



Community Involvement and Project Sustainability of Donor Funded projects: A Case of Water projects in Gakenke District, Rwanda

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ABSTRACT

The general objective of this study was to determine the effect of community involvement on the sustainability of donor funded projects in Rwanda. The study focused on community participation, community needs assessment, community empowerment and stakeholders' engagement on the sustainability of donor funded projects in Rwanda. The study adopted descriptive and inferential research designs. The target population was 144 identified from Gakenke District and involved in the project. Using Slovin's formula, a sample of 106 was selected using stratified random sampling technique. The research was carried out by using both primary data and secondary data, from the relevant documents obtained from Gakenke District. The primary data were collected using questionnaire and interview. The research analysis and interpretations were based on respondents' opinions. The respondents were provided with questionnaires and interview. All the 106 questionnaires were filled and returned representing 100% response rate. Pearson correlation analysis showed that community participation ($r=0.556$, $p<0.05$), community needs assessment ($r=0.591$, $p<0.05$), community empowerment ($r=0.617$, $p<0.05$) and stakeholders' engagement ($r=0.420$, $p<0.05$) were all positively and significantly related to the sustainability water projects in Gakenke District. Regression analysis revealed that the p-values for all the four indicators, namely, community participation, community needs assessment, community empowerment and stakeholders' engagement, were less than 5%. Therefore, all the null hypotheses were not supported. The researcher concluded that for donor funded projects to be sustainable and have a long-lasting effect on the community, it is imperative to involve the community within the project framework. The researcher recommends that sustainability of donor funded projects can only be achieved within an active project framework that acknowledges the importance of the inputs of each and every stakeholder in that project. Community-based project must actively engage the community, starting with a rigorous need assessment to ensure that the project is acceptable and that it addresses the pressing needs of the community. Further, the researcher recommends that community involvement in projects should be done in holistic manner.

Keywords: *Community participation, needs assessment, Community empowerment, Stakeholders' engagement, Sustainability, Rwanda*

1.0 INTRODUCTION

1.1 Background of the study

Developed nations like the United States of America, Canada and Russia among others are keen on implementing sustainable development projects with community participation being at the center stage to achieve uniform, steady and long-lasting development since it is the only way to recover from economic drawbacks (Masud, *et al.*, 2017). Development experts confirm that community participation is essential to sustainable development projects (Karzner, 2013). As commonly experienced, different people view community participation from different perspectives. Surya, *et al.*, (2020) also consider the significance of community-based projects in promoting the community empowerment. The authors find that such projects are important in empowering the community to meet their basic needs while at the same time creating opportunities for sustainable development of the community. However, this can be achieved successfully when there is active community involvement.

Community involvement ought to be utilized to create not just thoughts for projects arranging and their execution, yet additionally thoughts to additionally further develop existing task highlights (Afande, 2013). Project maintainability can be worked with and upgraded by figuring out what the local community needs, what will help the local community, what has been attempted previously, and how could be worked on past thoughts (Lemma, 2014). As per Ananga *et al.*, (2016) when local community individuals, are offered a chance to be educated and engaged with the venture interaction, are a basic component to an undertaking's a positive outcome. Likewise, people group individuals might have unique issues or worries that, whenever integrated into a task at the start, may assist with decreasing the probability of difficulties to take a chance with evaluation results, and possible remediation or rejuvenation plans.

Ika, Diallo and Thuillier (2012) contended that a local community evaluation is essential to the comprehension of the local community's requirements, issues, upset populaces, and what the proposed renewal will eventually mean for the local area. Local area evaluation helps in grasping a local community's needs and vision, and a fruitful renewal task will have answered these needs and dreams (Elimelech, 2014). Additionally, people group evaluation helps project chief to get data about a local community which can be valuable in maintainability of the task, for example, the ongoing position locally, current family status, pay, drafting, public transportation, instructive foundations, social credits of the local area, for example, nearby occasions and festivities; notable occupants; local gatherings; the jobs of schools, temples, social and urban associations and different organizations; individuals who live and work locally; dialects spoken; the minority bunches present, etc. When the local area evaluation has been finished, a brilliant course of action can be created to investigate all assets, resources, and arranging endeavors, to think about the local community's vision and to present a way toward renewal (MacIntosh & Maclean, 2014).

In Africa, community cooperation is considered as one of the vital components of venture manageability. Gaturu and Muturi (2014) states that participatory methodologies make the ventures more productive and successful as well as contributing in project supportability. Most of the projects have been initiated to help the youth generation to improve their living standards along contributing to poverty reduction.

Development projects in Rwanda are executed with the aim of achieving economic progress through acquisition of skills which enables people to source for income and hence improved livelihood. The livelihood project in Rwanda for example aims at improving people's income and hence alleviates poverty and hunger through skills development, promoting savings and advancing loans for businesses start up among others. Studies by Alcid (2014) indicated that the

livelihood project has so far transformed the lives of the rural households though the question of participation is still of concern.

1.2 Problem Statement

Community participation and involvement in a venture is one of the vital components of activity research. By proactively and efficiently pursuing working on the degrees of contribution in the different phases of an undertaking, the results are bound to suit nearby conditions, guarantee local community 'possession', and increment the manageability of a venture. Nonetheless, creating and keeping up with the cooperation of partners can frequently be a test requiring different methodologies and contemplations (Surya, *et al.*, 2020).

