

**INFLUENCES OF SUCCESSFUL IMPLEMENTATION OF PROJECTS IN
COUNTIES: THE CASE OF DRAINAGE UPGRADATION SYSTEMS IN MOMBASA
COUNTY, KENYA**

BY

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DECLARATION

This research project report is my original work and has not been submitted for any award in any University.

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DEDICATION

I dedicate this research to my children; Shamim, Shairin and Shadya for their support and understanding throughout this program, my late parents, Mr and Mrs Said Dhadho Maro for their determination to see their children through school and to all my siblings for their encouragement and moral support.

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ABBREVIATIONS AND ACRONYMS

CDA:	Community Development Association
CDC:	Community Development Committee
CIP:	Community Infrastructure
EPM:	Environmental Planning and Management
IA:	Irish Aid, now Irish Aid
IDA:	International Development Association (World Bank)
NIGP:	National Income Generation Program
NTF:	Norwegian Trust Fund
IPD:	Initial Project Definition
KPMG:	Kenya Project Management Group
PCP:	Project Construction Policy
SCP:	Sustainable Cities Program
UNDP:	United Nations Development Program
USEP:	Urban Sector Engineering Project
USRP:	Urban Sector Rehabilitation Project
UUN:	Urban Upgrading Network
UUS:	Unplanned Urban Settlements
TST:	Technical Support Team

ABSTRACT

The survey study investigated influences of successful implementation of projects in Counties: The case of drainage upgradation systems in Mombasa County, Kenya. The objectives of the study established the influence of feasibility studies, project plans, project funding, socio political factors and availability of qualified and experienced project teams to the successful implementation of drainage upgradation projects in Mombasa County. The descriptive research design study on a sample population of 50 was undertaken to establish the reasons why drainage upgradation seems to ever be in a constant state of disrepair thereby questioning the very purpose of drainage project upgrading systems. It hence sought to find the best solution that would lead to successful drainage upgrade project systems in the county. Response rate of questionnaires issued to respondents was 100%. The findings of this study revealed that indeed there were influences to successful implementation of drainage project upgrades. With regard to the influence of feasibility studies on the successful implementation of drainage project upgrades, respondents agreed that such studies were a prerequisite. The mean score associated here was 4.12 thereby indicating the views of respondents to be in agreement. The respondents were also in agreement that poor feasibility causes delays in implementation of drainage projects upgrade. A mean score of 4.513 was apparent. Findings show that 90% majority of the respondents had drainage project plans prior to the implementation of upgrade, but in spite of this, their success or lack of it were varied according to respondents' views. The mean score posted was 3.62 revealing respondents barely thought project plans were helpful in implementing project upgrades. The respondents ranked misappropriation of funds and lack of adequate funding as the greatest factors that would stall the successful implementation of drainage projects upgrade. The mean score in retrospect was 4.76 and 4.81. Respondents also had mixed opinion on the influence of politicians in influencing drainage upgradation systems. Majority of respondents 37 (74%) said there were no politicians directly interfering with implementation of drainage upgrades, but 13 (26%) indicated that there were politicians interfering with implementation of drainage project upgrades. Those who agreed said that politicians had influence on the tendering process and selection of contractors. The findings on the other hand show that availability of semi & skilled labour helps to a large extent expedite implementation of drainage project upgrades. The mean score was 4.12 which had inconsistent opinions as is evident from a standard deviation of 1.430. Recommendations from this study are that the County government should ensure preliminary investigations or enquiries are conducted into the potential benefits of undertaking projects before embarking on the same, ensure adequate planning for projects right at inception and take into account uncertainties such as project complexities, changes in designs in terms of scope which could cause delays in completion and ensure adequate funding is available based on reliable estimates by the quantity surveyor. In addition, developmental initiatives such as drainage upgrades or their implementation should be differentiated from political patronage and that only competent and skilled personnel are recruited to undertake drainage upgrades. County executives, supervisors and drainage project management teams as well as contractors will learn from these findings and aid the citizens of the county in ensuring a healthy and clean environment that shall play a positive role in attracting economic benefits.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Projects the world over have been implemented using diverse practices with the results sometimes neither being similar nor indifferent subject to parameters employed (Jacksonn, 2013). These practices seemingly therefore may not have a bearing on whether implementation will or will not be a success; the implementation notwithstanding. The running and execution of any project including one of a drainage upgradation kind normally requires putting in place a robust project management team. The team is often charged with the onus of managing every essence of the project.

Project management is a management discipline that emphasizes decision-making and operationalizing of strategies to bring about projects' success. Projects are complex and involve a large number of parties in execution. Their implementation practices thus are dependent on a myriad of factors (Kimanzi, 2012). One among the many of these could be demand oriented. The demand for major projects has never been greater; and are largely driven by an increasing regional and global population, aging infrastructure, increasing urbanization, and continued development of emerging markets (Jagboro, 2012). With demand come the challenges for users, contractors, and other stakeholders to successfully deliver the much-needed infrastructure projects (Taleb, 2009).

This appears to be true insofar as drainage upgrading is concerned. According to Jagboro (2009), drainage projects have become increasingly complex and challenging. What worked in the past is no longer good enough today and will definitely not be good enough in the future given the dynamics of the external environment for the most part. Chan, Suhaiza, and Yudi (2008) assert that good and efficient management of projects is essential, if the intended aims are to succeed. Equally important is ensuring that suitable best practices are carried out. These acknowledge Karim (2014) that factors of success may differ subject to peculiar situations and circumstances. Matta and Ashkenas, (2005), further argue that implementing similar projects in all situations often lead to project failure. They provide instances in India, Brazil and Nigeria where the drainage projects have led to mixed results because of use of a common practice irrespective of varying situations; some successful and others not.

Dr. Odero (2013) insinuates how drainage upgrading can be complicated even in light of cultural practices and density of residents. He goes on to give a case in point of Kibra and Mathare informal settlements otherwise referred to as slums that are dogged by the practice of flying toilets hence questioning the prevailing drainage systems. Upgrading drainage projects therefore seems to be increasingly becoming an issue of major concern among stakeholders especially in light of time to manage the upgrade and the quality. The implications appear to vary far and wide and include issues such as accumulated rate of interests by commercial banks, cost overrun, inflation, pressures emanating from users and the possibility of disputes and claims leading to litigations or arbitrations (Osazuwad, 2010).

According to Smith (2011), large drainage projects in the UK particularly are inherently complex and the dynamics for their implementation involves proper planning, identifying users and characteristics of usage, and assessing actual needs and requirements accurately to the project team. Briefing is critical to the successful upgradation of any project, as there may be many limitations, inhibiting effectiveness of such undertakings, resulting infrequent and severe drainage project delays, breakages and wanting quality. Such factors affect upgrading of projects (Owuor and Ruth, 2013). The impact of omissions and commission errors has the likely possibility of cost and time overrun.

In India, the population rate alone has had terrible consequences of drainage systems let alone the upgrading of drainage projects. This has resulted in open toilets that have the propensity of spreading chronic diseases such as cholera, bilharzia, and inter alia amoebiasis'; a tendency witnessed in Kenya in areas of Kibra and Mathare inter alia (Odero 2014). Mukesh (2012) contends that results from India Development Caucus indicate that the average delay in drainage system upgrade arises because of closures that impede the project. Others being escalation of material prices, availability of resources as planned through project duration, availability of personnel with a high experience and qualifications, quality of equipment and raw materials in project, and leadership skills for project managers (www.thefreelibrary.com, visited on 19.1.2015). Egypt construction industry is also faced with the problem of drainage upgrade project. Ogunsemi and Jagboro (2006) noted that one of the most serious problems is the project cost overrun, with attendant consequence of completing projects at sums higher than the initial sum.

Political insurgency also affects drainage project implementation negatively, as well as the absorptive capacity as is the case of construction projects. According to Jonathan (2013) the attributable causes having the capacity to influence county construction projects without necessarily referring to drainage projects in Kenya, seems to be monies allocated for a project, financing by the contractor during the project, changes in designs by the client or his agent during the construction, delays in contractor's payment and non-utilization of professional construction management. Drainage systems may face similar exposure.

In Mombasa County, which is located in the coastal area of Kenya, the drainage systems have thus far been dogged with issues pertaining to maintenance shortfalls over their lifetime and inter alia design flaws which have overstretched the infrastructure beyond their capacity (NEMA report, July 2012). This has prompted the researcher to conduct a study on the influences of successful implementation of projects in Counties: The case of drainage upgradation systems in Mombasa County.

1.2 Statement of the Problem

Drainage systems have existed since time in memorial and are a vital component of any social structure. For this structure to continue with minimal disruption, the drainage system must be upgraded periodically. This is especially true given the need for the society to keep up with growing external situations and pressures (Mwangi, 2013). This upgradation over the different periods in time has been tackled as an entire project which will ever be ongoing from generation to generation, however, it is scantily done according to stakeholder expectation and user pressures (UNDP, 2014). In the East Africa region, successive governments have emphasized on improving environment health through drainage upgrades which has been viewed as having a domino effect on health status of a nation thus reflecting in the national economic growth (IDA, 2013). Despite the emphasis however, upgrade of drainage systems has not been at par with the level of population growth, urbanization and industrialization.

In Kenya which is a developing country, drainage systems have been left in a constant state of disrepair more particularly in Mombasa. Mombasa has a very fluid population because of work migration from neighboring towns of Malindi, Kilifi, Mariakani, and Kwale (GoK report, 2013).

Despite a census report that put the population at 939,370 (1999 Census report], in excess of a million visit and work in the Central Business District (CBD) during day hours and as few as a third of that during the night. This greatly overstretches the drainage facilities. Furthermore, the growth of the real estate sector and exponential rise in informal settlements has added pressure to the infrastructure and leaves the county government no alternative but to upgrade the system.

