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Influence of Participatory Planning for Project Capacity Building on Sustainability of Community Water Point Projects in Turkana County, Kenya

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Abstract
Existence of institutional framework in form of project operation management committees, advocacy group, technical and maintenance teams and resource mobilization committees improves sustainability of projects after handing over. The objective of this study was to assess the extent to which participatory planning for project capacity building influences sustainability of community water point projects in Turkana central, Turkana County. The target population of the study was 24,025 households of Turkana central constituency. Cochran formula with 95% level of confidence and margin of error of 5% was used to determine the sample size of 384 households. Sample selection was done using proportional quota and convenience sampling techniques. The data was collected using observations, focus group discussions, key informants' interviews, and semi-structured questionnaire guides. Multiple Regression Analysis using Statistical Package for Social Sciences was used to analyze quantitative data. Framework Analysis and Narrative Analysis techniques were used to investigate qualitative data. Inter-rater reliability was used to measure the level of consistency of data collection instruments and content test was used to test instrument validity. The findings were tabulated, condensed, analyzed, and inferences drawn. Descriptive statistics were computed, and frequencies, percentages, arithmetic mean, and deviations presented. Pearson's Moment Correlation (r), multiple regression and stepwise regression (R^2), F-tests were used to test the hypothesis. The results indicated $F(1, 374) = 1145.246$, $p = 0.00 < 0.05$, $r = .868$, $R^2 = .754$. The study established that, for sustainability of community water point projects to be achieved, detailed plans to develop social capacities of stakeholders is a necessity. Stakeholders should be able to embrace communal objectives for resource management and capacitated enough to propose and develop action plans to achieve those objectives. They should have technical capacity to jointly manage their resources sustainably including ability to monitor resources and impose rules. In the same vein, project stakeholders should be able to develop and manage local institutions with the capacity to distribute costs and benefits impartially among themselves and have a self-motivated community leadership to catalyze demand and mediate disputes where and when needed.
Keywords: Project Sustainability, Community Water Points, Participatory Project, Capacity Building, Planning, stakeholders, beneficiaries.
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1.0. INTRODUCTION

Capacity is the ability of an individual or institution to marshal its resources and apply them to achieve and sustain goals (WRI, 2008). When an individual or an institution has a capacity, it can appreciate its surrounding, conceive solutions to inherent or operational problems and then operationalize solutions to meet desired level of comfort in its environment. Capacity building therefore is a process by which societies, institutions and or individuals develop capabilities to execute functions, solve problems, set, and attain objectives. It involves skills transfer, institutional development, and monitoring and evaluation mechanisms. According to Enjel, et al. (2007), capacity is the general ability of an institution to accomplish tasks and sustain itself. UNDP (1998) define capacity as the ability of an individual and or an organization to implement functions successfully, efficiently, and sustainably. WRI (2008) define capacity as possession of social, technical, and entrepreneurial skills to manage resources. ICOMOS (2013)

contends that in community development, community capacity is defined as the joint influence of a community's commitment, resources and skills that can be applied to build on its strengths to solve problems and exploit opportunities (Aspen Institute, 1996). According to WCES (2012), community capacity is fundamental for sound decision-making about the stewardship of natural, human, and cultural resources, and how they contribute to economic growth.

Therefore, for sustainability of community projects to be achieved, detailed plans to develop social capacities of stakeholders is a prerequisite. Stakeholders should be able to embrace communal objectives for resource management and capacitated enough to propose and develop action plans to achieve those objectives. They should have technical capacity to jointly manage their natural endowments sustainably including ability to monitor resources and impose rules. In the same vein, project stakeholders should be able to develop and manage local institutions with the capacity to distribute costs and benefits of their environment impartially among themselves and have a self-motivated community leadership to catalyze demand and mediate disputes where necessary. This study; therefore, endeavored to examine the extent to which establishment of institutional framework in form of operations management, advocacy, technical and maintenance and resources mobilization committees, influence sustainability of water point projects in Turkana Central, Turkana County.

2.0. BACKGROUND

The study was conducted in Turkana Central constituency of Turkana County. The constituency had a population of 134,677 by 2019 according to 2011 County Statistics. It has an approximate area of 5675.9 Sq.km and has five wards namely, Kerio Delta, Kang'ototha, Kalokol, Lodwar Township and Kanamkemer wards.

Fig.1. Map of Turkana Central Sub-County

In investigating sustainability of community water point projects, the study examined water points in each ward except for Lodwar town by interviewing beneficiaries, and other stakeholders found relevant to the projects. The study did not try to look at projects outside Turkana Central or projects other than water points or settlements not at water points of interest. This study only examined the planning processes that led to implementation of given water point projects and role played by the community during planning. The study looked at how lack of participation or otherwise in the planning by stakeholders affected maintenance of the water points after handing over.

