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Abstract

In Rwanda, projects failure is caused by lack of Monitoring and Evaluation staff trainings, technical expertise, design/approach, low level stakeholder involvement, lack of proper planning, lack of supportive supervision, insufficient financial management and poor leadership on feasibility and sustainability project. The general objective of the study is to assess monitoring and evaluation practices and urban water sustainability project in Rwanda. A case of WASAC project in Kigali city and the specific objectives of the study were to assess the influence of project monitoring and evaluation planning on urban water sustainability project in Rwanda, to assess the influence of monitoring and evaluation stakeholders involvement on urban water sustainability project in Rwanda and to determine the effect of monitoring and evaluation trainings on urban water sustainability project in Rwanda. The study was based on two theories such as theory of change and theory of constraints. In this study, a descriptive research design was used and the targeted population includes project management team, project monitoring and evaluation officials, project analysts and engineers. In total they were 184 from whom a sample size of 126 was selected as representative of total population. Therefore, a simple sampling technique will be used and data will be collected using questionnaire, interview and documentation. The analysis of data will be done through SPSS version 21. The study findings showed that stakeholders' involvement is essential in achieving urban water sustainability in the way that M&E planning contribution is at the mean of 3.908 and standard deviation of 0.755, stakeholders involvement contributed to urban water sustainability at the mean of 3.275 and standard deviation of 0.642 while M&E trainings has contributed to urban water sustainability at the mean of 4.505 and standard deviation of 0.720. The study found that there are continuous M&E trainings and development of the project staff to acquire skills to implement the project. The study recommended that effective project planning need to be put in place by the project team and managers. Project team should ensure their monitoring and evaluation control plan align with M&E plan. The study recommends a sound stakeholders' involvement at each phase of the project from initial phase to execution.

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Keywords: *Monitoring and Evaluation, Urban Water Sustainability, WASAC, Project Management, Kigali City Infrastructure*

1.0 Introduction

Project monitoring and evaluation procedures are crucial to the project and are integrated into the design of the project. Because they are limited, resources must be used wisely and efficiently. Over the past few years, monitoring and evaluation have become widely accepted as essential components of the project cycle and sound management practices (Olive, 2018). Project planning is the process of determining the time, money, effort, and personnel resources needed to complete the project, as well as the workforce, milestones, equipment, and budget estimations. It is the project's systematic resource organization that will help it achieve its goal (Pinto & Slevin, 2016).

Stakeholders can contribute to the project's success if they are well managed and offer a variety of talents, information, and experiences. The interests of stakeholders are determined, examined, and ought to be met. Stakeholders might originate from both inside and outside the company. For instance, the stakeholders in a particular project could include, among many others, the government, NGOs, clients, employees, suppliers, contractors, and the local community (Gibson, 2019). Sustainability is a development concern that illustrates a project's potential to have good long-term effects. Because of this, the Sustainable Development Goals (SDGs), also known as the Global Sustainable Goals, push for development narratives that uphold the planet's environmental integrity, peaceful prosperity, and high standard of living (United Nations Development Group, 2016). According to the Project Management Institute (2021), sustainable projects provide a steady stream of benefits, environmental stability, equal and fair benefit distribution, and ongoing community participation.

1.1 Statement of the problem

According to Javier and Alonso (2022), more than 84 million people worldwide lack access to safe drinking water and an estimated 2.5 million lack access to basic sanitation services. The World Health Organization estimates 6.3% of all death caused by limited access to safe drinking water and limited access to improved sanitation facilities and hygiene practice. The delays in the completion of water and sanitation projects make it difficult to achieve the required access to affordable safe and sanitation projects in African countries like Kenya where the total expenditure on water supply including sewerage and waste management and related services increased from ksh20.5 billion in 2023 to ksh 60.2 billion in 2021 (KNBS, 2022). In Rwanda, projects failure is caused by lack of monitoring and evaluation staff trainings, technical expertise, design/approach, low level stakeholder involvement, lack of proper planning, lack of supportive supervision, insufficient financial management and poor leadership on feasibility and sustainability project.

1.2 Research Objectives

- i. To assess the influence of project monitoring and evaluation planning on urban water sustainability project in Rwanda.
- ii. To assess the influence of monitoring and evaluation stakeholders involvement on urban water sustainability projects in Rwanda.

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- iii. To determine the effect of monitoring and evaluation trainings on urban water sustainability project in Rwanda.

1.3 Scope of the Study

The content scope of the study is to assess the monitoring and evaluation practice on urban water sustainability project in Rwanda, a case of WASAC limited Company. This study was conducted in Rwanda more specifically in two selected Districts of Kigali City. In conducting this study, researcher was interested in time to be more specific, realistic, measurable and achieving his objectives of having all important research findings. Thus, data to be collected covered the period from 2021 to 2023. The reason for this period is to have an image of how monitoring and evaluation practice has contributed to urban water sustainability project in Rwanda more specifically in Kigali city.