According to Mobey and Parker (2002), to increase the chances of a project succeeding it is necessary for the organization to have an understanding of what are the critical success factors, to systematically and quantitatively assess these critical success factors, anticipating possible effects, and then choose appropriate methods of dealing with them. It is against this background that the researcher aspired to conduct a study to examine influences of successful implementation of drainage upgrade systems. The aim of the study was to assist the County government, project managers, county executives, project teams and other stakeholders to avoid common pitfalls and errors of commission or omission while planning for; or undertaking drainage upgrading projects in Mombasa County.

1.3 Purpose of the Study

The purpose of this research was to examine influences of successful implementation of projects in Counties: The case of drainage upgradation systems in Mombasa County, Kenya.

1.4 Research Objectives

The study was guided by the following objectives:

- i. To investigate the influence of feasibility study on the successful implementation of drainage upgrading systems in Mombasa County.
- ii. To establish the influence of project plans in the successful implementation of drainage upgrading systems in Mombasa County.
- iii. To examine the extent to which funding influences the successful implementation of drainage upgrading systems in Mombasa County.
- iv. To determine the influence of socio-political factors to the successful implementation of drainage upgrading systems in Mombasa County.
- v. To assess the extent to which availability of project teams influence successful implementation of drainage upgrading systems in Mombasa County.

1.5 Research Questions

The questions that guided this study were:-

- i. What is the extent to which feasibility study influences the successful implementation of drainage upgrading systems in Mombasa County.
- ii. What is the extent to which project plans influences the successful implementation of drainage upgrading systems in Mombasa County.
- iii. To what extent does funding influence successful implementation of drainage upgrading systems in Mombasa County.
- iv. What is the influence of socio-political factors on successful implementation of drainage upgrading systems in Mombasa County.
- v. To what extent does availability of project teams influence upgrading of drainage systems in Mombasa County.

1.6 Significance of the Study

The findings of this study will be important to the people of Mombasa county prima facie. They will benefit by using drainage facilities that are workable and free from collapse on account of mitigating user overstretch of the system. The central government will also benefit because of the healthy environment that shall emanate from identifying critical factors that will influence the successful implementation of drainage upgrading systems, now and in the future. This will act to pool investors thereby leading to economic development. This development will further be propelled through the employment facilitated in the process of upgrade. Academicians will also learn from the findings of the study what works and what does not during drainage upgrading systems in Mombasa County. Engineers will also find this research invaluable given its timeliness and topical nature. Social scientists will all benefit from the findings of this study.

1.7 Assumptions of the Study

The study made assumptions that documented information on the study topic was adequate for this report. This study also used questionnaires and interview guides which were valid. It is assumed that the respondents were truthful and in context in giving their answers. In addition, that the sample population, is good enough to be representative to generalize to other Counties in Kenya. All assumptions ended up justified and did in fact hold good.

1.8 Delimitations of the Study

This research investigated influences of successful implementation of projects in counties: The case of drainage upgradation systems in Mombasa County. Mombasa County constitutes six constituencies viz. Likoni, Mvita, Changamwe, Jomvu, Kisauni and Nyali. Given that this study was a survey, convenience sampling was adopted. In this regard, the study encompassed drainage contractors, county executives, drainage project managers and project assessors.

The success of the study was facilitated by the fact that I work for the Mombasa County government and therefore could easily access government reports on the study area. In addition, access to respondents to distribute and collect the questionnaires was easy since the data was collected within the County.

1.9 Limitations of the Study

The study was limited by unavailability of documented information about drainage systems and designs. Historical sites that have been gazetted under Museums in Kenya had little or no information on drainage systems and upgrades. There was also initially lack of willingness by Mombasa county government officials to give information due to fear of reprisals. The researcher overcame the identified limitations by explaining to respondents on the purpose for which the study was sought. To break secrecy and/or lack of openness due to the confidentiality and secrecy policy in most government institutions that restrict some of the respondents from releasing vital information, the researcher re-assured the respondents of confidentiality and that the information collected thereof was purely for academic reasons.

1.10 Definitions of Significant Terms Used in the Study

Drainage or drainage system: A system to direct sewage, raw material or refuse from a house hold or industrial establishment to an area identified for the processing of the contents it carries.

Project upgrade/upgradation: This refers to a drainage project improvement(s) of a significant kind entailing more than Kshs 50,000 in cost.

Feasibility Study: These are preliminary investigations or enquiry into the potential benefits associated with undertaking or execution of a specific activity or project upgrade task.

Project Plan: A formal document designed to guide the control and execution of a project (Project Management Body of Knowledge, 2012).

Funding: These are tangible valuables that come in the form of money, manpower, material and inter alia machinery (Okato 2012).

Socio-Political factors: These are important forces/relationships in society whose involvement in a project undertaking or execution are impacted or have a bearing on the success or otherwise in the implementation or completion of a project.

Project Teams: Refers to the personnel/technicians that are involved in the drainage upgradation works and whose skills, competence and experience is needed for execution of projects.

1.11 Organization of the Study

This study was organized in five chapters. It entailed a project report submission. Chapter one provided a background, statement of the problem, research objectives, research questions, purpose of the study, significance of the study, and delimitations. Chapter two outlined the various schools of thought (Literature review); Chapter three outlined the research design and methodology that was used for purposes of completing the study. It also described research design, target population, sample, sampling procedure and data collection instruments, pilot testing of the instruments, data collection procedures and data analysis techniques. Chapter four contained an analysis and interpretation of data whereas chapter five presented a summary of findings, discussions, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provided related literature to the topical area of influences of successful implementation of project in Counties: The case of drainage upgradation systems in Mombasa County. The Chapter gives an overview of successful implementation of drainage upgradation systems in project management from different countries in the world. In addition, the chapter demonstrates linkages between influence of feasibility study, project plans, funding aspects, socio political factors and availability of projects teams to the successful implementation of drainage systems across the globe.

Mugenda & Mugenda (1999) posit that literature review involves the systematic identification, location and analysis of documents containing information related to the research problem. In this study, literature review focused on the influence of feasibility study, project plans, funding, socio political factors and availability of qualified and experienced project teams in the successful implementation of drainage upgradation projects globally, in the region and locally. The study, which had been drafted considering the research objectives, also provided highlights of research gaps.

2.2 Overview of Successful Implementation of Drainage Upgradation Systems in Project Management

Drainage systems the world over have always been improved from one generation flowing into another. In France, the Catacombes de Paris or the underground city of Paris as it is otherwise referred to is renowned for its drainage and sewerage systems so much so that it has gone into history as the most sophisticated underground channel (Gaul, 2008). Gaul went on to note that the drainage systems to date have been working for close to two centuries feeding out of mainstream Paris.

This was and has come to be referred to as the subsurface system of implementation because of its element of serving cities through channels below surface grounds. But there also exists surface drainage systems. In Brazil, Paulo (2007) submits to a surface system of drainage implementation being dominative.

This system is defined by Proxol (2007) as a drainage system that is open and transports refuse openly from one place to another. It has been known to have its inherent defects which have been debatable. Patel (2008) acknowledges the surface system of drainage implementation being used in the vast sub-continent of India. Patel too has mixed feelings on the use and possible distractions of this system. It can neither be referred to as successful nor criticized; it has only been opted for as a system traditionally used. David (2010) compares the surface open drainage system with the subsurface drainage systems and notes the difference as being distinctive although they more or less carry out the same functions. The former is attributed to be a disgrace and an eyesore of a society by the elite but not so by the relatively downtrodden despite the reality that both classes use the drainage system. The latter is viewed as more in line with a civilized drainage system which Gala (2005) asserts to being arduous to implement let alone maintain.

In Indonesia, Thraabanat (2006) narrates to the drainage usage implementation system being varied. He however points to the unique system of methane. This is otherwise referred to by Sharma (2006) as the gas implementation system. All the material in the drains is eventually put to fire. Some is converted to methane gas and reused or misused. It is not clear how. Anderson (2008) denotes to normal repairs as a mode of increasing the usage of drainage systems. It is hence implemented everywhere to some degree or the other. The state of repair or disrepair is neither here nor there argues John (2010). He attempts to look objectively and subjectively to repairs being an implementable system of enabling longevity in drainage use. Project upgrades have the potential to face certain hurdles just as may occur in any project, contends Foxtrot (2010). One among these, he continues to predict could be time constraints.

Ferry, Brandon, and Ferry, (1998) argue that many projects experience failure due to the uncertainties associated with project upgrade which include weather, materials, equipment, money and profitability disagreements between clients, contractors and sub- contractors. Others are statutory regulations, economic and political issues and functionality and purpose.

It is clear that some of these failures occur regardless of careful planning due to uncontrollable conditions such as climate change, recession, delayed deliveries etc. Therefore addressing the controllable issues, contractors can incorporate these problems into their specification. To prevent these failures from constantly occurring, the types of failures need to be addressed so future project upgrades do not fall into the same category of 'unsuccessful project upgrades'.

2.3 Influence of Feasibility Study on the Successful Implementation of Drainage Upgradation Systems

Feasibility studies are preliminary investigations or enquiry into the potential benefits associated with undertaking or execution of a specific activity or project upgrade task. The study in construction helps identify whether the building will stand strong on the site and whether there are any hazards that can result as a result of having the construction.

The feasibility or concept stage of the project life cycle is the first development stage undertaken after determining the reasons and benefits for undertaking a project. This usually consists of a study, where an Initial Project Definition (IPD) is developed in outline, demonstrating that the project is feasible, and identifying how the project should be structured in order to deliver the benefits expected of it. Time extensions are very serious and chronic problems in project upgrade (Kazaz and Ulubeyli 2009). The late implementation of a project upgrade results in the overrun of the budget allocated at project upgrade inception as well as the delay of the potential income that could be obtained with the operation of the constructed facility. Similarly, the early upgrade may pose cost extension due to complications of overstaffing. Although some changes in a time schedule can normally be made according to client's demands, upgrade projects are described as "successful" on condition that they are completed in the planned time, budgeted cost, and specified quality (Ritz 1994).

