

# Collaborative stakeholder involvement approach and implementation of water projects in Kisumu East sub-county, Kenya

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**Abstract:** Water projects face implementation challenges of cost and time overruns due to lack of stakeholders' involvement and this has led sustainability constraints. The purpose of the study was to assess the influence of collaborative stakeholders' involvement approach on implementation of water projects in Kisumu East sub-county. The study adopted descriptive survey research design and data collected through structured questionnaire. The research instrument was piloted for content validity and reliability tests. A sample size of 118 respondents was selected using stratified random sampling from a target population of 167 involved in implementation of water projects in Kisumu East sub-county. High Cronbach's coefficient Alpha of 0.8 was obtained. The data was analysed using descriptive statistic of mean, standard deviation, frequencies percentages and inferential statistics of correlation and regression at  $\alpha=0.05$  level of significance. The study found out statistically significant relationships between Collaborative Stakeholder Involvement Approach and Implementation of Water Projects. The null hypothesis H01: Collaborative stakeholder involvement approach does not significantly influence implementation of water projects in Kisumu East sub-county was rejected since  $p=0.000<0.05$ . It is recommended that a holistic bottom up approach in implementation of projects should be embraced so that all key stakeholders in projects become part and parcel of the projects and to bring ownership of projects by stakeholders. Further research should be carried out on project planning and design to establish whether stakeholders are involved at these initial stages before implementation of water projects.

**Keywords:** Collaborative stakeholders' Involvement approach, Implementation of water projects

## I. INTRODUCTION

Access to clean drinking water remains a big problem globally with 783million people unable to access clean drinking water, especially in rural areas due to mismanagement of available water resources and poor or weak government policies (Giupponi, Jakemann, Karssenber and Hare, 2006). Water governance challenges are attributed to conflicts and competing water needs (Akhmouch and Clavreul, 2016). Water is a scarce resource and needs an integrated management approach in making decisions that will capture stakeholder needs (Akhmouch & Clavreul, 2016). According to UNEP (2019), Sustainable Development Goal 6 (SDG 6) focuses on availability and sustainable management of water and sanitation for all. This agenda builds on the relevant Millennium Development Goals. In Thailand,

involvement of stakeholders in the water industry is not well developed and as such there is a shift from an initial government dominated and ineffective management process to a more stakeholder involvement process in water resources development projects (Uraiwong and Watanabe 2017). Involvement of stakeholders in water projects implementation is aimed at making the development demand driven and sustainable. Hansen, (2007) states that there is minimal stakeholder involvement in Australian projects. Somalia also experience minimal involvement of stakeholders in projects and that all projects which had stakeholders as primary beneficiaries never involved the same stakeholders in execution Newell (2001).

Kenya is classified as a water scarce country since it receives an annual renewable fresh water supply of only 647 cubic meters per capita (Birongo and Quyen, 2005). Government devolved the water function to improve service delivery and implementation of water projects, though this has proved to be a mirage. Almost 80% of diseases in "developing" countries are associated with water, causing early deaths. Previous water resource projects have failed due to poor involvement and identification of stakeholder needs and inadequate assessment of social impact of the project (Uraiwong and Watanabe 2017). To address this stakeholder involvement has become key in achieving water projects outcomes (Uraiwong and Watanabe 2017). The problem of stakeholder involvement in water projects is really entrenched in Kenya, a research conducted by Nyabera (2015) established that a vast majority of beneficiaries are never involved in needs assessment and this negatively affected successful implementation of project and ultimately jeopardised water projects sustainability.

Many water projects face implementation challenges and this has led to water projects being unsustainable, experiencing cost overruns, social protests, and the desired water quality not being achieved (Akhmouch & Clavreul, 2016). Lack of clean drinking water globally threatens the lives of humans, it is approximated that 1.4 million people die each year from contaminated drinking water; and 3.6 million people die each year from waterborne diseases(UNDP, 2006). The crisis is real for those living in the developing world. The water crisis has become a major issue that needs to be addressed in order

to improve the lives of poor people that are dying from preventable ailments. If water project is to be successfully implemented, then all key stakeholders that represent the interests of the beneficiaries must be involved in the implementation process. This study seeks to examine the influence of collaborative stakeholder's involvement approach on implementation of sustainable water projects.

