leadership posts**

<b>No of Posts</b>	<b>Frequency</b>	<b>Percentage</b>
None	114	58
1-3	57	29
4-5	12	6
6-7	8	4
Above 7	6	3
<b>Total</b>	<b>197</b>	<b>100</b>

The analysis of table 4.7 revealed that majority of the groups had none leadership structure at 114 (58%) of 197 respondents, 1-3 leadership posts was held by 57(29%), while 12(6%) had 4-5 leaders and 8(4%) had at least 7 leaders. This implied that the average posts groups were not involved in the key decision making posts.

**Numbers of Leadership posts held by women:**

The number of leadership posts held by men was analyzed and the results were shown in Table 4.8.

**Table 4.8: Number of women leaders,**

<b>No of women leaders</b>	<b>Frequency</b>	<b>Percentage</b>
None	114	58
1-3	67	34
4-5	10	5
6-7	6	3
Above 7	0	0
<b>Total</b>	<b>197</b>	<b>100</b>

The interpretations of the statistical data in table 4.8 indicate that majority of the groups at 114(58%) out of 197 respondents had none leaders, 67(34%) had 1-3 leaders who were women, 6(3%) had more than 7 women leaders and there were nil leaders in above 7 leaders in their water projects. The implication was that since over half the groups 114(58%) of the leaders were not involved in leadership from an average of seven each, it was established that women had few leadership positions.

**Activities women engaged themselves in:**

The researcher felt Cultural stereotypes generally influenced the activities women engaged in. Respondents were to indicate the activities women mostly engaged in their projects. The r Table 4.9 illustrated respondents’ views.

**Table 4.9: Activities women engaged themselves in**

<b>Activity</b>	<b>Frequency</b>	<b>Percentage</b>
Project Identification	10	5
Project decisions	15	8
Project planning and design	30	15
Project implementation	100	51
Project Monitoring and Evaluation	42	21
<b>Total</b>	<b>197</b>	<b>100</b>

The table 4.9 showed a great interest in of women in project implementation compared to all other project activities as at indicated by 100 (51%) out of 197 respondents. Women were relatively less engaged in project decision making 15(8%) and in project planning and design as indicated by 30 (15%) while 42 (21%) of them indicated project monitoring and evaluation while 10 (5%) were involved in project identification. The implication of this was that women were more engaged in project implementation, monitoring and evaluation functions. They were less involved in project identification and decision making. This indicates that culture undertones influenced the activities women undertook in the community water projects.

**Influence of access to finance:**

Finance is critical for the success of any community water project. It determines project performance and sustainability. An adequate resource such as finance is needed to accomplish project activities satisfactorily. This objective of how access to finance influences participation of women was a serious determinant factor as to how many women accessed loans. A few numbers of women groups had accessed loans successfully; this was as a result of not having collateral to borrow money for project activities like title deeds.

**Accessibility of loans to women:**

Loan facilities accessibility promotes water projects sector development by injecting much of financial resources in terms of costs of the project. Where group members can access loans individually facilitates ease of project activity implementation. The respondent’s response as how accessible loans were to women is presented in table 4.10

**Table 4.10: Accessibility of loans to women**

<b>Mode</b>	<b>Frequency</b>	<b>Percentage</b>
Very accessible	0	0
Accessible	22	11
Less accessible	48	24
Not accessible	130	65
<b>Total</b>	<b>197</b>	<b>100</b>

Table 4.10, indicates that out of 197 respondents only 0(0%) felt that loans were very accessible to women, while 22(11%) felt they were accessible. Majority felt that loans were not accessible at 130(65%) and 22(11%) that finance was less accessible to women in their community water projects. The implication of these statistical presentations was that women had little access to loans in Homa Bay County. This factor influenced women participation in projects.

**Number of women who secured loans:**

It was an interest of the researcher to the number of successful loans applicants within the community based projects. It showed how women with access to loans could secure them. This was an indicator that part of the credit could be injected into the project as vital resource. The respondents were asked to indicate how many women secured loans. The results are shown in table 4.11.

**Table 4.11: Number of women who secured loans**

<b>Mode</b>	<b>Frequency</b>	<b>Percentage</b>
None	122	61
1-3	47	24
4-6	19	10
Above 7	9	5
<b>Total</b>	<b>197</b>	<b>100</b>

From the statistics analyzed presentations in table 4.11 122(61%) out of 197 reflected that none of their group member had secured loans successfully, 47 (24%) indicated that only 1-3 women loan applicants were successful. 19 (10%) indicated that they had only 4-6 successful women applicants and 9 (5%) had above 7 successful applicants. This indicated that very few women succeeded in securing loans on applications.