According to Enshassi et al, (2009), delays are one of the most important factors affecting project performance. In practice, total project duration may potentially go beyond the calculated limits of the scheduled time because of the owner, contractor, subcontractors, or some technical, legal, and natural difficulties. Site location in terms of geographical, political and functional context fixes the site in relation to climate conditions, adjacent land uses, utilizes and infrastructure availability, and the social cultural environment. The topography and slope determine drainage patterns and problems, on-site and off-site views, erosion and sedimentation, and suitability for different uses and activities. The general climate of the location determines the design form and also implementation scheduling.

Feasibility studies for project upgrade in Kenya vary, with some of the issues such as foundation soil conditions only evident on excavation. This subsequently has an effect on nature of upgrade and technology to employ.

For instance, the study of Mombasa County has varied characteristics ranging from sandy soil, loam terrains and some parts with hot, flat and clay soil (Source: County Works Office – Mombasa). Feasibility studies thus contribute immensely to the viability of any project; and are an integral contemplation to its pursuit. The pursuit of a project to its logical conclusion is to a large extent going to depend upon how viable it is (Alison, 2009). A viable project in the words of Andia (2010) is a doable one.

2.4 Influence of Project Plans in the Successful Implementation of Drainage Upgrading Systems

Given the sprouting up of population, certain developments have obscured drainage plans and projects. The real estate sector has been one of those among many seen to play a major role. In some cases files have disappeared or have been conveniently misplaced due to under-hand dealings. What is more, the former Jua kali sector (Now called ‘small and medium entrepreneurs’) players and formal business sector players have interfered with drainage projects in terms of either stopping, preventing their upgrades or altering the system projects all together. As a result, many major project upgrades seem to fail to meet schedule objectives (Al-Momani, 2011). The duration of the upgrade projects is increasingly becoming an issue of concern among the stakeholders in the construction industry.

This is because of the increasing rates of interests, commercial pressure, inflation and the potential of a construction project to result in disputed and claims leading to litigation or arbitration (El Razek, Bassioni and Mobarak, 2008). On the other hand, Amusan, (2009) discovered that inadequate planning, contractors project inexperience, inflation, incessant and variation order, change in project design, project complexity, shortening of contract period and fraudulent practices are factors that results in cost overrun insofar as project upgrades are concerned. The same cannot quite be said to be automatic in drainage upgrade projects. According to Bathurst and Butler, (1980) cost and designs are closely linked and it is important to ensure that projects are delivered within their approved budgets and that the design represents value for money.

Projects should be designed taking account of both capital and operational costs, whole-life costing is an integral part of the design process, and whole- life costs of key components of a facility should be considered during the design process (Majid, 1998).

2.5 Influence of Funding to the Successful Implementation of Drainage Upgradation Systems

Funding in the words of Okato (2012) are tangible valuables that come in the form of money, manpower, material and inter alia machinery. All these may likely have a bearing on any project. This could include upgrading projects including drainage projects. Finance plays a key role in project planning revolving around upgrades (Ashworth, 1994). Many financing options involve the participation of third parties such as banks or bond underwriters. For private facilities such as office buildings, it is customary to have completely different financing arrangements during the upgrading period and during the period of facility use.

On the other hand, the options for borrowing by contractors to bridge their expenditures and receipts during construction are relatively limited (El Razeq, et al 2008). Upgraded projects are rated very successful if the work is completed within budget and to the deadlines and quality agreed in the specification. However, the sad truth is that not all projects are guilty of being successful (Barnes, 2012). Chan et al, (2008) in his paper submitted to the Chinese Engineering Annual Forum held that the most important aspect in project upgrade is financing by the contractor during the upgrade itself, changes in designs by the owner or his agent during the reconstruction, delays in contractor's payment and non-utilization of professional construction management.

In (2009), Ravindra argued that investment in a constructed facility represents a cost in the short term that returns benefits only over the long term use of the facility. Thus, costs occur earlier than the benefits, and owners of facilities must obtain the capital resources to finance the costs of construction Pilcher, (1992). A project cannot be upgraded without adequate financing, and the cost of providing adequate financing can be quite large (Dissanayaka and Kumaran Sammy, 1999). For these reasons, attention to project finance is an important aspect of project management. Finance is also a concern to the other interests involved in a project such as the general contractor and material suppliers (Kerzner 1998).

Unless the client immediately and completely covers the costs incurred by each participant, these interested parties are bound to face financing problems of their own (Oduami and Olusanya, 2000). To ensure value for money, a balance should be struck between initial capital costs and expected replacement costs over the life of the facility (Bosire, 2012).

Ochieng and Tubey, (2013) observe that at a more general level, project finance is only one aspect of the general problem of corporate finance. If numerous projects are considered and financed together, then the net cash flow requirements constitute the corporate financing problem for capital investment. Ashworth, (1994) postulates that whether project finance is performed at the project or at the corporate level does not alter the basic financing problem.

In essence, the project finance problem is to obtain funds to bridge the time between making expenditures and obtaining revenues (Kerzner, 1998). Based on the conceptual plan, the cost estimate and the construction plan, the cash flow of costs and receipts for a project can be estimated. Normally, this cash flow will involve expenditures in early periods (Mbachu and Olaoye, 1999). Covering this negative cash balance in the most beneficial or cost effective fashion is the project finance problem. During planning and design, expenditures of the owner are modest, whereas substantial costs are incurred during construction (Harris and MacCaffer, 2005). Only after the facility is complete do revenues begin. In contrast, a contractor would receive periodic payments from the owner as construction proceeds. However, a contractor also may have a negative cash balance due to delays in payment and retain age of profits or cost reimbursements on the part of the owner Bathurst and Butler, (1980). For donor funded projects, such funds or grants usually come with restrictions, expectations or other strings attached. Donor funded upgrades must meet the grants demands for accountability, often defined through donor-required financial and programmatic reports. In addition to restrictions imposed on many grants and donations, along is the uncertainty of disbursements of these funds, which make it difficult for long term planning and improvement of services to reach the desired user satisfactory levels.

2.6 Influence of Socio-Political Factors on Successful Implementation of Drainage Upgradation Systems

Society and political class are two important forces that cannot be ignored so easily for any project to be upgraded successfully.

Jameel, (2009) asserts that while increased community participation has been advocated as a way to improve the quality of public projects and services, evidence from randomized evaluations provides very mixed results about its effectiveness.

While it is clear that the details and context matter for this type of program, some common themes about what works are beginning to emerge.

Programs where the community had more direct control over service providers tended to work better. Community involvement is more effective when people are given specific tasks and training. On the other hand, Olusegun and Alabi, (2011) argue that causes of project abandonment are as a results of inadequate planning, inadequate financing, inflation, bankruptcy of contractor and variation of project scope and political factors among others. These cause disappointment of the populace or proposed users, lowering standards, wastage of resources, and reduction in employment opportunities and difficulties in attracting foreign loans.

Stakeholder contribution cannot therefore altogether be ignored as attributed to by Jackson (2006) in his paper to the European congress. He opined that programs where the stakeholders had more direct control over service providers seemed to work better. Their involvement appears more effective when people are given specific tasks and training. Various scholars have thus made a strong case on the efficient management of the relationship between a project and its stakeholders as it remains an important element in their successful implementation.

2.7 Extent to Which Availability of Project Teams Influences Successful Implementation of Drainage Upgrading Systems

Bruce and Dulipovici (2001) defined labour shortages in simple terms as the difficulty in finding the right people to fill the available jobs. Labour shortage is a problem faced by many countries all over the world. This is shown by the reports by Wang (2010) and Hanim (2010). As stated by Trendle (2008), there are several causes of labour shortages; a shortage of skilled labour can result from an increase in the demand for labour. This is due to the increase in demand for the goods or services provided. In the construction industry context the buying power of the consumer and this will lead to higher quality buildings being produced to meet increasing demands. Thus, more skilled personnel are required to produce high quality work. The second cause of labour shortage is the cost of foreign labour.

Hanim (2010) claimed that higher recruitment costs of foreign labour due to payment for the levy, medical checkup, security bond and medical costs by the employers lead to labour shortages in Malaysia. In the Malaysian construction industry, unskilled foreign laborers are widely used because the prices of foreign laborers are much cheaper compared to local laborers.

