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INFLUENCE OF PROJECT MANAGEMENT ON SUSTAINABILITY OF WATER AND SANITATION PROJECTS IN KIBRA SUB-COUNTY, KENYA

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ABSTRACT

This study examined the influence of project management on sustainability of water and sanitation projects in Kibra Sub county in Nairobi County, Kenya; focusing on financial resources, stakeholder's participation, monitoring and evaluation, and project tools and technique as the study's specific objectives. The research adopted a descriptive research design and the target population of the study were 413 beneficiaries within the water project. Simple random sampling techniques was used to select the sample population and Krejcie morgana formula were used to determine the study sample size of 201 respondents. Pilot study was done to determine the validity and reliability of the data collection instruments. To test reliability, the Cronbach's Alpha Test was conducted on all measures for the independent and dependent variables with a threshold of 0.7. To establish the validity of the research instruments, the researcher sought opinion from the experts in the field of study especially the researcher's supervisor and lecturers. Questionnaires and interview schedule were used for data collection. Data collected were coded and analyzed by IBM statistical package for Social Sciences (SPSS) version 23. The study established that a careful financial management strategy was likely to guarantee the success of water projects in the slums. Besides, there was minimal stakeholders' participation in the implementation of water and sanitation projects hence no sense of ownership of the project. Furthermore, through proper techniques on forecasting, there was proper planning and approximation cost of the project. Besides, regular monitoring of the project and efforts to ensure that the monitoring and evaluation was as good as the project plan. There was therefore need for proper channel of resource mobilization for projects and a proper funding schedule to facilitate the completion of the water project. Also, stakeholders need to be involved in all the projects processes decision making, the mission, vision and objectives of the project. In addition, it is crucial for water projects to have a proper technique on forecasting project activities. Finally, to enhance transparency and accountability of project resources, it is important to have monitoring and evaluation.

Key Words: *Financial Resources, Stakeholder's Participation, Monitoring And Evaluation, Project Tools And Techniques*

INTRODUCTION

One of the most important natural resource is water. It is the essence of life on earth. The availability of safe water is critical not just for health reasons, but also for social and economic development (WHO & UNICEF, 2015).The development agenda highlighted water supply and sanitation as a result of the UN conference in 1977 in Argentina. The International drinking Water supply and sanitation Decade was declared in the 1980s with the aim of ensuring every person has access to safe water, of adequate quantity and basic sanitary facilities, by 1990 (World Water Assessment Programme, 2013). Despite this, one billion people in the world today are without access to improved sources of water, and access to consistent safe drinking water not withstanding water being at the center of economic and social development; (World Bank, 2015).

The quality of life of people is threatened globally, it is approximated that 1.4 million people die from unavailable, clean drinking water; and 3.6 million people die each year from waterborne diseases. Of that number, children constitute 84% and 98% are living in the developing world. The crisis is real for those living in the developing world. The water crisis has become a major issue that needs to be addressed in order to save the lives of poor people that are dying from preventable ailments. According to the United Nations Human Development Report, the crisis is claiming more lives in the developed world than war claims through weapons (Water, 2013).

When the issue of Sanitation arises it is clear that in most urban centers in Africa, Asia and Latin America less than one third of the population in each country has what is referred to as “good quality sanitation”. It is approximated that more than 100 million urban dwellers world-wide are forced to defecate in the open, into waste paper and plastic bags because public toilets are not available or are too distant and expensive (WHO & UNICEF, 2013). These settlements lack systems for disposal of sewage, excreta, silage and solid wastes, which may cause health and environmental dangers. Specifically, Human waste disposal is a major problem, which renders informal settlements an unhygienic living place for the residents (WHO&UNICEF, 2014).

Informal settlements are areas where inhabitants have no land security land for where they dwell. The Residents are deemed as squatters and live in s setup where the rental for housing is informal. The areas normally have no access to the basic services and infrastructure. Housing mostly do not normally comply with the planning and building regulations, and often they are situated in areas that are geographically and environmentally dangerous (UN HABITAT, 2013). Residents in these areas are not officially recognized by the government, and more so do not possess birth certificates or national identification cards. It can concluded that they do not even exist in the country for their records are scarce (Sclar & Mary, 2003).

Globally, Indonesia is one country that has seen its population grow uncontrollably with very little advances in maintaining constant water supply, waste check and management. According to the World Bank report (2013), in Indonesia the WSS scenario is characterized challenges in the access and low quality of service. It is approximated that Over 40 million people lack access to improved water source, of the 240 million people, 110 million have no access to improved sanitation, with only 2% having access to sewerage, makes it one of the lowest among the middle-income countries (WHO, 2010). A study by UNICEF (2013) shows that, implementing projects that could give relief to the residents in the slums has proofed difficult due to challenges like; poor community participation, poor

security, low rates of return, political sideshows, poor infrastructure, poor urban planning and land ownership among others.

Regionally, Tanzania is one country in East Africa that can be said to be having a population structure that has almost a pure peri-urban settlement. This is evident in towns like Dar es Salaam, Tanga, Dodoma and Mwanza (Stacey et al., 2015). In Africa, water shortage is related to both under-development of potentially available water resources and their uneven distribution. This is coupled up with an unrelenting population growth rate of 3 % per year, which is a major factor in on-going water and sanitation problems. Water supply services in Zambia's peri-urban areas vary widely from one settlement to another even within the same town. Water supply systems have been poorly maintained in the last 20 years because local authorities and ministry departments as providers have absconded their capacity and professionalism to operate and sustain these services efficiently and effectively (Nwasco, 2015). This is similar to other countries like Zimbabwe, Nigeria, Angola, DRC etc.

A publication on Amnesty international (2010) shows that, in Kenya there are 8.5 million people that live in low income settlements and the population will increase rapidly at 6% per year. In Nairobi alone around 100 unplanned settlements with a population of 1.75 million exist (around 50% of Nairobi's population) and the number of areas and population are increasing. Thus with these issues in mind today more than ever, the development of a systematic understanding of the role of water and sanitation systems and the identification of the elements composing the complex nexus of challenges and opportunities for water and sanitation in cities become critical activities for policy makers, professionals and sector specialists (WHO / UNICEF, 2015).

Kibra is a sub county of Nairobi Area, Kenya, and neighborhood of the city of Nairobi, 6.6 kilometers from the city Centre. Kibera is the largest slum in Nairobi, and the largest urban slum in Africa. The 2009 Kenya Population and Housing Census reports Kibera's population as 170,070, contrary to previous estimates of one or two million people. Other sources suggest the total Kibera population may be 500,000 to well over 1,000,000 depending on which slums are included in defining Kibera. Most of Kibera slum residents live in extreme poverty, earning less than $1.00 per day. Unemployment rates are high. Persons living with HIV in the slum are many, as are AIDS cases. Cases of assault and rape are common. There are few schools, and most people cannot afford education for their children. Clean water is scarce. Diseases caused by poor hygiene are prevalent. A great majority living in the slum lack access to basic services, including electricity, running water, and medical care.

