

# Strategy Implementation and Water Service Delivery in Garissa County, Kenya

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Abstract— Water and Sewerage Companies in their respective regions face a myriad of challenges in trying to meet their mission of providing reliable, quality, affordable, sustainable sanitation and water services in a way that is well oriented to customers. Garissa County is among the areas that have a poor access to clean water due to dilapidated infrastructure and poor water quality. Hence, for water service providers like Garissa Water and Sewage Company (GAWASCO) to counter the various challenges, they need to have clear strategies. However, even with excellent strategic plans which define the company's ultimate goals, failure to implement these strategies would be detrimental to the excellence and effectiveness of delivery of water by service providers. The above concern forms the motive behind the study. The main purpose of this study was to assess the effect of strategy implementation on water service delivery in Garissa County. Specifically, the study sought to: establish the effect of resource mobilization on water service delivery in Garissa County; establish the effect of stakeholder coordination on water service delivery in Garissa County; determine the effect of infrastructure on water service delivery in Garissa County and determine the effect of change management on water service delivery in Garissa County. The study was founded on the resource based view theory, stakeholder theory and Kotter's Model. The study adopted a descriptive research design. The target population for this study was all the 180 employees working with Garissa Water and Sewerage Company in all cadres of management. The study used stratified sampling as well as simple random sampling to generate the sample. The study used primary data collected using semi structured questionnaires. Statistical Package for Social Sciences (SPSS) version 21 software was used to analyze the data where multiple linear regression analysis was conducted. The inferential statistics generated was used to check the relations between variables. A multiple linear regression model was used to show the link between strategy implementation and water service delivery in Garissa County. Quantitative data was presented descriptively and through statistical techniques such as tables and charts while the qualitative data obtained was analyzed using content analysis. The study found that strategy implementation had a positive influence on water service delivery. The regression results revealed that resource mobilization with a coefficient of 0.290 (p-value = 0.013); infrastructure with a coefficient of 0.181 (p-value = 0.028); change management with a coefficient of 0.312 (p-value = 0.011) and stake holders coordination with a coefficient of 0.305 (p-value = 0.044) were found to be significant and relating positively on water service delivery in Garissa County. The study recommends the management to assess other projects of financial gain as a source of revenue to meet the companies running expenses and expansion.

Keywords— Strategy Implementation; Service Delivery.

# I. INTRODUCTION

Kenya has instituted a variety of policies meant to solve the problem of inadequate water supply. These policies include creation of; Water Service Boards (WSBs); and companies managed by Water Services Regulatory Board (WSRB). The main purpose of creating the WSBs and the companies managed by WSRB is to maintain water supply and manage sewerage system. Nonetheless, Water and Sewerage Companies (WSC) in their respective regions face a myriad of challenges in trying to meet their mission of providing reliable, quality, affordable, sustainable sanitation and water services. For instance, according to Odhiambo (2014), only 0.6% of households in North Eastern region had access to piped water even with the excess demand for the service. The demand was found to be by far above the supply of the service. Garissa County is among the areas that have poor access to clean water due to dilapidated infrastructure and poor water quality (Rop, 2013). A current report released by WSRB indicated that in 2014–2015, there was overall poor water service delivery performance among Water Service Provider (WSP) in Kenya where all Water Service Board (WSBs) had an overall score of below 50% Water Service Regulatory Board (WASREB, 2016). The report showed that the main water facility in Garissa County, Garissa Water and Sewage Company was among the bottom performers ranked position 24 out of 28 medium sized water utilities in Kenya and overall ranking of 66 out of 84 publicly owned utilities where the ranking was based on various indicators of service delivery such as water coverage, non-revenue water hours of water supply, cost coverage as well as metering ratio, revenue collection efficiency among others (WASREB, 2016). This showed that there were no improvements in the performance of the utility over the years as shown by studies conducted before this period.

According to a study by Owiti (2013), level of water which is not related to revenue water was high in the municipality. The three key factors influencing non-revenue water were found to be unbilled unmetered consumption, physical losses, and unauthorized consumption. This threatened the financial sustainability of the water service provider, reduced the water quality and showed water services which were poorly run, and which lacked autonomy, level of accountability and governance, managerial and technicality skills required for providing suitable service to their population. Kimotho (2012) asserted that for water service providers like Garissa Water and Sewage Company (GAWASCO) to counter the various challenges, they needed to have clear strategies. However, even with excellent strategic plans which defined the company's ultimate goals and existed in these