This study is expected to contribute to the body of knowledge of project management so as to improve sustainability of water projects by capturing real beneficiary needs. This study may also provide insights in the role that different stakeholders play and how their roles improves chances of projects success and minimizes risks of project failure. It highlights the need for bottom-up approach in project planning, design and implementation. This study may also contribute to formulation of policies related to implementation of water projects by both public and private sector. Involvement of stakeholders in implementing water projects may bring a sense of legitimacy, power and urgency of stakeholders and ownership of projects. The county governments and different government entities dealing with water infrastructure development can use the results of this study to improve on effectiveness and efficiency of water projects implementation by aligning stakeholder needs and interests to organisational goals. Further research can be done on how to implement the different stakeholder involvement approaches by organizations.

## II. LITERATURE REVIEW

### 2.1 Collaborative Involvement Approach and Implementation of Water Projects

Collaborative involvement approach implies cooperation, teamwork, partnership, association and unity as used in this study. Sloan (2009) states that some cooperation treats stakeholders in an arm's-length manner which focuses on outward looking compared to inward looking approach to stakeholder collaboration which was embraced by some cooperation. Collaboration between internal and external stakeholders provide benefits to wide range of stakeholders and principal partners and this leads to sustainability. Inclusive collaboration with stakeholders is effective and provides opportunity for learning and change. The level of collaboration can be measured by how sustainability and stakeholder concerns are organized in the organization. According to Sloan (2009), besides organizations complying with legal requirements in terms of guaranteeing equality in relation to gender, regional balance or religion, creating an inclusive environment has become a broader strategy and a core ingredient in creating an inclusive innovative culture. With stakeholder collaboration in mind in the organizational strategies, it promotes a more holistic approach, this becomes an indicator of organizational performance. Sloan's findings show that stakeholder collaboration depends on the degree to which social responsibility and sustainability were integrated within the organization and in the decision-making process. Stakeholders expects organizations to attend to interests and

make social and environmental impacts to society besides economic interest.

In a study conducted by Bott, Grabowski and Wearing (2011) focusing on local community and their recognition as significant stakeholders, they noted that there is limited research produced on the involvement of local communities and factoring their views and interests in the decision-making processes in development. Collaboration with local community has now become a strategy for sustainable development. The bottom-up approach where management and development strategies are devised from the local community in the region where the project is to be implemented. Bott, Grabowski and Wearing (2011) notes that there are three main groups involved in stakeholder collaboration to ensure sustainability, these groups are the private sector, public sector and the local residents. These researchers' notes that to ensure success in stakeholder collaboration, consideration of all stakeholders identified is key and failure to do so would have detrimental effect on the outcome of a project. It's important to identify stakeholders involved before collaboration strategies are executed due to the number of stakeholders involved, each project has its own set of stakeholders specific to the type of project. With numerous opinions, interests and perspectives on resource uses. Stakeholder conflicts in the process of collaboration is almost certain. New approaches to development have recognized the value of local community and participatory planning and management of projects. A possible cause of complication in stakeholder collaboration is understanding the perceptions of different stakeholders' in terms of development projects and conservation and preservation of resources. Studies have noted the importance of understanding stakeholder perceptions and making sincere considerations for inclusion. Bott, Grabowski and Wearing (2011) emphasizes the need for collaboration between all key stakeholders and that without involvement of key participants' conflicts and complications will arise. These researchers note that once stakeholders are involved another challenge is distribution of power among them. The parties must be willing to cooperate in the process besides initial involvement stage of recognizing them, power shows the willingness and needs of different groups and needs to be addressed so that collaboration is better managed. Stakeholders have differing priorities and expectations; recognition of potential stakeholder conflict is important since conflicts results due to power differences. In their findings, Bott, Grabowski and Wearing (2011) note that with key stakeholders interacting and sharing knowledge, effective stakeholder collaboration will be achieved with sustainability as common goal. They also noted that if stakeholders' interests are perceived to be met then collaboration will override power imbalance. Stakeholders have different differing objectives, identifying these objectives is necessary to understand why collaboration can be difficult. In their research, the researchers conclude that though community members may be less educated or less involved in project planning and management, they have ability to influence success and that their consent is required

and that they can reject any decision. Local communities were found to have a lot of power, legitimacy, urgency and proximity. This shows that their genuine inclusion is inevitable in planning and management. Successful collaboration starts at recognition and legitimization of all stakeholders.