Statement of the Problem

Water and adequate sanitation for life in the household, and water for livelihoods, production and economic activities will continue to be foundational elements for a city's development especially in informal settlements (WASREB, 2016). Despite the importance that should be attached to water and sanitation, Kenya has scored poorly in almost all the MDGs meeting, more specifically in proving water to its slum dwellers. The largest slum in the world for example-Kibera- has only 10% of the population connected to water from the Nairobi county government and has a rationing rate of 67% being experienced and this rises to about 83% in dry seasons. The sanitation situation is wanting in that, the people have resulted into using what is commonly known as 'flying toilets' (Water Services Regulatory Board, 2014). A number of private and government sponsored organizations have tried to invest in water and sanitation providence to the

slum dwellers for example since 1992 (UNICEF, 2011) but have faced challenges that include: poor financial support from both the national and local governments, poor infrastructure, poor community perceptions and participation, poor training on the importance of such projects, poor rates of returns to the firms involved in WSS among other challenges. A number of studies have been done to access and bring out the situation of the WSS in the slums and other marginalized regions in the country. Kahariri (2014) in a study on the assessment of the challenges of water supply and sanitation in uncontrolled residential developments of Huruma estate, Nairobi County. In this study, he found out that factors like political goodwill, community training/involvement/participation, infrastructure, security, skewed nepotism among others were challenges.

Njuguna (2014) did a study on factors influencing sustainability of donor funded projects: the case of water and sanitation projects in Laikipia east district, Laikipia County, Kenya. He found out issues like M&E, project planning, human resources and capital resources affected sustainability of donor funded projects. Mulwa (2013) did a study on factors influencing sustainability of water supply projects in central division, Machakos district of Machakos county, Kenya. In his study, besides the above researchers' findings, he added the idea of rate of return on the WSS. From these studies and many more not mentioned, it is evident that such a study has not been done in slums; hence this study therefore aimed at examining the influence of project management on implementation of water and sanitation projects in Kibra sub-county.

Objectives of the Study

The general objective of this study was to establish the influence of project management on implementation of water and sanitation projects in Kibra sub-county. The specific objectives were:-

- To establish the extent to which financial resources influences the implementation of water and sanitation projects in Kibra sub-county
- To examine how stakeholder participation influences the implementation of water and sanitation projects in Kibra sub-county
- To determine how water policies influences the implementation of water and sanitation projects in Kibra sub-county
- To examine how monitoring and evaluation influences the implementation of water and sanitation projects in Kibra-Sub County

LITERATURE REVIEW

Theoretical Framework

According to Davidson (2008), a theory is a set of properly argued ideas intended to explain a phenomenal by specifying variables of the laws that relate the variables to each other. A theoretical framework is a collection of interrelated concepts, like a theory but not necessarily so well worked-out. A theoretical framework guides your research, determining what things you will measure, and what statistical relationships you looked for (Frederic, 2010). This study was based on four theories i.e. the stakeholders theory, resource dependency theory, evaluation theory and programs theory.

Stakeholders' Theory

My first specific objective is premised on stakeholder's theory. In this theory, A stakeholder is defined as "any group or individuals who can affect or is affected by the achievement of an organizations objective" (Freeman, 2004).Projects are undertaken by many stakeholders. For this reason, this study will borrow from the

stakeholders' theory. Miles (2013), also defines stakeholders as any group or individual which or who can affect or is affected by an organization including the community, the suppliers, the government, community-based organizations and vulnerable groups. The stakeholders' theory according to Nguluu (2003) is more managerial since it guides managers on how to articulate the shared sense of the value they create, and what brings its core stakeholders together and explains the role of management in promoting stakeholder interests.

Miles (2013) postulates that the stakeholder approach is important to managers since it highlights how the organization fits into the larger environment, how its operations and procedures affect the stakeholders and cautions them against making major decisions without analyzing the impact such a decision will have on each of the stakeholders. The objective of project managers should therefore not be focused on just wealth or profit maximization for the stakeholders but also to enhance the normative or moral aspects of projects. Emphasizing on the stakeholder theory, Friedman (2006) states that an organization should be thought of as a grouping of stakeholders and the purpose of the organization should be to manage their interests, needs and viewpoints. Stakeholder management is currently a fundamental instrument for the direction of projects (Atkin, et al, 2015). The complementarity of this link makes project management a stronger strategic competence for organizations and helps them link project outputs with difficult visibility to key business objectives, besides being an adequate tool to promote sustainable activities that generate value for all stakeholders.

The purpose of stakeholder management is to create methods to manage the different groups and relationships that resulted in a strategic fashion. Further Freeman (1984) thinks that the idea of stakeholders, or stakeholder management, or a stakeholder approach to strategic management, suggests that managers must formulate and implement processes which satisfy all and only those groups who have a stake in a project. The main task in this process is to manage and integrate the relationships and interests of shareholders, employees, customers, suppliers, communities and other groups in a way that guarantees the long-term success of the firm. In this case it is the sustainability of the water project in Kibra Sub-County. A stakeholder approach is very much concerned about active management of the business environment, relationships and the promotion of shared interests in order to develop business strategies.

However, the role of sustainability has not yet been explored through the relationship between stakeholders and project management. The sustainability construct intrinsically incorporates the consideration of stakeholders as an essential aspect in its characterization, that is, it is not understood without it. In recent decades, stakeholder theory has been the fundamental theoretical support that facilitates the understanding of and ways to address these relationships from multiple perspectives, becoming increasingly important. The relationships between organizations and stakeholders are crucial to achieve the difficult balance between the economic, social, and environmental dimensions (the key ones among others) that implies the implementation of sustainability. Project management, on the other hand, represented both by its standards of practical application and by the academic literature (Karlsen et al., 2002) also considers the relationship with stakeholders as one of the indispensable areas for the proper development of any project, where success is not understood without the satisfaction of the main stakeholders. However, project management

considers stakeholders in a smaller sphere, not in a broader way that implies the deployment of sustainability, and generally does not consider what happens in the long term with a project, once it ends.

Resource Dependency Theory

Resource Dependency Theory holds that organizations rely on resources which are obtained from their environment and that the survival of such organizations depends greatly on their ability to acquire and utilize the resources. Organizations depend on multidimensional resources: labor, capital, raw material, etc. Organizations may not be able to come out with countervailing initiatives for all these multiple resources. Hence organization should move through the principle of criticality and principle of scarcity. Critical resources are those the organization must have to function. This theory was developed by Dorfman, Hanges & House (2012). According to Hatch (2013), the need for resources and an outlet for finished products and services has forced organizations to depend on their environment. The environment in return has exerted influence on the entities that depend on it. Hatch (2013) further argues that such entities cannot survive if they are not guaranteed the continuous supply of the critical resources which can be done by retaining multiple sources of supply, engaging in vertical integration with the suppliers, creating joint ventures, and horizontal integration with competitors. Resource dependency theory also examines the relationship between organizations and the resources they need to operate. Resources can take many shapes or forms, including raw materials, workers, and even funding. If one company maintains the majority of a resource, then another company will become dependent on it in order to operate, creating a symbiotic relationship. Too much dependency creates uncertainty, which leaves organizations subject to risk of external control. External control may be imposed by the government or other organizations, and can have a significant effect on operations, such as funding or personnel policies. Managers strategize alternative business plans in order to lower this risk.

Water projects in Kibra Sub-county are therefore not independent entities, as they must depend to a large extent on the society from which they operate and for which it serves. This argument is reinforced further by the institutional organizational theory which holds that an organization can have all the resources in form of raw materials, labour and capital from the environment but if it is not accepted by the same society, it cannot succeed. Furthermore, Nguluu (2003) emphasizes that based on the input output model, an organization's survival depends not only on the availability of resources in the form of raw, materials, labour and capital equipment but also social legitimacy for it to thrive.