The main sources of water in rural areas are boreholes and wells. According to Turkana County Water and Sanitation Sector 2017-2021 Strategic Plan, over 61 per cent of rural families depend on unprotected wells and

streams for their domestic use and livestock survival. According to Turkana Central sub county water points status report of September 2019, there are 117 boreholes, 52 shallow wells, 18 water pans and 1 rock catchment. Of these waterpoints, 35 boreholes, 12 shallow wells 12, and 5 water pans are non-operational. Although a borehole has 30-40 years design life, over 50% of boreholes in Turkana Central broke down and were repaired in the last five years. Typically, a well-maintained borehole is not supposed to undergo major repair in the first decade of installation. The County government of Turkana spends over two million Kenyan shillings annually to repair dysfunctional waterpoints in Turkana Central Sub-County. There is no evidence of community's or beneficiaries' contribution either financially or technically to the maintenance of the water points. There is neither any evidence of beneficiaries' institutional setting that handles operational management, advocacy for water point development and management, resource mobilization and structured technical skills transfer for the purpose of water point maintenance.

3.0. LITERATURE

In most developing countries, stringent and highly centralized state structure coupled with political rent-seeking inhibits participation of the poor and the marginalized in decision making process in development projects. In fact, absence of regulatory framework to integrate and expand participation of beneficiaries in local development projects acts as an impediment to sustainability of such projects. A sustainable project needs to infinitely regenerate its benefits after its design life according to study by Silvius, et al., (2012). The benefits might be directly related to the project deliverable or can be effects that are inadvertently generated by the impact of the project's deliverables. This argument is supported by study by Ojwang' and Bwisa, (2014), which concluded that project's participants see sustainability in the lenses of continuous stream of gains and increase in flow because of project activities and its motivations. Therefore to achieve sustainability of a project as a result of participatory planning a congenial institutional framework and supportive policy direction of a community organization is considered a prerequisite for guaranteeing stakeholders' access to planning, implementation, and management process of development projects.

In project management, capacity building is agreed to mean development of knowledge, abilities, focus, systems, and leadership to enable effective implementation of projects (DeCorby-Watson et al., 2018). Brown et al (2001) argues that community capacity is the foundation for sound decision-making about the ownership and care of natural, human, and cultural resources and it contributes to economic growth. A research by WRI, (2008), pointed out that a meticulous plan for stakeholders' local resource management structures with the capability to allocate costs and benefits equitably, social capacity to hold a collective goal for resource management, technical capacity to jointly manage natural resources is requisite for sustainability of community projects.

In this regard, planning for capacity building of community projects is going to look at capacity building in the light of local institutional development, social capacity building, technical skills development, and financial capacity development as ways of enhancing sustainability of community projects. UNESCO (2010) noted that all forms of capacity building should be preceded by organizational and institutional capacity development to have an adaptive structure through which other forms of development can be advanced. A study by Pradhan et al., (2011) on interventions to strengthen school committees in Indonesia found that cooperation between school committees and village councils resulted in solid actions by the village council and substantial influences that school committees could not have achieved alone. Strengthening such local institutions and their linkages empowers communities to make resource management capabilities technically efficient. A research on forest management in Tanzania by Lund et al. (2010) found that, establishment of local forest management committee led to greater equity in the distribution of forest-related resources. It also found that vulnerable members of the community are given the opportunity to partake in decision-making, management and in benefits utilization. However, Ribot, Lund, and Treue (2010) acknowledged that in much of Africa, transfer of duties to communities is still being dogged by maintenance of opportunities for rent-seeking or ensuring resource sustainability of benefits for high-level interests, with the costs endured mostly by local inhabitants. Local institution is effective because members rely heavily on personal relationships and networks to gain access to resources and make decisions that benefit all the members. Brown et al (2001) assert that support organizations need to help local organizations in building technical capacities and linkages and networks to sustain donor-initiated community projects.

After development of local institutional capacity, social capacity is developed to mobilize stakeholders especially community members around the project (WRI, 2008). A study by Lam, & Lee (1994) & Ostrom (1990) concluded that farmer-managed irrigation systems have more equitable water distribution, but maintenance is worse in more uneven communities. Group visioning and other trust-building exercises are provoked to catalyze community-wide momentum toward the project by taking them through a process to be able to envisage their highest achievable goals (WCES, 2012). According to Adams & Dickinson, (2010), community members think of their technical capacity to be able to mutually manage resources sustainably including their ability to monitor and apply rules more when faced with livelihood projects. Technical management skills are therefore critical in

achieving sustainable community projects because they are required in identifying the problem, prospects thereto and in executing, managing, and reaping the outputs of the project.