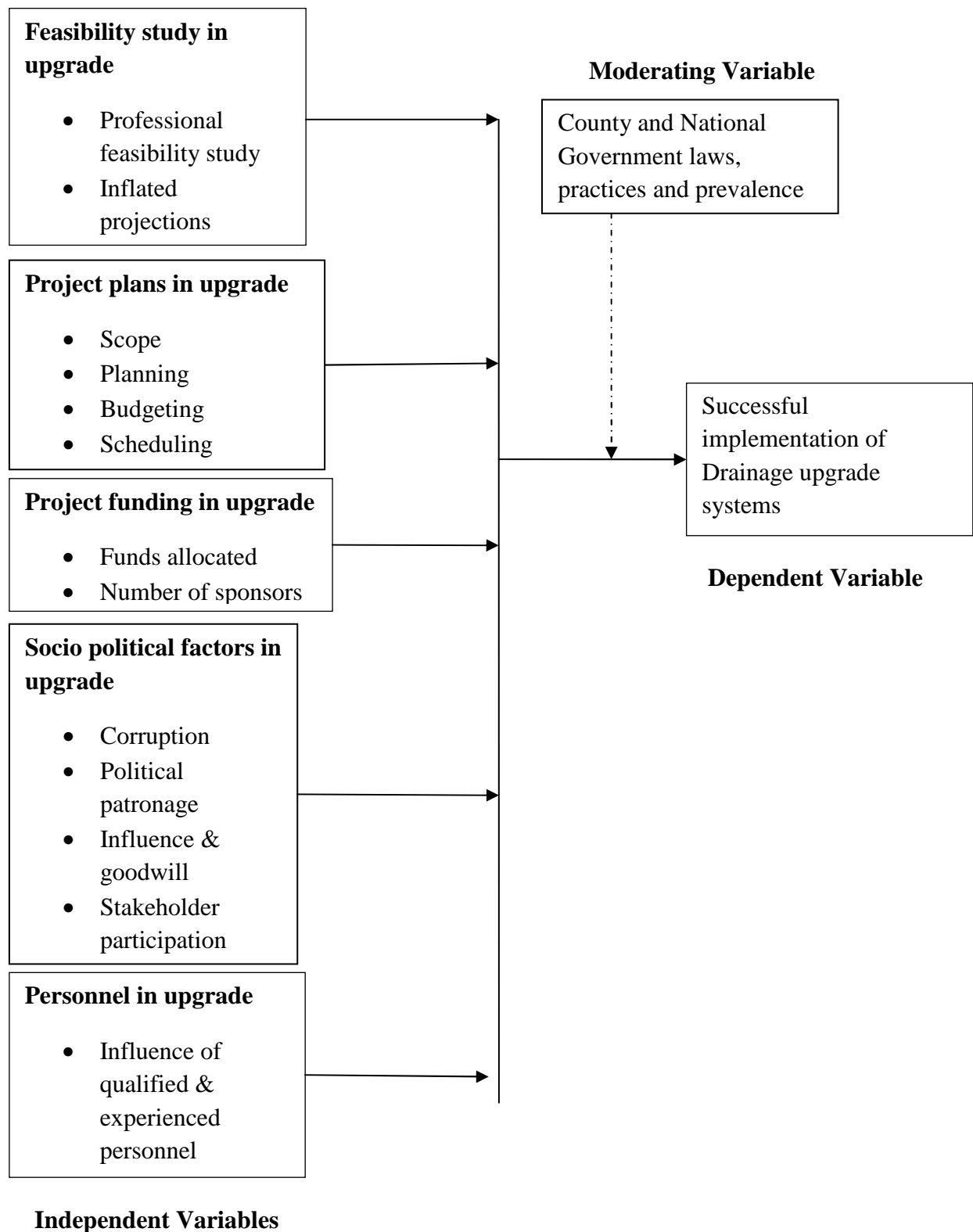
Hence the increasing cost to hire foreign labour will result in labour shortages in the construction industry and at the same time; contribute to delays in construction projects in Malaysia. Sweis et al, (2008) also indicated that shortage of manpower including skilled, semi-skilled and unskilled labour causes delays in construction projects. This is further supported by Sambasivan and Yau, (2007) who conducted a study in Malaysia and found out that labour supply is ranked number seven out of 28 causes of construction delay. It shows that labour supply is the major cause of delay due to the construction industry in Malaysia making use of foreign workers, some of which are working illegally in Malaysia. These illegal workers are frequently detained by Malaysian immigration officials and deported, causing further shortages of labour in the construction industry.

Effective and efficient site management of any upgrade by contractors during implementation phase is also very important to ensure projects are completed on time. This is because poor coordination contributes to delay from estimated completion time. Poor site and lack of proper management may hence occur when contractors do not have enough experience or knowledge in managing the project team (Kadir et al., 2005).

2.8 Conceptual Framework

Gakuu C. (2014) submits that a conceptual framework is a research tool intended to develop awareness and understanding of the situation under scrutiny and to communicate how variables are related in the research. He adds that it is the researchers own position on the problem and gives direction to the study where relationships of the different constructs being investigated are shown, and provides clear links from the literature to the research goals and questions.

Figure 2.1: Conceptual Framework



In the above conceptual framework in figure 2.1, the variables under study are the following;

i. Independent variables –These variables were looked into in order to determine their effect or influence on the dependent variable which is the successful implementation of drainage upgradation projects in Mombasa County.

Feasibility study before upgradation – A professionally done preliminary study before the drainage upgrade was expected to reduce cases of inflated projections and positively influence the successful implementation of drainage upgrading systems.

Project plans – This spelt out the scope of the upgrade. It was also expected to ensure proper planning of the project, what resources that are required and scheduling of work plans. Project plans were expected to positively influence the successful implementation of drainage upgrading systems.

Project funding – This variable brought out funding implications in the drainage upgrade. It looked into whether funding was adequate or not, and whether the nature of funding was from government, donors/sponsors or private public partnerships (PPP) for the drainage upgrade. Adequate funding for drainage upgrading systems was expected to positively influence their successful implementation.

Socio political factors in upgrade – This variable explored corruption, political patronage/interference/goodwill and stakeholder participation in drainage upgradation projects in Mombasa County. Socio political factors were expected to have a positive influence on the successful implementation of drainage upgradation projects.

Personnel in upgrades – Availability of qualified, experienced project teams to undertake drainage upgradation projects in Mombasa County were expected to influence the successful implementation of such projects.

ii. Moderating variables

County and National government laws, practices and prevalence – Schedule four of the Constitution (2010) has devolved the legislative function of public works and drainage systems.

The legislative framework thus spelt out the technical and operational issues that project teams complied with during drainage upgradation systems.

This was expected to be an intervening influence in the successful implementation of drainage upgradation projects in Mombasa County.

iii. Dependent Variable – The dependent variable in this study was, ‘The successful implementation of drainage upgradation projects in Mombasa County’; it attempted to indicate the total influence arising from the effects of the above identified independent variables.

2.9 Summary in Literature Reviewed

The researcher established the underlying concepts in the area of drainage upgrades as well as what other researchers have found in their previous studies. The conceptual framework is outlined showing the relationship existing between the variables under study. From the preceding cited literature, it is evident that drainage project upgrade problems were not only experienced at the local level but also at the global level. If and when inappropriately upgraded, the consequences of the failed project upgrade are bound to be far reaching. Over and above this, project upgrade was expected to be affected by several factors including lack of funding; lack of community participation in all the stages of the project upgrade; lack of political, economic, technical and manpower constraints; operation and maintenance personnel; and lack of in-depth planning process which focuses on the geographical, economical and socio cultural conditions of the target area.

Many studies have been done on influences of successful implementation of construction projects or causes for delays in projects’ construction like Al-Momani, (2000); Sweis, et al, (2008); Rosazuwad, (2010); Sambasivan and Yau, (2007); Enshassi et al, (2009); Ochieng and Tubey, (2013) and Chan et al, (2008); Jagboro, (1998); Majid, (1998) and El Razek et al, (2008) to mention but a few. None of these studies were however African oriented or that have looked into detail on aspects pertaining to influences of the successful implementation of drainage project upgrade systems in Kenya, more so Mombasa County. This was an area which thus called for the collection of hard data from the field and analyzing them so as to determine how the findings can be better used in ensuring satisfactory project upgrades especially with regard to drainage systems. Thus, no factual contribution of other scholars and/or researchers has been made in the target area.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology that was used in unearthing influences of successful implementation of drainage upgrading systems in Mombasa County. It outlines the study design, target population, sample and sampling procedures, methods of data collection, validity and reliability of research instruments, data analysis methods as well as operationalization of variables. All these were used in order to achieve the research objectives.

3.2 Research Design

According to Mugenda (2012) a research design entails the mode of research to be adopted by the researcher. The researcher adopted descriptive research design. A descriptive research design according to Kothari (2010) is one that describes the realities on the ground as they are and can be used to generalize the findings to a large population. Since the study will target Mombasa County, a survey approach was used. This approach was opted for because of its simplicity in the methods of data collection.

Mugenda and Mugenda (1999) also advances that the survey approach is probably the best method available to social scientists and other educators who are interested in collecting original data for the purpose of describing a population. In addition, a survey can be used to explain or explore the existing status of two or more variables at a given point in time. They are also excellent for measurement of characteristics of a large population. Nachmias (1996) concurs that survey method is one of the most important methods of data collection in social sciences and is used extensively to collect information on numerous topical subjects.

3.3 Target Population

According to Mugenda and Mugenda (2003) population is an entire group of individuals or objects having common observable characteristics. The target population in the study constituted project contractors, County executives, project managers and project assessors. However, the true population was not amenable in the time available due to the then ongoing headcount and rationalization by the cabinet secretary in charge of devolution hence use of survey approach.

Table 3.1 Target Population

	Target Population	Percentage
Contractors	32	32
County Executives	20	20
Project Managers	40	40
Project Assessors	8	8
TOTAL	100	100

3.4 Sample size and Sampling procedures

A sample according to Mugenda (2012) is a fraction of the target population selected for the study. According to Patton (2002), the sample size depends on what the researcher wants to know, the purpose of enquiry, what is at stake, what is useful, what credibility and what can be done with available time and resources. Therefore this fraction based on a ratio of fifty per cent of the target population made the sample representative of the population. The findings of the research were thus reflective of the entire populous. Convenience sampling technique was hence opted for. The table below suffices.

Table 3.2 Population and sample size

	Target Population	Ratio	Sample
Contractors	32	0.5	16
County Executives	20	0.5	10
Project Managers	40	0.5	20
Project Assessors	8	0.5	4
TOTAL	100		50

3.5 Data Collection Instruments

Creswell (2002) identifies data collection as a means by which information is obtained from the selected subjects of an investigation. The data collection instrument used in the study to collect secondary information from Project contractors, County Executive, Project Managers and Project assessors was a questionnaire and interview guide. The questionnaire contained both open-ended and closed-ended questions.

The open-ended questions were used in order to elicit views from the respondents on the subject under study. The closed-ended questions were used to limit the respondents' answers on the subject matter for easier analysis. The questionnaire was used because it gave respondents time to answer the questions and saved time for the researcher (Kothari, 2010). In addition, it is free from the bias of the interviewer as answers are in respondents' own words. According to Kothari (2004), questionnaires have low cost even when the universe is large and is widely spread geographically. The Interview guide elaborated the questions that were not answered in the questionnaire for want of time (Arnold, 2013).

3.6 Pilot Study

According to Borden's and Abbot (2008), a pilot study is a small scale version of the study used to establish procedures, materials and parameters to be used in the full study. Selection of the research instruments was based on their validity and reliability to achieve the objectives of this study. Questionnaires and interview guide were the main research instruments used to collect information for this study. They were pilot tested in Kilifi County where upon which validity and reliability of the instruments of research was ascertained. According to Creswell (2003), the rule of thumb is that 1 % of the sample should constitute the pilot test.