Resource dependence theory effects on nonprofit sector have been studied and debated in recent times. Scholars have argued that Resource dependence theory is one of the main reasons nonprofit organizations have become more commercialized in recent times. With less government grants and resources being used for social services, contract competition between private and nonprofit sector has increased and led to nonprofit organizations using marketization techniques used mainly in the private sector to compete for resources to maintain their organizations livelihood. Scholars have argued that the marketization of the nonprofit sector will lead to a decrease of quality in services provided by nonprofit organizations (Eikenberry et al., 2004)

Organizations which need resources not only to produce goods and services but also to be able to survive in a competitive business environment, use inputs such as raw materials, technology, knowledge, skills, labor, capital and human capital,

and organizational culture. Organizations always encounter resource availability uncertainty. Also, resource dependency strategies create main risks in relationships with suppliers and organizational structure, operational performance, and quality levels. According to the resource dependence theory, an organization is subject to external control when it depends on its external environment for a large proportion of a critical resource, such as funding (Brettel & Voss, 2013; Pfeffer & Salancik, 2003). Despite the changing prevalence of the types of mergers and interlocks described in resource dependence theory, it is clear that power and dependence relations among organizations, and the managerial lust for self-aggrandizement, had not gone away due to the advent of "shareholder value"; they had simply found new modes of expression, as shareholders in Enron, WorldCom, AIG, and Citigroup were to discover (Davis & Cobb, 2010).

The Modern Theory of Financial Intermediation

The modern theory financial intermediaries was developed by Allen and Santomero (1998). The theory builds on the economics of imperfect information that began to emerge during the 1970s with the seminal contributions of Akerlof (1970), Spence (1973) and Rothschild and Stiglitz (1976). The traditional theory posits that the existence of banks is justified because financial markets are informational imperfect and there are transaction costs. It builds on the notion that intermediaries serve to reduce transaction costs and informational asymmetries (Benston & Smith, 1975; Klein, 1971; Leland & Pyle, 1977). However, the deregulation of financial markets, the technological and financial innovations such as internet and financial derivatives, the changing composition of household portfolios which now include more risky assets, the gigantic size of pension funds and mutual funds in relation to bank assets, and such have led mainstream economists to question the validity of the relevance of transaction costs and informational asymmetry in the financial intermediation theory (Scholtens & Wensveen, 2003). Thus the theoretical justification for existence of banks has ceased but banks exist. This has led to the development of the modern theory of financial intermediation. The modern theory of financial intermediation lays emphasis on what banks do rather than why they exist (Claus & Grimes, 2003).

Allen and Santomero (1998) posit that intermediaries are facilitators of risk transfer and deal with the increasingly complex maze of financial instruments and markets. They argued that participation costs are crucial to understanding the current activities of intermediaries and in particular their focus on risk management. Financial intermediaries play an important role in credit markets because they reduce the cost of channeling funds between relatively uninformed depositors to uses. They specialize in collecting information, evaluating projects, monitoring borrower's performance and risk sharing (Claus & Grimes, 2003). The theory is premised on the existence of free markets devoid of government interventions. However, in modern economic times, prudential regulations are put in place which limits the behavior of financial intermediaries. According to Mwangi (2014), regulation reduces the degrees of freedom of financial institutions with regard to what they can or cannot do. Despite the limitation, the theory provides an insight as to what financial intermediaries do. The theory is anchored in the study to explain not only why financial intermediaries exist but also what role they play. It provides theoretical underpinning to the effect that the dynamics of financial markets have continued to change and financial institution must reorient to facilitate financial intermediation efficiency. DTSs have continued to change their mode of operation in line with changing economic and social environments.

Complexity and Chaos theories

Complexity theory was originally an invention of Los Alamos nuclear laboratory, in Santa Fe Institute in Mexico starting in the early 1980s, where the scientists claimed that through the study of complexity theory, one can see both laws of chaos and that of order; through which an explanation for how any collection of components will organize itself can be generated. This theory takes the view that systems are best regarded as wholes, and studied as such, thus rejecting the traditional emphasis on simplification and reduction as inadequate techniques. Complexity theory is concerned with the study of how order, structure, pattern, and novelty arise from extremely complicated, apparently chaotic systems and conversely, how complex behavior and structure emerges from simple underlying rules. The theory attempts to discover how the many disparate elements of a system work with each other to shape the system and its outcomes, as well as how each component changes over time (PMI, 2014).

Complexity theory describes states varying from comparative order to complete disorder, or chaos, where the system defies prediction or control. It is the recognition that some projects or parts of projects, do not behave predictably, even when under the guidance of experienced project teams, whereas some parts will be very stable and behave in a predictable manner that has sustained continued interest in complexity theory (Remington & Zolin, 2011). In general terms, insights from the study of complexity in the life sciences suggests that there is a natural tendency for all organisms (including human kind and social organisms such as project teams) to evolve complex responses to challenges that they encounter in their environment. This provides a compelling argument for why there is a pressing need for a coherent research agenda to understand both the causes of complexity, and what can be done to prevent it resulting in problems, waste, economic and social failure (Remington & Zolin, 2011).

Another important concept in complexity theory is that there is no master controller of any system. Rather, coherent system behavior is generated by the competition and cooperation between actors that is always present. The components of a system have different levels of organization-made up of divisions, which contain different departments, which in turn comprise different workers. But the important differentiation from this organization is that complex adaptive systems are constantly revising and rearranging their building blocks as they gain experience (Caldart & Joan, 2004).

Conceptual Framework

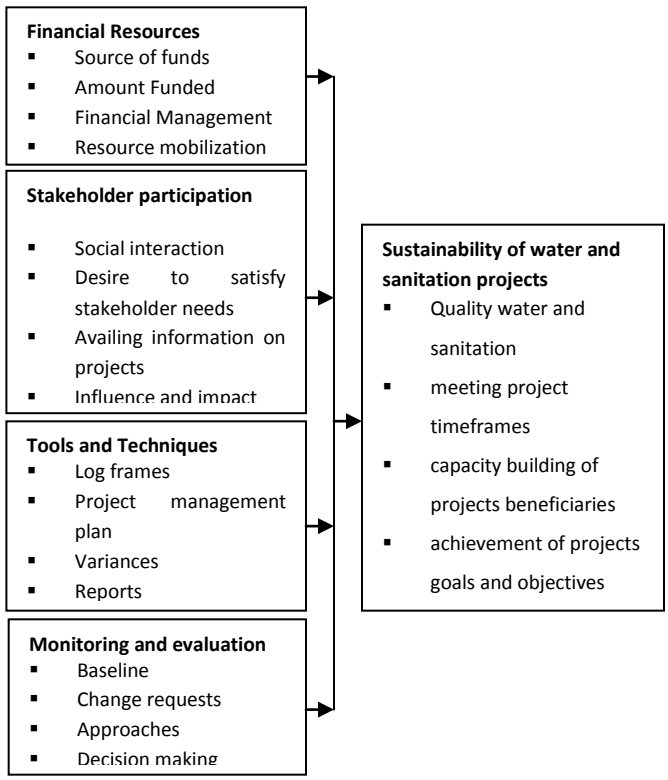

Figure 1: Conceptual Framework

Financial Resources

Effective financial resources management in projects is determined by parameters which govern funds control such as auditing (Kogan, 2004). The Financial Act 2003, Section 25 (2) stipulates that funds for any project should be adequate and be disbursed in time for successful implementation of development projects. Finance are monetized expressions of target to be accomplished in a given year by an individual, organization or nation. It is a deliberate attempt to achieve superior targets over time with available and expected resources. Such targets are influenced by the experiences of the past and expectation of the future (Douglas, 2004).With a well formulated budget, project managers can effectively plan, coordinate, control and evaluates its activities.