Albeit the donor funding expanding in Gakenke region in Rwanda, different projects have posted unremarkable execution as for administration, activity, and upkeep once the carrying out accomplices and benefactor hand the tasks over to local community. To bypass this issue, different donors and their execution specialists decide to keep running the project activities, yet the tasks would progressively become difficult to sustain unless active engagement of the community is done. Such steady decline has been credited to absence of community backing and subsidizing to guarantee the drawn-out support and activity of the projects. There have likewise been a few cases wherein donors succumb to the trap of impractical where projects continue well for a very long time or years and afterward when the donors withdraw, they start to disappear bit by bit and may at last lead to closure of the project (Ndungu & Karugu, 2019).

Report by World Bank, (2020) showed that projects funded by donors fail to meet the expectations of the donors and the beneficiary communities and have not produced the desired results. Some of these projects have either ended up with increased costs, or delays beyond the projected time. This means that most funds are wasted on donor funded projects which is a serious challenge considering the fact that resources are scarce and have to be utilized sparingly. Despite of donor providing funds in different youth projects, it is very few which survive at least five years. This brings about the lack of effectiveness of the project to the intended users and poor utilization of resources given by the donors (Musabyimana, 2019). Like many other developing countries, the private sector in Rwanda has also implemented innumerable donor-funded projects, particularly during the last decade. However, every time a project concludes the concerns on its effective implementation, corruption, mismanagement and sustainability are raised in the media. This is repeated by the same story for the next project without drawing lessons from the previous exercise. Further, Mutanguha and Kamuhanda (2021) note that only around 40% of donor-funded projects are able to continue functioning more than two years after the donors have withdrawn. This low percentage of project sustainability after donor withdrawal is attributed to poor community engagement such that the project ownership and community empowerment are at low levels. It is important most community projects that are exclusively donor aided to reduce donor dependency syndrome and a consumption mentality among their beneficiaries (Mutanguha & Kamuhanda, 2021). Therefore, some of these projects are unlikely to be sustained, more so when the donors funding is cut off. This study therefore sought to investigate the effect of community involvement on project sustainability of donor funded projects in Rwanda, taking a case of water projects in Gakenke District.

1.3 Objectives of Study

The general objective of this study was to determine the effect of community involvement on the sustainability of donor funded projects in Rwanda taking a case study of water projects in Gakenke District. This study was guided by the following specific research objectives:

- i. To investigate the effect of community participation on sustainability of donor funded water projects in Gakenke District, Rwanda.
- ii. To assess the effect of needs assessment on the sustainability of donor funded water projects in Gakenke District, Rwanda.

- iii. To determine the effect of community empowerment on the sustainability of donor funded water projects in Gakenke District, Rwanda.
- iv. To establish the effect of stakeholders' engagement on the sustainability of donor funded water projects in Gakenke District, Rwanda.

1.4 Research Hypotheses

The study tested the following research null hypotheses:

H01: There is no significant effect of community participation on project sustainability of donor funded water projects in Gakenke District, Rwanda.

H02: There is no significant effect of needs assessment on the sustainability of donor funded water projects in Gakenke District, Rwanda.

H03: There is no significant effect of community empowerment on the sustainability of donor funded water projects in Gakenke District, Rwanda.

H04: There is no significant effect of stakeholders' engagement on the sustainability of donor funded water projects in Gakenke District, Rwanda.

2.0 LITERATURE REVIEW

2.1 Theoretical Literature

In a contribution of beneficial resources, external distributors have assumed their role of instructing participants the options for their problems, and then the interest contributes in terms of sources to preserve project operations (Nyandika & Ngugi, 2014). The activity of external carriers is only to legitimize their existence in the project barring any intention of containing men and women in the allocation of useful resource. Meanwhile, members hope their position is to contribute to the provision of local resources to clear up matters and be receptive and attentive to advocates' directions to enhance resource contribution for the project sustainability (Pretty, 2015).

Community involvement in the project entails a contribution of material and net practicable through both direct and indirect beneficiaries and play an indispensable function in enhancing project sustainability. Other research stated that stakeholder participation in initiatives contributes to increased resources, such as the financial, staffing and manpower supply that make the project effective and positive in its operation (Mukunga, 2012). Community support is additionally significant for legitimacy of any donor financed project which acquires the proprietorship perspective (Lilian, 2012). Likewise, for any benefactor financed project to succeed, it should connect arranging with activity as well as the angle that local community partners should show their possession in the in the arrangement. As indicated by Shikuku (2012) the central objective of any local community proprietorship program ought to be to encourage local area certainty and independence accomplished through the improvement of self-supporting tasks, successful instruments for local community direction and authority recharging. As per Emmanuel (2020) the main consideration that impact local community responsibility for financed projects is investment which differs relying upon the setting of the tasks. Local community contribution is a key component which is the specialty of getting individuals engaged with the dynamic jobs of the ventures; the local community ought to be viewed as a unit of character through working of qualities and assets inside the local community (Morrow, *et al.*, 2017). Local community inclusion divulges a feeling of obligation and possession among the individuals which works on the imperativeness of the local area through joining individuals subsequently advancing multigenerational and multi-ethnic local community contribution.

Support of local community isn't tied in with sharing of advantages gathered from the undertaking rather it is the contribution of the weak gatherings to have assume key part in choices that influence advancement. Nyandika and Ngugi (2014) proposed five local community investment targets as expanding project adequacy and effectiveness, project cost sharing, building recipient limit and strengthening. This large number of goals lead to project

maintainability. The capacity of an improvement drives to keep on helping local people by government assuming control over the projects after the donor misfires monetary help is alluded to as supportability.