3.6.1 Validity and Reliability of Research instruments

Validity is the accuracy and meaningfulness of inferences, which are based on the research results (Mugenda & Mugenda, 1999). In other words, it is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study.

Patton (2002) defined validity as the best available approximation to the truth or falsity of a given inference, proposition or conclusion. Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda & Mugenda, 1999). Reliability in research is influenced by random error. As random error increases, reliability decreases (Mugenda & Mugenda, 1999).

3.6.2 Validity of research instruments

Mugenda and Mugenda (2003) contend that the usual procedure in assessing the content validity of a measure is to use a professional or expert in a particular field.

To establish validity, the researcher initially presented a sample of the questionnaires and interview guide to lecturers of the University of Nairobi Mombasa Campus who are authorities in research, and whose guidance led to necessary adjustments to the tools, hence improving on the validity.

3.6.3 Reliability of research instruments

The researcher used the most common internal consistency measure known as Cronbach's alpha(α) reliability coefficient which should be 0.70 or higher to be considered 'acceptable' in most social science research situations (Nassiuma and Mwangi, 2004). In this study, a reliability measurement of the instrument at 0.85 was established through random pre-testing of four pieces of questionnaires in neighboring Kilifi County.

3.7 Data Collection Procedures

A field visit was made to administer the questionnaires to the respondents. These were distributed to the respondents on a 'give and take up later basis', giving them a period of three days to fill them. The questionnaires thereafter were collected and accordingly prepared for analysis.

3.8 Data Analysis Techniques

Once the questionnaires were collected, they were carefully edited to detect errors and omissions for consistency and completeness. The questionnaires were set in a style that on analysis provided results consistent with the objectives of the study. Descriptive statistics were employed to analyze the quantitative data which was presented in tables and percentages. The SPSS software was hence used. On the influences of successful implementation of projects in Kenya: The case of drainage upgradation in Mombasa County was regressed against five dependent variables i.e influences of feasibility studies, project plans, funding of projects, socio political factors and availability of competent/qualified project teams.

3.9 Ethical Considerations

According to Mugenda and Mugenda (2003), a researcher must confirm to the principle of voluntary consent where the respondents willingly participate in research.

The scholar continued that informed consent should be based on the information regarding: The purpose of the study, identification of the researcher and any benefits that may be received. This was adopted in this study. The researcher communicated this to the respondents before the start of the study; that participation was on a voluntary basis, and they were free to withdraw if they so wished.

The respondents were however informed that their participation was important for this study as it would contribute to understanding influences of successful implementation of projects in Counties: The case of drainage upgrading systems in Mombasa County, Kenya. Before issuing the questionnaires the researcher also informed about all the procedures that were to be followed. The respondents were also assured that all the information obtained would be treated as confidential. That is, data was only used for stated purposes and no other person was to have access to the collected data. The researcher has also taken utmost care to acknowledge all work borrowed from other scholars.

3.10 Operational Definition of the Variables

Below is the table exhibiting the operationalization of the variables that were used in the study. The main variables that are being elaborated hereunder are the independent and dependent variables which are captured in the research objectives.

Table 3.3: Operationalization of the Variables

Objectives	Indicators	Measurement	Scale	Data tools	Analysis	
Establish influence of feasibility study on successful implementation of drainage upgrades in Mombasa County.	Professional feasibility study	Amount of money spent on drainage projects	Ordinal Nominal	Questionnaire Questionnaire	Frequencies Percentages	
	Inflated projections	No. of upgraded drainage projects	Ordinal Nominal	Interview Guide	Frequencies Percentages Qualitative and quantitative	
Investigate influence of project plans on successful implementation of drainage upgrades in Mombasa County.	Scope	Availability, quality and allocation	Ordinal Nominal	Questionnaire	Frequencies Percentages	
	Planning			Questionnaire	Qualitative and quantitative	
	Budgeting		Ordinal Nominal	Interview Guide	Frequencies Percentages	
	scheduling					
Examine influence of funding/resource to successful implementation of drainage projects system in Mombasa	Funds allocated	Effectiveness in use and efficient results	Ordinal Nominal	Questionnaire	Frequencies Percentages	
	number of sponsors			Questionnaire		
				Interview Guide	Qualitative	
Determine the influence of socio political factors in the successful implantation of drainage upgrades	Corruption	Corruption	Nominal	Questionnaire	Percentages	
	Political patronage	Political patronage				Charts
	Influence & goodwill	Influence & goodwill		Interview Guide	Tables	Qualitative & quantitative
To determine the Influence of availability of project teams to successful implementation	Qualified personnel	Availability of project teams	Ordinal Nominal	Questionnaire	Frequencies Percentages	
	Experienced personnel			Interview guide	Qualitative and quantitative	
				Interview Guide	Qualitative and quantitative	

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The purpose of this study was to find out the influences of successful implementation of projects in Counties with Mombasa County forming the representative case in point. The study encompassed drainage contractors, county executives, drainage project managers and project assessors. Analysis of data is hitherto provided as under.

4.2. Response Rate

This study had targeted a total of 50 respondents. All of the 50 answered and returned the questionnaires duly completed. The response rate was therefore 100% as shown in table 4.1 below. Their views were hence reflective of the counties.

Table 4.1: Response Rate

Response	Percentage
Questionnaires Distributed	50
Questionnaires Returned	50
Response Rate	100%

4.3 Demographic characteristics of Respondents

In order to achieve the main purpose of this study, the researcher found it useful to find out the demographic information of the respondents. The demographic information of the respondents included gender, age, duration of implementation of drainage project upgrade and professional qualification and work experience.

4.3.1 Respondents Position against Gender

Table 4.2 shows a cross tabulation of respondents position versus gender. The findings show that majority of the respondents (40%) were project managers with most of them being males as accounted by 32% of the respondents. Male project managers accounted for 8% as shown in table 4.2. Table 4.2 also shows that male respondents were 80% and female respondents were 20%.

The disparity in gender is a clear indication that males are more conversant with drainage systems and upgrades than their female counterparts hence the research findings were found to be reliable.

Table 4.2: Respondents Position versus Gender

Respondents Position		Gender of the Respondents		
		Male	Female	Total
Contractors	Count	15	1	16
	% of Total	30%	2%	32%
County Executives	Count	8	2	10
	% of Total	16%	4%	20%
Project Managers	Count	16	4	20
	% of Total	32%	8%	40%
Project Assessors	Count	0	4	4
	% of Total	0%	8%	8%
Total	Count	39	11	50
	% of Total	78%	22%	100%

4.3.2 Respondents Position and Age Category

Majority of the respondents (40%) were project managers within the age category of 30 to 39 years as accounted by 18% of the respondents. These were followed by contractors who accounted for 32% of the respondents. Table 4.3 highlights also shows that majority of the respondents were between the ages of 30 to 49 years as accounted by 86% of the respondents and few were in the age category of 20 to 29 years and above 50 years as accounted by 14% of the respondents. Age has direct bearing on individual involvement in successful implementation of drainage upgrading projects. A whopping 86% of the age between 30 and 49 years were reflective of this. They appeared to be more energetic and involved in implementation aspects of drainage upgrading.

Table 4.3: Respondents Position versus Age category

Respondents Position		Age Category of the Respondents				Total
		20 to 29 years	30 to 39 years	40 to 49 years	Above 50 years	
Contractors	Count	2	4	6	4	16
	% of Total	4%	8%	12%	8%	32%
County Executives	Count	0	4	6	0	10
	% of Total	0%	8%	12%	0%	20%
Project Managers	Count	0	13	7	0	20
	% of Total	0%	26%	14%	0%	40%
Project Assessors	Count	1	2	1	0	4
	% of Total	2%	4%	2%	0%	8%
Total	Count	3	23	20	4	50
	% of Total	6%	46%	40%	8%	100%

4.3.3 Respondents Position and Duration of Implementation of Drainage Projects Upgrade

Forty percent project managers were involved in implementation of drainage upgrade projects for between 3 to 5 years as accounted by 18% of the respondents. On the other hand those project managers who had worked for above 5 years accounted for 12% as shown in table 4.4. This shows that the key staff members were experienced with drainage upgrade projects since they have been involved in the implementation of these projects for more than three years. Table 4.4 also shows that majority of the employees had worked with the projects for more than 3 years as accounted by 58% of the respondents and few had worked for less than three years as accounted by 42% of the respondents. This showed that most respondents were experienced to work in drainage upgrade projects. Analysis of respondents' experience is correlated since most of them had more than three years working in drainage upgrade projects. Therefore the findings of this research were reliable.

Table 4.4: Respondents’ Position versus Duration of Implementation of Drainage Upgrade Projects

Respondents Position		Duration of Work					Total
		Less than 6 months	Between 6 months to 1 year	Between 1 to 3 years	Between 3 to 5 years	Above 5 years	
Contractors	Count	1	4	6	1	4	16
	% of Total	2%	8%	12%	2%	8%	32%
County Executives	Count	1	1	3	3	2	10
	% of Total	2%	2%	6%	6%	4%	24.4%
Project Managers	Count	1	2	2	9	6	20
	% of Total	2%	4%	4%	18%	12%	40%
Project Assessors	Count	0	0	0	1	3	4
	% of Total	0%	0%	0%	2%	6%	9.8%
Total	Count	3	7	11	14	15	50
	% of Total	6%	14%	22%	28%	30%	100%

4.3.4 Respondents Position and Highest level of Education

Majority of the respondents had attained tertiary and undergraduate level of education as accounted for by 36% of the respondents respectively. Of these, 14% of the project managers had attained tertiary college education as shown in table 4.5. This shows that most of the key personnel in the implementation of drainage projects upgrade had attained a high level of education (that is; tertiary and university levels) as accounted by 96% and few had primary level of education as accounted by 4% of the respondents. The higher the education levels of an individual the better management of drainage upgrade implementation projects.