Financial resources provide greater effectiveness in achieving organizational efficiency hence project sustainability. To be effective, however, the functional aspects must outweigh the dysfunctional aspects. Because financial plan exists, decisions are not merely spontaneous reactions to stimuli in an environment of unclassified goals. It is pertinent to note that management activities are the driving force behind every organization and of course necessarily unavoidable. These activities planning, organizing, directing and controlling of economic resources, are schematized to reflect the nature and objectives of the organization and must be tailored towards the attainment of the overall organizations predetermined objectives through successful budget implementation (Donald, 2008).

When deviations occur reasons for the difference are ascertained and recommendation of remedial action to match actual performance with plans is done (Coates, 2005). From the literature reviewed it is clear that the requirement of a project to be successful is clear and absolute that is a project must deliver to cost, to quality, and on time; and it must deliver the benefits presented in the business case. However at times if key stakeholders agreed that a project had to exceed its initial budget, the project may still be considered a success. Likewise, if a project delivered everything that was in the detailed project designs, it may still be considered a failure if it did not include vital elements that the key stakeholders needed. All too often construction projects make the national headlines for exceeding their initial budget estimates. Examples of such projects in Kenya is the Thika Super Highway.

Stakeholders Participation

Stakeholders may also include people who have a strong interest in the effort for academic, philosophical, or political reasons, even though they and their families, friends, and associates are not directly affected by it. Stakeholders can be classified into three categories namely primary, secondary and key stakeholders. Primary stakeholders who are the people or groups that stands to be directly affected, either positively or negatively, by an effort or the actions of an agency, institution, or organization.

In some cases, there are primary stakeholders on both sides of the equation: a regulation that benefits one group may have a negative effect on another. Secondary stakeholders refer to people or groups that are indirectly affected, either positively or negatively, by an effort or the actions of an agency, institution, or organization. Key stakeholders might belong to either or neither of the first two groups, are those who can have a positive or negative effect on an effort, or who are important within or to an organization, agency, or institution engaged in an effort. The director of an organization might be an obvious key stakeholder, but so might the line staff. Other examples of key

stakeholders might be funders, elected or appointed government officials, heads of businesses, or clergy and other community figures who wield a significant amount of influence (Dalal-Clayton, Dent & Dubois, 2003; DFID, 2002).

Tools and techniques

When preparing projects plan to identify methods, procedures, and tools to be used to meet the project's needs (Chaplowe, 2008). There are many tools and techniques used to aid project managers in planning and controlling project activities which include: project selection and risk management tools and techniques; project initiation tools and techniques; project management planning tools and techniques; project management executing tools and techniques; and project management monitoring and controlling tools and techniques. Most projects mainly use two principal frameworks: result framework and logical framework (Jaszczolt et al., 2010). A framework is an essential guide to monitoring and evaluation as it explains how the project should work by laying the steps needed to achieve the desired results.

A framework therefore increases the understanding of the project goals and objective by defining the relationships between factors key to implementation, as well as articulating the internal and external elements that could affect the project‟s success. A good M&E framework can assist with ideas through the project strategies and objectives on whether they are ideal and most appropriate to implement (Ending Violence against Women and Girls Programming Essentials 2, 2013). The M&E framework should also include details on budgeting and allocation of technical expertise, as well as inform donors and project management on the its implementation (Guijt et al., 2002).

Monitoring & Evaluation

Monitoring is defined as the routine continuous tracking of the key elements of project implementation performance that is: inputs (resources, equipment etc) activities and outputs, through recordkeeping and regular reporting (McCoy, 2005). It is also the tracking the planned implementation against the actual implementation, in order to able to report on how the project is progressing and if there is need for corrective action and to facilitate decision making by the project manager during implementation (McCoy et al., 2005).

Evaluation on the other hand is the episodic (not continuous as the case with monitoring usually midterm and at end of the project) assessment of an ongoing or completed project to determine its actual impact against the planned impact (strategic goal or objectives for which it was implemented) efficiency, sustainability, effectiveness (McCoy et al., 2005). Evaluations are systematic and independent and they are an assessment of an ongoing or completed project including its design, implementation and results. Evaluations also assess the relevance, efficiency of implementation, effectiveness, impact and sustainability of the project (Uitto, 2004).

The purpose of monitoring is to ensure that implementation is moving according to plans and if not the project manager takes corrective action, it is the control function of project management (Crawford & Bryce, 2003; Gyorkos, 2003). Monitoring enhances project management decision making during the implementation hence increasing the chances of good project performance. Monitoring also aids early identification of problems before they get out of hand since it is continuous (Gyorkos, 2003). According to Crawford and Bryce (2003), monitoring and evaluation facilitates transparency and accountability of the resources to the stakeholders including donors, project

beneficiaries and the wider community in which the project is implemented. Monitoring however tracks and documents resource use throughout the implementation of the project. This enhances accountability in that it facilitates the demonstration of the resource use throughout the implementation of the project.

Sustainability

Sustainability exhibits a number of dimensions including environmental, social, economic and financial, political, and technical dimensions. Project Social Sustainability dimension entails empowering poor and marginalized rural inhabitants to develop resilience and thus spur structural change in poverty within the structures of the community. It entails factoring of resource constraints in the selection of interventions with a design that espouses elaborate risk mitigation mechanisms. This is achieved through community support and acceptability based on commitment and social cohesion. It accords great emphasis on intergenerational equity for the social resources besides equal access to those social resources within the current generation. Social sustainability generally encompasses social cohesion, rights diversity, safety, governance structures and maturity (Chu-hua and Kuei, 2013).

Economic and Financial Sustainability employ optimization of resources that creates resilience to economic shocks. This is achieved through viable financial schemes that minimize household susceptibility and increase capacity to cope with risks and financial shocks. Economic sustainability besides promoting interventions that enhance household incomes and assets create platforms on which households and communities are able to handle dynamic and unexpected changes without collapsing (Cascio, 2007). Maintaining service provision or benefits from an effort over time has been the center of focus for project initiators. Indeed, many definitions of sustainability have been put forward.

Weaver and Rotman (2006) conceptualized sustainability as a cyclical, participatory process that entails scoping, envisioning, experimenting and learning through which a shared interpretation of development for a specific context is developed. They summed up the key concept of sustainability to be the whole notion of sustainable development describing it as development that places priority on the needs of the poor and future generation with a caveat on the extent of exploitation of the environment. It's further been defined as the continuity of economic development, environmental performance and social equity (Chu-hua and Kuei, 2013).

Empirical Review

Sustainability of Water Projects

According to Abrams, 1998 defines the word sustainability, as the ability of anything to function over a given period in time. However, Sugden (2003) argues that the term sustainability has been abused when it comes to coining the word development. Hodgkin, 1994 defined sustainability as the ability of a development project to maintain or expand the flow of benefits at a specified level long after project inputs have ceased. This definition appears to be more operational and more scholars have even given definitions which appear to be narrow and specific. According to African Development Bank (2013), notes that the fresh water resources are scarce. They point out that importance of maintain population growth in order to achieve stability in water demand. The key strategy is therefore to manage population growth by lowering it, and ensuring a balanced distribution of the populations. For these strategies to be successful, it entails raising of awareness, sensitizing

the communities, educating masses and training to lower the population growth (WHO and UNICEF, 2015).