At the point when community networks take part in the plan and execution of an undertaking, they are bound to comprehend and uphold the progressions achieved by the venture. This thus diminishes dangers and expenses for the advocate, (Nyaguthii & Oyugi, 2013). Drawing in local community individuals and associations upgrades comprehension of the objective populace. The drawn-out advantages of these undertakings incorporate the formation of additional positions, improvement in local community relations, local community strengthening, uplifted financial status, natural rebuilding and upgrade of the personal satisfaction in the area through ecological evaluation.

Need assessment is the most common way of distinguishing and assessing needs locally. A need is a gap between what is there and what ought to be (Gibson, 2013). Need investigation centers on the future, or the thing to do, as opposed to on what was finished similar to the focal point of most program assessments, (The World Bank, 2012a). Need investigation starts with identification of requirements or the acknowledgment that there is a need. Partners recognize and focus on the center of the issues and their circumstances and end results (Mansuri & Rao, 2014). Local community support in need recognizable proof is significant on the grounds that once the local community by and large considers an issue and focuses on it, they then, at that point, move it to the phase of valuing its degree and legitimize the most common way of settling it. On the off chance that they don't partake in needs identification, regardless of whether the need is related to the help of the rest of the world they won't legitimize it. Local community's necessities ought to be the basic role for any advancement arranging and mediation, other formative worries ought to be auxiliary, (Barasa & Jelagat, 2013).

As a cycle, it can construct initiative, bunch solidarity, and a feeling of nearby contribution locally project. A few necessities investigation procedures, including overviews and center gatherings, give members a potential chance to offer their viewpoints on local community issues. As a technique, a requirements examination is an instrument that assists with moving the mission of the improvement association or government through navigation and carrying out procedures. To find lasting success, need examination should be thorough and require dynamic preparation and association from central members in the designated local community, (Titcomb, 2020).

As indicated by Muraguri (2011) local community commitment is the support of the local area in different parts of the venture to guarantee project manageability. The cycle is critical because of its capacity to distinguish disregarded neighborhood information, smooth out endeavors and gain acknowledgment. Local community individuals who add to the renewal arranging cycle will see well the interaction and will be bound to help a venture they had contribution in, hence making a supportable undertaking. Local community commitment gives a climate to occupants to become educated about project issues and to be effectively associated with settling on choices that eventually influence their local area (Witkin, 2014). Significant people group commitment is advantageous in more ways than one appointed by Hamdi and Goethert, (2017). The same author puts forward that improving data stream further developing local community comprehension of neighborhood Government; considers local community support; encourages joint effort; limits clashes; may advance ecological equity. As per Kusek and Rist (2014), local community commitment in the arranging system, project execution and ceaseless observing and assessment are basic since changes and upgrades to mediations must be made by recognizing qualities and shortcomings in their execution. Drawing locally prompts limit building which empowers the local community to be more successful and proficient during the time spent recognizing, carrying out, checking and assessing of tasks.

As per Botes and Rensburg (2020), local community improvement project begins with the distinguishing proof of a need or the acknowledgment that there is a need. Project arranging

includes defining objectives, concluding what the venture involves (Kerzner, 2013). As indicated by David (2017), individuals who get what they need do so in light of the fact that they have clear objectives and foster plans and timetables to accomplish the objectives. The people group, as the recipients, should be engaged with the sequencing and extreme execution of the task (Orodho, 2013).

2.2 Theoretical framework

Theory of Change

The Theory of Change (TOC) was presented in the mid (1990s) in the United States by Anderson. It is a philosophy or device utilized in arranging, support and assessment being developed undertakings (not for benefit making) to advance social change. It is a far-reaching depiction and outline of how and why an ideal change is supposed to occur in a specific setting as Clark (2004) puts it. The hypothesis of progress works by distinguishing long-haul objectives by in reverse planning and associating results until the results system is finished and suspicions are recognized that prompts improvement of pointers and recognizing mediations. As per Clark (2004), these cycles are connected with each other causally. For projects to be manageable and useful to the local community they must be grounded on a decent hypothesis. Theory of Change is great in local community improvement projects whenever applied in the correct manner. The hypothesis helps projects engineers to think of right undertakings which are effectively thought out as far as the should be tended to and the progressions the activities will contribute as well. These call for contribution of all the community individuals in the project plan. The means in the hypothesis of progress are continued in a coherent way and thoughts behind each step are obvious making it more straightforward to deal with the project and support it. Such ventures advance social change locally and long-haul results which are practical.

The theory of change was relevant in this study as it relates to community development projects whose main objective is to bring a change to the community. In this regard, the TOC proposes that the community development projects should bear an impact on the community by introducing a change into the community. It also proposes that in order for such project to prevail, the key stakeholders should be involved in order that they can effectively embrace the change. This research investigated the sustainability of the donor funded projects by proposing that the engagement of the community ensures that the change brought about by the projects are sustained enough to influence the community socioeconomic wellbeing.

Stakeholder Theory

Stakeholder theory was first portrayed Freeman. Stakeholder theory came from four significant scholarly fields: financial matters, governmental issues, humanism, and morals (Wagner Mainardes, Alves and Raposo, 2011). Muchlinski (2011) saw the partner hypothesis according to alternate points of view. There is the Normative Stakeholder hypothesis, which contains speculations of how supervisors or partners should act and view the technique for thinking of association on some ethical rule (Koschmann, 2018).