companies, failure to implement these strategies would be detrimental to the excellence and effectiveness of delivery of water by service providers. The above concerns form the motive behind the study. An evaluation of past research reveals that none of these studies sought to find how strategy implementation affected water service delivery in Garissa County. For instance, Rop (2013) focused on issues impacting provision of water services in Garissa Central Division; Owiti (2013) focused on the factors influencing the high non-revenue water in Garissa County. The studies on strategy implementation had a different objective and context from this study. For Instance, Kimotho (2012) analyzed strategy implementation challenges faced by water providers licensed by the Athi Water Services Board in Kenya while Gitonga (2013) looked on impact of planned strategic implementation on performance within organizations in Nakuru Water and Sanitation Services Company (NAWASSCO). These studies also do not discuss the water service delivery issues in depth and focus more on performance within organizations. The research therefore sought to find out the effects of strategy implementation on water service delivery in Garissa County.

# II. RESEARCH METHODS

The study adopted descriptive research design. The study population comprised all the 180 employees of Garissa Water and Sewerage Company. This is because the issue of strategy implementation and its success involves all the staff in an organization and participation of all employees in the study was crucial. The formula developed by Yamane (1967) was used in determining the sample size for the employees. According to him, for a 95% confidence level and p=0.05, size of the sample for this study should be:

$$n = \frac{N}{1 + N(e^2)}$$

Where:

n=the sample size N= the size of the population e=the error of 5% points (level of precision) Using the formula yields a sample size of

$$n = \frac{180}{1 + 180(0.05^2)}$$

n=124

Hence, the sample size for this study was 124 employees. The study incorporated both stratified and simple random sampling methods to come up with the sample. Stratified random sampling technique ensured that all employees in each level/cadre are well represented. This representativeness helped to reduce errors realized during sampling. The target population was classified into 3 strata. Further, random sampling was used to select respondents from the specified cadres. This form of random sampling additionally ensures that there is elimination of bias when it comes to the choice of respondents.

Table 1. Sample Size						
Categories	Target population	Proportion	Sample size			
Top management	13	7.2	9			
Middle level cadre	70	38.9	48			
General staff	97	53.9	67			
Total	180	100.0	124			

Source: Garissa Water and Sewerage Company (2017)

The study employed questionnaires which were semi-structured to collect primary data on resource mobilization, stakeholder coordination, infrastructure, change management and water service delivery. Questionnaires were suitable for this study since they are used to get information from respondents on aspects such as motivations, feelings, attitudes, experiences and accomplishments (Sutrisna, 2009). They were also less costly, time convenient and can be used to collect detailed data that is objective. The collected data was analysed by use of Statistical Package for Social Sciences (SPSS). Microsoft excel complemented the SPSS particularly when it came to tables and diagrams. SPSS was used to generate inferential statistics (regression and correlation analysis) and descriptive statistics (percentages and frequencies). Correlation analysis usually establishes association between variables while linear regression tests the essence of the influence dependent variable and independent variables. The choice of multi-linear model of regression is due to its essence in testing the cause-effect relationship between delivery of water service and implementation of strategy. The following equation which was used indicates multi-linear model of regression of both the dependent and independent variables;

 $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$ 

Where:

Y = Water Service Delivery  $\beta_1$ ,  $\beta_2$  and  $\beta_3$ ,  $\beta_4$ , = Beta coefficients  $\beta_0$  = Constant Term

 $X_1 = Resource mobilization$ 

 $X_2$  = Stakeholder coordination

 $X_3 = Infrastructure$ 

 $X_4$  = Change management

 $\varepsilon$  = Error term

In testing causal relationship between dependent and independent variables, R<sup>2</sup>statistic, F statistic, regression/beta coefficients were analyzed for importance using p values. The critical p value was set at 0.05.

#### III. RESEARCH RESULTS AND DISCUSSION

### Descriptive Results

1 Effects of resource mobilization on water service delivery

The study sought to investigate the influence of mobilization of various resources required for efficient and sufficient water supplies to the residents of Garissa County. To achieve this, a five point likert scale was used. The findings were illustrated in table 2.

Table 2. Resource mobilization

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	St
The average revenue collected by the company	25.90%	34.30%	21.30%	11.10%	7.40%	2.4	1.2
is adequate The company has enough and well trained	20,600/	21.500/	11 100/	17.700/	0.000/	2.51	1.4
personnel	29.60%	31.50%	11.10%	17.70%	9.99%	2.51	1.4
The company is able to cover it recurrent and capital budget using its revenues	28.70%	29.60%	11.10%	13.90%	16.70%	2.6	1.5
The billing system and collection practices of the company are efficient	29.60%	33.30%	13.00%	13.90%	10.20%	2.42	1.3
The company has diverse financing sources	33.30%	33.30%	15.70%	8.30%	9.30%	2.27	1.3
The level of non-revenue water is minimal	25.90%	24.10%	16.70%	21.30%	12.00%	2.69	1.4
Aggregate						2.48	1.35