Dorothy et al (2017) carried out a study seeking to establish the extent to which project beneficiary selection process influence the sustainability of dairy goat projects in Kenya. The study focused on the project beneficiary selection tools, beneficiary needs analysis and beneficiary composition as the indicators. The study findings indicated that project beneficiary needs analysis is important in project beneficiary selection. While agreeing with this finding, Swanepoel and de Beer (2006) pointed out that different groups of people may be concerned about different needs or that may have different perceptions about the same needs and in this case grouping becomes necessary. Matiwane & Terblanché (2012) also agrees with this study that projects are motivated by a specific need that must be clearly outlined as a prerequisite to proper project designing. Community participation in need analysis is important as the needs are collectively conceived and prioritized paving the way for the process of addressing them (Barasa & Jelagat 2013). Seeking the opinion and views of the project beneficiaries can greatly make easy the planning and design processes and bring understanding among beneficiaries. All this is part of the monitoring and evaluation reporting process that the researcher is seeking to determine its influencers.

Financial Resources

Every year Government and donor agencies invest Millions of dollars in project implementation. Studies indicate that, despite increasing attempts to tackle the problem, many projects are failing to maintain the flow of expected long time benefits of about over 15 to 20 years (Ochelle, 2012). Studies by a number of scholars have shown that, for WSS to be successful in the slums there are a number of financial elements that need to be considered. This includes: the sources of finances, the amount of finances allocated, financial management and many more. Binder (2008) and Adhiambo (2010) argue that, the financing process is critical for the sustainability of WSP both in the rural and urban dwellings. According to the documented literature, insufficient funding is one of the factors which cause poor maintenance of the project outputs and at last project failure.

Financial issues need to be addressed because they are an obstacle in achieving water supply and sanitation in over 70% of the countries. Financial resources control and allocation involves the preparation of a budget, recording of actual achievements, ascertaining and investigating the differences between actual and budgeted performance and taking suitable remedial action so that budgeted performance may be achieved effectively (Controllers report, 2001). Financial resources control is the system of controlling costs through budgets. It involves comparison of actual performance with the budgeted with the view of ascertaining whether what was planned agrees with actual performance.

Stakeholder Participation

Stakeholders can be a considerable asset, contributing knowledge, insights and support in shaping a project brief as well as supporting its execution (Bourne & Walker, 2005). The high failure rate of major projects has been attributed to a lack of attention to stakeholders (Legris & Collerette, 2006). Stakeholders' negative attitudes towards a project can cause cost overruns and time schedule delays due to conflicts over project design and implementation (Olander & Landin, 2005).

According to Petter & Randolph (2009), considerable project management effort is devoted to managing stakeholders that begins with stakeholders identification, determining what they

want and predicting what they will do, which will be based upon their perception of the project. Stakeholder participation is critical to the success of every project in every organization. In a project environment, these stakeholders are usually numerous, and can vary significantly in the degree of influence in both directions. As such, a project manager is required to develop sufficient understanding of such characteristics, which are in fact changing variables within the various stakeholders in a project environment.

The number and nature of stakeholders will vary with the life of the project and it would therefore make sense to carry out the review of identification throughout the project (Moodley 2002). Participation can take place in different places of the project cycle and at different levels of society, and take many different forms. These can range along a continuum from contribution of inputs to predetermined projects and programs, to information sharing, consultation, decision making, partnership and empowerment. Participation is both a means and an end (Cooke & Kothari, 2001; Dalay-Clayton et al., 2003; Kumar, 2002).

Tools and Techniques

Hummelbrunner, R. (2010) further confirms the continued use of Log frame despite several criticisms. He asserts that Log Frame's Approach has not been fundamentally weakened by critics. Even though many donors acknowledge its limits and weaknesses; that logic models are technocentric with a cultural bias towards linear logic that can alienate rather than foster local understanding, participation, and ownership (therefore it is essential to consult and involve local partners, especially managers, to enhance their understanding of log frames) they still maintain its use as a planning and monitoring tool. Myrick (2013) states that a pragmatic approach to M&E is ideal however in the real world practitioners may be limited by constraints that will prevent their continued use of either a log frame or some overly pragmatic approach to M&E. He further adds that whatever the approach used, at least the basic principles for M&E which are measureable objective, performance indicator, target and periodic reporting should be used in a reporting tool. The advantages of a Log frame include simplicity and efficiency in data collection, recording and reporting. Projects use different tools and approaches, some of which are either complementary or substitute to each other, while others are either broad or narrow (World Bank, 2002). An evaluator however may choose to use a combination of methods and sources of information in order to cross-validate data (Nabris, 2002). The M&E system tools include performance indicators, logical framework approach, theory-based evaluation, formal surveys, rapid appraisal methods, participatory methods, public expenditure tracking surveys, impact evaluation, cost benefit and cost effectiveness analysis. The selection of these tools however depend on the information needed, stakeholders and the cost involved (World Bank, 2002).

Monitoring and Evaluation

PASSIA (2004) found out that monitoring and evaluation should be integral components of the project management cycle including project planning and design. Thinking in terms of monitoring and evaluation at the design stage facilitates the project stakeholders to think in terms of performance measurement even before implementation starts with a clear picture of expectations of what a successful project would look like. PASSIA (2004) further found out that poorly designed projects are hard to monitor or evaluate and that project plans defines the project's expected outcomes and goals and facilitates the evaluation to determine the extent to which the objectives were achieved. Therefore monitoring and evaluation is dependent on the project plan and can

only be as good as the project plan, meaning that if the project plan is flawed and unrealistic then monitoring and evaluation will not be of any significant value to the project stakeholders.

In a study conducted by Gyorkos (2003), he found out that; there should be a clear specification of how often monitoring and evaluation data is to be collected and from whom, there should be a specification of a schedule for monitoring and evaluation reports to be written and that the monitoring should be done regularly in order to be able to track the project and identify problems early enough before they go out of hand. The regularity of monitoring could be a function of the size of the project, but a monthly frequency would be adequate, monitoring every 3 months would still be acceptable (AUSAID, 2006: FHI, 2004). The monitoring would entail collecting data, analysis and witting a report at the specified frequency.

Patton (2010) in his developmental evaluation reported identification of project beneficiaries as stakeholders in monitoring and evaluation to be the primary feature for any effective monitoring and evaluation system in healthcare. He reported that identification of stakeholders in M&E enables project management to identify and understand their varied needs and to increase their understanding, acceptance and utility. Okello and Mugambi (2015) in their study reported that identification of stakeholders in monitoring and evaluation enables them to buy and support the M&E systems from the beginning of the project which later contributes to the sustainability of a project. However, they further reported that 52.5% of project beneficiaries are not fully involved in project activities and that 42% of project staff are always not aware of the existence of other stakeholders in their project and do not recognize their contribution in service delivery.

Umlaw and Chitepo (2015) in their study in South Africa reported on different structures of monitoring and evaluation units where 46% had stand-alone M&E units that are staffed by M&E senior officials who are directors, chief officers or deputy director generals, 75% have their M&E units joined with planning in organizations with dedicated M&E units, 45% joined with some other functions. On the influence of management in M&E, Abalang (2016) in his study found that management influences M&E systems by 58% during resource allocation at the initial stages of the project and 17% during implementation of the project.

METHODOLOGY

This study adopted a descriptive research design. Descriptive research design is a process of collecting data to answer questions concerning the current status of the subjects in the study. The target population were 413 as per the 2017 annual report and financial statement (Kibra Sub-County, 2017).