Table 4.5: Respondents Position versus Level of Education

Respondents Position		Highest Level of Education				Total
		Basic Education	Tertiary	Undergraduate	Postgraduate	
Contractors	Count	1	8	7	0	16
	% of Total	2%	16%	14%	2.4%	32%
County Executives	Count	0	1	4	5	10
	% of Total	0%	2%	8%	10%	20%
Project Managers	Count	0	7	6	7	20
	% of Total	0%	14%	12%	14%	40%
Project Assessors	Count	1	2	1	0	4
	% of Total	2%	4%	2%	0%	9.8%
Total	Count	2	18	18	12	50
	% of Total	4%	36%	36%	24%	100%

4.4 Influence of Feasibility Study on Successful Implementation of Drainage Upgrade Systems

The research sought to establish the influence of feasibility study as well as the people responsible in carrying out feasibility before implementing drainage project upgrades. According to majority of the respondents, feasibility study is a prerequisite before any implementation of drainage project upgrades is done as accounted for by 80%. However a paltry 20% of the respondents had contra opinion. They disagreed. The results are shown in table 4.6 below.

Table 4.6: Feasibility Study is a Prerequisite

Feasibility Study is a Prerequisite to Implementing Drainage Project Upgrades	Frequency	Percentage
Yes	40	80%
No	10	20%
Total	50	100%

4.4.1 Influences Pertaining to Feasibility Study in Implementation of Drainage Project Upgrades

The respondents were asked to rate the extent to which they agreed or disagreed with the various statements as related to the influence of feasibility study in implementation of drainage projects upgrade. A five-point Likert scale was used. With regard to whether feasibility study can stall implementation of drainage projects upgrade, there was a mean score of 4.23 on the Likert scale indicating that respondents were in concordance. This is evident in the standard deviation that revealed strong consistency in the responses. Further evidence of this is adduced from the findings that showed that 78% of the respondents agreed that poor feasibility studies can stall the implementation of drainage projects upgrade whereas 74% agreed that poor feasibility studies leads to wastage of resources in an endeavor to implement drainage projects upgrade. The mean score here reported 4.12 thereby indicating the views of respondents to be in agreement. A standard deviation of 0.453 revealed diagrammatic concordance in respondents' views. A whopping 80% also agreed that poor feasibility causes delays in implementation of drainage projects upgrade. A mean score of 4.513 was apparent.

But there were strong inconsistencies in these responses as shown by the standard deviation of 1.231 suggesting that the views of respondents delved in between options strongly agreeing and agreeing that poor feasibility causes delays in implementation of drainage projects upgrade. This insinuates that a feasibility study is important before any successful implementation of drainage projects upgrade. Indeed during the interviews, some respondents alluded to hearing from the local news that Mombasa Island sits on ground strata alleged to be sinking. Some portended that the city is bound to sink within the next 50 years hence questioning drainage terra firma. Recent cases of cholera outbreak in the Coast region seem to suggest that drainage mixes water underground sources with sewerage systems thus strengthening the case for drainage upgrades. But the mere reality that contamination exists has played a significant role in stalling implementation of drainage upgrades pending feasibilities. Whenever modernization was done, projects stalled because the sewage waste contaminated water used by the residence thus causing an epidemic or pandemic forcing the Ministry of Public Health temporarily stopping drainage project upgrades. Poor site and lack of management may occur when contractors do not have enough experience of knowledge in managing the project team.

Table 4.7: Feasibility Study of Implementation of Drainage Upgrades Projects

	Strongly Agree	Agree	Not Sure	Disagree	Strongly disagree	Mean	Standard deviation
	%	%	%	%	%	4.23	0.031
Poor feasibility study can stall implementation of drainage projects upgrade	36%	42%	18%	2%	2%		
Poor feasibility study lead to wastage	22%	52%	14%	8%	4%	4.12	0.453
Poor feasibility causes delays in implementing drainage project upgrades	44%	36%	16%	0%	4%	4.513	1.231

Likert scale; 5= Strongly Agree,4=Agree,3=Not sure,2=Disagree,1=Strongly Disagree
 Source: Field Data, 2015

4.5 Influence of Project Plans in the Successful Implementation of Drainage Upgrading Systems in Mombasa County

Findings show that majority of the respondents (90%) had drainage project plans prior to the implementation of upgrade and only 10% of the respondents said there were no project plans before implementation of drainage project upgrade. This study established that most drainage upgrade projects had plans in place. The respondents who were in agreement that there were plans, however were divided in as far as how the project plans helped in the implementation of drainage projects upgrade. Their success or lack of it were varied according to respondents' views. The mean score posted was 3.62 revealing respondents barely thought project plans were helpful in implementing project upgrades. The standard deviation was 1.241 suggesting that opinion was divided amongst respondents. This displays that there was likely politics that disheartened respondents to query the helpfulness of plans in implementing project upgrades. In this regard 48.9% of the respondents noted drainage upgrade plans being very helpful or helpful whereas 33.3% said that the plans were not helpful. A paltry 17.8% remained indifferent.

Inference reveals that implementation of drainage projects upgrade is influenced by the planning. However, plans appear to be meddled by politics. This therefore calls for the sobriety of Mombasa county government to plan for the drainage projects upgrade before they are implemented to ensure successful implementation. Poor scope plan, poor budgeting, poor scheduling, poor resource utilization planning and poor logistics planning could be the major hindering factors to success.

Table 4.8 Prevalence of Project Plans Prior to Implementation of Drainage Upgrades

	Responses	Frequency	Percentage
Are there project plans (N=50)	Yes	45	90%
	No	5	10%
	Total	50	100%

Table 4.9 Helpfulness of Project Plans Prior to Implementation of Drainage Upgrade

Are the plans helpful or not	Responses	Frequency	Percentage	Mean	Standard Deviation
(N=45)	Very Helpful	10	22.2%	3.62	1.241
	Helpful	12	26.7%		
	Not Helpful	15	33.3%		
	Not Very Helpful	0	0%		
	Do not Know	8	17.8%		
Total		45	100%		

Likert scale; 5= Very Helpful, 4=Helpful, 3=Not Helpful, 2=Not Very Helpful, 1=Do not Know

Source: Field Data, 2015

4.6 Influence of Funding on Successful Implementation of Drainage Upgrading Systems

Resources including funding play a crucial role in the implementation of drainage project upgrades. They can make such upgrades successful or otherwise. Towards this end respondents were tasked to make mention of sources of income of Mombasa county that were focused towards implementation of drainage projects upgrade.

4.6.1 Major Sources of Income

The study established that Mombasa county largely raises funds for drainage projects upgrade through national government as accounted for by 72%. Other sources of additional funding are shown in Table 4.8 below.

Table 4.10: Major Source of Income in Implementing Project Upgrades

Major source of income	Frequency (N=50)	Percentage
Through Donors	12	24%
Through Fundraising	2	4%
Through National Government	36	72%
Total	50	100%

4.6.2 Funding of Drainage Upgrading Systems

Respondents herein were asked to indicate whether funding influences successful implementation of drainage projects upgrade. The results are shown on table 4.11 below.

Table 4.11: Influence of Funding in Drainage Projects Upgrade

Funding Influence	Frequency	Percentage
Yes	50	100%
No	0	0%
Total	50	100%

The study found that funding influences successful implementation of drainage project upgrades. All fifty (100%) respondents were in consensus on this factor. Their unanimous view is consistent with Matta's assertion (2005) where he says financial stability of contractors and adequate cash flow is very critical in keeping progress of implementation of drainage project upgrades as planned. Some project managers and county executives during a one on one interview with the researcher gave examples of stalled drainage upgrade projects in Nyali, Ganjoni, Chaani, Kisauni Changamwe, Old Town, and inter alia Kisauni that were behind schedule. According to the respondents, some of these drainage implementation projects were due way back in 2008 when they were initiated. Despite time lapse, the erstwhile Coast provincial administration had registered an estimated budget of 1.5 billion but only 400 million had been raised by then. The same sentiments are supported in www.sabahionline.com (Cited on May 02 2015) by former Ministers Najib Balala and Kajembe. "We expected the successful implementation of drainage project upgrades to be in place by the beginning of 2009, but could not get funds to finish the projects on time," said the Ministers.

4.6.3 Rating on Facets of Funding and Financial Management of Drainage Upgrades

The respondents were asked to rate on diverse factors likely to affect implementation of drainage projects upgrade. These aspects were adequacy of funding allocation, Sponsors role on funding, Misappropriations of funds, Irregular funds disbursement and late payment to contractors. The respondents were asked to opine on the nature of impact on drainage upgrades using Likert scale ratings as follows: Greatest = 5; Great = 4; Minor = 3; No Effect =2; Not Sure = 1. The results are indicated on table 4.12 below.

The respondents ranked misappropriation of funds and lack of adequate funding as the greatest factors that would stall the successful implementation of drainage projects upgrade. They vouched with 84% and 64% respectively.

The mean score in retrospect was 4.76 and 4.81 with a corresponding standard deviation of 0.021 and 0.004 which showed least dispersion in the views of respondents. They were all united in opinion. The respondents hence gave weightage to misappropriation of funds and lack of adequate funding as the two major factors that had greatest influence on the successful implementation of drainage projects upgrade.

Respondents' views on the role played by sponsors other than the national government had a mean score of 4.67 that had highly consistent opinions as adjudged by the standard deviation of 0.053. It is therefore surprising that 48% respondents vouched the same. Majority 36% respondents gave score to irregular funds disbursement being a great factor that would stall the successful implementation of drainage projects upgrade. Opinion was somewhat divided given a standard deviation of 1.102 which is evidence that that existed contra views.

While some respondents noted irregular funds disbursement being a great factor in stalling the successful implementation of drainage projects upgrade, a significant 28% of respondents felt irregularity of funds disbursement was the greatest factor that would stall the successful implementation of drainage upgrade. With regard to late payment to contractors, there was a mean score of 2.95 which insinuated respondents, noting it to being a minor factor in the successful implementation of drainage projects upgrade.