Source: Research data (2019)

Among the respondents who filled the questionnaire on resource mobilization from the analysis of the collected data, it was identified that 21.3 percent were neutral and not sure on whether the average revenue collected by the company was adequate. Majority of the respondents disagreed that the companies have been collecting adequate revenue, where the least number (18.7%) agreed that the revenue collected was adequate. Majority (62%) of the respondents also disagreed that the companies have enough of well trained personnel, 11.1% had no opinion while 26.9% agreed that the companies have enough trained personnel. Opinions were also taken on whether the companies were able to cover their budget using its revenues and majority (58.3%) disagreed, 11% had no opinion while 30.9% agreed to the statement. 63% disagreed that the billing and collection practices were efficient, 24% agreed to the statement while 13% had no opinion concerning the billing and collection system. A large number of respondents (66.6%) disagreed to the fact that the company has diverse financing sources, 15.7% had no opinion while 17.7% agreed to the statement. An opinion was taken from the respondents on whether the level of non-revenue water is minimal, 50% agreed to that, 16.70% had no opinion while 33.3% agreed to the statement.

From the findings, majority of the respondents disagreed that the companies have put into place all the necessary measures of implementing the various strategies in water delivery services. This was supported by the aggregate mean and standard deviation of the outcomes which is 2.48 and 1.35 respectively. This is attributed by the low revenues collected and minimal funding which have made the water services delivery services to remain underperforming. This was in line with Tsige, Zeraebruk, Gathenya and Mayabi, (2014) conducted a study about of the supply of water resources and how it performed in terms of operation in Asmara Water Supply department (AWSD) with regard to developing of decision support tools.

2 Effects of stakeholder coordination on water service delivery

This research also sought to evaluate the influence of stakeholders' coordination to water service delivery. A five point likert scale was used to collect the opinions of respondent using the questionnaire. Table 3 gives an illustration.

Among the respondents who participated in the study, there a variety of opinion on various statements stated in relation to stakeholders associations. Concerning the existence of proper communication among all the key stakeholders, 58.3% disagreed on it, 11.1% had no opinion while 30.6% agreed with the statement. 71.3% disagreed that there are frequent stakeholder meetings for identification of needs and priority areas, 16.7% have neutral opinion while 12.1% agreed with the statement. Majority (60.2%) disagreed on the existence of water committees to monitor water services while 23.1% agreed to the issues and 16.7% were not having any opinion over the issue. The involvement of all key stakeholders in planning, budgeting and execution of water projects statement had 58.4% disagreeing whereas 30.5% agreed to the fact while 12% had neutral opinion over the stated issue. The existence of a mutual relationship among all the stakeholders was raised for response and 63% disagreed, 20.4% agreed while 17.60 had neutral opinion concerning the issue.

Table 3. Stakeholder coordination

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
There exists proper communications among							
all the key stakeholders using the company's	28.70%	29.60%	11.10%	13.90%	16.70%	2.6	1.45
water services							
There are frequent stakeholder forums for	40.70%	30.60%	16.70%	5.60%	6.50%	2.06	1.18
identification of needs and priority areas	40.7070	30.0070	10.7070	3.0070	0.5070	2.00	1.10
There exists water committees for monitoring	31.50%	28.70%	16.70%	11.10%	12.00%	2.44	1.36
the services provided by the company	31.3070	20.7070	10.7070	11.1070	12.0070	2.77	1.50
Key stakeholders are involved in planning,							
budgeting and execution of various water	26.90%	31.50%	11.10%	12.00%	18.50%	2.64	1.46
projects							
There exists a mutual relationship among all	32.40%	30.60%	17.60%	11.10%	8.30%	2.32	1.27
the stakeholders	32.7070	30.0070	17.0070	11.1070	0.3070	2.32	1.2/
Aggregate						2.41	1.34

Source: Research data (2019)

The findings show that majority, averagely more than 50% disagree with healthy stakeholders relationships within the companies. This was further supported by the overall mean and standard deviation which was 2.41 and 1.34 respectively. This is brought about by low interaction and communication between the stakeholders. The findings were in line with study conducted by Githua and Wanyoike (2015) who researched on issues influencing performance of water projects within communities in Njoro Sub-County. According to the results, participation of stakeholders had a magnificent impact on the delivery of community water projects.

#### 3 Effects of infrastructure on water service delivery

This study focused also on examining the influence of infrastructure on water delivery services in Garissa County. The questionnaire was structured with a five-point likert scale to get the opinions on various infrastructure elements. The illustrations are shown in table 4.