Once social, institutional, and technical capacities of a community project have been developed, it is important to develop sustainable financial capacity. Most of community projects are efficiently executed through Local Non-Profit Organizations because of their closeness to the people, especially poor communities (WRI, 2008). According to Strydom, (2014), the aim of non-profit organization is to have financial management capacity to deliver efficiently and effectively on its mandates, successfully raise funds and establish necessary cost controls and budget management to continue to win trust of donors and other stakeholders. Krug & Weinberg (2004) found that the goal of financial management for Non-Profit Organizations is to guarantee funds flow while delivering essential purposes. Shrestha (2018) confirmed that overall chances of a community project getting funded are improved with more organizational partners, direct and indirect reach to communities and cohesion among partners. It continues to argue that network aids independent actors to marshal resources, share information, build trust and prevent unnecessary competition over the same sources. Therefore, to enhance sustainability of community projects through maintenance and operations after handing over, participatory planning strategies should be used to lead stakeholders in general and beneficiaries to develop institutional capabilities, social visioning, technical skills, and financial sustenance. This study hence sought to examine the extent to which participation of stakeholders in planning for capacity building influences sustainability of community water point projects in Turkana central, Turkana County.

4.0. METHODOLOGY

The null hypothesis of the study was to establish whether there was no significant relationship between Participatory Planning for Project Capacity Building and Sustainability of Community Water Point Projects in Turkana Central sub-county.

Figure 2. Map of Turkana Central Sub-County.

The study used pragmatic paradigm which integrated positivism and constructivism philosophies. This combination widened information trough and ensured comparison of perspectives. The study used mixed methods research (MMR) design approach (Johnson et al., 2007) which combined different elements of qualitative and quantitative research approaches. This ensured broad and in-depth understanding and corroboration of viewpoints

obtained from different respondents. The research designs used were Ex post facto, cross-sectional, and correlational research designs. Ex post facto method was used to understand the planning process of community water point projects during implementation and then correlate the process the level of sustainability of the chosen water point projects based on their level of productivity (Cohen & Manion, 1986, Lavrakas, 2008, Leedy & Ormrod (2010). The target population of the study was 24,025 households of the Turkana Central constituency (Matula et al., 2018). The target population of this study was 24, 025 households of the Turkana Central Sub-county. A sampling frame of this study were settlements around identified water points. The unit of analysis of the study was a household. A household here means a community-water-point-benefitting household who for the purpose of this study are referred to as community water point projects. The households' representatives are referred to as stakeholders and were targeted as respondents for the self-administered questionaries. The stakeholders selected include beneficiaries, community leaders, political leaders. They were drawn equitably from five study wards of, Lodwar Township, Kalokol, Kang'otho, Kanamkemer and Kerio Valley. These households were identified around existing community water points to provide information on the status of the water point projects, their history of planning, implementation, and operation to understand how these processes contributed to sustainability of the water point projects. Cochran formula was used to determine the sample size of 384 respondents to be interviewed during the research (Cohen et al., 2011). This formula enabled calculation of an ideal sample size with a desired level of precision, confidence levels, and estimated proportion of the attribute present in the target population of Turkana Central sub-county. It was considered appropriate because the target population was large**.** The formula is as follows:

$$n_0 = \frac{z^2pq}{e^2}$$

n_0 is the study sample size
e is the desired level of precision i.e. the margin of error which will be taken as 5%
p is the (estimated) proportion of the population which has the attribute in question,
q is (1 – p). z value will be determined from z-value at 95% as 1.96.

$$no = \frac{1.96\times1.96\times0.5\times0.5}{0.05\times0.05} = \ 384\ households$$

The study used proportional quota and convenience sampling techniques to distribute and select study objects, respectively, across five wards of Turkana Central sub-county. The study used semi-structured questionnaires, observations, focus group discussions and key informants to collect data (Cohen et al., 2011). The study also deployed qualitative, quantitative, and inferential analyses techniques to analyse data collected (Sutton & Austin 2015, Gale, et al., 2013, Riessman et al., 2005, Babbie ,2010). The study used framework and narrative analyses to evaluate qualitative data, and Statistical Package for Social Sciences (IBM SPSS Statistics 22) to analyze Likert-type quantitative data.

A sample of 10% of the statistical sample were randomly selected for pilots testing in accordance with Connelly (2008) who opines that pilot sample should be 10% of the sample projected for the study. Since the study aimed to interview three hundred and eighty (380) interviewees shared proportionally across Turkana Central Wards, thirty-eight (38) respondents were interviewed at pilot testing, proportionally distributed to assess adequacy of the instruments, feasibility of the study, and the viability of data collection and analysis processes. The research assistants were instructed to take details of the respondents used at piloting phase to avoid repetition. The responses of interviewees at the piloting were used to improve the questionnaires and methods of interaction during the main study. The test was successful.

Sustainability of community water point projects was gauged by assessing project continued productivity, measured by number of beneficiaries at the time of investigation in comparison the beneficiaries as planned, project resilience(lifespan), and project ownership exhibited by existence of management structures or project management committees.

The study started by observing level of service (operation) of different water points in designated study area; that is, operational state and how long they had been in the operation. Having captured the level of service of water points, inquest was made on how it was planned and implemented to appreciate whether stakeholders were involved and to what extent. This was followed by investigating the role of the beneficiaries and other stakeholders in sustaining the project. Participation was measured by existence of operations management committee, maintenance/technicians committee, advocacy group and funds mobilization committee. This was related to stakeholders' level of engagement during project identification, project formulation, planning for implementation and capacity establishment and building.

