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Participatory Implementation, Participatory Monitoring, Evaluation and Sustainability of Community Water Projects in Uasin Gishu County, Kenya.

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Abstract
The role project beneficiaries play in the implementation and subsequent operations and maintenance of community water projects is critical in the sustenance of these water projects. However, despite community involvement many water projects in UasinGishu, Kenya experience low sustainability. The purpose of the study was to investigate how participatory project implementation and subsequent participatory monitoring and evaluation influence sustainability of community water projects. The objectives of the study was to determine how participatory implementation influence sustainability of community water projects, and how participatory monitoring and evaluation influence sustainability of community water projects in UasinGishu County, Kenya. The study adopted descriptive survey research design and used questionnaire with closed ended items with a Likert scale from which quantitative data was collected and analyzed using frequencies, percentages means scores and standard deviations. Quantitative data gathered using interview schedule and analyzed using the themes of the study to determine the attitude of the beneficiaries on the extent to which participatory implementation and monitoring and evaluation influence sustainability of smallholder irrigation schemes. Results indicated that participatory implementation had composite mean 3.678 with standard deviation of 0776 while sustainability had a composite mean of 3.210 and standard deviation of 0.649. This implied that beneficiaries participated in community project implementation despite it not being clear whether or not the projects were sustainable. PM&E had a mean score of 3.185 with standard deviation of 0.646 while sustainability had a composite mean of 3.210 and standard deviation of 0.649implying that it was not clear whether beneficiaries were actively involved in monitoring and evaluation as it wasn't apparent whether the community water projects were sustainable. It was therefore concluded that community water projects in UasinGishu County, Kenya benefited from the participatory implementation methodologies although this was not clearly demonstrated through their long-term sustainability. It was also concluded that beneficiaries participated in monitoring and evaluation despite the projects not demonstrating long-term sustainability. It is recommended that agencies involved in community water projects in UasinGishu County formulate suitable policy, strategies and plans that will ensure participatory implementation and PME of community water projects. It is also is recommended that these agencies mainstream capacity development programmesin order to empower beneficiaries on decision making during participatory implementation and PME phases on water project development in UasinGishu County, Kenya.

Key words: Participatory Implementation, Participatory Monitoring and Evaluation Sustainability of Community Water Projects

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1. INTRODUCTION

There exists a disparity between the level of project beneficiary involvement and sustainability of most community development projects. There is no better way to visualize this paradox than to compare the level of beneficiary involvement and sustainability of externally funded community water projects. Low performance of such community initiatives has previously compelled the government to fund their operations and maintenance or even rehabilitation at public expense long after funding is stopped (Economic Stimulus Programme, 2008). The fact that such community water project are unable to self-govern as they should despite evidence of community need for the project is an indication that several factors influence sustainability.Sustainability in community water projects refers to the ability of the project to continue supplying the same quantity and quality of water during all weather conditions and remain within the same state, with a capacity of self- reorganizing (Brown & Williams, 2015). Yet for sustainability to be realized, it is imperative for active involvement of all project stakeholders (Langat, Oduor, Chepkwony, 2021). It has been acknowledged that success in any community development project greatly depends on the level of involvement of its beneficiaries (Gleick, 2013). This means that despite the felt need for a project, success of such community initiative to a great extent depend the level of involvement they displays during the course of project life. (Anand,2018).).

Thelevel of participation by project beneficiaries in community water projects during project management cycle to some extent could therefore be a pointer to the level of self-governance upon completion of such projects. The purpose of the study was to establish how participatory planning and participatory monitoring and evaluation influence sustainability of community water projects in UasinGishu County, Kenya.

1.1.Research Objectives

The study was guided by the following specific objectives;

i. To determine how participatory implementation influence sustainability of community water projects in UasinGishu, Kenya
ii. To establish how participatory monitoring and evaluation influence the sustainability of communitywater project in UasinGishu, Kenya

1.1.1 Research Hypothesis

The research questions were:

i. How does participatory implementation influence sustainability of community water project in UasinGishuCounty, Kenya?
ii. How does participatory Monitoring and Evaluation influence sustainability of community water project in UsinGishu, Kenya?

2. LITERATURE REVIEW

Empirical and theoretical literature was reviewed in order to operationalize the variables under study and further develop both conceptual and theoretical understanding of the same.

2.2.1 Sustainability of Community Water Projects

Absence of strong community managed institutions upon cessation of external support in most projects is a pointer to not only low sustainability of such institutions but also the initiatives they support. There is no such single local institutions that exhibit these characteristics as community water projects. The World Commission on Environment and Development (WCED) (1987)that first the term sustainable development defines it as the transformative process that seeks to achieve a state of equilibrium in the utilization of resources the trajectory of which among other benefits is the technological advancement,

the allocation of investments, and the evolution of institutions. Based on this understanding, sustainable development is viewed a normative construct that encompasses criteria for evaluation and conduct upheld by human collective and societal endeavor in order to meet requirements for survival and welfare of beneficiaries. Viewed in this context, sustainability of community water projects is attained when beneficiaries get together to coordinate their efforts and pool their resources in order to achieve a shared goal (Taylor,2019).

Scholars have variously advanced the view that a significant inter-organizational power relations among project beneficiaries do exist as a strategy on shared resources (Waithaka, 2016). That is why Wodajo,Serbeh-Yiadom,andAsfaw(2014) advanced the view that Resource-Dependency theory supports the argument that lays emphasis on economic benefits derived from the exploitation of a common good such as water supplied by a community water project . Such resource-dependency hypothesis, contrasts the discourse of competing scientific experts by recognizing the value of divergent epistemological perspectives as equal contributors to a mutually beneficial network of discourse (Borja-Vega, 2017).The idea that community involvement is a recent phenomenon is challenged by Adesida (2015)who argue that since pre-colonial times in Africa communities worked together on development activities to achieve a common goal where power relations were defined through decision making. Based on this view, KulkarniandTyagi (2015)shwoed that participation ensures sustainability of community initiatives, particularly water projects. However, despite strong theoretical arguments to support empirical evidence, community water projects in UasinGishu are not sufficiently supported by beneficiaries as they do and therefore not sustainable. The purpose of the study was to determine influence of participatory implementation and participatory monitoring and evaluation on sustainability of community water projects in UasinGishuCounty, Kenya.

2.2.2 Participatory Implementation and Sustainability of Community Water Projects

Participation is variously defined by different experts. Muindi(2011) for instance conceptualize participation as the direct orindirectinvolvementindecisionmaking and further acknowledgesthatdifferenttypesandlevelsdo exist in the project management life cycle. That is why (Burton,2003)arguethatitis possibletoencourage, enableor permitdifferentlevelsandtypesof participation in community projects. It is on that basis thatMgulo (2022)established that community involvement throughout the whole processincluding the conception, design, execution, operation, and maintenance has as a major impact on the long-term sustainability of water projects. Glei, (2013) further argue that community involvement inall stages of project life cycle guarantees sustainability. This view is supported by Oduor (2018) when he argues that project success depends on a community participation strategy throughout the entire project management cycle because they take personal responsibility for their actions which contribute to project success.This means that participation has influence on the level of local support for water infrastructure projects.