Table 4. Infrastructure facilities

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
The company has modem and adequate equipment for supplying water to all the consumers	29.60%	38.90%	9.30%	12.00%	10.20%	2.34	1.3
The company has adequate water storage/ handling equipment	32.40%	33.30%	10.20%	13.90%	10.20%	2.36	1.34
The annual financial budget allocated to water supply infrastructure development	26.90%	35.20%	12.00%	12.00%	13.90%	2.51	1.37
The company's operational cost of supplying water are low	29.60%	24.10%	9.30%	17.60%	19.40%	2.73	1.53
Amounts of water lost from the companies systems through leaking infrastructure is low	7.40%	13.00%	8.30%	34.30%	37.00%	3.81	1.27
Upfront investment is made on rehabilitation and extension of existing water network	13.00%	22.20%	12.00%	26.90%	25.90%	3.31	1.4
Aggregate						2.84	1.36

Source: Research data (2019)

As shown, the respondents indicated a disagreement with the infrastructure development in the water companies according to the aggregate mean of 2.84 and a standard deviation of 1.36. The majority (68.5%) disagreed that the companies have modern and adequate equipment's of water supply, 9.30% are available in the companies. 65.7% of the respondents indicated that they disagree that the companies have adequate water handling and handling equipment's, 10.2% had neutral opinion while 24.1% agreed with the statement. 62.1% disagreed that the annual financial budget allocated to water supply infrastructure development was adequate and enough, 12% disagreed while 25.9% agreed on that the beget allocation is enough. 53.7% indicated a disagreement that the companies operational costs of supplying water is low, 37% agreed while 9.3% had a neutral opinion concerning the issue. Many respondents (71.3%) agreed that the amounts of water lost from the companies through leakages was low while 20.4% disagreed and 8.3% had no idea hence gave a neutral opinion. 52.8% agreed that the upfront investment is made on rehabilitation and extension of the existing water network, 12% had neutral opinion whereas 35.2% disagreed on the statement. From the findings, it's evident that the infrastructure need improvement since its not yet modernized. The various water companies in Garissa have inadequate facilities which are necessary and crucial in efforts to increase the water supply network. The findings concur with the study of Rop (2013) investigated the factors which influence provision of water service in Garissa central division, Kenya. It was shown that the water service providers were found to be doing a good job when it came to supplying water but the infrastructure was found to be wanting.

## 4 Effects of change management on water service delivery

The study focused on examining the influence of change management handling on water delivery services in Garissa County. A five point likert scale was used to get the opinions of the respondents to the questionnaires. The following table 5 gives the illustration of the questionnaires feedback.

T-1-1- 6	C1	management
rame o.	Change	шапачетиент

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Std Dev	Mean
23.15%	32.41%	4.63%	21.30%	18.52%	1.48	2.8
32.41%	34.26%	6.48%	12.04%	14.81%	1.43	2.43
23.15%	27.78%	12.96%	24.07%	12.04%	1.37	2.74
20.37%	32.41%	10.19%	21.30%	15.74%	1.4	2.8
36.11%	33.33%	9.26%	15.74%	5.56%	1.25	2.21 <b>2.60</b>
	Disagree 23.15% 32.41% 23.15% 20.37%	Disagree Disagree  23.15% 32.41%  32.41% 34.26%  23.15% 27.78%  20.37% 32.41%	Disagree         Disagree         Neutral           23.15%         32.41%         4.63%           32.41%         34.26%         6.48%           23.15%         27.78%         12.96%           20.37%         32.41%         10.19%	Disagree         Disagree         Neutral         Agree           23.15%         32.41%         4.63%         21.30%           32.41%         34.26%         6.48%         12.04%           23.15%         27.78%         12.96%         24.07%           20.37%         32.41%         10.19%         21.30%	Disagree         Disagree         Neutral         Agree         Agree           23.15%         32.41%         4.63%         21.30%         18.52%           32.41%         34.26%         6.48%         12.04%         14.81%           23.15%         27.78%         12.96%         24.07%         12.04%           20.37%         32.41%         10.19%         21.30%         15.74%	Disagree         Disagree         Neutral         Agree         Agree         Dev           23.15%         32.41%         4.63%         21.30%         18.52%         1.48           32.41%         34.26%         6.48%         12.04%         14.81%         1.43           23.15%         27.78%         12.96%         24.07%         12.04%         1.37           20.37%         32.41%         10.19%         21.30%         15.74%         1.4

Source: Research data (2019)