5.0. ANALYSIS AND FINDINGS

5.1. Statistical Summary

The response rate for this study was 376 out of 380 questionnaires which translates to 98.95%. This was considered efficient according to Draugalis, et al (2008) assertion that, a return rate of 80% is considered a comfortable level of representative for studies whose outcomes will be generalized to a population. Out of 376 respondents, 258

were female, which makes 68.6%. These statistics resonate with findings by Watts S. (2004) which established that responsibility of domestic water point management is relegated to women, because in most conservative cultural settings, women are typically responsible for collecting, preserving, and utilizing water and for disposing of the effluent thereof. Majority of respondents, 332 (88.3%), were ordinary citizens while 44 (11.7) %, were leaders who held various leadership positions in the community. Of these participants, youthful population (18-35 years) make up to 37 (24.6%) with the middle age (36-55 years) making up 339 (64.4%). The rest were 55 and above years old of age. On duration of occupancy of the area, 84 (22.3%) of the respondents had stayed at project area for 0-5 years, 116 (30.9%) for 5-10 years and 176 (46.8%) for over 10 years though with some seasonal migrations. On the literacy level of the respondents, over 40% of the respondents could not read and write, 48.6% had attained primary and secondary school education and only 8% had reached tertiary education level.

5.2. General Information on participatory planning for project capacity building and sustainability of community point projects.

This subsection of the research thesis recounted responses to open-ended questions on engagement of stakeholders in planning for project capacity building and their impact on water point projects sustainability. The results were analyzed and presented in tables 5.1., 5.2., 5.3., and 5. 4.

Table 5.1. Stakeholders in Management Committee

	Type of stakeholders Engaged	Frequency	Percent
Valid	All stakeholders	50	13.3
	Beneficiaries	41	10.9
	Community leaders	21	5.6
	County government Officials	33	8.7
	Do not know	201	53.5
	N/A	30	8
	Total	**376**	**100.0**

The responses in Table 5.1. on the composition of post-implementation project management committee showed that 13.3% of respondents believed that all stakeholders were included while only 10.9% responded that it was only beneficiaries that were included. Majority of respondents, 53.5% were not sure of who was included in the post-implementation project management committee. This trend could be interpreted that either post-implementation project management committees did not exist, or the stakeholders were not involved during their establishment.

Table 5.2. Areas of disagreement on the operations and management of the project benefits

		Frequency	Percent
Valid	Community Participation	78	20.6
	Lack of transparency in management of funds and benefits of the projects by the committee members	45	11.5
	Lack of training for the beneficiaries	14	3.7
	N/A	41	10.9
	Do not know	198	53.6
	Total	**376**	**100.0**

In Table 5.2., the respondents were asked on the areas of disagreement or dispute during the operation of water points. Although majority, 53.6% was not sure, a reasonable number 20.6% acknowledged that community participation was the main area of conflict. Most community members or beneficiaries decried exclusion by community leaders and county government officials in the management of the water points. The takeaway from this question was that there was little involvement of beneficiaries in management of operations and maintenance of most water points. This trend can contribute to lack of sustainability of most community water points in Turkana central, Turkana County.

Table 5.3. Reasons why the community were not satisfied with the project outcomes.

Reasons for dissatisfaction		Frequency	Percent
Valid	Committee Members were not transparent	9	2.4
	Do not know	194	51.6
	lack of engaging community in project fully	1	.3
	Lack of funds to sustain, unelected officials	1	.3
	Project non-performance; lack of water	14	1.3
	Mismanagement of waterpoint funds	2	.3
	N/A	152	40.4
	Never participated in project implementation	2	.3
	Political interference, management committee was selected by politicians	1	.3
	Total	**376**	**100.0**

Information in Table 5.3. was intended to capture reasons why beneficiaries felt dissatisfied with the outcomes of community water point projects. There appeared to be no any apparent reason stated. It is either there was no dissatisfaction with the project, or the stakeholders did not attribute any dissatisfaction to a particular reason. Discussions with Focus Group and Key Informants indicated that the main area of dissatisfaction was frequent breakdown of boreholes and slow speed of maintenance. They lamented that setting up their maintenance team and funds would go a long way in making the water points more responsive to the needs of the people.

Table 5.4. The source(s) of funds for paying the technicians and for purchase of materials during operation and maintenance of the boreholes.

		Frequency	Percent
Valid	Government	196	52.1
	Community	124	33.0
	Others	54	14.4
	Total	374	99.5
Missing	System	2	.5
Total		376	100.0

In Table 5.4., the study sought to establish the source of funds for paying technicians and purchase of materials for maintenance of water points. While majority, 52.1% said it was the government, 33% of the respondents said it was the community. This trend needs to be reversed if sustainability of community water point projects was to be realized. Contribution of beneficiaries to the cost of maintenance is critical in improving sustainability of community water point projects.