Dispersion among respondents' views was nevertheless high given standard deviation of 1.312. From the interviews, the researcher found out that all respondents were of the opinion that financial procedures used in the disbursement of devolved funds, greatly affects the completion rate of the projects. Therefore, there is need for the government to streamline the financial procedures used to disburse funds to ensure that funds flow effectively to avoid delays.

Table 4.12: Respondents’ Rating on Facets of Funding and Resource Management of Drainage Upgrades

Statements	5	4	3	2	1	Mean	Standard Deviation
Adequate funding allocation drainage upgrades	64%	12%	8%	0%	16%	4.81	0.004
Sponsors play a key role on funding implementation of drainage upgrades	48%	6%	18%	20%	8%	4.67	0.053
Misappropriations of drainage project funds lead to delays in implementation of upgrades	84%	0%	0%	0%	16%	4.76	0.021
Irregular funds disbursement don’t facilitate implementation of drainage projects upgrade	28%	36%	16%	12%	8%	3.62	1.102
Late payment to contractor hinder drainage upgrades	14%	18%	36%	28%	4%	2.95	1.312

Likert scale;5= Greatest,4=Great,3=Minor,2=No Effect,1=Not Sure
 Source: Field Data, 2015

4.7 Influence of Socio-Political Factors on successful Implementation of Drainage Upgrading Systems

This study sought to determine how social and political factors influence the implementation of drainage upgrade projects. Inference reveals that respondents view political interference as a manifestation of political patronage where politicians interfere with tendering procedures and selection of contractors. From the study findings as indicated in table 4.13 majority of the respondents 37 (74%) observed that there were no politicians directly interfering with implementation of drainage project upgrades. 13 (26%) indicated that there were politicians interfering with implementation of drainage project upgrades. Those who agreed said that politicians had influence on the tendering process and selection of contractors. On further interview however, respondents disagreed that politicians attend tendering meetings. They do however use proxies to influence the tendering process and selection of contractors insofar as implementation of drainage upgrade projects were concerned. Politicians also influence where the drainage project should be upgraded.

Thus infighting with bureaucratic administration often leads to lack of agreement consequently resulting in drainage upgrade projects being stalled for a long time thus delaying implementation. Respondents' views in table 4.13 are indicative of this.

Table 4.13 Political Interference and successful implementation of drainage upgrade systems

If there is Political Interference	Frequency	Percentage
Yes	13	26%
No	37	74%
Total	50	100%

4.8 Influence of Project Teams on Successful Implementation of Drainage Upgrading Systems

Project teams play a pivotal role in influencing implementation of drainage upgrades. This is because teams form bonds that aid in understanding impetus to successful attainment of goals. From the below table, 70% of the respondents said that people who work in the construction projects are not trained while 30% said that they are trained. The results shows that most of the employees who work on drainage upgrades are not trained in any way concerning implementation of drainage projects. This reveals that hiring of teams has not been given due attention in drainage projects by the county government. Most of the untrained workers working on the implementation of drainage upgrades were actually the casual laborers while other professional work had few trained employees. From the findings, teams influence implementation of drainage upgrades.

Table 4.14: Level of staff training and successful implementation of drainage upgrade systems

Level of Staff Training	Frequency	Percentage
Trained	15	30%
Not Trained	35	70%
Total	50	100%

4.8.1 Extent of Influence of the Teams on Successful Implementation of Drainage Upgrading Systems

The respondents were asked to rate the extent of influence of teams on successful implementation of drainage project upgrades. A five-point Likert Scale was used and the findings are as shown in table 4.15. The findings show that availability of semi & skilled labour helps to a large extent expedite implementation of drainage project upgrades. The mean score was 4.12 which had inconsistent opinions as is evident from a standard deviation of 1.430.

This inconsistency lay in the reality that while 34% respondents opined the availability of semi & skilled labour in helping to a large extent expedite implementation of drainage project upgrades, a significant 28% noted to availability of semi & skilled labour helping expedite implementation of drainage project upgrades to a very large extent. In both cases however, respondents' views were positively congruent in direction.

The respondents were also asked to opine if the lack of semi & skilled labour teams delays or stalls altogether the implementation of drainage project upgrades. The findings reveal respondents' views having a mean score of 3.91 indicating concordance to a large extent. 24 percent respondents on the other hand concorde to a very large extent. This accounts for the standard deviation of 1.02 associated thereto.

Again the views were positively congruent in direction. Asked on whether skilled labour provides for successful implementation of drainage project upgrades, a mammoth 40% agreed to a very large extent. Mean score posted was 4.62 that had high consistency in responses as denoted from a standard deviation of 0.781. From the findings, skilled labour also saves wastefulness of resources during implementation upgrades. Mean score posted was 4.55 with a standard deviation of 0.671. In this regard, a whopping 50% agreed to a very large extent that indeed skilled labour does save wastefulness of resources during implementation upgrades.

On the outset foregoing therefore it can be adduced that cumulative responses vouched in retrospect. This showed that engaging skilled teams had influence on successful implementation of drainage project upgrades. These findings are also consistent with the literature review since this study found out that the shortage of manpower including skilled, semi-skilled and unskilled labour causes delays in projects (Sweis et al, 2008).

Table 4.15: Extent of the Influence of Qualified Teams on Implementation of Drainage Project Upgrades

	Very small extent	Small Extent	Undecided	Large Extent	Very Large Extent	Mean	Standard Deviation
Availability of semi & skilled labour teams helps to expedite the successful implementation of drainage project upgrades.	20%	6%	12%	34%	28%	4.12	1.430
Lack of semi & skilled labour teams delays or stalls altogether the implementation of drainage project upgrades	6%	14%	16%	40%	24%	3.91	1.02
Skilled labour provides for successful implementation of drainage project upgrades	10%	20%	2%	20%	48%	4.62	0.781
Skilled labour saves wastefulness of resources during implementation of drainage project upgrades	4%	24%	0%	22%	50%	4.55	0.671

Likert scale; 1= Very Small Extent, 2=Small Extent, 3=Undecided, 4=Large Extent, 5=Very Large Extent
 Source: Field Data, 2015

CHAPTER FIVE
SUMMARY OF THE FINDINGS, DISCUSSIONS, CONCLUSIONS AND
RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of findings, discussions, and conclusion on influences of successful implementation of drainage project upgrades and makes recommendations.

5.2 Summary of Findings and Discussions

This section gives a summary of the findings vis a vis the objectives of this project which was to determine the influence of feasibility studies to successful implementation of drainage upgrades, influence of project plans to successful implementation of drainage upgrades, influence of funding to successful implementation of drainage upgrades, influence of socio-political factors to successful implementation of drainage upgrades and the influence of qualified project teams to successful implementation of drainage upgrades.

5.2.1 Influence of feasibility studies to successful implementation of drainage upgrades

With regard to the influence of feasibility studies on the successful implementation of drainage project upgrades, respondents agreed that such studies were a prerequisite. The mean score associated here was 4.12 thereby indicating the views of respondents to be in agreement. 78% of the respondents agreed that poor feasibility studies can stall the implementation of drainage projects upgrade. The respondents were also in agreement that poor feasibility causes delays in implementation of drainage projects upgrade. A mean score of 4.513 was apparent. The study findings were in agreement with earlier research finding by Kazaz and Ulubeyli (2009) which found that feasibility study is the backbone of successful implementation of projects. The study also found out that the feasibility studies were done by people who had no background knowledge of the area of study. This resulted in delays in the implementation of drainage project upgrades.

5.2.2 Influence of project plans to successful implementation of drainage upgrades

On the influence of project plans the study established that such plans indeed had influence on successful implementation of drainage project upgrades. Findings show that majority of the respondents (90%) had drainage project plans prior to the implementation of upgrade. But in spite of this, their success or lack of it were varied according to respondents' views. The mean score posted was 3.62 revealing respondents barely thought project plans were helpful in implementing project upgrades. Their views are consistent with Matta's assertion (2005) where he says financial stability of contractors and adequate cash flow is very critical in keeping progress of implementation of drainage project upgrades as planned. This finding also concurred with the conclusions of a study by Amusan, (2009) which observed that inadequate planning could lead to increase in commercial pressure and claims leading to litigation or arbitration as a result of delays.

5.2.3 Influence of funding to successful implementation of drainage upgrades

As pertains to the influence of funding of drainage upgrades, the study established that Mombasa county largely raises funds for drainage projects upgrade through national government as accounted for by 72%. However, with connection to misappropriation of funds and lack of adequate funding, the respondents ranked misappropriation of funds and lack of adequate funding as the greatest factors that would stall the successful implementation of drainage projects upgrade. The mean score in retrospect was 4.76 and 4.81.

5.2.4 Influence of socio-political factors to successful implementation of drainage upgrades

On the influence of socio-political factors the study findings revealed that although 74% majority of the respondents observed that there were no politicians directly interfering with implementation of drainage project upgrades, a significant 26% respondents indicated that there were politicians interfering with implementation of drainage project upgrades. This brings into query the effectiveness of implementation of drainage projects upgrade. In relation to these findings Jameel, (2009) asserts that while increased community participation has been advocated as a way to improve the quality of public projects and services, evidence from randomized evaluations provides very mixed results about its effectiveness.

Further, Jackson (2006) in his paper to the European congress opined that programs where the stakeholders had more direct control over service providers seemed to work better. Those that did not did not work better.

5.2.5 Influence of qualified project teams to successful implementation of drainage upgrades

However, on the influence of project teams on the successful implementation of drainage projects, the findings reveal that the lack of semi & skilled labour teams to a large extent delays or stalls altogether the implementation of drainage project upgrades. A mean score of 3.91 was attributed to this. The findings on the other hand show that availability of semi & skilled labour helps to a large extent expedite implementation of drainage project upgrades. The mean score was 4.12. According Kadir et al., (2005) poor site and lack of proper management may occur when contractors do not have enough experience or knowledge in managing the project team. These findings are also consistent with Sweis et. al, (2008) who alluded to the shortage of manpower including skilled, semi-skilled and unskilled labour causing delays in projects.