In table 5, the findings illustrated show that many respondents disagreed that change management handling techniques and handling is effective. The aggregate mean of the change management strategies was 1.39 and a standard deviation of 2.60. The low mean indicated that the ineffectiveness of the change management plans. 55.6% of the respondents disagreed that the changes within the company are communicated effectively to all the parties involved, 4.6% had neutral opinion over the issue whereas 39.8% of the respondents agreed. The study also sought to establish whether the employees are involved and participates in the change processes in the companies where 66.6% disagreed, 6.4% had no opinion and the rest (26.8%) agreed. An opinion collection on the management of companies having a direction of change was disagreed by 50.8%, 12.96% had neutral opinion while 36.1% agreed. Most respondents (52.7%) disagreed that the companies they are working has benefitted from the changes in technology, organizational leadership, structure and culture and 10.19% had no opinion while 36.01% agreed with the statement. To study on credibility of the change agents, 69.4% disagreed on their credibility, 9.26% had neutral opinion whereas 21.2% agreed on the credibility of the change agents.

From the findings, a number of the workers in the low level of management has no information about the change management strategies. These findings relate to the study by Wanza and Nkuraru (2016) on change management practices. The key finding was change in structure and organizational leadership positively influenced the excellence of university employees. Moreover, the study concluded that strong organizational culture motivates the spirit of working together as a team and enhance performance among employees.

# 5 Rating of water service delivery

The study focused on rating the water service delivery in Garissa County. Five point likert scale on the extent of service and opinion questions were used to get the feedback from the respondents. The following table 6 gives illustration.

The findings revealed that majority (46.10%) of the respondents said that average hours of water supply per day by the company have been increasing to a less extent. Additionally, the results also indicated that 53.9% of the respondents revealed that total number of water connections by the company has increased to a less extent. Findings also revealed that majority of the respondents 52.2% indicated that the amount of water supplied per day by the company always meets the demand in the town but to a less extent. This was confirmed by the statement that the percentage of people served per day has increased significantly which majority of the respondents indicated the option of less extent. Further the results revealed that 46% of the respondents indicated that the average complains per 1000 connections have reduced. Additionally, 48.6% of the respondents indicated that the operating revenues of the companies have increased to a less extent.

Table 6. Water delivery service

	Not at all	Less extent	Moderate extent	Great extent	Very great extent	Std Dev	Mean
The average hours of water supply per day by the company has been increasing	8.00%	38.10%	31.90%	8.80%	8.80%	1.06	2.71
The total number of water connections by the company has increased tremendously	9.70%	44.20%	30.10%	7.10%	4.40%	0.94	2.5
The amount of water supplied per day by the company always meets the demand in the town	30.10%	46.90%	8.80%	5.30%	4.40%	1.03	2.03
The percentage of people served per day has increased significantly	9.70%	42.50%	31.90%	8.00%	3.50%	0.92	2.51
The average complains per 1000 connections have reduced	11.50%	34.50%	27.40%	15.00%	7.10%	1.10	2.7
The level of non-revenue water is minimal	10.80%	37.80%	31.90%	7.10%	8.00%	1.05	2.49
The operating revenues of the companies have increased significantly	9.70%	36.30%	34.50%	9.70%	5.30%	0.99	2.63
Aggregate						1.01	2.53

Source: Research data (2019)

The findings shown in table 6 are that the level of water services delivery is to low extent as per the mean and standard deviation which is 1.01 and 2.53 respectively. In comparison of the size of the county and the water services network of supply, the extent of water services is low. Moreover, the service level was tested and the results are as shown in figure 1.

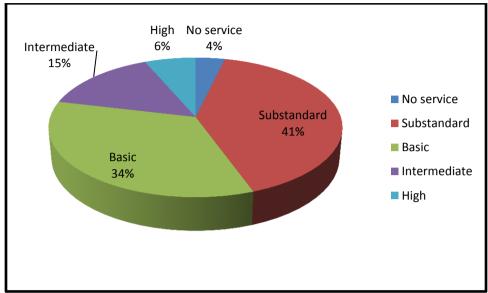


Figure 1. Service Level

Source: Research data (2019)

As per the findings of figure 1, the majority (41%) has the opinion of substandard water delivery services, 34% rated the services to be of basic level, 15% rated the service level as intermediate, 6% said the services are high while 4% said there are no services offered. Averagely, we can say the service level is at a basic level.

The quality of the water services offered was assessed as well and the deductions are as shown in figure 2.