The other perspective is the obvious accomplice speculation that is concerned with how directors and accomplices act and how they see their obligations and exercises. The point to note is the way donors oversee and control project management and in instances, may fail to actively engage the community. The stakeholder theory was relevant to the current study inasmuch as it proposes that project managers should make sure that they actively engage the key stakeholders in the planning, implementation and the running of the projects. In this case, in order to ensure that there is effective sustainability of community projects, project managers should actively engage the community. This should include community participation, performing community need assessment and empowering the community. In community projects, the main stakeholders are the targeted community who in this case should be involved in the projects. Hence, the stakeholder theory resonates well with the current study whose main objective is to investigate

the sustainability of donor funded projects. Such projects can never be sustainable if key stakeholders are not actively engaged. Therefore, it is not enough to ensure funds are available for the running of the project. It is also important to ensure that the key stakeholders are engaged and that the project is acceptable by the majority. The failure of donor funded project is not only attributed to lack of funds, but can be greatly attributed to the level of community participation, community empowerment and the level of acceptability of such projects by the community.

2.3 Conceptual Framework

The conceptual framework depicts the independent and the dependent variables. The independent variable was community involvement while the dependent variable was project sustainability.

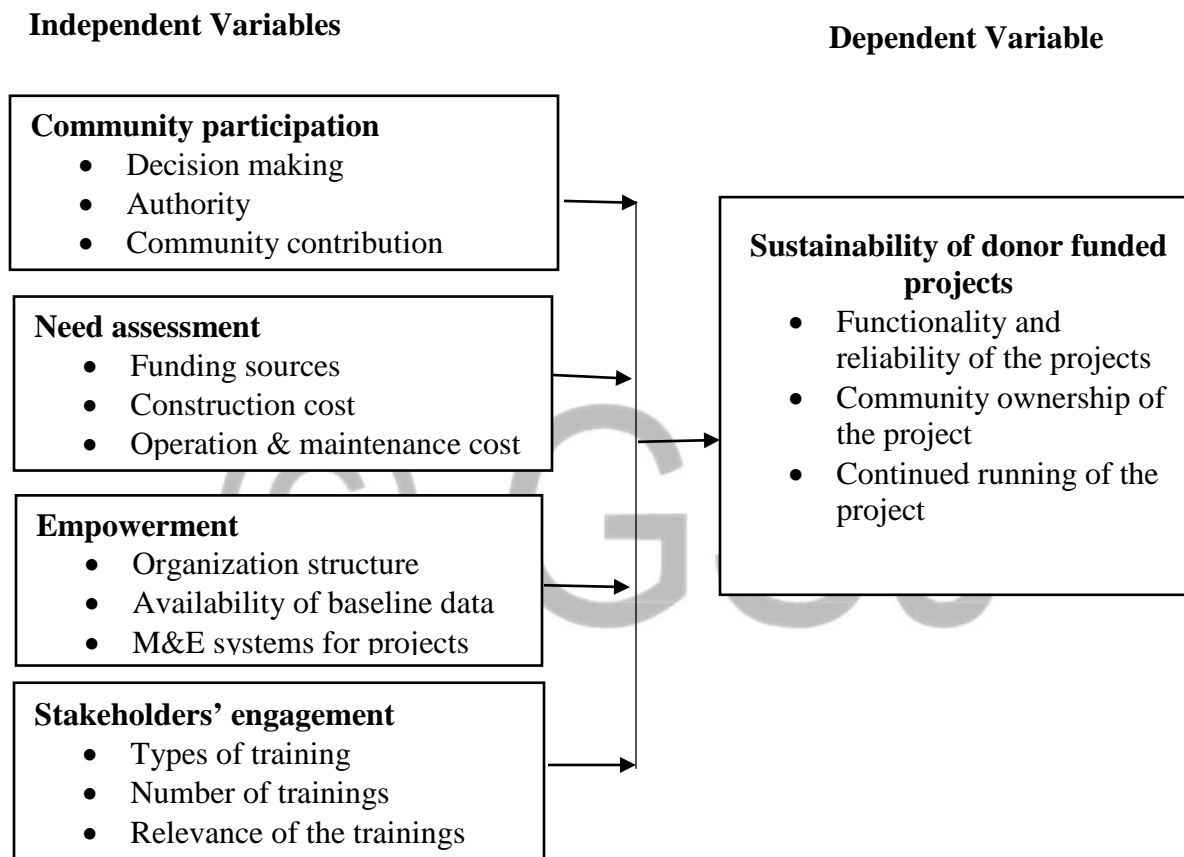


Figure 1: Conceptual Framework

3.0 RESEARCH METHODOLOGY

3.1 Research design

Research design refers to the arrangement of conditions for data collection, measurement and analysis with a view of achieving the research objectives (Ondiek, 2008). The research design thus illustrates on the measurement scale, instrumentation and the data analysis aspects of the collected data. The purpose of the research design is facilitating efficient achievement of the research objectives (Upagade & Shende, 2012). This research used descriptive research design and correlational research design. Descriptive research was chosen because it is a study intended to portray the participants in a precise manner in accordance with the subject being studied. The assessment fitted inside the courses of action of particular outline research plan. The

correlational research design was used to measure the relationship between the study variables. Also, it helped to measure the effect of the community participation, community need assessment, community empowerment and stakeholders' engagement on the sustainability of donor funded projects using regression analysis (Creswell, 2014).