5.3. Percent, Means and Standard Deviation of Data on Participatory Planning for Project Capacity Building and Sustainability of Community Water Point Projects.

The research collected descriptive data on the influence of participatory project capacity building (independent variable) on sustainability of community water point projects (dependent variable) using five Likert scale questionnaires. The statistics was analyzed and presented to understand the association that existed between two variables. Interviews with key informants and focus group discussions were recorded, analyzed, and triangulated with the results from the questionaries. To measure the relationship between participatory project capacity building and sustainability of community water projects, the following indicators were studied, local institutional capacity building, social capacity building, technical Capacity building and financial capacity building. The study used eleven (11) five-point Likert items to collect data which was analyzed to capture sentiments of respondents. These five-point Likert-type items were rated on a scale ranging from Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A) to Strongly Agree (SA). The following scoring was used: 1<SD<1.8, 1.8<D<2.6, 2.6<N<3.4, 3.4<A<4.2, and 4.2<SA<5.

Table 5.5. percent, means and standard deviation of data on Participatory Planning for Project Capacity Building and Sustainability of Community Water Point Projects.

	Project Capacity Building	N	SD (%)	D (%)	N (%)	A (%)	SA (%)	Me	Std Er	SD
a	Post-implementation project committee was set up to manage the operations and benefits of the project during handing over	376	11.7	18.1	39.4	30.9	0	2.9	.050	.974
b	Project management committee was helpful for the sustainability of the community water point	376	11.2	27.7	41.2	19.9	0	2.7	.047	.914
c	All members of the community agreed on how the benefits and operations of the projects were going to be managed upon handing over	376	13.0	19.7	50.8	16.5	0	2.7	.046	.894
d	The cooperation of the community members was helpful to the sustainability of the water point project	376	2.9	36.2	40.2	20.7	0	2.8	.041	.802
e	Members of the community were satisfied with the water point project outcome	376	15.2	17.8	26.1	40.7	0.3	2.9	.056	1.096
f	Training of technicians of the beneficiaries on how to manage and maintain the project after handing over was done	376	3.5	20.2	70.2	6.1	0	2.8	.031	.599
g	The trainees were helpful to sustainability of the water point project	376	1.6	31.9	60.1	6.4	0	2.7	.031	.604
h	A financial plan was put in place for running and maintaining the water point after handing over	376	2.9	36.7	46.5	13.8	0	2.7	.038	.736
i	Financial oversight training was offered to the management committee of the water point	376	12.5	21.8	53.7	12.0	0	2.7	.044	.848
j	Financial plan that was put in place for running and maintenance of the water point after handing over contributed to its sustainability	376	11.4	30.6	44.1	13.8	0	2.6	.044	.864
k	I think if the water point were planned differently, it would have been more sustainable	376	0	4.5	70.2	23.4	1.9	3.2	.028	.551
	Valid N (listwise)	376								
	Composite Mean Score and Standard Deviation							**2.792**		**0.8075**
	Cronbach's Alpha									**0.933**

As shown in Table 5.5., the composite mean and standard deviation of the statistics were, M=2.792 and SD = 0.8075, respectively. The composite mean of M=2.792 is within the neutral range meaning most respondents were unsure of the relationship being investigated. The Cronbach Alpha Coefficient of the items used to measure influence of participatory planning for project capacity building on sustainability of the community water projects was 0.933. The coefficient being above 0.7 is indicative of strong internal consistency of the data.

Item a sought to examine the extent to which respondents agreed to whether post-implementation project committee was set up to manage the operations and benefits of the project during handing over. The responses were that 30.9% agreed, 39.4% were neutral, 18.1% disagreed and 11.7% strongly disagreed. The item mean was M=2.9 with the standard deviation of SD=.974. Although the mean is above composite mean, the responses fell within neutral range meaning either the participants were not sure if post-implementation committees were set up or the influence of formation of committees on influence on sustainability of water point projects.

However, focus group discussions and key informants' interviews pointed out that beneficiaries' post-project implementation committees were critical for maintaining and managing operations of the water point after handing over. They therefore recommended formation of such committees before handing over to enhance sustainability of community water point projects. One participant emphasized that:

"Unless we have structures to manage operations, mobilize resources and oversee maintenance of water points, there is no way we could keep reaping the benefits of having clean water in a good proximity. It will resemble someone who starves his cows and expects to continue to milk them"

In item b, the study sought to establish whether the post-project implementation management committees formed were helpful for the sustainability of the community water point. With item mean of M= 2.7, SD=0.914 and responses of 11.2%% strongly disagreeing, 27.7% disagreeing, 41.2% neutral and 19.9% disagreeing, the findings were within neutral range. This answer could be related to responses in 29a, in which respondents were not sure on whether committees were formed or of their impact on project sustainability.

Focus group discussions and key informants' interviews echoed the importance of post-project implementation management committee on sustainability of community water point projects. They contended that formation of post-project implementation management committees was important, but it must also be coupled with educating the members on the role of such committees in ensuring sustainability of water points.