**Other sources of income:**

The aspects of access to other financial sources enhanced effective participation of women in community projects activities due additional sources of income. Stable women in other financial engagements, brings stability to community initiatives. The respondents were investigated on other community incomes they had other than the community based water projects. This is illustrated in table 4.12.

**Table 4.12: Other sources of income**

<b>Source</b>	<b>Frequency</b>	<b>Percentage</b>
Formal employment	20	10
Farming	113	57
Business ventures	47	24
Table banking	19	10
<b>Total</b>	<b>197</b>	<b>100</b>

The table 4.12: illustrates that 113 (57%) out of 197 respondents were engaged in farming, 47 (24%) in business ventures, 20 (10%) in formal employment and 19 (10%) in Table banking. The additional sources of income enhanced their participation in these projects as the analyzed statistics. Most women are farmers and are able to apply gains made from farming to community based water projects. Business ventures, Table banking and formal education also influence women participation in water projects as they add additional financial resources to accelerate development.

**Land ownership:**

Land ownership is a valid collateral or security that allows one to secure finance from lending institutions. The land is where the projects are implemented and ownership plays very important role. The following is respondent's response to indicate the land ownership of their water projects, as captured in table 4.13.

**Table 4.13: Ownership of land**

<b>Owner of land</b>	<b>Frequency</b>	<b>Percentage</b>
Government	6	3
Private company	18	9
Leased from men	93	47
Bought from men	61	31
Hired from women	19	10
<b>Total</b>	<b>197</b>	<b>100</b>

Table 4.13 indicates that 93 (47%) out of 197 respondents utilized land leased from men in the community water projects, 61 (31%) bought land from men, 19 (10%) leased land from women owners 18 (9%) had their community projects on private company land and 6 (3%) utilized government land. This implied that most of land used for project activities was either bought or leased from the male companions. The marginal ownership of land by women, private companies and government indicated that they would be less effective in participating in these projects which they largely did not own. Project identification was difficult since women were not involved and projects like Bore holes were mostly identified on private lands.

**Number of women with title deeds:**

Land ownership is a critical indicator of securing finance and is used as guarantee to obtain credit. The responses of respondents recorded are depicted in table 4.14.

**Table 4.14: Number of women with title deeds**

Number of women	Frequency	Percentage
None	133	68
1-3	20	10
4-6	18	9
7 and above	16	8
All	10	5
<b>Total</b>	<b>197</b>	<b>100</b>

As indicated in table 4.14, 133 (68%) of women held no valid title deeds, 20 (10%) had 1-3 members, 18(9%) indicated 4-6 members, 16 (8%) had 7and above members with title deeds and those who had all their female members with title deeds were 10 (5%) out of 197 respondents. The implication was that majority of women held no valid title deeds and could therefore not access loan facilities.

**Influence of information on participation of women:**

This parameter was sought to find out whether the access to information influenced participation of women in community based water projects. The researcher felt that presence of reliable information system was important for the success community based project initiation.

**Source of information:**

Information sources on agro-forestry need to be credible, reliable and adequate. This is especially so since Water projects management practices and technological intervention are dynamic so there must be reliable, credible and adequate source of information. Following is the analysis of the responses in table 4.15.

**Table 4.15: Sources of information**

Source	Frequency	Percentage
Farming and Demonstration	88	44
Field Days	45	23
Extension information	31	16
Workshop and seminars	23	12
ICT and Mass Media	10	5
<b>Total</b>	<b>197</b>	<b>100</b>

As reflected in table 4.15, the 197 respondents used different sources of information which they considered appropriate to them. It is indicated 88(44%) mainly subscribed to information from farming and demonstrations, 45 (23%) Sourced from field days, 31(16%) from extension information, 23(12%) They got from workshop seminars and 10 (5%) liked ICT and Mass Media.

It was found out that most respondents preferred practical orientations as regard information, by farming and demonstrations and field days getting the greatest percentage. Minimal respondents used extension information services. ICT and Mass Media were the least used to access information.

**Accessibility of information:**

Information has to be easily accessible to members. This is necessary for effective monitoring and evaluation of water projects by the community. Respondents were required to rate how accessible information was to the women participating in these projects. Summaries of the analysis are in Table 4.16.

**Table 4.16: Accessibility of information**

<b>Mode</b>	<b>Frequency</b>	<b>Percentage</b>
Very accessible	20	10
Accessible	65	33
Less accessible	104	53
Not accessible at all	8	4
<b>Total</b>	<b>197</b>	<b>100</b>

Table 4.16 reflects the levels of accessibility of information where over half, 104 (53%) of the 197 respondents were less accessible to information, 65 (33%) were accessible, 20 (10%) indicated that it was very accessible and 8 (4%) was not accessible at all.