In matters development, community involvement is a dynamic process that gives individuals who stand to gain from initiatives a voice in determining their course. That is why Marks,Komives,and Davis (2014)showed that when a community takes ownership of a project, it implies that its members are responsible for its success before, during, and beyond the project's designated funding phases.In another study Shields (2021)explored and evaluated the influence of participatory implementation on sustainability of rural water projects in which 250 beneficiaries were sampled in five water projects. The study established that participatory implementation affects the long-term viability of water

distribution systems.Similarly Tafara (2013) while undertaking a study in MtitoAndei, in Kibwezi Sub-County showed that application of participatory methodologies has a major impact on the long-term effectiveness of rural community-based water projects. Technical know-how, resource management, a reliable monitoring and evaluation system, business acumen, strong leadership, accurate project scheduling, budgeting, risk assessment and management notwithstanding, community water project depends on participatory implementation.

That participatory implementation is a critical methodological and management discipline from project manager's point of view cannot be underscored. That is why Ondrik (2012)while undertaking a series of studies on community supported water systems across 4 Asian countries of Pakistan, India, Indonesia and Malasia identifiedthe elements that influence the sustainability of community water projectsto be: strong community leadership, proper water distribution regime, operations and maintenance strategy that is understood by all water users' and risk assessment underpinned on a comprehensive participatory methodology for monitoring technical efficacy of the water systems.The studies showed that success of community's water projects depends on their involvement in decision making during project implementation. This means thatlong-term sustainability of community water projects is incumbent on participatory implementation but only if beneficiaries were allowed to make decision during implementation phase of the project. This observation was similarly observed by ColinandPetit(2007)when they sought to ascertain how participatory implementation practices influenced the long-term viability of community post disaster projects. It was similarly established that participatory measures are crucial in maintaining the sustainability of projects, including continuous assessment, the creation of capabilities for both beneficiaries and project teams leading to the development of efficient communication systems (Beyne, 2012).

In another study Adesida (2015) used community engagement to show that a strong positive correlation of 0.765 existed between community participation during implementation and long-term sustainability of water projects. In the study however, the use of technology and the provision of post-implementation support, were only sporadic predictors of the long-term viability of community water projects. The finding contributes fresh and invaluable information to the existing body of knowledge that participatory methodologies are not an end to themselves when adopting problem-solving strategies. That is why Kativhu(2018) showed that holding cooperative discussions on implementation processes and procedures does not necessarily safeguard infrastructure maintenance upon which sustainability relies but plays a major role in shaping up commitment by the beneficiaries to through the project management committee.Therefore it is on the basis of these review that the study sought to determine how participatory implementation influence sustainability of community water project in UasinGishuCounty, Kenya.

2.2.3 Participatory M&E and Sustainability of Community Water Projects

Participatory monitoring and evaluation (PME) refer to the process where beneficiaries of an initiative are involved in the periodic assessment of its progress. Chamber (2014) conceptualize PME as the engagement of targeted beneficiaries in monitoring and evaluation processes. It is on the basis of this understanding that success of community water projects is, above all else, influenced by three key factors, namely; social demographics, distance to natural water source and local climatic conditions. In order to determine whether participatory monitoring and evaluation has influence on sustainability, Laah (2014) adopted exploratory research method and collected both quantitative and qualitative data from 120 water users' in projects financed by both the national government and non-governmental organizations (NGOs). In the study it was establish that 51.7%) of

respondents were of the view that community-based water activities were successful in fulfilling their objectives only if they participate in monitoring upon capacity building. According to Adesida (2015) however, NGO funded projects have a greater level of success when compared to government sponsored initiatives. In the same study, it was stablished that even under the best case scenerio, PM&E only has a 50% chance to influence sustainability of community water projects. Kativhu (2018) on his part observed that numerous confounding factors account for half of this influence. Based on these findings, it implies that appropriate incentives, adequate skills and resources availability are effective maintaining water systems but only if appropriate skills is imparted upon beneficiaries.

That PME is not an end to itself in determining sustainability of community water projects may be true. According to Keeble, Topiol,&Berkeley (2013) programmatic project design together with the right incentives to beneficiaries is effective for organizational relationships in spurring sustainability. That is why Mandara (2013) suggested a modelthat makes it easier to include these issues within the context of rural water service delivery is critical. In addition to the advantages of action-oriented learning, the findings of this study demonstrate a strong relationship between the predictor factors and the dependent variables (Wandera,Naku,andAfrane(2013).In addition, it has been shown that the goals of water projects may be sufficiently achieved through application of Participatory Monitoring and Evaluation (PM&E) as demonstrated by Adesida (2015) that at 0.05 level of significance, difference in opinions between the low, medium, and high levels of PM&E's efficacy is clearly demonstrable.

It is important to note that with regard to NGO assisted water projects, majority of beneficiaries rate PM&E as the enabler for sustainable development of community water projects.That is why Wabwoba, & Wakhungu (2013) while undertaking a study on community water projects in Kiambu, Kenya showed that capacity development of beneficiaries is essential in achieving the long term goals of PM&E. This means that more can be done to strengthen community capacity so that community-based water projects may be managed effectively through monitoring and evaluation. This view is shared by Keeble et al., (2003) when they showed that community involvement in PM&E iscontingent to the capacity of the community to effectively use the gathered data for decision making. It is on the basis of this review that the study sought toestablish how participatory monitoring and evaluation influence the sustainability of community water project in UasinGishu, Kenya

3. METHODOLOGY

The study adopted descriptive research design in which the researcher was interested in describing the characteristics of the phenomena in frequencies, percentages, means scores and standard deviations (Mugenda and Mugenda, 2005). The research design was ideal because it enabled the researcher to analyze the views of sampled elements in order to understand the variables under study. UasinGishu County has six Sub-Counties namely; Ainabkoi, Kapsaret, Kesses, Moiben, Soy and Turbo. Out of the six Sub-Counties, Ainabkoi, Moiben, Soy and Kesses were selected because they had the highest variability in terms of donor funded community water projects. The study had a population of 250 across the four sub-counties from which a sample size of 152 was desired using Krejcie and Morgan (1970) sample size determination tableand selected from a sample frame using computer random numbers. The sampling design is shown in table 3.1.

Table 3.1: *Sampling Design*

Constituency	Target Population	The proportionof community members inthe population	Sample size
Ainabkoi	101	0.404	61
Moiben	55	0.22	34
Soy	78	0.312	47
Kesses	16	0.064	10
Total	**250**	**1.000**	**152**

Quantitative data was gathered on a 5-Likert scale and analyzed using frequencies, percentages, mean scores and standard deviation while qualitative data was analyzed using content analysis based on the themes of the study. Further qualitative data was gathered from available project documents.

4. RESULTS AND ANALYSIS

4.1 Questionnaire return rate

Table 4.1: Questionnaire Return Rate

S/No.	Name of Constituency	Numberof questionnaires completed	Percentage rate of return per constituency
1.	Ainabkoi	59	98.33
2.	Moiben	28	93.33
3.	Soy	47	92.16
4.	Kesses	10	90.91
Total		**144**	**93.68**

Out of 152 questionnaires distributed 144 were returned giving a return rate of 98.68%. The return rate of 93.68% isclose to what Adeneji (2011), reported in a study when he obtained a return rate of 94% in a study on participative management of project execution through direct labour. A return rate of 93.68% obtained is way above the threshold recommended by Nachmias and Nachmias (2005), who proposed that a return rate of 75% is sufficiently high to provide dependable analysis for generalization.