FINDINGS AND DISCUSSION

Descriptive Statistics

Financial Resources

The specific objective of this study was to establish the extent to which financial resources influence the implementation of water and sanitation projects in Kibra sub-county. Table 1 illustrated the results on financial resources.

The study sought to establish whether the organization has different sources of funds in water and sanitation project implementation. The results from the study revealed that, of the total respondents, 31.1% (56) strongly agreed that the organization has different sources of funds in water and sanitation project implementation, 36.7% (66) of them agreed, 4.4% (8) strongly disagreed while 27.8% (50) of the respondents were neutral. The mean value was 3.9 and standard deviation 0.992 implying that there are different

sources of funds in water and sanitation project. In determining whether all allocated funds for project are well managed financially, the study revealed that 10% (18) of the respondents agreed, 16.7% (30) disagreed, 52.8% (95) disagreed while 20.6% (37) of the respondents were neutral. The results summed up to a mean of 2.24 and standard deviation of 0. 848. The implication is that there is mismanagement of allocated funds for water projects. In a related question of whether misappropriation of project funds lead to incompletion of projects, results from the study revealed that, the question had a mean of 3.34 and standard deviation of 0.892. This was as a result of 10.6% (19) of the respondents strongly agreeing, 30.6% (55) agreeing, 17.8% (32) disagreeing, and 41.1% (74) being uncertain.

To find out whether, there is proper channel of resource mobilization for the projects, respondents were asked to state the degree to which they agreed with the above statement. Of the total respondents, 10.6% (19) of the respondents strongly agreed, 29.4% (53) of them agreed, 38.9% (70) disagreed, while 20.6% (37) of them were neutral. The results summed up to a mean of 3.11 and standard deviation of 1.06 meaning that there is a gap in terms of proper channel of resource mobilization for water projects. Finally, the study enquired whether the funding schedule affects completion of construction projects. The results revealed that 21.1% (38) of the respondents strongly agreed, 50.6% (91) of them agreed, 10% (18) disagreed while 18.3% (33) of the respondents were neutral. The results summed up to a mean of 3.83 and standard deviation of 0. 877. Generally, the results on financial resources summed up to a mean of 3.438 and standard deviation of 0.474.

Table 1: Financial Resources

		SD	D	N	A	SA	Mean	SD
The organization has different sources of funds in water and sanitation project implementation	Freq	8	0	50	66	56	3.9	0.992
	%	4.4	0	27.8	36.7	31.1		
All allocated funds for project are well managed financially	Freq	30	95	37	18	0	2.24	0.848
	%	16.7	52.8	20.6	10	0		
Misappropriations of project funds lead to incompletion of projects.	Freq	0	32	74	55	19	3.34	0.892
	%	0	17.8	41.1	30.6	10.6		
There is proper channel of resource mobilization for the projects	Freq	1	70	37	53	19	3.11	1.06
	%	0.6	38.9	20.6	29.4	10.6		
Funding schedule affects completion of construction projects	Freq	0	18	33	91	38	3.83	0.877
	%	0	10	18.3	50.6	21.1		
Financial Resources							**3.438**	**0.474**

Stakeholders Participation

The second objective of this study was to examine how stakeholder participation influences the implementation of water and sanitation projects in Kibra sub-county. Table 2 illustrated the results on stakeholder participation.

To establish whether stakeholders are involved in all the projects processes decision making, the respondents were asked to respond accordingly. 4.4% (8) of the respondents strongly agreed, 8.9% (16) of them agreed, 44.4% (80) strongly disagreed, 34.4% (62) disagreed and 7.8% (14) of the respondents were neutral. The item realized a mean of 1.94 and standard deviation of 1.132. Judging from the results, the stakeholders are not part and parcel of decision making during the different stages of the project. As a result, it could lead to lack of ownership of the water project.

Regarding whether stakeholders understand the mission, vision and objectives of the project, respondents were requested for their opinion and the results were such that, 32.8% (59) of the respondents strongly agreed, 25% (45) of them agreed,17.8% (32) strongly disagreed, 1.1% (2) of them disagreed while 23.3% (42) of the respondents were neutral. The results summed up to a mean of 3.54 and standard deviation of 1.416 an indication that the stakeholders are aware of the mission, vision and objectives of the project.

To ascertain if there is proper social interaction among stakeholder, results revealed that, 8.3% (15) of them strongly agreed, 41.1% (74) of them agreed, 16.7% (30) of them disagreed and 24.4% (44) of the respondents were neutral. This summed up to a mean of 3.22 and standard deviation of 1.116. The implication is that there is limited social interaction among stakeholders during the implementation of power projects.

Table 2: Stakeholders Participation

		SD	D	N	A	SA	Mean	SD
Stakeholders are involved in all the projects processes decision making	Freq.	80	62	14	16	8	1.94	1.132
	%	44.4	34.4	7.8	8.9	4.4		
Stakeholders understand the mission, vision and objectives of the project	Freq.	32	2	42	45	59	3.54	1.416
	%	17.8	1.1	23.3	25	32.8		
There is proper social interaction among stakeholders depending to their influence in the project	Freq.	17	30	44	74	15	3.22	1.116
	%	9.4	16.7	24.4	41.1	8.3		
All projects relevant stakeholder are provided by the projects updates information	Freq.	16	30	64	46	24	3.18	1.134
	%	8.9	16.7	35.6	25.6	13.3		
The project caters for all the needs of its stakeholders	Freq.	27	21	20	66	46	3.46	1.38
	%	15	11.7	11.1	36.7	25.6		
Stakeholders Participation							**3.65**	**0.610**

Furthermore, 13.3% (24) of the respondents strongly agreed that all project relevant stakeholders are provided with project update information, 25.6% (46) of them agree, 8.9% (16) strongly disagreed, 16.7% (30) disagreed while 35.6% (64) of the respondents were not sure if all project relevant stakeholders are provided with project update information. The implication is that there are gaps that exists regarding the provision of project update information to project relevant stakeholders.

Finally, 25.6% (46) of the respondents strongly agreed that the project caters for all the needs of its stakeholders, 36.7% (66) of them agreed, 15% (27) strongly disagreed, 11.7% (21) of them disagreed while 11.1% (20) of the respondents were neutral. The results summed up to a mean of 3.46 and standard deviation of 1.38 an indication that most of the stakeholders are catered for by the project. Generally, the results on stakeholder participation summed up to a mean of 3.65 and standard deviation of 0.610.

Tool and technique

The third specific objective of this study was to determine how tool and techniques influences the implementation of water and sanitation projects in Kibra sub-county. Table 3 highlighted the results on tools and techniques.

To determine if there is a proper technique on forecasting project activities, results revealed that, 6.1% (11) of them strongly agreed, 5% (9) of them agreed,62.8% (113) strongly disagreed, 20% (36) of them disagreed and 6.1% (11) of the respondents were neutral. This summed up to a mean of 1.72 and standard deviation of 1.169. The results imply that there are no proper techniques on forecasting project activities. It could therefore be difficult to identify shortcomings in the project before they actually happen.

Furthermore, 27.8% (50) of the respondents strongly agreed that variances are conducted on performance, schedule and cost of project activities, 45.6% (82) of them agreed, 5.6% (10) disagreed while 15% (27) of the respondents were neutral. The mean value of 3.83 was confirmation that variances are conducted on performance, schedule and cost of project activities.