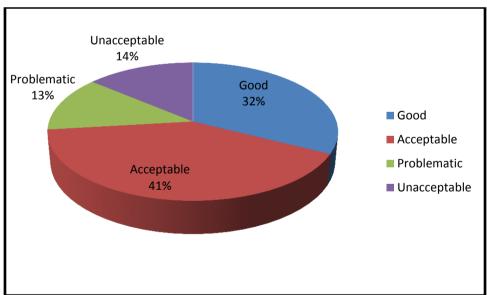


Figure 2. Quality level

Source: Research data (2019)

According to the findings in figure 2, majority (73%) of the respondents are for the opinion of the quality level to be good and acceptable while 27% said the service quality level is problematic and unacceptable. This shows that the quality of services to the already residents getting the water services are quality.

A test on the water delivery services was conducted in relation to the reliability of the water services. Figure 3 shows the reliability levels of the water services in Garissa County.

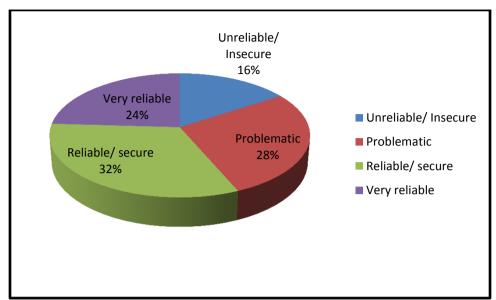


Figure 3. Water Services Reliability

Source: Research data (2019)

With reference to figure 56% rated the water delivery services as reliable while 44% rated the reliability of the services as problematic and insecure. This is due to low water supply network and insufficient amount of water to the residents.

This study furthermore focused on assessing the status of the water delivery services in comparison to the past years. Specifically, the aim was to assess whether the services have improved or unimproved in the recent past years. Figure 4 gives the illustration.

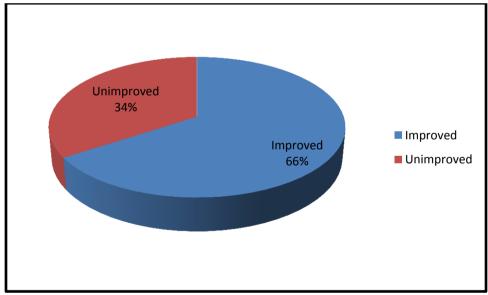


Figure 4. Overall status

Source: Research data (2019)

In consideration of the overall progress of water delivery services in the recent past years, the services have been improving, though at a lower rate since the rating of the services ids still low. This shows that the implementation of the strategies led to more improvement in the water services in Garissa County.

### Correlation Analysis

The association closeness of the variables under the study was assessed through Pearson Correlation coefficient. The correlation coefficient can only fall between+1 and -1 where the lower the coefficient the lower the association. Zero indicates there is no association between the variables and a positive coefficient shows that there is a direct proportional relationship between the variables whereas a negative coefficient indicates there is a inverse proportional relationship of variables. The correlation analysis of variables is shown in table 7.

According to table 7, there was a positive association between the variables of the study, that is, resources mobilization, stakeholder's coordination, infrastructure and change management with coefficients 0.656, 0.786, 0.686 and 0.835 respectively. The positive correlation shows that there was a relationship between strategy implementation and water delivery service in Garissa County. The variables moreover had significant p-values <0.05 at 95% confidence level.

Table 7. Correlation coefficients Water services Stakeholders Resource Change Infrastructure delivery Mobilization coordination management water services delivery Pearson Correlation 1 Sig. (2-tailed) .656\*\* Resource Mobilization Pearson Correlation 1 Sig. (2-tailed) 0.008Stakeholders Pearson Correlation 0.786\*\* .564\*\* coordination Sig. (2-tailed) 0.03 0 Infrastructure Pearson Correlation 0.686\*\* .564\*\* 1.000 1 0.043 Sig. (2-tailed) 0 0.174 198\*\* 178\*\* Change management Pearson Correlation 0.835\*\* 1 Sig. (2-tailed) 0.032 0.072 0.04 0.02

Source: Research data (2019)

#### Regression Analysis

In an effort to determine the extent of association further between resource mobilization, stakeholder coordination, infrastructure, change management and water service delivery, the researcher did a linear regression analysis.

## 1 Model summary

The model summary is the regression with information about the regression lines ability to account for the total variation in the experiment variable in our case being water delivery services. The results are shown in table 8.

Table 8. Model summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	.748a	0.662	0.625	0.43109			
a Predictors	s: (Constant)	, stakeholders co	ordination, Resource Mobilization	on, change management, infrastructure			

Source: Research data (2019)

Table is indicated that the value of adjusted Rsquared was 0.52 implying that 52% of the water delivery services in Garissa County could be explained by strategy management. The remaining 48% variation in water delivery could be explained by some other factors not employed in the model.