4.2 General Information about the respondents

In this section data was analyzed on the general information about the respondents.

4.2.1 Distribution of Respondents by water project per Constituency

Distribution of community water projects per sub-county was important because they were evenly spread across four sub-counties in UasinGishuCounty in Kenya and no single community water project was preferred during sampling.

Table 4.2: Distribution of Respondents in projects per Constituency

S/No	Name of sub-county	Frequency	Percentage of responses
1.	Ainabkoi	59	40.97
2.	Moiben	28	19.44
3.	Soy	47	32.65
4.	Kesses	10	6.944
Total		**144**	**100**

Accordingly, the frequency distribution of respondents in the sample size determined was proportional to size percentage of respondents in each community water project. According to Ndou (2012), while examining beneficiary participation in agricultural development projects in South Africa, it was established that a sample size distributed was based on the proportion of subjects within the population yielded results that were consistent with the proportion of respondents across the various water projects in the four sub-counties.

4.2.2 Distribution of Respondents by Gender

Gender distribution was important for the study because it created an understanding on how socially assigned responsibilities determined sustainability of community water projects in UasinGishu County Kenya.

Table 4.3: Distribution of Respondents by Gender

Gender	Frequency	Percentage
Males	78	54.17
Females	66	45.83
Total	144	100

According to statistics, male respondents somewhat outnumber their female counterparts. This result however contradict what Van der Berg (2013) obtained in his study conducted in South Africa, where a distribution of 71% females and 29.0% males was registered. Despite this difference, Marks, KomivesandDavis (2014)inGhana found adistributionof61.0% femalesto39.0% males which is not quite different from what the study established.

4.2.3 Distribution of Respondents by Age Group

The age distribution of respondents was significant because beneficiaries' level of involvement in community water project was contingent on their ability to make and contribute to important decisions as they got older.

Table 4.4: Distribution of Respondents by Age Group

Age group	Frequency	Percentage
21-25	8	5.56
26-30	7	4.86
31-35	20	13.89
36-40	23	15.97
41-45	22	15.28
46-50	18	12.5
51-55	23	15.97
>55	23	15.97
Total	144	100

The distribution shows that majority of respondents 98(68.06% were below 50 years of age compared to those above 50 years of age who constituted 46(31.94%). The mean age for the project beneficiaries was 42.74 years implying that the distribution was skewed towards beneficiaries below 50 years. The finding agrees with observations made by Langat, Oduor and Chepkwony (2021) in which they similarly established that distribution of respondents' ages in water projects in Narok County, Kenya had 70% respondents below 50 years while those above 51 years of age were 30% with a mean age of 43.29 years This means that rural based water projects have beneficiaries whose mean age is skewed towards 40s.

4.2.4 Distribution of Respondents by level of Education

The level of education of the respondents was critical because participatory implementation and PME involves conceptual skills and decision making an aspect closely associated with ones level of education.

Table 4.5: Distribution of respondents by Level of Education

Level of education	Frequency	Percentage
No basic education	3	2.08
Primary	24	16.67
Secondary	78	54.17
Tertiary education	29	20.14
University	10	6.94
Total	**144**	**100**

The distribution showed a near normalmesokuticdistributionwithabouthalfofrespondentsindicatingthatthey hadattained secondary education.This result is consistent with what Oduor (2018) found in a research, which showed that the distribution of respondents by educational attainment in smallholder irrigation projects in Busia County, Kenya, was normally distributed. Both studies revealed that the majority of respondents had at least a secondary education, making them qualified to take part in project implementation and PME and the creation of water usage regulations, both of which are essential for the sustainability of community water projects.

4.2.5 Distribution of Respondents' years of participation in community water project

Distribution of respondents by years of participation in community water projects was important because it had a direct bearing on the level of sustainability of community water project.

Table 4.6: Distribution of Respondents' years of participation in the water project.

Years of involvement in the water project	Frequency	Percentage
≤2.9	62	43.1
3.0-5.0	37	25.69
6.0-8.9	18	12.5
≥9.0	27	18.75
Total	**144**	**100**

The distributionofthe year's participation in community water projectwasskewedtowardlessthan5 years of water distribution experience. This means that majority of project beneficiaries had been active members of the project for a period less than 5 years. This finding was confirmedthroughinterviews when one project beneficiary contented that;

> " …….a good majority of our members *have only benefited from water distribution in a period not more than three years, not long enough to sustain the water supply…"*

DocumentanalysisbasedonGIZ/KfW(2016) feasibility study reportfortheNzoiaRiver Multipurpose water project for Kakamega,BungomaandSiayaof which UasinGishu County is part of the watershed recommend that InternalRateof Return (IRR) for the a community based water project isseven(7)years. This means that a water project needs up to 7 year of water distribution in order to break even and realize returns on investment. These finding are however at variance with a study by Langat, Oduor and Chepkwony (2021) in which they showed that community water Projects in Narok County realized internal rate of return in a period of 5 years. This means that some projects attain sustainability in a shorter period.

4.3 Sustainability of Community Water Projects

The results for analysis for sustainability of community water projects is presented in table 4.7.