Desai (2018) states that cooperation always engages stakeholders so as to achieve goals that are hard to achieve internally which come in many forms such as strategic alliance or joint arrangements with associations and other agencies to ensure collaborative involvement with distributed stakeholder communities, customers and other third-party groups. The main motive for collaborative stakeholder involvement is for gaining, maintaining and organizational legitimacy. Desai (2018) defines legitimacy as assumptions or perceptions that are generalized which are desirable or appropriate actions of an entity within some socially constructed system of norms, beliefs and values. Much research emphasize that organizations should collaborate with external stakeholders so as to access important resources and that outsiders feel at ease working with legitimate organizations. Customers and community organizations involvement collaboratively provides transparency and allows monitoring and evaluation of organizational activities more effective. Involving external stakeholders collaboratively provides opportunity blend related but distinct arguments and also benefits organization by allowing them to access outside information. Desai (2018) emphasizes that some organizations suppress the application of external collaboration to solve problems when their legitimacy is at risk. Collaborative stakeholder involvement increases transparency among parties. Desai (2018) suggests that collaborative stakeholder involvement enhances participation of outsiders and allows them to observe internal operations as well as exchange of information and further states that organizations that operate in accordance to expectations of external stakeholders have higher chances of success compared to those that don't. Desai (2018) findings suggests that organizations that involve external stakeholders benefits from access to outside information in response to problems requiring outside information. Results also suggest that organizations fail to collaboratively involve relatively powerful stakeholders or when their past practices have been questioned.

In his study on going from stakeholder management to stakeholder collaboration, Olden (2003) notes that stakeholder from different sectors of the community need to be worked with to improve service delivery because community problems are complex and that many organizations throughout a community must collaborate to solve the problem. Collaboration among stakeholders is hard to create and maintain. Organizations should be in position to judge stakeholder's potential to be a threat, potential to cooperate and stakeholders' power and control of needed resources. Olden (2003) notes that institutions may have vast stakeholders but not all deserve equal attention from the organization. There are three attributes of stakeholders namely

legitimacy, power and urgency. There needs to be policies, procedure and processes in the organizations for effective stakeholder relations and their interests to be part of business policies and standard operating procedures and production processes. Collaboration involves joint decision making and stakeholders sharing resources to solve problems that cannot be solved individually and thus accomplish goals. Organizations cannot just do things there way and expect stakeholders to adapt to organization instead Olden (2003) stresses that organizations must be willing to adapt to its stakeholders because when processes and stakeholders are not compatible then discontentment on the part of stakeholders is likely. The researcher found out that organizations in the health sector who didn't align their policies and processes to stakeholder interests faced discontentment on the side of stakeholders meaning lack of ownership of programmes by stakeholders.

Johnson, Willeke and Steiner (1998) conducted a study on "Stakeholder Collaboration in the Design and Implementation of a Family Literacy Portfolio Assessment", the researchers' noted that implementing programmes that in-cooperated diversity of stakeholder perspectives and interventions that are tailored to individual family needs posed a challenge assessing program outcomes. They proposed collaboration with key stakeholders as a strategy to address this challenge. There was no evidence that stakeholder skill was utilized in the programs. Johnson, Willeke and Steiner (1998) notes that collaboration is increasingly playing a role in coming up with program goals and objectives and according to them stakeholders are those with enough knowledge to contribute to design of a program. When stakeholders are not actively involved in the creation of a program leads to discontentment and conflicts about program goals.