3.2 Target population and Sample Size

A target population is referred to as the set of people or items with a common observable trait that is of interest to the researcher and was useful in the addressing of the research objectives of the study (Orodho & Kombo, 2012). In the context of this study, the target population was a group of people with a common observable trait. Population is portrayed as the hard and fast arrangement of parts that helps in making determinations (Cooper & Schindler, 2011). The targeted population of the study was 144 members dealing with projects at Gakenke District.

Kothari (2014) refers sampling as the way toward acquiring data about a whole populace by inspecting just a piece of it. Tests can either be likelihood tests or non-likelihood tests. By and large, sample sizes bigger than 30 and under 500 are proper for most examination. Using Slovin's formula, the sample of 106 respondents was determined as follows.

$$n = \frac{N}{1 + N(e)^2} = \frac{144}{1 + 144 * 0.05^2} \approx 106$$

Where n = the desired sample size, e = probability of error (i.e., the desired precision, e.g., 0.05 for 95% confidence level), N = the estimate of the population size.

This study took on the stratified random sampling procedure. From the conceivable 144 study population, stratified sampling was utilized to choose a sum of 106 participants. Stratified random sampling in this study involved dividing the population to homogeneous groups known as strata and choosing the sample from every stratum in view of its proportion.

Table 1: Sample Size Computation

Strata	Population	Proportion	Sample
District Officers	12	0.083	9
Local Leaders	8	0.056	6
Project Managers	8	0.056	6
Middle project managers	16	0.111	12
Other project workers	24	0.167	18
Local community	76	0.528	56
Total	144		106

Source: Researcher computation (2023)

3.3 Data collection methods

The study used a Drop-Off and Pick-Up later technique for information collection. In this technique, the questionnaire was dropped to the respondents and hand-picked within pre-concurrent time to give the respondents time to fill the survey. This study collected primary data using structured questionnaire for the purposes of data collection. The structured questionnaire is characterized by close-ended questions. The structured questionnaire was used in this study due to the various advantages associated with it including ease of data collection and analysis.

3.4 Data Analysis

The data assessment cycle was embraced to give a strategy for translating the results and keeping an eye on the investigation objectives of the survey. The information examination alluded to the method for lessening and sorting out information to accommodate the discoveries that require translation. The primary data gathered information was initially checked for unfilled questionnaires prior to being coded into SPSS programming. Descriptive and inferential analysis were utilized for information translation. The descriptive statistics that were used include frequency distributions, means and standard deviation. The multiple linear regression was used

for making inferences on the relationship between variables. The multiple linear regression that was used is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

Where Y is the dependent variable which is the project goal, μ is the Error, α is the constant β is the coefficients,

X_1 = Community participation,

X_2 = Community needs assessment,

X_3 = Community Empowerment,

X_4 = Stakeholders engagement

3.5 Ethical consideration

The ethical consideration relates to the acceptable code of conduct during the undertaking of the research process. All the data from respondents were treated with privacy. The researcher requested a letter from Mount Kenya University Rwanda to guarantee the respondents that the research was only for academic purposes. Likewise, before information was gathered the researcher got a letter of Approval from Gakenke District.

4.0 RESEARCH FINDINGS AND DISCUSSIONS

4.1 Key Findings

This section presents the main empirical findings. The four main areas of investigation included community participation, community need assessment, community empowerment and stakeholders' engagement and how all these affect project sustainability. We used Pearson and multiple regression analyses to achieve these objectives.

Table 2: Correlation matrix of community involvement and project sustainability

		Project Sustainability	Community Participation	Needs Assessment	Community Empowerment	Stakeholder Engagement
Project Sustainability	Pearson Correlation	1				
	Sig. (2-tailed)					
	n	106				
Community Participation	Pearson Correlation	.556**	1			
	Sig. (2-tailed)	.000				
	n	106	106			
Needs Assessment	Pearson Correlation	.591**	.162	1		
	Sig. (2-tailed)	.000	.096			
	n	106	106	106		
Community Empowerment	Pearson Correlation	.617**	.308**	.285**	1	
	Sig. (2-tailed)	.000	.001	.003		
	n	106	106	106	106	
Stakeholder Engagement	Pearson Correlation	.420**	.206*	.109	.205*	1
	Sig. (2-tailed)	.000	.034	.265	.035	
	n	106	106	106	106	106

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Source: Researcher, (2023)

The findings on Pearson correlation are shown in Table 2. As shown in the table, community participation ($r=0.556$, $p<0.05$) was found to be positively and significantly related to the sustainability water projects in Gakenke District. For needs assessment ($r=0.591$, $p<0.05$), the correlation was also positive and significant to the sustainability water projects in Gakenke

District. Similarly, the Pearson correlation analysis showed that the correlation for community empowerment ($r=0.617$, $p<0.05$) was positive and significantly affects the sustainability water projects in Gakenke District. Lastly, stakeholders' engagement ($r=0.420$, $p<0.05$) also significantly and positively affect the sustainability water projects in Gakenke District. These results therefore indicate that all the four indicator variables, namely, community participation, needs assessment, community empowerment and stakeholders' engagement all are positively and significantly related to the sustainability water projects in Gakenke District since their respective p-values were less than 5%. They individually affect the sustainability of water projects in Rwanda in a positive direction.