In an attempt to establish if participatory monitoring and approach is used to determine performance, the respondents were asked to respond accordingly. 21.1% (38) of the respondents strongly agreed, 33.3% (60) of them agreed, 6.1% (11) disagreed and 33.3% (60) of the respondents were neutral. The item realized a mean of 3.57 and standard deviation of 1.078 revealing that there is use of participatory monitoring and approach to determine performance.

Besides, to find out whether tools are well assessed if they are applicable in organization activities, respondents were requested for their opinion and the results were such that, 17.2% (31) of the respondents strongly agreed, 28.3% (51) of them agreed, 13.9% (25) of them disagreed while 34.4% (62) of the respondents were neutral. The results summed up to a mean of 3.37 and standard deviation of 1.108 an indication that tools are well assessed if they are applicable in organization activities.

Finally, to find out whether employees are well trained on project tools in organization projects, results revealed that, 38.9% (70) of them strongly agreed, 40.6% (73) of them agreed, 7.2% (13) of them disagreed and 7.8% (14) of the respondents were neutral. This summed up to a mean of 4 and standard deviation of 1.124. On the whole, the employees are well trained on project tools in organization projects. Generally, the results on tools

and techniques summed up to a mean of 3.751 and standard deviation of 0.352.

Table 3: Tool and Technique

		SD	D	N	A	SA	Mean	SD
There is a proper technique on forecasting project activities	Freq.	113	36	11	9	11	1.72	1.169
	%	62.8	20	6.1	5	6.1		
Variances are conducted on performance, schedule and cost of project activities	Freq.	11	10	27	82	50	3.83	1.086
	%	6.1	5.6	15	45.6	27.8		
Participatory monitoring and approach is used to determine performance	Freq.	11	11	60	60	38	3.57	1.078
	%	6.1	6.1	33.3	33.3	21.1		
tools are well assessed if they are applicable in organization activities	Freq.	11	25	62	51	31	3.37	1.108
	%	6.1	13.9	34.4	28.3	17.2		
Employees are well trained on project tools in organization projects	Freq.	10	13	14	73	70	4	1.124
	%	5.6	7.2	7.8	40.6	38.9		
tool technique							3.751	0.352

Monitoring and Evaluation

The fourth and final objective of this study was to examine how monitoring and evaluation influences the implementation of water and sanitation projects in Kibra-Sub County. The findings on monitoring and evaluation are illustrated in table 4.

To find out if the organization has put in place mechanisms that ensure there is regular monitoring of project progress, the respondents were asked for their views on this and the results showed that 0.6% (1) of the respondent strongly agreed, 7.2% (13) of them agreed, 43.9% (79) strongly disagreed, 41.1% (74) disagreed and 7.2% (13) of the respondents were neutral. The item realized a mean of 2.79 and a standard deviation of 0.901 implying that sufficient efforts have not been made to ensure regular monitoring of project progress.

In regards to whether monitoring and evaluation facilitated transparency and accountability of the use of project resources, of the total respondents, 26.1% (47) of the respondents strongly agreed, 31.1% (56) of them agreed, 7.2% (13) disagreed while 21.1% (38) of the respondents were neutral. The results summed up to a mean of 3.47 and standard deviation of 1.339 meaning that monitoring and evaluation facilitated transparency and accountability of the use of project resources.

Also, the study enquired from the respondents whether the organization gives regular project progress to all project stakeholders. The results revealed that 9.4% (17) of the respondents strongly agreed, 38.3% (69) of them agreed, 17.8% (32) disagreed while 26.7% (48) of the respondents were neutral. The results summed up to a mean of 3.24

and standard deviation of 1. 095. The implication is that there is a gap in terms of disseminating regular project progress to all project stakeholders.

In relation to whether participatory M&E ensures that the project objectives and goals are achieved, the results were positive with 26.7% (48) of the respondents in strong agreement,40% (72) in agreement,7.2% (13) strong disagreement while 25.6% (46) of them were neutral. The item realized a mean of 3.78 and standard deviation of 1.074.

Finally, 25.6% (46) of the respondents strongly agreed that the organization has put in place project control systems that are very effective in their functions, 40% (72) of them agreed,7.2% (13) strongly disagreed and 25.6% (46) of them were neutral. The mean for the item was 3.44 and the standard deviation 1.173 suggesting that there is still room for improvement of the project control systems. Monitoring and evaluation summed up to a mean of 3.6987 ad standard deviation of 0.697.

Table 4: Monitoring and Evaluation

		SD	D	N	A	SA	Mean	SD
The organization has put in place mechanisms that ensure there is regular monitoring of project progress.	Freq.	79	74	13	13	1	2.79	0.901
	%	43.9	41.1	7.2	7.2	0.6		
Monitoring and evaluation facilitates transparency and accountability of the use of project resources.	Freq.	26	13	38	56	47	3.47	1.339
	%	14.4	7.2	21.1	31.1	26.1		
The organization gives regular project progress to all project stakeholders.	Freq.	14	32	48	69	17	3.24	1.095
	%	7.8	17.8	26.7	38.3	9.4		
Participatory M&E ensures that the project objectives and goals are achieved.	Freq.	13	1	46	72	48	3.78	1.074
	%	7.2	0.6	25.6	40	26.7		
The organization has put in place project control systems that are very effective in their functions.	Freq.	13	16	75	30	46	3.44	1.173
	%	7.2	8.9	41.7	16.7	25.6		
Monitoring and Evaluation							**3.6987**	**0.697**

Project Sustainability

This section of the analysis highlights the results on project sustainability. The findings are as presented in table 5. Regarding whether the project meets intended objectives as scheduled, of the total respondents, 7.2% (13) of the respondents strongly agreed that the project meets intended objectives

as scheduled, 6.7% (12) of them agreed,62.8% (113) strongly disagreed,20% (36) disagreed while 3.3% (6) of the respondents were unaware. The results summed up to a mean of 1.76 and standard deviation of 1.236 meaning that the project has failed to meet its objectives. The reason for this could be lack of stakeholder participation as well as mismanagement of the allocated project funds.

Further, respondents were asked whether there is proper utilization of project resources. The results showed that 20.6% (37) of the respondents strongly agreed, 46.7% (84) of the respondents agreed, 12.2% (22) of them strongly disagreed while 20.6% (37) of the respondents were neutral. The results summed up to a mean of 3.63 and a standard deviation of 1.177.

Also, the study sought to find out if projects are implemented and completed within the expected timeframe. Results indicated that 31.1% (56) of the respondents strongly agreed, 26.1% (47) of them agreed, 27.2% (49) disagreed while 10% (18) of the respondents were neutral. The results summed up to a mean of 3.94 and standard deviation of 0.84 indicating that projects are implemented and completed within the expected timeframe

Moreover, the study sought to establish if costs are minimized in the projects during its implementation. The results from the study indicated that 21.7% (39) of the respondents strongly agreed, 56.1% (101) agreed, 9.4% (17) disagreed and 7.2% (13) of the respondents were neutral. The item reported a mean of 3.5 meaning that costs are minimized in the projects during its implementation.

Finally, 20.6% (37) of the respondents strongly agreed that concluded projects normally meet the required standard,64.4% (116) agreed,11.7% (21) of them strongly disagreed and 3.3% (6) disagreed. The item realized a mean of 3.79 and standard deviation of 1.062 implying that concluded projects normally meet the required standard. Generally, project sustainability summed up to a mean of 3.674 and standard deviation of 0.68.