## 2 ANOVA

To examine the statistical significance of the model, the test of ANOVA was conducted. The recorded outcomes are in the table 9.

Table 9. ANOVA results of the model of regression

ANOVA Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.242	4	0.311	1.671	.0062b
	Residual	18.955	102	0.186		
	Total	20.198	106			

a Dependent Variable: water services

b Predictors: (Constant), stakeholders' coordination, Resource mobilization, change management, infrastructure.

Source: Research data (2019)

A p-value which is greater than 0.05 means that the employed independent variables have no influence on the independent variables and this implies that they cannot be used as predictor variables. A p-value less than 0.05 means that the independent variable is significant and can be used to predict the dependent variable. According to table 9, the model is significant statistically  $(F_{(4,102)}=0.311, p=0.006)$  implying that the independent variables (resource mobilization, stakeholder coordination, infrastructure and change management) are usable in explaining the independent variable (Water service delivery). The model being significant was adequate for further testing. The following table 10 shows the coefficients of regression.

Table 10. Regression Model Results

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	В	Std. Error	Beta		
(Constant)	2.009	0.283		7.107	0
Resource mobilization	0.290	0.078	0.201	3.724	0.013
Infrastructure	0.181	0.075	0.049	2.416	0.028
Change management	0.312	0.068	0.057	4.588	0.011
Stakeholders coordination	0.305	0.06	0.007	5.075	0.044

a Dependent Variable: water services

Source: Research data (2019)

According to the coefficients of regression in table 10, resource mobilization with a coefficient of 0.290 (p-value = 0.013); infrastructure with a coefficient of 0.181 (p-value = 0.028); change management with a coefficient of 0.312 (p-value = 0.011) and stake holders coordination with a coefficient of 0.305 (p-value = 0.044) were found to be significant and relating positively on water service delivery in Garissa County. The summary of the model is shown in the equation.

Water Service delivery (Y) =  $2.009 + 0.290X_1 + 0.181X_2 + 0.312X_3 + 0.305X_4$ 

Where  $X_1$  is the resource mobilization,  $X_2$  is stakeholders' coordination,  $X_3$  is infrastructure and  $X_4$  is the change management

#### Discussion

To investigate the impact of strategy implementation on water delivery services in Garissa County, the study found out that resource mobilization has influence to a large extent on the water services delivered with the impact being on resources mobilization among other factors such as stakeholders' coordination, infrastructure and change management. Resources gathering and usage have an influence on the services offered since it involves organizing on getting the needed facilities, installation and usage of the equipment. Gathering of finances through projects and revenue collection is significant and related to the services provided by individual companies. Having enough trained personnel and proper budgeting of the company's finances have positive impact as well. This concurred with a study by Torome (2013) who conducted a study on level of mobilized revenue and local authorities and found out that when level of mobilized revenue was raised, it led to exorbitant achievement of local authorities. Torome (2013) also concluded that concentrating on collecting of revenue and administrative forms in order that qualified services are provided to people should be focused on.

To assess the effect of stakeholders' coordination within the companies at Garissa County, the study found out that stakeholders' coordination practices have an influence on the water delivery services to a significant extent. The respondents indicated low extent of stakeholders' association and relation strategy implementation which makes it not effective enough. Communication among the key stakeholders and involvement of all stakeholders in meetings and forums in planning was found significant towards strategy implementation and water delivery services. Similarly, Ngile (2015) investigated participation of stakeholders in managing of water resources in Machakos Sub-County and found out that community participation had a big potential in increasing access to reliable water resources in the Sub-County. Thus, the inclusion of all the relevant stakeholders in planning and budgeting should be an objective to the companies and promote mutual relationship between the stakeholders.

To find out the effect of infrastructure on water delivery services offered by water companies in Garissa County, the study found out that infrastructure influenced water services to a large extent which is brought about by the inadequate equipment for water mining, storage and supply which hinder growth of water supply networks. The deficient equipment's and low quality facilities has increased the cost of operations for companies and losses. Thus, the positive significance of infrastructure calls for concentration on the quality of infrastructure facilities. These findings concurred with a study by Mohamed (2012) whopursued to investigate the factors that affected delivery of service among water and sewerage companies in Kenya. The findings revealed that the main factors affecting Garissa Water and Sewerage, management were unaccounted for water mainly due to illegal water connections, pipe bursts and leakages. It was concluded that the companies' infrastructure improvement has a positive impact towards water services delivery therefore it ought to be a priority to the companies, with emphasis on the adequate budgeting towards water infrastructure.