## *2.2 Implementation of Water Projects*

As used in this study implementation of water projects implied Water quality timeliness, sustainability, cost effectiveness, affordability and beneficiary satisfaction. Shrestha (2018) notes that mobilisation of resources, information sharing, building trust and prevention of protests are key issues that help in achieving project success and hence the goals. The strength of relationship and frequency of contact also plays a key role. Having a cohesive group of stakeholders helps in securing support and stakeholders are never self-sufficient and depends on external resources and support in order to succeed. In his research on implementation of water projects in Nepal concentrating on contact created between implementing organizations and the project beneficiaries. He notes that cohesion among stakeholders increases success of implementation. He notes that there is a close link between cohesive stakeholder involvement and project outcome. He states that in Nepal, the communities take the lead in initiating and implementing water projects. The beneficiary community then elects a Water Supply and Sanitation User Committee (WSUC) to manage daily activities of the project then the Rural Water Supply and Sanitation Program (RWSSP) provides technical support to

the communities. Frequent contact with stakeholders is of value for resource mobilization and the researcher notes that more stakeholders are essential for success and value addition when frequency of contacts increases. He found out that there was weak contact and cohesion between stakeholders and implementing agencies. The researcher emphasizes that for success of projects there need to be collaboration and identification of right stakeholders.

Slaymaker and Newborne (2004) in their research on "Implementation of Water Supply & Sanitation Programmes under PRSPs" notes that there is need for implementation policy and political will for success of water sector projects and if there is no political will then it's unlikely for projects to be successful. The researchers' quest to establish the factors that may interfere with a project meeting desired outcome to address poverty reduction shows that in many instances the objectives of projects are lost or disregarded during project execution leading to beneficiary dissatisfaction. Their research also shows that the poor doesn't benefit from funding aimed at water infrastructure development due to inefficiencies in resource allocation. Implementation of water sector projects need to be systemized and made more transparent if accountability and sustainability is to be realized in programmes led by the governments. Water projects contribute to the economic growth and social development and this is not understood or articulated by most planning and implementing agencies. Multi-stakeholder forums have improved planning and coordination between different sectors.

According to Pinto and Slevin (1997) implementation of a project is said to be successful if it completed on schedule, as per budgetary allocation and the goals are achieved and if its accepted by the intended beneficiaries. Project implementation success should include four measures namely conceptualization, planning, execution and termination. Projects must have the personnel with adequate technical skills and have adequate technology to perform the task, however this does not guarantee success as risks of users' unfamiliarity with the systems or technology and cost effectiveness. Pinto and Slevin (1997) notes that it is important to determine beneficiaries' acceptance. It is always assumed that if all stages of project implementation are handled well then, the internal and external stakeholders will automatically accept the project. User participation in the early stages of the project is important. Many projects go through proper planning and designing of projects with qualified project team members but the failure comes in when beneficiaries reject the project because of lack of addressing their real needs leading to lack of improvement in living condition.

Mahianyu and Njeru (2016) notes that projects can succeed if the implementers have an understanding of what the critical

factors. Implementation is when all the planned activities are put in to action. The project team must identify the strengths and weaknesses including internal and external forces. Projects targeted to benefit the poor should be done in way that they are involved from the project design stage to implementation. Many projects fail and consequently do not meet the people's needs. The success of a project can be defined in terms of timeliness, working within budget and meeting stakeholder expectation. Likewise, failure entails projects not adhering to schedule, cost ineffectiveness, dissatisfaction of stakeholders and failure of accountability. In their findings, Mahianyu and Njeru (2016) notes that top management involvement as active stakeholders is key for project success and that clarity of goals throughout the project management and implementation is important. Top management monitors the progress of projects and communicates progress to stakeholders.

### III. METHODOLOGY

This study employed descriptive survey research design and data collected using structured questionnaire from a sample size of 118 out of a target population of 167 of PMCs, Contractors, Water Department staff and ward Administrators. A pilot testing was done on 10% of the sample size and a reliability coefficient of 0.77 and validity coefficient of 0.8 obtained. Analysis involved descriptive statistic of percentages, frequencies, mean and standard deviation while inferential statistics involved correlation and regression analysis.

### IV. FINDINGS AND DISCUSSION

The response rate was 89.83% of the total respondents. The study sought to establish how collaborative stakeholders' involvement approach influence implementation of water projects in Kisumu East-sub county, Kenya.

#### *4.1 Collaborative Involvement Approach and Implementation of Water Projects*

The first objective that this study sought to establish was to determine the influence of collaborative stakeholder involvement approach on implementation of water projects in Kisumu East sub-county.