Table 4.7: Sustainability of Rural water project

No	Item	n	SA	A	N	D	SD	Mean score	Std. dev.
5a1	Meeting water demands	**144**	30 (20.83%)	33 (22.92%)	47 (32.64%)	22 (15.28%)	12 (8.33%)	3.265	0.551
5a2	Continuous water flow	**144**	28 (19.44%)	31 (21.53%)	30 (20.83%)	36 (25.00%)	16 (11.11%)	2.590	0.532
5a3	Fee-based distribution	**144**	38 (26.39%)	36 (25.00%)	40 (27.78%)	20 (13.89%)	10 (6.94%)	4.515	0.462
5a4	Affordable charges	**144**	44 (30.56%)	36 (25.00%)	30 (20.83%)	30 (12.50%)	*16 (11.11%)*	*4.355*	0.503
3a5	Covers operational costs	**144**	33 (22.92%)	33 (22.92%)	45 (31.25%)	23 (15.97%)	10 (6.95%)	3.437	0.486
Cost Recovery		**144**	**35 (24.31%)**	**33 (22.92**	**38 (26.38%)**	**26 (18.06%)**	**12 (8.33%)**	**3.632**	**0.507**
5b1	Good infrastructure	144	13 (9.03%)	34 23.61%)	28 (19.44%)	33 22.92%)	35 (24.31%)	2.627	0.502
5b2	Timely repairs	144	24 (16.67%)	30 (20.83%)	31 (21.53%)	38 (26.39%)	21 (14.58%)	2.448	0.433
5b3	Routine maintenance	144	29 (20.14%)	36 (25.00%)	28 (19.44%)	35 (24.31%)	16 (11.11%)	2.690	0.571
5b4	Trained staff	144	34 (23.61%)	35 (24.31%)	44 (30.56%)	22 (15.28%)	9 (6.25%)	3.481	0.875
5b5	Satisfactory operation	144	34 (23.61%)	32 (22.22%)	46 (31.94%)	23 (15.97%)	7 (4.86%)	2.366	0.980
Continuing support		**144**	**14 (9.72%)**	**35 (24.31%)**	**44 (30.56%)**	**37 (25.69%)**	**14 (9.72%)**	**2.722**	**0.672**
5c1	Timely salaries	144	31 (21.53%)	32 (22.22%)	44 (30.56%)	25 (17.36%)	12 (8.33%)	3.582	0.906
5c2	Electricity expenses	144	30 (20.83%)	33 (22.92%)	45 (31.25%)	23 (15.97%)	13 (9.03%)	3.429	0.838
5c3	Treatment chemicals	144	24 (16.67%)	30 (20.83%)	34 (23.61%)	38 (26.39%)	18 (12.50%)	2.433	0.811
5c4	Licenses and tariffs	144	23 (15.97%)	29 (20.14%)	34 (23.61%)	39 (27.08%)	19 (13.19%)	3.440	0.814
5c5	Community payments	144	30 (20.83%)	32 (22.22%)	44 (30.56%)	25 (17.36%)	13 (9.03%)	3.593	0.780
Continued improvement of the project		**144**	**30 (20.83%)**	**33 (22.92%)**	**47 (32.64%)**	**22 (15.28%)**	**12 (8.33%)**	**3.295**	**0.830**
5d1	Mandatory payments	144	44 (30.56%)	40 (27.78%)	20 (13.89%)	21 (14.58%)	19 (13.19%)	4.838	0.527
5d2	Payment dependence	144	45 (31.25%)	47 (32.64%)	21 (14.58%)	20 (13.89%)	11 (7.64%)	4.811	0.562
5d3	Community willingness	144	35 (24.31%)	34 (23.61%)	45 (31.25%)	20 (13.89%)	10 (6.94%)	3.814	0.722
5d4	Regular payments	144	12 (8.33%)	35 (24.31%)	44 (30.56%)	37 (25.69%)	16 (11.11%)	2.780	0.525
5d5	Voluntary payment	144	30 (20.83%)	33 (22.92%)	49 (34.03%)	22 (15.28%)	10 (6.94%)	3.216	0.593
Ability to pay		**144**	**40 (27.78%)**	**34 (23.61%)**	**45 (31.25%)**	**15 (10.42%)**	**10 (6.94%)**	**3.892**	**0.586**
Composite for sustainability of water projects		**144**	**45 (31.25%)**	**34 (23.61%)**	**44 (30.56%)**	**25 (17.36%)**	**11 (7.64%)**	**3.210**	**0.649**

Table 4.7 shows that that 144 people answered questions on sustainability of community water projects. Assessing whether the project has the infrastructure to meet the increasing water needs was item 5a1. A mean score of 3.265 with a standard deviation of 0.551 was obtained from the answer, which showed that 30 (20.83%) highly agreed, 33 (22.92%) agreed, 47 (32.64%) were neutral, 22 (15.28%) disagreed, and 12 (8.33%) severely

disagreed. The aforementioned response indicates that participants had reservations about the project's decision to include steps aimed at curbing the increasing demand for water. The purpose of item 5a2 was to evaluate the project's effectiveness in ensuring a steady and continuous supply of water. A mean score of 2.590 and a standard deviation of 0.532 were obtained from the replies, which showed that 28 (19.44%) highly agreed, 31 (21.53%) agreed, 30 (2083%) were neutral, 36 (25.00%) disagreed, and 16 (11.11%) severely disagreed. The project's capacity to consistently provide a steady supply of water on a regular basis did not sit well with the responders.

The purpose of item 5a3 was to ascertain whether water costs were reasonable. The findings indicated that, of the respondents, 44 (30.56%) strongly agreed, 36 (25.00%) agreed, 30 (20.83%) were neutral, 30 (20.83%) disagreed, and 16 (11.11%) disagreed significantly. This resulted in a mean score of 4.3.55 with a standard deviation of 0.503. This indicates that most respondents thought water was reasonably priced. Item 5a4 investigated whether imposed fees compensated for operating expenses and 33 (22.92%) strongly agreed. A mean score of 3.437 with a standard deviation of 0.486 was obtained from 33(22.92%) who agreed, 45(31.25%) who were indifferent, 23(15.97%) who disagreed, and 10(6.95%) who disagreed severely. This indicates that the respondents were unsure about the affordability of the water rates. The mean score for cost recovery was 3.632, with a standard deviation of 0.507. This indicates that cost recovery was seen as successful by all respondents.

The purpose of item 5b1 was to assess the overall state of the water distribution infrastructure. The results indicated that, of the respondents, 13 (9.03%) strongly agreed, 34 (23.61%) agreed, 28 (19.44%) disagreed, and 35 (24.31%) strongly disagreed. These results yielded a mean score of 2.627 and a standard deviation of 0.502. This suggests that the respondents were unsure about the state of the water distribution system. Question 5b2 asked if timely repairs were made, and 24 (16.67%) highly agreed. There were 20.83 percent who agreed, 21.53 percent who were indecisive, 38.39 percent who disagreed, and 21.58 percent who strongly disagreed, yielding a mean score of 2.448 with a standard deviation of 0.433. This suggests that a majority of respondents did not agree that repairs were made on time.

The purpose of item 5b3 was to determine if regular maintenance was carried out. The findings indicated that, with a mean score of 3.481 and a standard deviation of 0.875, 29(20.14%) strongly agreed, 36(25.00%) agreed, 28(19.44%) were unsure, 35(24.31% disagreed, and 16(11.11%) severely disagreed. This indicates that they were unsure about the efficacy of regular maintenance. With a mean score of 3.481 and a standard deviation of 0.890, the responses to item 5b5, which asked if project workers had received satisfactory training, were as follows: 34 (23.61%) strongly agreed, 35 (24.31%) agreed, 44 (30.56%) were uncertain, 22 (15.28%) disagreed, and 9 (6.25%) severely disagreed. This suggests that they were unsure about the satisfactory training of the project crew. The mean score for continuing support was 2.722, with a 0.67 standard deviation. This indicates that it was unclear whether the ongoing assistance was ineffective.

In answer item 5c1 about whether project staff members were paid on time, 31 respondents (21.53%) highly agreed, 32 agreed (22.22%), 44 (30.56%) were unsure, 25 disagreed (17.36%), and 12 severely disagreed (8.33%). This resulted in a mean score of 3.582 and a standard deviation of 0.906. This indicated that they were unsure about whether employees were paid on time. With a mean score of 3.429 and a standard deviation of 0.838, the respondents to item 5c2, which asked if the project incurred electrical expenditures, were 30 (20.83%) who highly agreed, 33 (22.92%) who agreed, 45 (31.25%) who were unsure, 23 (15.97%) who disagreed, and 13 (9.03%) who severely disagreed. This indicated that they were unsure whether the project included any electrical costs. Item 5c3 looked to see

whether the water that was provided had undergone chemical treatment. A mean score of 3.440 and a standard deviation of 0.811 were obtained, with 24 (16.67%) highly agreeing, 30 (20.83%) agreeing, 34 (23.61) unsure, 39 (27.08%) disagreeing, and 19 (13.19%) severely disagreeing. This suggests that they were unsure whether the water was chemically treated or not.