This implies that majority of respondents had less access to information, indicating that the information systems used were not adequate. This therefore further casted doubt as to whether meaningful information reached the women participants. Lack of adequate information from these sources posed a challenge to the project initiation.

**Attendance of workshops and seminars:**

According to the researcher attendance of workshops and seminars by water project members was important in parting knowledge, skills and attitudes related to their projects. Respondents were required to state their frequency of participation in workshops and seminars on water projects. The respondents captured as indicated in table 4.17.

**Table 4.17: Attendance of workshops and seminars**

<b>Mode</b>	<b>Frequency</b>	<b>Percentage</b>
Weekly	0	0
Monthly	6	3
Quarterly	40	20
Annually	53	27
Facilitated	98	50
<b>Total</b>	<b>197</b>	<b>100</b>

As reflected in table 4.17, out of 197 respondents 98 (50%) indicated that they attended workshops and seminars wherever facilitated by the project leaders with NGOs and the government, 53(27%) indicated an annual attendance, 40(20%) attended them quarterly, 6(3%) regularly attended them every month while none attended them weekly.

The implication was that majority of the participants preferred forums facilitated by their project leaders rather than the externally stimulated forums by other parties. None of them attended weekly seminars and workshop indicating their busy schedules during the week and that for them to attend, they had to have pre-planned schedule.

## 5. SUMMARY OF FINDINGS CONCLUSIONS AND RECOMMENDATIONS

**Summary of findings:**

The study targeted women who participated in community based Water projects. Majority of these respondents at 98(50%) were in the mid-age brackets of 41-50. The study established that this age group was largely constituted by women who had settled down permanently in the community and engaged actively in community initiatives actively while those aged 65 years and above were not because they had retired from active labour. It was also found out that those aged below 41 years constituted a very little percentage this was because they were involved in employment or were out of the community with their husbands.

This showed that the younger generation were less involved in the project activities, as they were engaged in other occupations such as furthering their education, and in formal employment areas, which ate a lot of time thus interfering with their participation. The study revealed that all of the respondents had at least basic literacy levels having gone through primary level of education; while this is so, it is expected that the participants in Water projects would be expected to perceive technical explanations on various hands on project activities. This meant that secondary level of education represented by 57 (29%) out of 197 would be adequate, but in applying technical intervention, it was prudent to have at least tertiary level education. The low percentage of participants at higher education levels indicated that women who had attained professional education qualifications preferred formal employment in comparison to water projects development.

#### **Gender inequality and marginalization on participation:**

The study found out that, in the community women had no voice. They could not make simple decisions like sifting of water facility projects. They had no access and control of resources which in most cases was skewed to men.

The highest figure 114 (58%) indicated that women had no posts out of possible average of 7. women were not responsible for decision made in projects and project activities. Only 20 out of 197 women had title deeds, which means that most of the land where projects are carried out belongs to men and women has very little say. This implied that in these projects, men enjoyed participatory leadership; all decisions were made by them. Men don't always participate in project implementation activities apart from performing supervisory roles.

#### **Education level on participation of respondents:**

In regard to this objective, it was revealed that the number of women with college level education was few as respondents indicated that few members of their groups had women with tertiary level education. The findings were that majority of the groups were represented by those with primary level of education.

This is a result of water projects being rural-based. The level of education held by majority of the women indicated that the more educated members of society were less engaged in community based development projects. Likewise, the study indicated that majority of the women in the respondents group could read and write basic technical instructions. They could apply the less technical aspect of water project development after reading instructions on it. It was also determined that the number of ICT literate members in these groups was adequate. This implied that the use of ICT in diffusion and its utilization in community based group was applicable.

The study also found that most respondents identified the level of education as a critical proponent of effective participation by women in their groups. Out of 197 respondents, 83 (42%) agreed with this view compared to 64 (35%). This validated the importance of the level of education as a key determinant of women's participation in community based water projects in Homa Bay County. Though they accepted that education enhanced participation, respondents felt that intensive advocacy and lobbying should be done to attract the younger women with higher education levels.

#### **Socio-Culture on participation of women:**

The cultural stereotype mostly accepted by the communities in Homa bay was that major leadership positions were held by men in their water projects. This view was held by majority of the respondents. It was revealed that culture undertones were significant in the community leadership structure.

The highest figure 114 (58%) indicated that women had no posts out of possible average of 7. women were also moderately responsible decision made in projects and project activities. Only 20 out of 197 women had title deeds, which means that most of the land where projects are carried out belongs to men and women has very little say. This implied that in these projects, men enjoyed participatory leadership; all decisions were made by them. Men don't always participate in project implementation activities apart from performing supervisory roles.