5.3 Conclusion

In determining the influence of feasibility studies in project drainage upgrades, this study concludes that it positively influences the successful implementation of drainage projects. The study however did not particularly look into technical aspects of carrying out a drainage project feasibility study such as demographic environment profiles, soil content, and the level of drainage contamination and/or upgrade. It did however seek respondents' views on knowledge of feasibility of drainage upgrade projects. The findings noted implementation of drainage project upgrades. The study further established that the project feasibility study was actually done from the desktop by people who had no background knowledge of drainage upgrades and neither did they bother to visit the area meant for the upgrade to assess success viability.

On the influence of project plans before implementation of drainage project upgrades, the study established that insofar as project planning was concerned inadequate planning led to premature depletion of resources, waste of time and energy thus negatively influencing implementation of drainage project upgrades.

What is more, lack of funds, under costing as well as inaccurate estimates often cause drainage project upgrades to derail, delay or even fail thus negatively impacting implementation of drainage project upgrades.

In regard to socio-political factors the researcher anticipated greater political interference which would have negatively influenced implementation of drainage project upgrades. However since matters relating to drainage cut social class, community and political affiliation, no direct hand in intervention could be attributed to politicians.

On availability of project teams, it was noted that skilled and educated personnel are needed to manage successful implementation of drainage project upgrades. Availability of semi and skilled labour helps in to a large extent expedite implementation of drainage project upgrades. In addition, project managers must ensure proper site management and supervision of project teams so as to avoid delays in project implementation and completion.

5.4 Recommendations

Based on the findings and conclusions, the following recommendations were made:

- i. The County government of Mombasa should conduct preliminary investigations or enquiry into the potential benefits associated with undertaking or execution of a specific project upgrade task before embarking on the same. This will ensure that the project execution is structured to deliver the identified benefits associated with it within the planned time, budgeted cost and specified quality.
- ii. The County government of Mombasa should also ensure adequate planning for upgrading drainage projects right at inception and be alive to uncertainties such as increasing rates of interests, project complexities, inflation rates and changes in project designs in terms of scope which could cause delays in completion of drainage upgrades. In addition the County government should ensure that drainage upgrade projects are delivered within the approved budgets and that the design represents value for money.
- iii. It is also imperative that the County government ensures enough funding is available based on reliable estimates made by the quantity surveyor for implementation to be successful.

- iv. The county government should ensure that where funds from the national government are not enough for upgrading drainage projects, alternative sources of funds should be sought from fundraising, donors and even through county taxation to add more revenue for successful implementation.
- v. Developmental initiatives such as drainage upgrades or their implementation should be differentiated from politics or political affiliation so as to ensure goodwill from beneficiaries, donors and technical personnel which will also go a long way in their sustainability.
- vi. The County government should engage services of competent professionals as well as competent employees to effectively and competently implement upgrades of drainage projects.

5.5 Suggestions for Further Research

Further research is needed to explore the problem on a large sample and also conduct similar study in other parts the country. Future research hence should focus towards recycling waste and diminishing pressure on drainage systems using latest global modes and techniques.

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APPENDICES

APPENDIX I: COVER LETTER

Dear Respondent,

RE: REQUEST TO RESPOND TO THE STUDY QUESTIONNAIRE

I am a student at University of Nairobi, Mombasa Campus pursuing a Master degree in Project Planning and Management. As part of this course requirement, I am expected to carry out a research. I therefore, humbly request for your assistance and cooperation in responding to the questions attached herewith. The information given will be treated with utmost confidentiality and will be used only for the purpose of the study.

Looking forward to your response and co operation.

Yours faithfully,

Salma Ndoge Maro

L50/66609/2013

APPENDIX II: RESEARCH QUESTIONNAIRE

SECTION A: Respondents' profile

1. Kindly indicate your gender?

a) Female

b) Male

2. Respondents' Position:

a) County Executive

b) Project Manager

c) Contractor

d) Project Assessor

e) Others (Specify)

.....

3. Which one best describes your age bracket?

20 – 29 years

30 – 39 years

40– 49years

Over 50 years

4. How long have you been involved in drainage upgrading projects?

Less than 6 months

Between 6 months to 1 years

Between 1-3 years

Between 3-5 years

Above 5 years

5. Indicate the highest level of your education?

Basic Education (Pry & Sec) []

Tertiary []

Undergraduate []

Postgraduate (Masters/PhD) []

Others

(Please specify).....

SECTION A: Influence of Feasibility Study on drainage upgrades

6. Is feasibility study a prerequisite before any drainage project upgrading?

Yes []

No []

7. Who carries the feasibility study for County's projects?

Experts []

Politicians []

Community leaders []

Quarks []

Others (specify).....

8. Indicate the level of your agreement or disagreement against every statement given below about upgrading projects in Mombasa County. React on the items provided by using the scale given. Please tick (√) appropriately.

1=Strongly Disagree

2=Disagree,

3=Not Sure,

4=Agree

5=Strongly Agree

Statement	1	2	3	4	5
Poor feasibility study can influence drainage upgrading projects.					
Poor feasibility study lead to wastage of resources for drainage upgrading projects.					
Poor feasibility causes delays on drainage upgrading projects.					

9. What advice could you offer on feasibility studies to enhance successful completion of drainage upgrading projects?

.....

.....

.....

SECTION B: Lack of Project Plans Influence on drainage upgrades

10. Do you normally have project plans prior to drainage upgrading implementation in your County?

Yes []

No []

11. How helpful are the drainage upgrading project plans to be undertaken in the County?

Very helpful []

Helpful []

Do not know []

- Not helpful []
- Not very helpful []

SECTION C: Extent of Influence of Funding/Resources in drainage upgrades

12. How does your County raise funds for the drainage upgrading projects?

- Thro' Donors []
- Thro' Fundraising []
- Thro' Government []

Other (please specify).....

13. Does funding influence drainage upgrading projects in Mombasa County?

- Yes []
- No []

14. Describe the magnitude of project funding levels in upgrading drainage systems that you have been involved in.

- Sufficient funds []
- Intermittent Funding []
- Funding in Phases []
- Insufficient funding []

15. Indicate the level of extent of influence of funding on drainage upgrading projects in the County. React on the items provided by using the scale given. Please tick (✓) appropriately.

5= Very Great

4= Great

3= Minor

2=No effect

1=Not Sure

Statements	1	2	3	4	5
Adequate funding allocation enhances drainage upgrading projects					
Sponsors play a key role on funding for upgrading projects					
Misappropriations of project funds lead to incompleteness of upgrades.					

16. What advice could you offer on funding to enhance successful drainage upgrading projects in the County?

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.....

.....

SECTION D: Extent of Socio Political factors to successful implementation of drainage upgrades

17. To what extent do politicians take part in drainage upgrading projects?

Great extent [] Some Extent [] Never Involved []

18. Do politicians take part in costing of the drainage upgrading projects?

Yes [] No []

19. Does local politics interfere with drainage upgrading projects in Mombasa County?

.....

.....

20. To what extent do local communities take part/get involved in drainage upgrading projects?

Great extent [] Some Extent [] Never involved []

SECTION E: Extent of Influence of availability of Skilled Personnel in drainage upgrades

17. How is the labour force recruitment done for project upgrading?

Trained []

Not Trained []

Others (please specify).....

18. Indicate the level of extent of influence of availability of skilled personnel on drainage upgrading projects. React on the items provided by using the scale given.

Please tick (✓) appropriately.

1=To a Very Small extent

2=To a Small Extent

3=Undecided

4=To a Large Extent

5=To a Very Large Extent

Statements	1	2	3	4	5
Availability of semi & skilled labour helps to expedite the project upgrading.					
Lack of semi & skilled labour delays or stalls altogether the completion					
Skilled labour provides quality of upgraded drainage project systems.					
Skilled labour saves wastefulness of resources in upgrading projects					

19. What advice could you provide on the use of skilled personnel in enhancing drainage upgrading projects?

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20. Indicate the influence of the following factors on drainage upgrading projects in the County. Please tick (√) appropriately.

1=To a Very Small extent

2=To a Small Extent

3=Undecided

4=To a Large Extent

5=To a Very Large Extent

Statements	1	2	3	4	5
Poor feasibility study significantly influence drainage upgrading					
Project plans influences successful implementation of drainage upgrades					
Funding significantly influences drainage upgrading projects.					
Availability of skilled project teams significantly influences drainage upgrading projects.					

Thank You for your participation...

APPENDIX III: INTERVIEW GUIDE

Your opinion will be treated with a lot of confidentiality. This information is purely for academic purposes.

1. What is your position in this County?
2. How old are you?
3. How long have you been involved in drainage upgrading projects?
4. What is your highest level of your education?
5. Is feasibility study a prerequisite before any drainage upgrading projects?
6. Who carries the feasibility study for County's drainage upgrading projects?
7. What advice could you offer on feasibility studies to enhance successful drainage upgrading projects in the County?
8. Do you normally have project plans prior to upgrading drainage systems in your County?
9. How helpful are the plans to the drainage upgrade project(s) that is/are to be undertaken in the County?
10. How does your County raise funds for drainage upgrading projects?
11. Does funding influence drainage upgrading projects in Mombasa County?

12. Describe the magnitude of project funding levels in drainage upgrading projects that you have been involved in.
13. What advice could you offer on funding to enhance drainage upgrading projects in the County?
14. To what extent do politicians take part in drainage upgrading projects in Mombasa County?
15. Do politicians take part in costing of the drainage upgrading projects in Mombasa County?
16. Do local politics interfere with drainage upgrading projects in Mombasa County?
17. Do local communities take part in costing of drainage upgrading projects in Mombasa County?
18. Do local communities interfere with drainage upgrading projects in Mombasa County?
19. How is the labour force recruitment done for drainage upgrading?
20. What advice could you provide on the use of skilled personnel in enhancing drainage upgrading projects?

Thank You for your participation...