Table 5: Project sustainability

		SD	D	N	A	SA	Mean	Std. D
The project meet intended objectives/goals as scheduled	Freq.	113	36	6	12	13	1.76	1.236
	%	62.8	20	3.3	6.7	7.2		
There is proper utilization of project resources	Freq.	22		37	84	37	3.63	1.177
	%	12.2		20.6	46.7	20.6		
Projects are implemented and completed within the expected timeframe	Freq.	10	49	18	47	56	3.94	0.84
	%	5.6	27.2	10	26.1	31.1		
Costs are minimized in the projects during its implementation	Freq.	10	17	13	101	39	3.5	1.327
	%	5.6	9.4	7.2	56.1	21.7		
Concluded projects normally meet the required quality/standard	Freq.	21	6	0	116	37	3.79	1.062
	%	11.7	3.3	0	64.4	20.6		
Project sustainability							**3.674**	**0.68**

Inferential statistics

Table 6: Correlation

		Project sustainability	Financial Resources	Stakeholders Participation	tool technique	Monitoring and Evaluation
Project sustainability	r	1				
	p value	0				
Financial Resources	r	.528**	1			
	P value	0.000				
Stakeholders Participation	r	.450**	.156*	1		
	P value	0.000	0.036			
tool technique	r	.444**	.517**	0.122	1	
	P value	0.000	0.000	0.102		
Monitoring and Evaluation	r	.573**	.235**	.358**	.214**	1
	P value	0.000	0.001	0.000	0.004	

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

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

Regression

Table 7: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.753a	0.567	0.557	0.45294

a Predictors: (Constant), Monitoring and Evaluation, tool and technique, Stakeholders Participation, Financial Resources

The results in table 7 showed that the four predictors (monitoring and evaluation, tool technique, stakeholder participation and financial resources) explained 56.7 percent variation of project sustainability. This showed that considering the four study independent variables, there is a probability of project sustainability by 56.7% (R squared =0.567). Table 8 illustrated the results on the ANOVA Model.

Table : 8 ANOVA Model

	Sum of Squares	df	Mean Square	F	Sig.
Regression	46.921	4	11.73	57.178	.000b
Residual	35.902	175	0.205		

Total	82.823	179

a Dependent Variable: Project sustainability

b Predictors: (Constant), Monitoring and Evaluation, tool and technique, Stakeholders Participation, Financial Resources

Table 9: Coefficient of Estimates

	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	-1.466	0.402		-3.65	0.000
Financial Resources	0.449	0.085	0.313	5.306	0.000
Stakeholders Participation	0.274	0.06	0.246	4.606	0.000
Tool technique	0.332	0.113	0.172	2.94	0.004
Monitoring and Evaluation	0.365	0.053	0.374	6.852	0.000

a Dependent Variable: Project sustainability

CONCLUSION AND RECOMMENDATIONS

The findings on financial resources revealed that there are different sources of funds in water and sanitation project. However, there is mismanagement of allocated funds for water projects. Besides, there is a gap with regard to whether misappropriation of project funds lead to incompletion of projects. Similarly, there is doubt if proper channel of resource mobilization for the projects. Nonetheless, the funding schedule affects completion of construction projects.

Regarding stakeholder participation, the stakeholders are not part and parcel of decision making during the different stages of the project. As well, there is limited social interaction among stakeholders during the implementation of water projects. Nonetheless, they are aware of the mission, vision and objectives of the project. Furthermore, there are gaps that exists regarding the provision of project update information to project relevant stakeholders. Additionally, most of the stakeholders are catered for by the project.

The results on tools and techniques showed that there are no proper techniques on forecasting project activities. Further, variances are conducted on performance, schedule and cost of project activities. Besides, there is use of participatory monitoring and approach to determine performance. As well, tools are well assessed if they are applicable in organization activities. Also, employees are well trained on project tools in organization projects.

Finally, the findings on monitoring and evaluation established that sufficient efforts have not been made to ensure regular monitoring of project progress. There is also a gap in terms of disseminating regular project progress to all project stakeholders. Furthermore, monitoring and evaluation facilitated transparency and accountability of the use of project resources. In addition, participatory M&E ensures that the project objectives and goals are achieved. However, there is still room for improvement of the project control systems.

Conclusion

In conclusion, the study added sufficient insights on the influence of financial resources on project sustainability. It also filled a knowledge gap in terms

of the role financial resources play in projects sustainability of water and sanitation projects in Kibra sub-county. The implication is that a careful financial management strategy is likely to guarantee the success of water projects in the slums. Overall, for project sustainability to be achieved, there is need for efficient utilization of the financial resources.

Stakeholder participation is critical to project sustainability. Specifically, whenever stakeholders participate in the implementation of water and sanitation projects stakeholders, they feel a sense of ownership of the project and deem themselves as producers of the water project. In such a case, community-based perceptions are put into consideration hence the water projects are implemented with spirit of ownership. The challenge however is that stakeholders are not involved in all the projects processes. As such, the stakeholders lack the opportunity to decide on important aspects of the project such as where to station the water project, develop the objectives and the anticipated risks.

Furthermore, tools and techniques have a positive and significant effect on project sustainability. Through proper techniques on forecasting, there is proper planning and approximation cost of the project. As well, there is participatory monitoring and approach to find out if the project is sustainable or not. However, before even the tools are used, they are assessed if they are in tandem with the project activities. The employees are also required to have knowledge regarding the use of project tools.

Finally, project sustainability is dependent on monitoring and evaluation. For water projects, it is evident that there is regular monitoring of the project and efforts to ensure that the monitoring and evaluation is as good as the project plan. Other than that, transparency and accountability of water projects is facilitated with monitoring and evaluation. Therefore, project stakeholders are given regular project progress as a result of monitoring and evaluation.

Recommendations

The study established that financial resources should be given the attention it deserves if project sustainability is to be achieved. Specifically, it is crucial for all allocated funds for projects to be managed well. As well, there is need for proper channel of resource mobilization for projects and a proper funding schedule to facilitate the completion of the water project. Moreover, it is utmost necessary to have a proper channel of resource mobilization for the projects.

Based on the study findings, it is imperative to involve stakeholders in the implementation of water and sanitation projects. Specifically, stakeholders need to be involved in all the projects processes decision making, the mission, vision and objectives of the project. It is also important to involve stakeholders in the allocation of resources, checking on quality and making the necessary corrective measures. As well, is essential to give stakeholders the opportunity to air their views and ideas on the water project and have sufficient interactions with the project management.

Since tools and techniques have a positive and significant effect on project sustainability, it is crucial for water projects to have a proper technique on forecasting project activities. Besides, there is need for participatory monitoring and approach to determine performance. The employees need to be well trained on project tools in organization projects. Besides, the tools need to be assessed well to establish if they are applicable in organization activities.

Finally, regarding monitoring and evaluation, it is crucial for water projects to put in place mechanisms that ensure there is regular monitoring of project progress. Furthermore, to enhance transparency and accountability of project resources, it is important to have monitoring and evaluation. Besides, there is need for project control systems that are very effective in their functions. Furthermore, it is important to have M&E that ensures that project objectives are achieved.

Recommendations for further studies

This study recommends that another study be done to augment finding in this study. On a geographical dimension, this study was primarily limited to Kibra-Sub County. Therefore, it may not be appropriate to generalize to the whole population of water projects in this county or any other county. For this reason, further empirical investigations in different Counties and countries are needed. Also, there is no evidence that project sustainability is entirely dependent on financial resources, stakeholder participation, tools and techniques and monitoring and evaluation. As such, further research need to be carried out to establish what other factors contribute to implementation of water and sanitation projects. Further research on this will ascertain the validity of this concept.

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