Item c sought to establish whether all members of the community agreed on how the benefits and operations of the projects were going to be managed upon handing over. With item mean, M=2.7, and SD=0.894, and the responses being 13.0% strongly disagreed, 19.7% disagreed, 50.8% neutral and 16.5% agreeing, the results were within neutral range. It means that most respondents were not sure on whether all members of the community agreed on how the benefits and operations of the projects were going to be managed upon handing over and its impact on sustainability of community water point projects.

Focus group discussions and key informants' interviews confirmed that all members of the community did not agree on how the benefits and operations of the projects were going to be managed upon handing over. However, they corroborated that agreeing on the benefits and operations of the projects would enhance sustainability of community water point projects. A community leader emphasized this point that:

"When beneficiaries agree on how to manage operations and maintenance of boreholes, they would be able to proactively mobilize resources, train technicians and repair the boreholes beforehand in case of breakdown. This is critical in elongating service life of the water point and maximizing benefits to the community."

In item d, the study sought to establish the extent to which respondents agreed on whether the cooperation of the community members was helpful to the sustainability of the water point projects. With the item mean M=2.8, SD=0.802 and the responses being 2.9% strongly disagreeing, 36.2% disagreeing, 40.2% neutral, and 20.7% agreeing, the respondents were uncertain about the impact of cooperation of stakeholders on sustainability of the water points.

Focus group discussions and key informants' interviews appreciated the need for cooperation among beneficiaries in sustaining water point projects. However, the discussants pointed out that deliberate effort was never made by project promoters to engage beneficiaries on the need for a collaborative framework within which they could cooperate to sustain water points. This was lamented by one participant.

"It appears that leaders, especially politicians, fear cooperative framework of community members in development work. There seems to be fear of accountability."

Item e registered neutral responses with M=2.9 and SD=1.096 when respondents were asked of the extent to which they agreed on whether members of the community were satisfied with the water point project outcome. However, with highest percent of respondents, 40.7% agreeing to the statement, it can be concluded that water point projects served intended purpose.

Focus group discussions and key informants' interviews established that only 52.7% of the water points were sustainable in relation to the level of satisfaction obtained. Participants further lamented that such rate of sustainability was too low for public investments especially with scarce resources from government coffers. The participants recommended proactive maintenance plans of water points to improve sustainability as lamented by a former politician who is now a community leader that,

"It will be difficult for the government to serve this poverty-stricken population if resources are invested and blown away within a short time by lack of maintenance of projects. Sustainable development is the surest way of guaranteeing that people equitably access government services, and this can only be achieved through participatory development."

This sentiment agrees with finding by Sharma (2009) which established that to meet the challenging global situation of widening economic and social disparity, inclusive and long-term preventive growth would be the best tool to drive integrated development strategy for drought-prone and poverty-stricken areas.

Items f wanted to investigate the extent to which respondents agreed to the statement that training of technicians and beneficiaries on how to manage and maintain the project after handing over was done. With item mean, M=2.8 and SD=0.599, the respondents overwhelmingly responded with 70.2% being unsure on whether any training was done. Although 20.2% disagreed with the statement, the trend clearly indicates either there was wider involvement of the stakeholders or there was not training carried out at all.

Discussions with Focus Group and Key Informants' interviews were more emphatic that there was no training of technicians and beneficiaries after projects handing over on management and maintenance of water points. They suggested that lack thereof of training could be responsible for low levels of satisfaction of sustainability of community water point projects in the project area, Turkana central subcounty. The importance of training could not have been articulated any better than how one participant put it.

"Had the beneficiaries been trained on how to manage and maintain their water sources, they would use their available resources, including selling their goats to raise money for maintenance of boreholes so that they can settled life with their animals."

Item g sought to find out if technician trainees were helpful to sustainability of the water point projects. With item mean, M=3.2 and SD = .551 and 60.1% of respondents unsure, the responses were within neutral range,

meaning the respondents were unsure whether any training took place. In the same line with item 29f above, it can be said that the respondents were not engaged, and no training of technicians was done.

Focus Group discussions and interview of key informants confirmed responses in item 29f that no training of technicians was carried out. So, there were no technician trainees to maintain the water points.

In Item h, the study enquired whether a financial plan was put in place for running and maintaining the water point after handing over. The item data were, mean, M=2.7 and SD=0.736 with 46.5% unsure and 36.7% disagreeing, the responses still fell within neutral range. The respondents were not sure whether any finance mobilization plans were in place to maintain and operate the water points after handing over.

Focus Group Discussions and interviews of key informants confirmed that there were no financial plans that were put in place for maintenance and operations of the water points.

Item i sought to establish if financial oversight training was offered to the management committee of the water point. With item mean, M=2.7 and SD=.848 and overwhelming 53.7% of respondents being unsure, the responses were not decisive. This could be attributed to lack of involvement of beneficiaries in the training or absence of training all together.