Table 3: Regression model of community involvement on project sustainability

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.862 ^a	.743	.732	.11442

a. Predictors: (Constant), Community Participation, Needs Assessment, Community Empowerment, Stakeholder Engagement

Source: Researcher, (2023)

The regression analysis reported in Table 3 shows that the regression obtained a good fit with $R=0.862$ and an $R^2=0.743$. This indicated therefore that community participation, needs assessment, community empowerment and stakeholders' engagement produce a combined effect to the tune of 74.3% to the sustainability of water projects in Gakenke District.

Table 4: ANOVA results of community involvement on project sustainability

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.813	4	.953	72.813	.000 ^b
	Residual	1.322	101	.013		
	Total	5.135	105			

a. Dependent Variable: Project Sustainability

b. Predictors: (Constant), Community Participation, Needs Assessment, Community Empowerment, Stakeholder Engagement

Source: Researcher, (2023)

In addition, the Analysis of Variance (ANOVA) was used to provide the statistical significance of the regression model. As shown in Table 4, the results ($F=72.813$, $p<0.05$) showed that the regression analysis was significance since the p-value was less than 5%. This implied that community involvement, as measured by community participation, community needs assessment, community empowerment and stakeholders' engagement, significantly affect the sustainability of water projects in Gakenke District, Rwanda.

Table 5: Regression coefficients of community involvement on project sustainability

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	.284	.222		1.278	.204
	Community Participation	.228	.037	.333	6.190	.000
	Needs Assessment	.265	.034	.412	7.784	.000
	Community Empowerment	.265	.042	.349	6.298	.000
	Stakeholder Engagement	.175	.039	.235	4.496	.000

a. Dependent Variable: Project Sustainability

Source: Researcher, (2023)

Lastly, the researcher investigated the effect of each of the four indicators of community involvement, namely, community participation, community needs assessment, community empowerment and stakeholders' engagement, on the project sustainability. To this end, the coefficients of regression were investigated to determine the effect of each as well as to test the earlier stated hypotheses. Since the regression constant was not statistically significant ($\alpha=0.284$, $p=0.204$) with the p-value was greater than 5%, then this was dropped out of the regression equation. The regression equation was initially stated as follows:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \mu$$

Where Y=dependent variable and X1, X2, X3, X4= the independent variables.

As per the findings, with $\alpha=0$, the following regression equation was derived

$$\text{sust} = 0.333 * \text{part} + 0.412 * \text{assessment} + 0.349 * \text{emp} + 0.235 * \text{eng} + \mu$$

Where: sust = project sustainability

part = community participation

assessment = community needs assessment

emp = community empowerment

eng = stakeholders' engagement

The first null hypothesis was stated as follows:

H₀₁: There is no significant effect of community participation on project sustainability of donor funded water projects in Gakenke District, Rwanda.

Since ($\beta_1 = 0.333, t = 6.190, p < 0.05$) the p-value for the first regression coefficient was less than 5%, then the first null hypothesis was rejected. This implied that the alternative hypothesis stating that there is a significant effect of community participation on project sustainability of water projects in Gakenke District was upheld. This showed that community participation contributes significantly to the sustainability of the water projects. In addition, a one percent change in community participation would lead to an increase in project sustainability by 33.3%.

The second null hypothesis for this study was stated as follows:

H₀₂: There is no significant effect of needs assessment on the sustainability of donor funded water projects in Gakenke District, Rwanda.

The regression coefficient analysis showed that ($\beta_2 = 0.412, t = 7.784, p < 0.05$) the p-value for the second regression coefficient was less than 5%. Therefore, the second null hypothesis was rejected. This implied that the alternative hypothesis stating that there is a significant effect of community needs assessment on project sustainability of water projects in Gakenke District was upheld. This showed that community needs assessment contributes significantly to the sustainability of the water projects. In addition, a one percent increase in community needs assessment would lead to an increase in project sustainability by 41.2%.

The third null hypothesis was stated as follows:

H₀₃: There is no significant effect of community empowerment on the sustainability of donor funded water projects in Gakenke District, Rwanda.

The regression coefficient analysis showed that ($\beta_3 = 0.349, t = 6.298, p < 0.05$) the p-value for the third regression coefficient was less than 5%. Therefore, the third null hypothesis was rejected. This implied that the alternative hypothesis stating that there is a significant effect of community empowerment on project sustainability of water projects in Gakenke District was upheld. This showed that community empowerment contributes significantly to the sustainability of the water projects. In addition, a one percent increase in community empowerment would lead to an increase in project sustainability by 34.9%.

Lastly, the fourth null hypothesis was stated as follows:

H₀₄: There is no significant effect of stakeholders' engagement on the sustainability of donor funded water projects in Gakenke District, Rwanda.

The regression coefficient analysis showed that ($\beta_4 = 0.235, t = 4.496, p < 0.05$) the p-value for the fourth regression coefficient was less than 5%. Therefore, the fourth null hypothesis was rejected. This implied that the alternative hypothesis stating that there is a significant effect of stakeholders' engagement on project sustainability of water projects in Gakenke District was upheld. This showed that stakeholders' engagement contributes significantly to the sustainability of the water projects. In addition, a one percent increase in stakeholders' engagement would lead to an increase in project sustainability by 23.5%.

4.2 Discussions of key findings

This study sought to investigate the effect of community involvement on the sustainability of donor funded projects in Rwanda, taking the case of water projects in Gakenke District. To achieve this, the researcher through a literature review, identified four key areas of community involvement. These include community participation, community needs assessment, community empowerment and stakeholders' engagement. These were used as key indicators of community involvement and therefore as the predictor variables of which the researcher investigated their effect on project sustainability. The study therefore revolved around four specific objectives, following the four key areas mentioned.