With a mean score of 3.440 and a standard deviation of 0.814, the results of item 5c4, which attempted to determine whether water licensesand tariffs were incurred by the project, showed that 23 (15.97%) strongly agreed, 29 (20.14%) agreed, 34 (23.61%) were undecided, 39 (27.08%) disagreed, and 19 (13.19%) strongly disagreed. This indicated that they were not clear whether the project had to pay for water licenses and prices. The purpose of item 5c5 was to determine the effectiveness of community payment for water services. The findings indicated that, with a mean score of 3.593 and a standard deviation of 0.780, 30(20.83%) highly agreed, 32(22.22%) agreed, 44(30.56%) unsure, 25(17.36%) disagreed, and 13(9.03%) severely disagreed. This indicated that they were unsure about the efficacy of community funding for water services. The project's continuous improvement received a mean score of 3.295 with a standard deviation of 0.83. This suggests that it was unclear whether the project was still being improved.

With a mean score of 4.838 and a standard deviation of 0.527, the responses to item 5d1, which asked if the project required water payment, were as follows: 44(30.56%) strongly agreed, 40(27.78%) agreed, 20(13.89%) were unsure, 21(14.58%) disagreed, and 19(13.19%) severely disagreed. This indicated that they were in full agreement that the project required water payments. With a mean score of 4.811 and a standard deviation of 0.562, the respondents to item 5d2 (which asked if the project was reliant on water payment) were 45 (30.56%) highly agreeing, 47 (32.64%) agreeing, 21 (14.58%) unsure, 20 (13.89%) disagreeing, and 11 (7.64%) severely disagreeing. This indicated that they were in agreement that the project required payment for water. Item 5d3 asked whether the community was prepared to pay for water; with a mean score of 3.8 and a standard deviation of 0.722, 35(24.31%) highly agreed, 34(23.61%) agreed, 45(31.25%) unsure, 20(13.89%) disagreed, and 11(7.64%) severely disagreed. This indicates that they both felt that the community was prepared to pay for water.

A mean score of 2.780 and a standard deviation of 0.593 were obtained for item 5d4, which evaluated whether regular payment for water used was provided. Of the respondents, 12 (8.33%) strongly disagreed, 35 (24.31%) agreed, 44 (30.56%) were unsure, 37 (25.69%) disagreed, and 16 (11.11%) severely disagreed. This indicated that most people were unsure about whether regular payment for the water consumed was received. Thirty (20.83%) highly agreed, thirty (22.92%) agreed, forty-nine (34.03%) were unsure, twenty-two (15.28%) disagreed, and ten (6.94%) strongly disagreed with the assessment of whether or not water payment was voluntary (item 5d5). This resulted in a mean score of 3.216 and a standard deviation of 0.593. This indicated that they were unsure about the voluntary nature of the water payment. With a mean score of 3.892 and a standard deviation of 0.586, capacity to pay overall indicated that project beneficiaries could afford water. The water project's overall sustainability score was 3.210, with a 0.69 standard deviation. This suggests that it wasn't clear if the community water project was going to be viable.

Participatory Implementation and Sustainability of Community Water Projects

In this section, the application of descriptive statistics was employed to examine the impact of participatory implementation on the sustainability of the Siaya-Bondo community water project. The impact of participatory implementation on the sustainability of water projects within the community was assessed through the utilization of a set of 20 elements. The analysis of the components related to the participatory execution of the

UasinGishucommunity water projects was conducted, and the findings are provided in Table 4.10.

4.8 Participatory Implementation and Sustainability of Community Water Projects

No	Item	n	SA	A	N	D	SD	Mean Score	Std. dev.
8a1	Land contributed	144	35 (24.31%)	41 (28.47%)	24 (18.06%)	23 (15.97%)	16 (11.11%)	3.91	0.897
8a2	Water tank land	144	39 (27.08%)	36 (25.00%)	40 (27.78%)	20 (13.89%)	9 (6.25%)	4.30	0.788
8a3	My land for pipes	144	35 (24.31%)	41 (28.47%)	24 (18.06%)	23 (15.97%)	16 (11.11%)	4.05	0.614
8a4	Satisfactory project site	144	36 (25.00%)	41 (28.47%)	24 (18.06%)	23 (17.36%)	15 (10.41%)	3.97	0.877
8a5	Community land success	144	37 (25.69%)	40 (27.78%)	27 (18.75%)	25 (17.36%)	15 (10.42%)	3.66	0.802
Community contributions		**144**	**36 (25.00%)**	**41 (28.47%)**	**28 (19.44%)**	**24 (16.67%)**	**15 (10.42%)**	**3.978**	**0.796**
8b1	Community Involvement	144	24 (16.67%)	29 (20.14%)	35 (24.31%)	38 (26.39%)	18 (12.50%)	3.43	0.768
8b2	Beneficiary Materials	144	38 (26.39%)	41 (28.47%)	25 (17.36%)	24 (16.67%)	16 11.11%)	3.90	0.751
8b3	Local Equipment Success	144	35 (24.31%)	41 (28.47%)	24 (18.06%)	23 (15.97%)	16 (11.11%)	4.00	0.876
8b4	Project Maintenance Support	144	31 (31.53%)	30 (20.83%)	49 (34.03%)	19 (13.19%)	15 (10.42%)	4.15	0.850
8b5	Raw Equipment Satisfaction	144	42 (29.17%)	40 (27.78%)	24 (16.67%)	20 (13.89%)	18 (12.50%)	3.78	0.890
Equipment and tools		**144**	**35 (24.31%)**	**36 (25.00%)**	**31 (21.53%)**	**25 (17.36%)**	**17 (11.81%)**	**3.852**	**0.827**
8c1	Sand, gravel, stones	144	29 (20.14%)	36 (25.00%)	28 (19.44%)	35 (24.31%)	16 (11.11%)	2.77	0.660
8c2	Fencing poles	144	=-pojb	30 (20.83%)	34 (23.61%)	38 (26.39%)	18 (12.50%)	2.32	0.964
8c3	Mandatory materials	144	30 (20.83)	28 (19.44%)	34 (23.61%)	30 (20.83%)	18 (12.50%)	2.98	0.549
8c4	Project success	144	24 (16.67%)	30 (20.83%)	34 (23.61%)	38 (26.39%)	18 (12.50%)	3.29	0.599
8c5	Satisfactory stages	144	30 (20.83)	30 (20.83%)	34 (23.61%)	32 (22.22%)	18 (12.50%)	2.98	0.698
Contribution of locally available materials		**144**	**27 (18.75%)**	**31 (21.53%)**	**33 (22.92%)**	**35 (24.31%)**	**18 (12.5%)**	**2.862**	**0.694**
8d1	Community Consultation	144	31 (31.53%)	30 (20.83%)	49 (34.03%)	19 (13.19%)	15 (10.42%)	4.17	0.769
8d2	Team Incorporation	144	40 (27.78%)	37 (25.69%)	40 (27.78%)	19 (13.19%)	8 (5.56%)	4.64	0.618
8d3	Community Views	144	29 (20.14%)	30 (20.83%)	40 (27.78%)	26 (18.06%)	19 (13.19%)	3.42	0.679
8d4	Improved Implementation	144	39 (27.08%)	36 (25.00%)	40 (27.78%)	20 (13.89%)	9 (6.25%)	4.30	0.971
8d5	Satisfactory Involvement	144	29 (20.14%)	30 (20.83%)	40 (27.78%)	26 (18.06%)	19 (13.19%)	3.42	0.898
Operations and Maintenance		**144**	**33 (22.92%)**	**33 (22.92%)**	**42 29.17%)**	**22 (15.28%)**	**14 (9.72%)**	**4.018**	**0.787**
Composite mean for implementation		**144**	**33 (22.92%)**	**35 (24.31%)**	**33 (22.92%)**	**27 (23.67%)**	**16 (11.11%)**	**3.678**	**0.776**