The research also aimed at the impact of change management strategies on water delivery services which was found directly proportional and had influence to a moderate extent. The respondents indicated that there is a direction of change within the company and the employees within the company partly participated in some changes formulation. However, the credibility of change agents in the companies was doubted. Since the company always benefited from the changes in technology, organizational leadership, organizational structure and culture, it should be a key priority of focus. This study also related to a study by Nkoyo (2013) who inquired about the impact of change managerial practices on quality service delivery in the public service providers in Marsabit County. The results showed that communication of change process, participation in change process and managing the direction of change had remarkable influence on quality delivery of service in the public service and recommended that the management should ensure full involvement of staff in the process of change to improve on quality service delivery.

The study also aimed at examining the quality of water service delivery in Garissa County and the extent of strategy implementation impact. In regard to the responses given, majority stated that strategy implementation practices have a positive and significant effect on water delivery services which calls for focus on implementing the relevant strategies useful in water services. Hence, efficiency in strategic planning and execution leads to improved water services.

## IV. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

# Summary of Findings

## 1. Effects of resource mobilization on water service delivery

The study found out that resource mobilization influences water service delivery to a large extent. The respondents indicated that the deficiency in the sources of resources was a key cause to the deficient water delivery services. The companies have challenges in collection of revenue to run and sustain the company. The companies have deficient personnel who have up to date qualities of water skills. The companies have satisfactory bill collection system possibly due to low water supplies to clients. Moreover, majority of the companies don't have other financial sources to generate extra revenue.

# 2. Effects of stakeholders coordination on water service delivery

Stakeholders' coordination was found to have moderate influence on the delivery of water services. The respondents indicated that the improper communication among the stakeholders was as a result of insufficient forums organizations. There was need that in planning, budgeting and execution of water services involvement of all the stakeholders to be crucial. The mutual relationship among the stakeholders should be upheld to promote service delivery. It was established that the strategies once planned should not remain pending but should be implemented in reference to the previous reports in effort to remain relevant and objective. Consultations should be upheld among the stakeholders to ensure relevancy and growth of ideas.

# 3. Effects of infrastructure on water service delivery

The study established that there was positive and significant relationship between infrastructure and water service delivery. The respondents were asked whether the companies had modern and adequate equipment for mining, handling and supplying water equipment. The response was average on the availability of the service equipment where most respondents said that the equipment were available but not modernized for better quality. The company's operational costs of water supply were found to be average. Further, the study established the deficiency in the equipment has contributed to the low water supply networks. The water spillages and leakages are supposed to be addressed with immediate effect to minimize losses financially.

## 4. Effects of change management on water service delivery

A number of change management strategies were found to significantly influence water service delivery. The communication of changes to all the stakeholders is crucial to the service delivery. The company has befitted from changes in technology, organizational leadership, structure and culture. However, the credibility of the change agents is not settled on and need to be improved. Moreover, views were taken from the respondents to get the hindrances of change management and the resultant effect on water service delivery. Insufficient research on necessary positive changes and inactivity of some stakeholders lead to deficiency in relevant ideas of change. The companies should make efforts of coming up with change management committees.

#### 5. Rating of Water Service Delivery

The study established that the water services had improved compared to the past years although the state of water delivery services was still low.

#### Conclusion

From the findings in this study, it makes several conclusions. The deductions of the study are that the main strategy implementation factors that the affect water delivery services are resources mobilization, stakeholders' coordination, and infrastructure and change management. Implementation of the specific strategies related to water services determines the development of water sector. The determinant factors however were found to be varying in their extent of influence on water delivery services. Moreover, according to the regression analysis, there is a strong association of these factors leading to the conclusion that the underperformance of this sector may be due to them. This implies that the improvement of these factors will lead to improved water delivery services in Garissa County. Focusing on key strategies such as resource mobilization and infrastructure automatically leads to growth of this sector.

#### Recommendations

The main strategy implementation factors under study were found to be affecting water delivery services in Garissa County. The study recommended that the management of the water companies in Garissa County to keenly evaluate these factors to enable them to identify the possible limitations or strengths affecting their companies. The findings showed that strategy implementation highly affects the water delivery services and therefore the management should assess other projects of financial gain as a source of revenue to meet the companies running expenses and expansion. This would enhance improvement in water delivery services and hence increased profits and service network. Moreover, the companies should embrace change in structure and technology in efforts to build their capacity of water delivery and profitability.

## Suggestions for Further Research

There are many determinants of strategy implementation, but this study only focused on resources mobilization, stakeholders' coordination; infrastructure and change management. The study suggests that further studies to be done on other strategy implementation practices. Moreover, more studies can be done in other counties to allow comparisons hence creating in-depth knowledge concerning water delivery services.

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