The first objective concentrated on the community participation and how it affects sustainability of water projects in Gakenke District. As per the findings, majority of the participants were in agreement that community participation plays a significant role in determining the sustainability of donor funded projects. In particular, the participants pointed out that ensuring the participation of the community increases ownership of the projects, thereby, improving the responsibility of the community towards making the project a success. The results from correlation analysis and regression analysis further showed that there exists a positive and significant relationship between community participation and sustainability of donor funded projects. More so, an increase in community participation by one unit would increase the sustainability of the projects by 0.333 units. These results are in agreement with previous studies (Lilian, 2012, Nyaguthii & Oyugi, 2013, Morrow *et al.*, 2017, Emmanuel, 2020, Surya, et al., 2020, Mutanguha & Kamuhanda, 2021) which also indicated the importance of participation of the community towards making the projects a success.

The second objective was concerned on the significance of community needs assessments towards the sustainability of donor funded projects. The majority of the participants indicated that community needs assessment importantly help the project managers prioritize on the immediate needs of the community, thereby, increasing project acceptability. Since the project is geared towards solving the challenges the community faces, it becomes easier for project managers and donors to sell the idea to the community. It therefore implies that donor funded projects that prioritize the needs of the community are more likely to have higher acceptance from the community. This in turn would increase the community desire to make the project a success and to maintain the project to a sustainable level. Moreover, the correlation and regression analysis revealed that a positive and significant effect is exhibited by community needs assessment on the sustainability of donor funded projects. One unit change in community needs assessment would lead to an increase in project sustainability by 0.412 units. These results are in congruence with other researches previously carried out in this area. In particular, Barasa and Jelagat (2013), Mansuri and Rao (2014) and by Easterly (2016) who earlier emphasized the importance of community need assessment for sustainable donor funded projects.

The third objective was more concerned with how community empowerment, one of the key indicators of community involvement, can influence the sustainability of donor funded projects. As per the findings reported, most of the participants involved in this study were in agreement that empowering the community increases the skills level and ability of the community to be self-reliant. It also increases the ability of the community to run a project independent of the donors, thereby, increasing the possibilities of long-term sustainability of the project way after

the donors have left. The inferential statistics, that is correlation and regression analysis, both reported a positive and significant effect of community empowerment on the sustainability of donor funded projects in Rwanda, in particular the water projects in Gakenke District. A one unit increase in community empowerment would lead to an increase in project sustainability by 0.349 units. These findings are in agreement with earlier findings reported by other researchers (like for instance by Rondinelli, 2013; Gaturu & Muturi, 2014).

Lastly, the fourth objective in this study investigated the effect of stakeholders' engagement on the sustainability of donor funded projects in Rwanda. The findings showed that majority of the participants were in agreement that engagement of stakeholders importantly plays a significant role in improving the sustainability of the project. If the intended beneficiaries are actively engaged in the planning and implementation of a project, there is increased likelihood of project acceptance and ownership. This would in turn translate to increased sustainability of the project. The correlation and regression analysis further show the relationship between stakeholders' engagement project sustainability. As the findings reveal, a positive and significant effect is exhibited by stakeholders' engagement on the sustainability of donor funded projects. In particular, a one unit increase in stakeholders' engagement would increase the sustainability of the projects by 0.235 units. Similar findings have been reported in earlier literature (for instance by Witkin, 2014; Kusek & Rist, 2014; Hamdi & Goethert, 2017; Botes & Rensburg, 2020) that showed the importance of engagement of key stakeholders for the success and sustainability of these projects.

4.3 Conclusions

This study sought to investigate the effect of community involvement on the project sustainability in donor funded projects in Rwanda, taking a case of water projects in Gakenke District. To this end, four key areas of concerns were identified, namely community participation, community needs assessment, community empowerment and stakeholders' engagement. These were investigated on their effect on sustainability of donor funded projects in Rwanda. As per the findings, all the four indicators were found to be significant in determining the sustainability of donor funded projects, in particular, the water projects in Gakenke District. Therefore, the researcher concluded that for donor funded projects to have a sustained life and long-lasting effect on the community, it is imperative to include key community involvement indicators such as community participation, community needs assessment, community empowerment and stakeholders' engagement within the project framework. This would increase the level of project acceptability and ownership by the community and thereby improve the possibilities of long-lasting projects. This is more important especially where the donors pull out of a project either after completion or for other reasons before project completion. If the community is well prepared and empowered, it is possible for such projects to continue offering the intended services without interruptions or failures. It is more important therefore to make projects work by actively involving the community.

4.4 Recommendations

This study has shown that positive and significant effects exist between community involvement and project sustainability. In particular, community involvement included aspects like community participation, community needs assessment, community empowerment and stakeholders' engagement. Since all these contribute significantly in the sustainability of donor funded projects, the researcher recommends that community involvement in projects should be done in holistic manner. That is, all the important factors that include community involvement should be incorporated within the project framework for effectiveness in that project.

Moreover, there is need for project managers and donors to ensure that key stakeholders are identified earlier on and that these are actively engaged. This would increase the ability of the project to address the most pressing needs of the community. Moreover, the researcher concludes that sustainability of donor funded projects can only be achieved within an active project

framework that acknowledges the importance of the inputs of each and every stakeholder in that project. In particular, the researcher recommends that community-based project must actively engage the community, starting with a rigorous need assessment to ensure that the project is acceptable and that it addresses the pressing needs of the community. In this way, the life and the sustainability of the projects can be a sure bet.