2.1 Theoretical Framework

2.1.1 Theory of Change (ToC)

The theory of change was developed by Kusters (2000), the theory of change assist manager to have clarity outcomes and explain which strategies which can be selected. Theory of change helps to design and focus on the planning framework in early stage of the design process. The theory of change enhances the understanding of stakes and stakeholders 'assistance in thinking through the utilization of planning activities and increases the consequences of awareness. The implication of this theory to the current study is that it is helpful to not only to measure the outcome but also to understand the role of projects and other factors contributing to the success.

1.1.2 Theory of Constraints

This theory was advanced by Blackstone (2010). The theory tries to eliminate constraints and is the method for locating and eliminating organizational process constraints that obstruct organizational objectives. Production control, project management, and production planning have all been impacted by the notion of limits. To increase performance, it is helpful to identify the most important bottlenecks in the systems and processes. This idea implies that project performance and sustainability can be better understood throughout the project monitoring and assessment process.

2.2 Conceptual Framework

The main variables of interest is the study variables such as independent and dependent variables. In this study, the independent variable is monitoring and evaluation and is measured by monitoring project planning and monitoring and evaluation stakeholders involvement. The dependent variable is urban water sustainability project and is measured by timely project completion, completion within set budget and completion within scope. Therefore, the intervening variables also influence the independent and dependent variables and these include Government policies, rules and regulations.

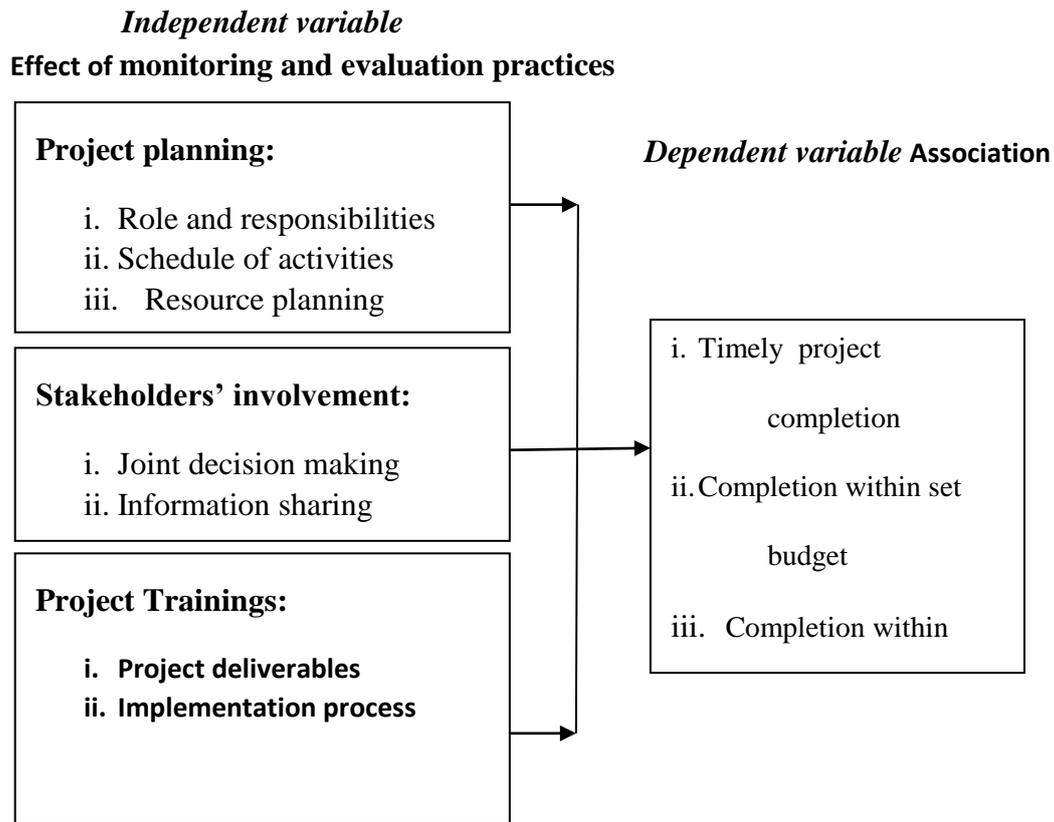


Figure 1: Conceptual Framework

Source: Research (2024)

3.0 Research Methodology

Research Design

In this study, researcher used a descriptive research design with two mixed methods such as quantitative and qualitative approaches.