##### *4.1.1 Descriptive analysis of Collaborative Involvement Approach and Implementation of Water Projects*

To achieve this, the respondents were asked to give their opinions on the level of agreement or disagreement with statements using Likert scale of 1-5 where 1- Strongly disagree, 2- Disagree, 3- Neutral, 4-Agree and 5-Strongly agree. The descriptive analysis results are presented in Table 4.1.



Table 4.1: Collaborative Involvement Approach and Implementation of Water Projects

Statements	(5)	(4)	(3)	(2)	(1)	Mean	SD
Cooperation enhances beneficiary satisfaction in water project implementation	51(48%)	42(40%)	10(9%)	3(3%)	0(0%)	4.33	0.77
Teamwork enhances timely implementation of water projects	26(24%)	61(58%)	17(16%)	2(2%)	0(0%)	4.05	0.70
Partnership increase chances of sustainability of water projects	27(25%)	46(43%)	22(21%)	11(10%)	0(0%)	3.84	0.93
Association improves the level of unity among stakeholders	28(27%)	53(51%)	14(13%)	9(9%)	0(0%)	3.96	0.87
United stakeholders implement projects within timeline.	51(49%)	36(34%)	11(10%)	6(6%)	1(1%)	4.24	0.93
Composite mean and composite standard deviation						4.084	0.84

The study sought to investigate the extent to which respondents agreed that cooperation enhances beneficiary satisfaction in water projects implementation. Out of 106 respondents 51(48%) strongly agreed, 42(40%) agreed, 10(9%) were neutral, 3(3%) disagreed, and 0(0%) strongly disagreed with a mean and standard deviation of 4.33 and 0.77 respectively as shown in table 4.1. The findings suggest that cooperation was done exhaustively as 93% were satisfied. The mean of and standard deviation

The study sought to investigate the extent to which respondents agreed that teamwork enhances timeliness in implementation of water projects. Out of 106 respondents. The results in Table 4.3 shows that 26(24%) strongly agreed, 61(58%) agreed, 17(16%) were neutral, 2(2%) disagreed, and 0(0%) strongly disagreed with a mean and standard deviation of 4.05 and 0.70 respectively. This shows that teamwork was actively employed in implementing water projects as 87% were satisfied.

The study sought to establish the extent to which respondents agreed that partnership enhances sustainability in implementation of water projects. The results in Table 4.3 shows that 27(25%) strongly agreed, 46(43%) agreed, 22(21%) were neutral, 11(10%) disagreed, and 0(0%) strongly disagreed with a mean and standard deviation of 3.84 and 0.93 respectively. This shows that partnership was actively employed in implementing water projects since 73% were in agreement.

The study sought to investigate the extent to which respondents agreed that association enhances sustainability in implementation of water projects. The results in Table 4.3 shows that out of 106 respondents 28(27%) strongly agreed, 53(51%) agreed 14(13%) were neutral, 9(9%) disagreed, and 0(0%) strongly disagreed with a mean and standard deviation of 3.96 and 0.87 respectively. This shows that associations were actively employed in implementing water projects with 81% in agreement.

The study sought to determine the extent to which respondents agreed that unity enhances sustainability in implementation of water projects. The results in Table 4.3 shows that out of 106 respondents 51(49%) strongly agreed, 36(34%) agreed, 11(10%) were neutral, 6(6%) disagreed, and 1(1%) strongly disagreed with a mean and standard deviation of 4.24 and 0.93

respectively. This shows that associations were actively employed in implementing water projects since 83% were in agreement.

The composite mean was 4.084 and composite standard deviation was 0.84, this showed that Cooperation and Unity influenced Implementation of Water Projects since there means were higher than the composite meanwhile Teamwork, Partnership and Association did not influence Implementation of Water Projects since there means had smaller values than the composite mean.

4.1.2 Inferential Analysis of Collaborative Involvement Approach and Implementation of Water Projects

Inferential analysis of collaborative involvement approach and implementation of water projects was conducted in terms of correlation, ANOVA, regression and coefficients. The results were as outlined below:

4.1.2.1 Correlation of Collaborative Involvement Approach and Implementation of Water Projects

Pearson product correlation coefficient was used to establish the existence or non-existence of significance relationship as well as degree of association between Collaborative Involvement Approach and Implementation of Water Projects.