The research's 144 participants all provided responses to the questions about participatory implementation and the sustainability of the community water project, as shown in Table

12. Item 8a1 required to establish whether project beneficiaries contributed their land for project establishment and the response showed that 35(24.31%) strongly agreed, 41(28.47%) agreed, 24(18.06%) were undecided, 23(15.97%) disagreed while 16(11.11%) strongly disagreed giving a mean score of 3.91 and standard deviation of 0.897. this meant that majority of respondents agreed that project beneficiaries contributed their land for project establishment. Item 8a2 inquired whether beneficiaries allowed water tanks to be established in their land and the response showed that 39(27.08%) strongly agreed, 36(25.00%) agreed, 20(13.89%) were undecided, while 9(6.25%) strongly disagreed with a mean score of 4.300 and a mean score of 0.788. This meant that majority of respondents strongly agreed that beneficiary land was set aside for establishment of water tanks. Item 8a3 inquired whether individual beneficiary land was used to lay water pipes for the project and the response showed that 35(24.31%) strongly agreed, 41(28.06%) agreed, 24(18.06%) were undecided, 23(17.36%) disagreed while 15910.42%) strongly disagreed giving a mean score of 4.050 and standard deviation of 0.614. This meant that respondents agreed that individual beneficiary land was used to lay water pipes for the project.

Item 8a4 sought to determine whether project site was agrees upon by all stakeholders and the response showed that 36(25.00%) strongly agreed, 41(28.47%) agreed, 24(18.06%) undecided, 23(17.36%) disagreed while 15(10.42%) strongly disagreed giving a mean score of 3.97 and standard deviation of 0.877. This meant that project site was agrees upon by all stakeholders. Item 8a5 sought to determine whether private land was accessible by project teams and the results showed that 37(25.69%) strongly agreed, 40(27.78%) agreed, 27(18.75%) undecided, 25(17.36%) disagreed while 15(10.41%) strongly disagreed giving a mean score of 3.66 and standard deviation of 0.802. this mean that respondents agreed that private land was accessible by project teams. Community contribution had a mean score of 3.978 with a standard deviation of 0.796 implying that community contributed towards the project implementation.

Item 8b1 sought to establish whether there was community contribution and the results showed that 24(16.67%) strongly agreed, 29(20.14%) agreed, 35(24.31% were undecided, 38(26.39%) disagreed while 18(12.50%) strongly disagreed giving a mean score of 3.43 and standard deviation of 0.768. The implication of this was that respondents agreed that there was community contribution. Item 8b2 sought to understand whether community contributed locally available materials and results showed that 38(26.39%) strongly agreed, 41(28.47%) agreed, 25(17.36%) were undecided, 24(16.67 disagreed while 16(11.11%) strongly disagreed with a mean score of 4.000 and standard deviation of 0.850. this meant that the respondents agreed that community contributed locally available materials. Item 8b3 sought to determine whether the community contribute local equipment and the results showed that 35(24.31%) strongly agreed, 41(28.47%) agreed, 24(8.06%) neutral, 23(15.97%) disagreed while 16(11.11%) strongly disagreed giving a mean score of 3.900 and standard deviation of 0.751. this meant that they agreed that community contribute local equipment.

Item 8b4 sought to determine whether project received maintenance support and the results showed that 31(21.53%) strongly agreed, 30(20.83%) agreed, 49(34.03%) neutral, 19(13.19%) disagreed while 15(10.42%) strongly disagreed with a mean score of 4.15 and standard deviation of 0.850. This meant that majority of respondents agreed that the project received maintenance support. Item 8b5 sought to assess whether beneficiaries were satisfied with the equipment support and results showed that 42(29.17%) strongly agreed, 40(27.78%) agreed, 24(16.67%) neutral, 20(13.89%) disagreed while 18(12.50%) strongly disagreed with a mean score of 3.78 and standard deviation of 0.890. this implied that majority of respondents were of the view that the project received equipment support. Equipment and tools had a mean score of 3.852 with a standard deviation of 0.827. This

meant that equipment and tools were provided by both the project implementers and beneficiaries.

Item 8c1 sought to determine whether sand, aggregates and boulder were locally available and the results showed that 29(2014%) strongly agreed, 36925.00%) agreed, 28919.44%) neutral, 35(24.31%) disagreed while 16(11.11%) strongly disagreed with a mean score of 2.77 and standard deviation of 2.77. This implied that respondents were not sure whether sand, aggregates and boulder were locally available. Item 8c3 sought to determine whether contribution of locally available materials was mandatory and the results showed that 30(20.83%) strongly agreed, 28919.44%) agreed, 34(23.61%) were neutral, 38(26.39%) disagreed while 18(12.50%) strongly disagreed with a mean score of 2.98 and standard deviation of 0.549. This implied that majority of respondents were not sure whether contribution of locally available materials was mandatory. Item 8c4 sought to determine whether the project was a success and the response showed that 24(16.67%) strongly agreed, 30(20.83%) agreed, 34(23.61%) neutral, 32(22.22%) disagreed while 18(12.50%) strongly disagreed with a mean score of 2.98 and standard deviation of 0.698. This meant that respondents were not certain whether project was a success.

Item 8c5 sought to determine whether project implementation was successful and the response showed that 30(20.83%) strongly agreed, 30(20.83%) agreed, 34(23.61%) neutral, 32(22.22%) disagreed and 18(12.50%) strongly disagreed giving a mean score of 2.98 and standard deviation of 0.694. This implied that respondents were unsure whether project implementation was successful. Contribution of locally available materials had a mean score of 2.862 and standard deviation of 0.694. This meant that contribution of locally available materials by the community was not felt.

Item 8d1 sought to determine whether the community was consulted and the results showed that 31(21.53%) strongly agreed, 30(20.83%) agreed, 49(34.03%) neutral, 19(13.19%) disagreed while 15(10.42%) strongly disagreed giving a mean score of 4.17 and standard deviation of 0.769. this meant that respondents agreed that the community was consulted. Item 5d2 sought to assess whether the project teams incorporated the views of key stakeholders and the results showed that 40(27.78%) strongly agreed, 37(25.69%) agreed, 40(27.48%) neutral, 19(13.19%) disagreed while 8(5.56%) strongly disagreed with a mean score of 4.64 and standard deviation of 0.618. This implied that respondents strongly agreed that project teams incorporated views of the key stakeholders. Item 8d3 sought to determine whether community views was required during operations and maintenance and the results showed that 29(20.14%) strongly disagreed, 30(20.83%) agreed, 40(27.78%) were undecided, 26(18.06%) disagreed while 19(13.19%) strongly disagreed with a mean score of 3.42 and standard deviation of 0.679. this meant that respondents agreed that community views was required during operations and maintenance.