Socio-Culture was identified as pivotal in the leadership structure of these organizations as well as enhancing the adoption of activities in which women and men could involve in the project activities. Decision making, such as decisions of where to site water projects was also the man's domain. Land inheritance followed cultural bearing following cultural customs. This affected their financial borrowing capability. Consequently, the men were participants in leading there projects,

enhancing participation of men. Respondents also argued that culture was also responsible for minimal participation of women in these projects in Homa Bay due to their inability to engage fully in project implementation. Women to enhance their participation, needs to be involved in decision making.

#### **Finance on participation of women:**

The findings of the study indicated that women in Homa Bay had minimal access to loaning facilities. Of the 197 respondents majority felt it was very inaccessible. It was therefore revealed that majority of the women participating in water projects found it fairly difficult to obtain credit, primarily due to red-tape procedures. While it was fairly difficult to obtain credit, some women had been successful in loan applications. The implication was that few women had little access to credit facilities. This meant that the lack of adequate credit limited the effective participation of women in the projects.

The study also indicated that a vast majority of women engaged in farming for extra income, while fewer of the participants engaged in businesses, formal employment and as volunteers. This implied that while majority of the women participants were persons who practiced farming. The farmers would inculcate the informal learning culture in their projects and had more time to spare on farming activities in comparison to those of different occupations. The study findings further indicated that the community land was mostly leased from men as indicated by majority of the respondents, while other groups bought land from men, leased it from women, leased from private companies or by the government. The findings indicated that the most land owners were men. This gave men a cutting edge they could make key decisions in the project.

Further, it was established that though majority of land was owned by men, a paltry percentage of the respondents had valid title deeds. The implication was that very few women owned land in their names. The land most women had was culturally inherited and as dictated by culture. Most land was therefore still in the men's names. Respondents felt that limited access to finance reduced women's participation as they were interested in increased productivity, higher profits and low costs.

#### **Conclusion:**

The main objective of the study was to establish the determinants influencing participation of women in community water projects in Homa Bay County. The study targeted women members of registered water project committees. It was concluded that the determinants investigated influenced the participation of women in community water projects.

1. The researcher concludes that when issues of gender inequality and marginalization are addressed during project, design, implementation and operation and maintenance of water projects influences women participation of women in community water projects. Women's participation ensures ownership and enhances effective implementation of the community water projects.
2. Training of women community members especially on mobilization, planning, design and implementation of water projects that determines their participation. They should be trained as water point care takers to operate and maintain water projects to minimize breakdowns and ensure sustainability. Trained operators are more efficient while operating the water structures thus minimizes any breakdowns during maintenance or operation. This helps in reducing projects breakdowns and stalling.
3. It is concluded that Socio-Cultures practices influences participation of women in community water projects. Cultural barriers should be overcome by adopting hybrid culture which encourages equal participation of both women and men in leadership and decision making. Project management practices like bylaws, monitoring and evaluation, establishing skilled project team and ensuring effective communication structures ensure that quality projects are implemented within schedule and budget.
4. The Sources of project financing like government, non-governmental organizations or women community member's funding influences women participation in community water projects. There is need for the funds to be adequate for implementing water projects as per the designs and plans. The water technology should be simple and not involve heavy funding. Women to have access and control of resources to enable them have collateral to borrow money from financial institutions.

**Recommendations:**

- 1) Gender equality should be enhanced to ensure equality between the men and women with roles clearly specified. Women should be allowed to make decisions and have leadership positions in the project.
- 2) Women education to be strengthened to increase women and girl child school enrollment. Adult literacy classes should be put in place to increase literacy of both adult men and women. Simulative initiation and mentorship programs to inculcate the water projects culture in the youth should be established. These policies will encourage many of them to get involved in project activities, promoting the sustainability of these projects.
- 3) Socio- Cultures barriers to be removed and so are the stereotyping of culture. Men should assume the bosses role of the household but accept women participation. In evaluating the influence of socio-culture on participation of women, there's need to streamline the leadership structure that both men and women would have key positions, by implementing the third gender rule. There was also need for women to be more involved in project decision making project activities, for the water projects to benefit from various skills, knowledge attitudes and perceptions of different members of the community.
- 4) Women should be able to have access and control of resources so that they can secure loans for community development projects. Gender policy formulation to guide on gender roles. Stakeholders need to facilitate more training to stimulate research based innovations at local level. This aspect of technology involves using suitable pedagogical methods to reach out to all members of the community regardless of educational level. This will enhance participation of women by them developing new products for their community projects, thereby being cost effective.

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