Target Population

The population is referred to as all members of any well-defined class of people, events or objects about which the organization is made. It can be also defined as the aggregate or totality of objects or individuals having one or more characteristics in common having interest to the researcher and from where findings are to be obtained. The target population of this study was: project management team, monitoring and evaluation officials, project analysts, project engineers. In total they will be 184 populations from which a sample was selected. (MININFRA., 2019)

Sample Size

The small group chosen from the entire targeted population and considered to be representative of the entire population and is known as the sample size. Stated otherwise, a sample size is a portion of the larger population. Thus, the method created

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by Yamane (1967) was utilized to establish the sample size in this study project, taking into account the sampling error of 5%. $n = N / (1 + N (e^2))$

n = Sample size or number of samples, Population total (N) and error tolerance (e)
As a result, with a 5% sampling error from the 184 target population overall, the sample size was calculated as follow:

$$n = \frac{184}{1 + 184(0.05)^2} = \frac{184}{1 + 184(0.0025)} = \frac{184}{1 + 0.46} = \frac{184}{1.46} = 126$$

Data Analysis

To make it explicit, data will be coded in SPSS version 21 following data collection. Both quantitative and qualitative methods will be used to analyze the data. Consequently, both descriptive and inferential statistics were used in the investigation. The study used the mean and standard deviation for descriptive statistics, and Cronbach's Alpha, with values between 0 and 1.00, was used to determine reliability in inferential statistics. Correlation analysis was also used to determine the strength of the relationship between the independent and dependent variables. Regression analysis was therefore employed to examine the relationship between the variables.

4.0 Findings and Discussion

Project planning and Urban Water Sustainability

The impact of monitoring and evaluation planning on urban water sustainability was established by the study's findings collected from research participants. To make it more successful regression analysis was used to achieve research objectives. With this regression analysis research findings were more effective and provide the best fit response of research objectives. According to the study conducted in WASAC, results from research participants found that, project planning for monitoring and evaluation has a major positive impact on urban water sustainability projects as it has a positive Correlation. As a result, researcher suggests that monitoring and evaluation plays the significant roles on water sustainability within WASAC and most of staff members of WASAC have responsibilities to achieve the sustainability of urban water is normally observed through designing proper planning and with project activities are planned, and resources are appropriately distributed. Thus, it is important to regularly update and revise monitoring and evaluation plans in order to account for changes and improve the sustainability of water projects. Consequently, the results support the idea that a key component of urban water sustainability result from efficient project planning.

Stakeholders' involvement and Urban Water Sustainability

The objective which was to assess the effect of involvement on urban water sustainability was also evaluated. Based on the study findings, the response from participants showed that stakeholders on the sustainability of urban water was also important. Regarding this research objective, however, it was also shown that within WASAC stakeholder involvement remain significantly to improve urban water sustainability. As a result, project governance, information sharing, and collaborative decision making constitute the foundation of the involvement. This suggests that a greater involvement of stakeholders would result into a higher level of urban water sustainability. With the participation of stakeholders, projects are overseen and managed for efficient execution.

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Monitoring and Evaluation trainings and Urban Water Sustainability

The effect of M&E trainings on Rwanda's urban water sustainability was also assessed in this research study. As indicated by research participants, the urban water sustainability shown to be important in WASAC project and this will be useful in Kigali city more specifically in Two selected Districts such as Nyarugenge and Kicukiro District. M&E trainings plays important role in water sustainability if trainings in monitoring and evaluation are encouraged. The results of the research demonstrated that the project crew had received sufficient training to recognize and address M&E mistakes. Likewise, trainings on monitoring and evaluation enabled project personnel to respond effectively and promptly in the event that a deviation occurred.

5.0 Conclusion

The study concludes that project planning has a significant impact on urban water sustainability in two selected sectors (Nyarugenge & Gasabo) of Kigali city. It was reviewed that regular review, role and responsibilities, schedule of activities as well as resource planning are essential in influencing urban water sustainability in Rwanda. Therefore, monitoring and evaluation plan scope was well structured to accommodate change, thereby serving as a facilitator of urban water sustainability project in two selected sectors of Kigali city, Rwanda. It was also concluded that stakeholders' involvement is essential in achieving urban water sustainability in the way that their involvement in joint decision making, in information sharing and project governance have influenced urban water sustainability. It was also found that monitoring and evaluation trainings is a vital component affecting the urban water sustainability in two selected districts of Kigali city. The study found that there are continuous M&E trainings and development of the project staff to acquire skills to implement the project. Therefore, project staff within WASAC is adequately able to identify and handle M&E errors in the project. M&E trainings provided necessary support to strengthen monitoring and evaluation framework which contributed to the urban water sustainability in two selected Districts in Kigali City.

6.0 Recommendations

The study documented that all monitoring and evaluation practices namely project planning, stakeholders' involvement and M&E trainings were significantly predictors of urban water sustainability. The study recommends that effective project planning needs to be put in place by the project team and managers. Project team should ensure their monitoring and evaluation control plan aligns with M&E plan. The study recommends a sound stakeholders' involvement at each phase of the project from initial phase to execution. Stakeholders' involvement needs to put more emphasis on transparency in decision making to provide monitoring and evaluation feedback. The study recommends that there should be enhanced human resource competency to monitoring and evaluation planning. Therefore, efficient monitoring and evaluation resources allocation is highly encouraged. The study further recommends that project trainings should be handled with utmost importance. Project team members should continually be adequately trained to identify and control monitoring and evaluation errors.

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