Focus Group discussions and interviews of key informants also agreed that there were no financial oversight trainings carried out to prepare beneficiaries for management of water points. This was emphasized by one participant that,

"had the beneficiaries been trained on the oversight role of mobilizing and managing resources for running operations and maintenance of water points, 50% of water points would not be out service as is currently the situation."

Item j enquired whether financial plan that was put in place for running and maintenance of the water points after handing over contributed to its sustainability. With item mean, M=2.6 and SD=0.864, and 30.6% of respondents disagreeing and 44.1% neutral, the responses were generally neutral. This implies that there were no financial plans put in place after handing over of water point projects.

These responses were corroborated by Focus Group Discussions and interviews of Key Informants. A respected community leader retorted that,

"As it has been the case across Turkana land, there are no formal and structured community development committees that would be managing development projects in the communities. These committees would also be useful in holding leaders, especially the politicians, to account on management of public funds."

Item k sought to establish if the water point projects would have been more sustainable had they been planned differently. With item mean, M=3.2 and SD=.551, and with 70.2% of respondents neutral and 23.4% in agreement, there was a general agreement that if planned differently, the water points could be sustainable.

Focus Group discussants and key informants confirmed that lessons have been learnt from previous water point projects. This was affirmed by one participant.

"if water point projects were planned in a way that puts in place beneficiaries-driven management committees, resources mobilization and oversight committees and with technicians trained from among the beneficiaries, such projects will achieve sustainability."

5.4. Relationship between Participatory Planning for Project Capacity Building and Sustainability of Community Water Point Projects

5.4.1. The Hypothesis.

Ho: There is no significant relationship between Participatory Planning for Project Capacity Building and Sustainability of Community Water Point Projects in Turkana Central sub-county.

A multiple regression model was used to examine the relationship between Participatory Planning for Project Capacity Building, a predictor (independent variable), and Sustainability of Community Water Point Projects (dependent variable). The analysis was carried out in subsection 5.4.

5.5. Multiple Regression Analysis

The study used Multiple Regression model to analyze the relationship between independent variable of participatory planning for project capacity building and sustainability of community water point projects in 5.4. 1..

5.5.1. The Model of the variable

$$\mathbf{Y = \alpha + \beta X + \varepsilon}$$

Where α -constant

B-Coefficient of the variable.

X -Independent, Participatory Planning for Project Capacity Building

ε -Error term.

The model was analyzed, and the results tabulated in Table 5.6 below.

Table 5.6. Multiple Regression Analysis Results on the influence of Participatory Planning for Project Capacity Building on Sustainability of Community Water Point Projects.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	df1	df2	Sig. F Change
1	.868[a]	.754	.753	.29722	.754	1145.246	1	374	.000

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	101.169	1	101.169	1145.246	.000[b]
	Residual	33.038	374	.088		
	Total	134.207	375			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.691	.069		10.031	.000
	Project Capacity	.814	.024	.868	33.841	.000

Dependent Variable: Project Sustainability
Predictors: (Constant), Project Capacity

F (1, 374) =1145.246, p=0.00<0.05, r = .868, r.sq.= .754

The multiple regression model analysis results in Table 5.6. show that R = 0.868, inferring a positive slope between the independent variable (participatory planning for project capacity building), and dependable variable, (sustainability of community water point projects). The R-Squared was 0.754, implying that planning for project capacity building influenced 75.4% of variation in sustainability of community water point projects. The other factors explained 24.6% of variability. With p-value=0.00, r = 0.868, R-Squared = 0.754 and overall F (1, 374) =1145.246, the ANOVA results suggested that the relationship was statistically significant. Hence, the study rejected the Null Hypothesis and concluded that there is a significant relationship between participatory planning for project capacity building and sustainability of community water point projects in Turkana central, Turkana County

Substituting coefficient and constant, gives a model as,

$$\mathbf{Y = .691 + 0.868X_4}$$

The beta value, β_4, implies that by increasing participatory planning for project capacity building by a unit, sustainability of community point projects increases by 0.868. This in tune with assertion by Shober et al., (2018), that a change in the magnitude of 1 in a variable is associated with a change in the magnitude of another variable in a correlated data, either in the same (positive correlation) or in the opposite (negative correlation) direction.

This finding validates the argument that participatory planning for project capacity building has a significant influence on sustainability of community water point projects in response to the objective of the study which was to investigate the extent to which participatory planning for project capacity building influences sustainability of the community water point projects in Turkana central, Turkana County. The study therefore rejects the null hypothesis that there is no significant relationship between participatory planning for project capacity building and sustainability of the community water point projects in Turkana Central, Turkana County.

6.0. CONCLUSION

The research established that most water point projects did not have post-implementation management framework to safeguard sustainability. The beneficiaries and community leaders had not been engaged in the planning so that they could envision the need for such provisions. This was evident in lack of ownership of the projects as was seen in the attitudes of the beneficiaries and local leaders. For sustainability of community water point projects to be attained, a meticulous planning process that involves beneficiaries and community leaders in planning for project post-implementation management, social advocacy, technical skills transfer, and financial management structures that help in maintaining and sustaining it after handing over is inimitable.