Item 8d4 sought to determine whether consultation among stakeholder improved project implementation and the results showed that 39(27.08%) strongly agreed, 36(25.00%) agreed, 40(27.78%) were undecided, 26(18.06%) disagreed while 19(13.19%) strongly disagreed giving a mean score of 3.800 with a standard deviation of 0.971. this meant that respondents agreed that consultation among stakeholders improved project implementation. Item 8d5 sought to establish whether community involvement in project implementation was satisfactory and the result showed that 29(20.14%) strongly agreed, 40(27.78%) agreed, 30(20.83%) neutral, 26(18.06%) disagreed while 19(13.19%) strongly disagreed giving a mean score of 3.62 and standard deviation of 0.898. This meant that respondents agreed that community involvement in project implementation was satisfactory. Operations and maintenance had a mean score of 4.018 with standard deviation of 0.787 implying that operations and maintenance was participatory. Composite

mean for participatory project implementation was 3.678 with standard deviation of 0776 meaning that the community project was implemented in a participatory manner.

Interviewssimilarlyconfirmedthatboth theprojectteamsand project beneficiaries agreedthatconversionof projectinputsintooutputswasthe fulfilmentoftheirsenseofownershipasablyexpressedby a committee members when he noted that,

> *"....project ownership is evident when we take chargeof theimplementation process by contributing our own labourin building the project....."*

This assertion is consistent with the findings of Marks, Komives, and Davis (2014), who hypothesized that project beneficiaries' perceptions of project ownership are influenced by the work contributions they make. Therefore, it is crucial to create a strategy that balances community participation in project execution with their capacity to utilize water resources properly. This result is in line with that of Wandera, Naku, and Afrane (2013), who discovered that just 22% of Ejisu project respondents felt a feeling of ownership while 78% did not. Similar results were seen in the AsotweProgramme, where 21.2% of participants and 78.8% of project supervisors expressed a sense of ownership. This result conflicts with that of Marks and Davis (2012), who showed that farmers who contributed personally to the project's execution showed a larger sense of ownership than those who did not.

The research's findings therefore suggest that the creation of a sense of ownership is significantly influenced by the community's participation in project implementation. The conclusions reached by Wandera, Naku, and Afrane (2013), Marks, Komives, and Davis (2014), and Marks and Davis (2012) are supported by these findings. This suggests that there is strong evidence to substantiate the idea that beneficiaries' participation in the implementation of water projects has a big influence on their long-term viability, as is the case with the Siaya-Bondo community water project in Siaya County, Kenya.

4.4.5 Participatory Monitoring and Evaluation and Sustainability of Community Water Projects

In this section, the application of descriptive statistics was employed to examine the impact of participatory monitoring and assessment on the long-term viability of the UasinGishucommunity water project. This study examines the impact of participatory monitoring and evaluation on the sustainability of community water projects through the utilization of a set of 20 items. The analysis of the items pertaining to participatory monitoring and evaluation of the UasinGishucommunity water project was conducted, and the findings are provided in Table 4.11.

4.9 Participatory Monitoring and Evaluation and Sustainability of Community Water Projects

No	Item	n	SA	A	N	D	SD	Mean score	Std. dev.
9a1	Community involvement in water distribution	144	38 (26.39%)	36 (25.00%)	40 (27.78%)	20 (13.89%)	10 (6.94%)	4.56	0.762
9a2	Project committees represent beneficiaries	144	30 (20.83)	32 (222.22%)	34 (23.61%)	30 (20.83%)	18 (12.50%)	3.06	0.670
9a3	Equitable water distribution	**144**	37 (25.69%)	40 (27.78%)	27 (18.75%)	25 (17.36%)	15 (10.42%)	3.69	0.762
9a4	System maintenance and operation	144	38 (26.39%)	41 (28.47%)	25 (17.36%)	24 (16.67%)	16 11.11%)	3.91	0.784
9a5	Effective distribution supervision	144	30 (20.83)	34 (23.61%)	36 (25.00%)	28 (19.44%)	16 (11.11%)	3.16	0.875
Monitoring of water allocation		144	**35 (24.31%)**	**37 (25.69%)**	**32 (22.22%)**	**25 (17.36%)**	**15 (10.42%)**	**3.674**	**0.771**
9b1	Equitable distribution	144	24 (16.67%)	30 (20.83%)	34 (23.61%)	38 (26.39%)	18 (12.50%)	2.410	0.849
9b2	Compliance assurance	144	24 (16.67%)	32 (22.22%)	34 (23.61%)	38 (26.38%)	16 (11.11%)	2.444	0.472
9b3	Community agreement	144	31 (21.53%)	32 (22.22%)	34 (23.61%)	30 (20.83%)	14 (9.72%)	3.560	0.446
9b4	Non-compliance penalties	144	36 (25.00%)	41 (28.47%)	28 (19.44%)	24 (16.67%)	15 (10.42%)	3.008	0.591
9b5	Generally followed	144	26 (18.06%)	31 (21.53%)	34 (23.61%)	37 (25.69%)	16 (11.11%)	2.459	0.659
Rules of water distribution		144	**28 (19.44%)**	**33 (22.92%)**	**33 (22.92%)**	**34 (23.61%)**	**16 (11.11%)**	**2.776**	**0.603**
9c1	Cash contribution for spare parts	144	30 (20.83%)	33 (22.92%)	45 (31.25%)	23 (15.97%)	13 (9.03%)	3.534	0.844
9c2	Cash for storage tank replacement	144	28 (19.44%)	31 (21.53%)	30 (20.83%)	36 (25.00%)	16 (11.11%)	2.511	0.513
9c3	Beneficiaries' 5-year cost coverage	144	28 (19.44%)	29 (20.14%)	42 (29.16%)	27 (18.75%)	18 (12.50%)	3.388	0.506
9c4	Satisfactory cash contribution	144	29 (20.14%)	31 (21.53%)	36 (25.00%)	30 (20.83%)	15 (10.42%)	3.537	0.480
9c5	Mandatory pre-project cash	144	28 (19.44%)	31 (21.53%)	30 (20.83%)	36 (25.00%)	16 (11.11%)	2.560	0.479
Indicator identification		144	**30 (20.83%)**	**31 (21.53%)**	**37 (25.69%)**	**30 (20.83%)**	**16 (11.11%)**	**3.106**	**0.564**
Composite for Monitoring and Evaluation		**144**	**31 (21.53%)**	**34 (23.61%)**	**34 (23.61%)**	**30 (20.83%)**	**15 (10.42%)**	**3.185**	**0.646**

The study's collection of responses from all 144 participants on inquiries on the community water project's long-term sustainability, monitoring, and assessment is shown in Table 4.10. Item 9a1 sought to establish whether community involvement in water distribution was effective and the results showed that 38((26.39%) strongly agreed, 36(25.00%) agreed, 40(27.78%) were unsure, 20(13.89%) disagreed while 10(6.94%) strongly disagreed giving a mean score of 4.560 and standard deviation of 0.762. This implied that respondents

strongly agreed that community involvement in water distribution was effective. Item 9a2 sought o assess whether project committees represented the community interest and the result showed that 30(20.83%) strongly agreed, 32(22.22%) agreed, 34(23.61%) were indifferent, 30(20.83%) disagreed while 18(12.50%) strongly disagreed giving mean score of 3.06 and standard deviation of 0.670. This implied that they were not sure whether project committees represented the community interest. Item 9a3 sought to assess the whether there was equitable water distribution and 37(25.69%) strongly agreed, 40(27.78%) agreed, 27(18.75%) were undecided, 25(17.36%) disagreed while 15(10.42%) strongly disagreed giving a mean score of 3.69 and standard deviation of 0.762. This meant that respondents agreed that whether there was equitable water distribution.