Table 4.2: Correlation of Collaborative Involvement Approach and Implementation of Water Projects

		Collaborative Involvement Approach	Implementation of Water Projects
Collaborative Involvement Approach	Pearson Correlation	1	.199*
	Sig. (2-tailed)		.041
	n	106	106
Implementation of Water Projects	Pearson Correlation	.199*	1
	Sig. (2-tailed)	.041	
	n	106	106
** Correlation is significant at the 0.05 level (2-tailed).			

Table 4.2 presents the correlation statistics of Collaborative Involvement Approach and Implementation of Water Projects. The correlation table shows that Collaborative Involvement Approach was significantly related (p value<0.05) against

Implementation of Water Projects. The p value ( $p < 0.05$ ) implies that there is a significant relationship between Collaborative Involvement Approach and Implementation of Water Projects leading to rejection of the null hypothesis  $H_{01}$ . Collaborative stakeholder involvement approach does not significantly influence implementation of water projects in Kisumu East sub-county. The results are consistent with the findings of studies that have found significant relationships between Collaborative Involvement Approach and Implementation of Water Projects (Sloan (2009), Bott, Grabowski and Wearing (2011), Desai (2018)).

4.1.2.2 Regression Analysis of Collaborative Involvement Approach and Implementation of Water Projects

In this study, simple linear regression was adopted to establish how Collaborative Involvement Approach Influences Implementation of Water Projects from opinions of the respondents. The reason for using the model was to establish how each predictor significantly or insignificantly predicted Implementation of Water Projects, secondly to find out how Collaborative Involvement Approach best predicted Implementation of Water Projects and finally to confirm whether the model was a best fit for predicting Implementation of Water Projects. The regression model summary results are presented in table 4.5 below.

Table 4.3: Regression Analysis between Collaborative Involvement Approach and Implementation of Water Projects in Kisumu East Sub-County

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.199 <sup>a</sup>	.040	.031	.68514
a. Predictors:(constant), cooperation, Teamwork, partnership, Association, Unity				

The table 4.3 presents a model summary of relationship between Collaborative Involvement Approach and Implementation of Water Projects. To find out the amount of variation in Implementation of Water Projects which explains its relationship with Collaborative Involvement Approach. R-Square (coefficient of determination) is commonly used statistic to evaluate model fit. It explains the amount of variation in Implementation of Water Projects and relationship with Collaborative Involvement Approach. The above model summary table indicates that there is a positive multiple correlation ( $R=0.199$ ) between Implementation of Water Projects and Collaborative Involvement Approach and those predicted by the regression model. In addition, the coefficient of determination  $R^2 = 4.0\%$  indicates that the amount of variance in Implementation of Water Projects is explained by Collaborative Involvement Approach. The results of the model are consistent with findings of studies that have found significant relationship between Collaborative Involvement Approach and Implementation of Water Projects (Bott, Grabowski and Wearing (2011), Desai (2018), Olden (2003)).

4.1.2.3 ANOVA<sup>a</sup> Results of the Regression between Collaborative Involvement Approach and Implementation of Water Projects in Kisumu East Sub-County

Analysis of variance (ANOVA) is a collection of statistical models and their associated procedures used to analyse the differences among means in a sample. It is a statistical tool used to develop and confirm and explanation of an observed data.

Table 4.4: ANOVA<sup>a</sup> Results of the Regression between Collaborative Involvement Approach and Implementation of Water Projects in Kisumu East Sub-County

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.020	1	2.020	4.304	.041 <sup>b</sup>
	Residual	48.819	104	.469		
	Total	50.840	105			

a. Predictors: cooperation, teamwork, partnership, association & Unity  
Dependent Variable: Implementation of Water Projects in Kisumu-East Sub-county

ANOVA results on Table 4.4 on regression of Collaborative Stakeholder Involvement Approach on Implementation of Water Projects. The study sought to find out whether the regression model was best fit for predicting Implementation of Water Projects through use of F-statistics from the ANOVA output. As per results in table 4.6  $F=4.308$  is significant at  $p\text{-value} < 0.05$  implying the regression model result is significantly better prediction of Implementation of Water Projects. From the perspective of overall research participants, Collaborative Involvement Approach had positive influence on Implementation of Water Projects. The results are consistent with the findings of studies that have found significant relationships between Collaborative Involvement Approach and Implementation of Water Projects(Desai, 2018).