These findings agree with foundational knowledge in the areas of sustainable development. It agrees with assertion by UNESCO (2010) that all forms of capacity building should be preceded by organizational and institutional capacity development to have an adaptive structure through which other forms of development can be advanced. A study by Pradhan et al., (2011) on interventions to strengthen school committees in Indonesia also agrees that structured cooperation among beneficiaries resulted in solid actions by the village council and substantial influences that school committees could not have achieved alone. This also concurs with research on forest management in Tanzania by Lund et al. (2010), which established that use of local forest management committee led to greater equity in the distribution of forest-related resources. However, Ribot, Lund, and Treue

(2010) alarmed that noted that in much of Africa, transfer of project management and maintenance duties to community committees is still being dogged by rent-seeking attitudes of leaders. Brown et al (2001) emphasized the importance of operating within structured community operations by affirming that support organizations need to help local organizations in building technical capacities and linkages and networks to sustain donor-initiated and any other rurally located community projects. DeCorby-Watson et al., (2018) which contend that capacity building involves development of knowledge, abilities, focus, systems, and leadership to enable effective implementation and maintenance of projects. It also concurs with a study by Brown et al (2001) which established that community capacity is the foundation for sound decision-making about the ownership and care of natural, human, and cultural resources and it contributes to economic growth. A research by WRI, (2008), also agreed to the diction that a meticulous plan for stakeholders' local resource management structures with the capability to allocate costs and benefits equitably, social capacity to hold a collective goal for resource management, technical capacity to jointly manage natural resources is a requisite for sustainability of community projects. However, Ribot, Lund, and Treue, (2010) lamented resistance in Africa of ceding of duties to beneficiaries to operate and maintain their projects because of rent-seeking intention by most leaders. The research therefore confirms a need for

6.1. LIMITATION OF THE STUDY

The main challenge during this research was the language barrier and literacy level, which affected the ability of respondents to objectively provide information that was demanded by the questionnaires. This was reflected in the gap found between data collected by questionnaires where research assistants only asked questions framed in the schedule and information collected through focus group discussions and key informants' interviews where the researcher had exploratory discussions, though through interpretations with the respondents. Use of supplementary unstructured questionnaires, and focus group discussions solicited more unstructured information from largely illiterate respondents. This enabled the researcher to pose follow-up questions to clarify on issues that might not have been clear to the respondents as framed in the questionnaires. Another challenge was access to community water points and settlements thereto. Since the research area had few access roads, accessing community water points for investigation posed some challenges. This became even more perilous as communities move about looking for water during the dry season since the data collection took place between November 2020 and January 2021. The try to remedy this, the researcher deployed convenience sampling technique in each ward of Turkana Central constituency, so that accessible water points their resultant settlements were investigated and used to draw inference.

6.2. SIGNIFICANCE OF THE FINDINGS

The study is expected to inform policy debate on the significance of participation-sustainability relationship. It is also expected to complement the existing body of knowledge on community participation and project outcomes in Kenya. To the government of Kenya, the findings of the study are expected to inform policy implications on improving community participation as far as Community-based development projects is concerned. The findings are also expected to enrich Participatory Rural Appraisal programs that are run by development partners in rural areas of Kenya.

Finally, the study is anticipated to shape the way Turkana people look at development projects. Their entrenched participation in projects from inception, where issues related project post-implementation are planned, to commissioning is hoped to generate sense of inventiveness, self-reliance, and innovation among the beneficiaries. For researchers with interest in community participation and sustainability, this study examines the roles of community participation and identifies the relationship between community participation and sustainability of community-based development (CBD) projects. This is a subject that both the government and development partners have committed to, but bulk of study has not been done in Kenya to warrant generalized policy information statement on the subject. This is another opportunity to realize it.

6.3. RECOMMENDATION FOR FURTHER RESEARCH

The study investigated the relationship between participatory project planning with focus on project capacity building and sustainability of community water points project in semi-arid county of Turkana in northwest Kenya. The study has been able to collect and analyze empirical data and draw inferences from it. However, further research is required to generalize findings to more heterogeneous and widely distributed target population. The following are recommendations to complement this study:

1. The study recommends that further research be carried out in other counties of comparable characteristics in Kenya and possibly in the region. This will provide a chance for comparison of perspectives and factors unique to geographical locations.
2. The study of participatory project planning and sustainability of community water point projects did not focus on specific section of the society. However, rural water point projects directly impact on the role of

women who solely carry out domestic activities in most traditional African settings like Turkana. It will be interesting to study the level of participation of women in development planning and how this affects sustainability of community water points.

3. Another area of further research that can be informed by this study is to establish the relationship between the level of economic development of the beneficiaries and their ability to participate in development planning and hence sustain community projects.
4. And finally, this study can form a foundation for establishing the influence of level of literacy by the benefitting community on its ability to participate in planning of community projects and how these impacts on sustainability of the projects

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