Item 9a4 sought to determine whether community participated in the water system for maintenance and operations and the results showed that 38(26.39%) strongly agreed, 41(28.47%) agreed, 25(17.36%) were neutral, 24(16.67%) disagreed while 16(11.11%) strongly disagreed with a mean score of 3.91 and standard deviation of 0.784. This implied that they agreed that community participated in the water system for maintenance and operations. Item 9a5 sought to establish whether there was equitable distribution of water to beneficiaries and results showed that 30(20.83%) strongly agreed, 34(23.61%) agreed, 36(25.00%) were undecided, 28(19.44%) disagreed while 16(11.11%) strongly disagreed giving a mean score of 3.16 and standard deviation of 0.875. this implied that they were not sure whether there was equitable distribution of water to beneficiaries. Monitoring of water allocation had a mean score of 3.674 with a standard deviation of 0771 meaning that participatory monitoring of water was undertaken.

Item 9b1 sought to establish whether equitable water distribution was ensured throughout the year and results showed that 24(16.67%) strongly agreed, 30(20.83%) agreed, 34(23.61%) neutral, 38(26.39%) disagreed while 18(12.50%) strongly disagreed giving a mean score of 2.410 and standard deviation of 0.849. this meant that they disagreed that equitable water distribution was ensured throughout the year. Item 9b2 sought to determine whether compliance in water allocation was ensured and results showed that 24(16.67%) strongly agreed, 32(22.22%) agreed, 34(23.61%) neutral, 38(26.39%) disagreed as 16(11.11%) strongly disagreed giving a mean score of 2.444 and standard deviation of 0.472. This implied that majority disagreed that compliance in water allocation was ensured. 9b3 sought to establish whether there was community agreement on water allocation and the result showed that 31(21.53%) strongly agreed, 32(22.22%) agreed, 34(20.83%) neutral, 30(20.83%) disagreed while 14(9.72%) strongly disagreed giving a mean score of 3.560 and standard deviation of 0.446 this implied that they were not sure whether there was there was community agreement on water allocation.

Item 9b4 sought to establish whether penalties for non-compliance of water allocation were effective and the response showed that 36(25.00%) strongly agreed, 41(28.47%) agreed, 28(19.44%) neutral, 24(16.67%) disagreed while 15(10.42%) strongly disagreed with a mean score of 3008 and standard deviation of 0.591. This implied that they were not sure whether penalties for non-compliance of water allocation were effective. Item 9b5 sought to establish whether rules of water allocation was adhered to by the community and the results showed that 26(18.06%) strongly agreed, 31(21.53%) agreed, 34(23.61%) neutral, 37(25.69%) disagreed while 16(11.11%) strongly disagreed giving a mean score of 2.459 and a standard deviation of 0.603. This implied that respondents were not certain whether penalties for non-compliance of water allocation were effective. Rules for water distribution had a mean score of 2.776 and standard deviation of 0,603 implying that it was not apparent among beneficiaries whether rules of water distribution was effective.

Item 9c1 sought to establish whether community contributions covered replacement of spare parts for the project and results showed that 30(20.83%) strongly agreed, 33(22.92%)

agreed, 45(31.25%) neutral, 23(15.97%) disagreed while 13(9.03%) strongly disagreed giving a mean score of 3.534 and standard deviation 0.844. this implied that respondents agreed that community contributions covered replacement of spare parts. Item 9c2 sought to determine whether cost recovery for the project investment was attainable and the results showed that 28(19.44%) strongly agrees, 31(21.53%) agreed, 30(20.83%) were neutral, 36(25.00%) disagreed, 16(11.11%) strongly disagreed giving a mean score of 2.511 and standard deviation of 0.506. This meant that respondents disagreed that cost recovery for the project investment was attainable. Item 9c3 sought to assess whether 5-years was enough for cost recovery and the response showed that 28(19.44%) strongly agreed, 29(20.14%) agreed, 42(29.16%) neutral, 27(18.75%) disagreed giving the mean score of 3.388 and standard deviation of 0.506. This implied that respondents were not certain whether cost recovery for the project investment was attainable.

Item 9c4 sought to determine whether pre-project contributions beneficiaries was adequate and the response showed that 29(20.14%) strongly agreed, 31(21.53%) agreed, 36(25.00%) neutral 30(20.83%) disagreed, 15(10.42%) and strongly disagreed giving a mean score of 3.537 with standard deviation of 0.479. This implied that majority of respondents agreed that pre-project contributions beneficiaries was adequate. Item 9c5 sought to establish whether mandatory pre-project contribution was enforced and results showed that 28(19.44%) strongly agreed, 31(21.54%) agreed, 30(20.83%) neutral, 36(25.00%) disagreed while 16(11.11%) strongly disagreed giving a mean score of 2.560 and standard deviation of 0.479. This meant that respondents were of the disagreed that mandatory pre-project contribution was enforced. Indicators for M&E had a mean score of 3.06 with a standard deviation of 0.564implyimg that it was not clear to whether the community met all the requirement. The composite for M&E was 3.185 with standard deviation of 0.646 implying that community participation was average.During the interview a member of the project stated that:

> "*Community involvement in monitoring and evaluation is critical to the success of water distribution which in turn is essential for the sustainability of the community water project……"*

Ndou (2012) also found that project ownership increased when water consumption rules were followed. This conclusion is consistent with his findings. This conclusion is consistent with the work of Khwaja (2004), who showed that water committees' control of water allocation management significantly affects water projects' viability over the long run. That means the water project will be more sustainable in the future thanks to the efforts of the water committee. Conclusions may be drawn about the importance of monitoring and evaluation methods to the long-term viability of the UasinGishucommunity water project in Kenya's Siaya County.

5. CONCLUSION AND RECOMMENDATIONS

Results indicated that participatory implementation had composite mean 3.678 with standard deviation of 0776 while sustainability had a composite mean of 3.210 and standard deviation of 0.649. This implied that beneficiaries participated in community project implementation despite it not being clear whether or not the projects were sustainable. Despite this finding, the interviews showed that those who benefited from the project believed that it took into account the interests of the community since it took into account local requirements and carefully identified and assessed the project's stakeholders. It was therefore concluded that community water projects in UasinGishu County, Kenya benefited from the participatory implementation methodologies although this was not clearly demonstrated through their long-term sustainability. PM&E had a mean score of 3.185 with standard deviation of 0.646 while sustainability had a composite mean of 3.210 and standard deviation of 0.649 implying that it was not clear whether beneficiaries were

actively involved in monitoring and evaluation as it wasn't apparent whether the community water projects were sustainable. This finding was tenable despite evidence that community participated in PME.It was therefore concluded that beneficiaries participated in monitoring and evaluation despite the projects not demonstrating long-term sustainability. It is recommended that agencies involved in community water projects in UasinGishu County formulate suitable policy, strategies and plans that will ensure participatory implementation and PME of community water projects. It is also is recommended that these agencies mainstream capacity development programmes in order to empower beneficiaries on decision making during participatory implementation and PME phases on water project development in UasinGishu County, Kenya.

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