4.5 Suggestions for Further Studies

This study was limited to one area of project management, namely, project sustainability. The researcher acknowledges that project sustainability is just one of the key performance measurements of project success. Other future researches may be carried out to incorporate different measures of project performance in one research. In addition, this study also focused primarily on community involvement, which is not the only determinant of project sustainability. Other factors are also important on determining the sustainability of donor funded projects. For instance, the government support, donors continued support and availability of funds. Future research can try to incorporate different factors that may be important to have a wider view on the sustainability of donor funded projects.

REFERENCES

- Afande, O. F. (2013). Factors Affecting use of Donor Aid by International Non-Governmental Organizations in Kenya: A case of USAID. *International Journal of Business Management and Administration*, 2(5), 089-116.
- Ananga, E. O., Njoh, A. J., Anchang, J. Y., & Akiwumi, F. A. (2016). Participation-related factors Influencing performance in four urban-based community-operated water schemes in Kisumu, Kenya. *Community Development Journal*, 52(2), 319-336.
- Bal, M., Bryde, D., Fearon, D., & Ochieng, E. (2013). Stakeholder engagement: Achieving Sustainability in the construction sector. *Sustainability*, 5(2), 695-710.
- Barasa, F., & Jelagat, T. (2013). Community Participation in Project Planning, Management and Implementation: Building the Foundation for Sustainable Development. *International Journal of Current Research*, Vol. 5, Issue, 02, pp.398-401.
- Elimelech, M. (2014). Increasing functional sustainability of water and sanitation supplies in rural Sub-Saharan Africa. *Environmental Engineering Science*, 26(5), 1017-1023.
- Emmanuel, N. (2020). Stakeholder Involvement and Performance of Donor Funded Projects in Rwanda: A Case Study of 'empowering Youth through an Inclusive Cooperative Movement in Rwanda Project (EYICM) in Bugesera District. *Journal of Advance Research in Business Management and Accounting (ISSN: 2456-3544)*, 6(9), 25-96.
- Gaturu, N., & Muturi, W. (2014). Factors affecting the timeliness of completion of donor funded Projects in Kenya: a case of world agroforestry center (ICRAF). *European Journal of Business Management*. 2(1): 189-202.
- Gibson, T. (2013). Influence of donor funded projects on the social-economic welfare of the rural Communities. Case of CADSAL in Elgeiyo Marakwet County, Kenya. University of Nairobi.
- Ika, L. A., Diallo, A., & Thuillier, D. (2012). Critical success factors for World Bank projects: An Empirical investigation. *International Journal of Project Management*, 30(1), 105–116.
- Karzner, H. (2013). *Project Management: A systems approach to planning, scheduling and Controlling*. New York: John Wiley and Sons.
- Lemma, T. (2014). The role of project planning on project performance in Ethiopia. A *Dissertation of MA Thesis*.
- Lilian, A. (2012). Factors Affecting the Effectiveness of Donor Funded Projects in Promoting *Development in Kibera*. Nairobi: University of Nairobi.

- MacIntosh, G. J., & Maclean, I. (2014). Stakeholders' participation in the fisheries management Decision-making process: Fishers' perceptions of participation. *Marine Policy*, 34(5), 1093-1102.
- Mansuri, G., & Rao, V. (2004). Community-based and-driven development: A critical review. *The World Bank Research Observer*, 19(1), 1-39.
- Masud, M. M., Aldakhil, A. M., Nassani, A. A., & Azam, M. N. (2017). Community-based Ecotourism management for sustainable development of marine protected areas in Malaysia. *Ocean & Coastal Management*, 136, 104–112.
- Musabyimana, T. (2019). Farmers' and Researchers' Perceptions on Mediated Communication of Agricultural Research Results by Rwanda Agriculture Board. *The Journal of Development Communication*, 30(1), 53-62.
- Mutangha, J., & Kamuhanda, J. K. (2021). Assessment of the effects of community participation on sustainable development in Rwanda: A case of Water Aid Rwanda project in Gahanga Sector, Kicukiro District. *International Journal of Advanced Scientific Research and Management*, 6(1), 1-8.
- Ndungu, J. N., & Karugu, J. (2019). Community Participation and Performance of Donor Funded Youth Projects in Korogocho, Nairobi City County, Kenya. *International Journal of Current Aspects*, 3(3), 227-240.
- Nyaguthii E. & Oyugi L. (2013). Influence of Community Participation on Successful Implementation of Constituency Development Fund Projects in Kenya. Case study of Mea Constituency. *International Journal of Education and Research*. 1(2), 23-38.
- Nyandika, O. F & Ngugi, K. (2014). Influence of Stakeholders' Participation on Performance of Road Projects at Kenya National Highways Authority. *European Journal of Business Management*, 1 (11), 384-404.
- Shikuku M. (2012). *Community related Variables influencing sustainability of water Projects in Nyando District. Case of UNICEF Funded Projects under UNICEF WASH Programme*. University of Nairobi- Kenya.
- Surya, B., Syafri, S., Hadijah, H., Baharuddin, B., Fitriyah, A. T., & Sakti, H. H. (2020). Management of slum-based urban farming and economic empowerment of the community of Makassar City, South Sulawesi, Indonesia. *Sustainability*, 12(18), 7324.