4.1.2.4 Regression Coefficients of the relationship between Predictive Variables and Implementation of Water Projects

The study attempted to establish the extent to which Collaborative Stakeholder Involvement Approach Influence Implementation of Water Projects in Kisumu East Sub-county. Simple linear regression model was used to test whether Collaborative Involvement Approach affected Implementation of Water Projects.

Table 4.5: Regression Coefficients of the relationship between Predictive Variables and Implementation of Water Projects

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.356	.505		4.662	.000
	Collaborative Involvement Approach	.255	.123	.199	2.075	.041

a. Dependent Variable: Implementation of Water Projects

$$y = \alpha + \beta_1 X_1$$

$y$  = the average score of Implementation of Water Projects, and

$X_1$  = the average score for research participants' Collaborative Involvement Approach

The reason for using the model was to establish how each predictor significantly or insignificantly predicted Implementation of Water Projects, to find out which of the approaches best predicted Implementation of Water Projects.

#### 4.1.2.5 Testing for Hypothesis 1

The first null hypothesis was  $H_{01}$ : Collaborative stakeholder Involvement Approach does not significantly influence Implementation of Water Projects in Kisumu East sub-county. The null hypothesis was tested at  $\alpha=0.05$  level of significance. From the correlation results shown in table 4.4, the null hypothesis was rejected since  $p$ -value (0.041)  $< 0.05$  and it was concluded that at least one of the explanatory variables is significantly related to the Implementation of Water Projects. The results are consistent with the findings of studies that have found significant relationship between Collaborative Involvement Approach and Implementation of Water Projects (Desai, 2018; Olden, 2003).

## V. CONCLUSION

The study finding indicate that there is a positive multiple correlation coefficient ( $R=0.199$ ) between Implementation of Water Projects and Collaborative Involvement Approach and those predicted by the regression model. In addition, the coefficient of determination ( $R^2=4.0\%$ ) suggests that the amount of variation in Implementation of Water Projects is explained by Collaborative Involvement Approach based on the perspective of all the 106 research participants. From the correlation results, the null hypothesis  $H_{01}$ : Collaborative stakeholder involvement approach does not significantly influence implementation of water projects in Kisumu East sub-county was rejected since  $p$  value =  $0.041 < 0.05$  and so it was concluded that at least one of the explanatory variables is significantly related to the Implementation of Water projects. The study concluded that Cooperation, Teamwork, Partnership, Association and Unity affected implementation of water projects to a great extent. Overall, partnership had the least effect on implementation of water projects while cooperation had the highest effect. The study recommends that Community should be encouraged to take part in implementation of water projects to bring a sense of ownership to projects by the community members since after implementation is complete the project is given to communities to operate and maintain. This requires an understanding of the water project from the onset so as to be assured of sustainability of the project. A holistic approach to project implementation should be embraced where all key stakeholders are identified and brought on board to discuss project affairs and to participate in the decision-making process. This contributes to timely implementation and

sustainability of water projects. Capacity building of stakeholders to give them courage and confidence to participate wilfully in implementing community projects. The researcher suggests similar studies in other sub-counties to establish whether stakeholders are involved in the implementation of water projects.

## REFERENCES

- [1] Akhmouch A. and Clavreul D. (2016). Stakeholder Engagement for Inclusive Water Governance: "Practicing What We Preach" with the OECD Water Governance Initiative. 8(204).
- [2] Birongo, J.M. and Quyen, N.L. (2005). An Analysis of Water Governance in Kibera, Kenya. Retrieved 25<sup>th</sup> April 2019 from: <http://rudar.ruc.dk/bitstream/1800/863/1/Project%20Report%20-%20Group%202249.pdf>
- [3] Bott, A. L., Grabowski, S., & Wearing, S. (2011). Stakeholder Collaboration in a Prospective World Heritage Area: The case of Kokoda and the Owen Stanley Ranges. *Cosmopolitan Civil Societies: An Interdisciplinary Journal*, 3(2), 35–54.
- [4] Bunea, A. (2017). Designing stakeholder consultations: Reinforcing or alleviating bias in the European Union system of governance? *European Journal of Political Research*, 56(1), 46–69.
- [5] Chidammodzi, C. L., & Muhandiki, V. S. (2015). Determination of the status of stakeholder participation in the management of the Lake Malawi basin through application of Integrated Lake Basin Management. *Lakes & Reservoirs: Research & Management*, 20(3), 166–181.
- [6] CoK (2010). Constitution of Kenya
- [7] Cook, J. &. (2016). Environment for Development: The Costs of Coping with Poor Water Supply in Rural Kenya. Retrieved from Environment for Development. <https://www.semanticscholar.org/paper/The-costs-of-coping-with-poor-water-supply-in-rural-Cook-Kimuyu/68f51edccfa1bb9936ea0c6dd2bf2217329a9d4d>
- [8] Desai, V. M. (2018). Collaborative Stakeholder Engagement: An Integration between Theories of Organizational Legitimacy and Learning. *Academy of Management Journal*, 61(1), 220–244.
- [9] Giupponi, C., Jakemann, A.J, Karssenber, D. and Hare, M.P. (2006). Sustainable management of Water resources: An integrated approach, Massachusetts: Edward Elgar Publishing limited
- [10] Graff, M., & Francis, R. (2017). Does Stakeholder Participation Influence Epa's Chemical Risk Values? *Public Administration Quarterly*, 41(3), 496–531.
- [11] Hansen. (2007). *Stakeholders participation In Project implementation and Delivery*. New age International Publishers. London, UK
- [12] Harrison, J. S., Freeman R. E., & Abreu, M. C. (2015). Stakeholder Theory as an Ethical Approach to Effective Management: applying the theory to multiple contexts. *Review of Business Management*, 17(55), 858-869.
- [13] Johnson, R. L., Willeke, M. J., & Steiner, D. J. (1998). Stakeholder collaboration in the design and implementation of a family literacy portfolio assessment. *American Journal of Evaluation*, 19(3), 339.
- [14] Mitchell, R. K., Agle, B. R. & Wood, D. J. (1997). Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts. *Academy of Management Review*. 22, No 4, pp 853 – 886.
- [15] Nyabera T. M. (2015). *Influence of Stakeholder Participation on Implementation of Projects in Kenya: A Case Of Compassion International Assisted Projects In Mwingi Sub-County*. University of Nairobi.
- [16] Owuor, M. O., & Moronge, M. (2017). Influence of Stakeholder Participation on Completion of Water Supply and Sanitation Projects in Informal Settlements in Nairobi City County, Kenya. *The Strategic Journal of Business and climate change*, 3(4), 42 – 59.

- [17] Safford, T., Carlson, M., & Hart, Z. (2009). Stakeholder Collaboration and Organizational Innovation in the Planning of the Deschutes Estuary Feasibility Study. *Coastal Management*, 37(6), 514–528.
- [18] UNDP (2006), Human Development Report 2006 – Beyond scarcity: Power, poverty and the global water crisis. New York: United Nations Development Programme
- [19] UNEP (2019). Sustainable Development Goals and water. <https://www.unenvironment.org/explore-topics/water/what-we-do/supporting-sustainable-development-goals-and-water> retrieved on 5th May 2019
- [20] Uraiwong, P., & Watanabe T. (2017). Stakeholder Analysis of Water Resources Projects in Thailand. Retrieved from [https://www.researchgate.net/publication/267724507\\_STAKEHOLDER\\_ANALYSIS\\_OF\\_WATER\\_RESOURCES\\_PROJECTS\\_IN\\_THAILAND](https://www.researchgate.net/publication/267724507_STAKEHOLDER_ANALYSIS_OF_WATER_RESOURCES_PROJECTS_IN_THAILAND) on 30th March 2019
- [21] Wickenden, M., Mulligan, D., Fefoame, G. O., & Katende, P. (2012). Stakeholder consultations on community-based rehabilitation guidelines in Ghana and Uganda. *African Journal of Disability*, 1(1), 1–10. <https://doi.org/10.4102/ajod.v1i1.1>