

EXTENT OF INTEGRATION OF ENVIRONMENTAL, ECONOMIC, AND  
SOCIAL SUSTAINABLE PUBLIC PROCUREMENT PRACTICES IN  
LAKE VICTORIA SOUTH WATER SERVICES BOARD (LVSWSB),  
KENYA

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## ABSTRACT

Sustainable procurement has close connection to sustainable development. It advocates for acquisition and disposal practices that maximise economy and facilitate economic development while having little or no negative environmental impacts. However, the problem is lack of sustainable procurement practices amongst the public entities in Kenya and for the entities that try to incorporate sustainability within their practices, the extent of integration still needs some upgrading owing to the fact that only one or two of the sustainability pillars, economic, environmental, and social, are incorporated instead of the three. Despite many studies on the concept of sustainable procurement practices, most of the studies have only focused on one or two of the aspects of the practices. Hence, there is a need to establish the extent of integration of environmental, economic, and social sustainable public procurement practices in Kenya from the case study of Lake Victoria South Water Services Board (LVSWSB). The objectives of the study are to establish the extent of environmental sustainability, examine the extent of social sustainability, and determine the extent to which economic sustainability are all integrated within the public procurement practices at the LVSWSB. On this respect, the conceptual framework looks at public procurement as the dependent variable and environmental, social, and economic sustainability aspects as the independent variables. A descriptive survey research design targeting a population size of 144 participants was used in the study. A total of 106 participants were used as the representative sample. Determination of the adequacy was based purely on judgment and experience in the said field of study. Through the use of questionnaires and other secondary sources, the study obtained the required data. In order to enhance the reliability and validity of the questionnaires, the study performed a test and retest process. On the item level, the correlations ranged between 0.6 and 0.8. The overall reliability of total retest scores was 0.84. When stratified by water service providers, sub-county water officers, LVSWSB contractors, and LVSWSB head office, the total score reliability approximated 0.80 for all the categories. Based on the results, the study established that environmental sustainability had a mean of 3.01, economic sustainability had a mean of 3.54, and the social sustainability had a mean of 3.67. It means that the extent of integrating economic and social sustainability is higher than the integration of environmental sustainability in the board. In this respect, the study recommends that all the three pillars should be adequately integrated within the procurement process.

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## CHAPTER ONE: INTRODUCTION

This section contains background of the study, statement of the problem, objectives, research questions, scope of the study, significance of the study and an adapted conceptual framework.

### 1.1 Background to the Study

The present study is anchored on the Triple Bottom Line (TBL) theoretical framework on sustainability advanced by John Elkington in 1994 (Elkington, 1997; 2004). In the model, Elkington (1997) postulates that there are three separate “bottom lines” in business entities, namely, financial, social and environmental. The model identifies three main aspects, namely, people, planet, and profit as the main pillars of business entities whether public or private (Elkington, 1997; 2004). A triple bottom line measures use the “profit pillar” to measure the economic value of an entity, the “people account” to measure the degree of social responsibility in a company, and the “planet account” to measure the environmental responsibility of an entity (Elkington, 1997; 2004). Elkington (1997; 2004) argued that companies should prepare three bottom lines – the triple bottom line – instead of focusing solely on its finances, thereby giving consideration to the company's social, economic and environmental impact. In this respect, the study concentrated on the three pillars identified within the Triple Bottom Line (TBL) theoretical framework in establishing the extent which they (three pillars) are integrated within the public procurement practices in Lake Victoria South Water Services Board (LVSWB).

Notably, the main aspects under study were public procurement process, environmental, economic, and social sustainability. Even though researchers such as Evenett and Hoekman (2005), Afonso *et al.* (2005), Heald (2003), and Persson and Tabellini (2001) provide varied definitions of public procurement process, the definition adopted in the study is, the activities that include the acquisition and disposal, whether under formal contract or not, of works, goods and services by public bodies (Uyarra & Flanagan, 2010). It ranges from the purchase of routine supplies or services to formal tendering and placing contracts for large infrastructural projects. On the other hand, the study adopts the definition of sustainable public procurement from Afonso *et al.* (2005), that is, purchasing and investment process



that takes into account the economic, environmental and social impacts of the entity's spending. Sustainable procurement allows organizations to meet their needs for goods, services, construction works and utilities in a way that achieves value for money on a whole-life basis in terms of generating benefits not only to the organization, but also to society and the economy, while remaining within the carrying capacity of the environment.

While conducting a study on efficiency of public sector from an international comparison perspective, Afonso *et al.* (2005) stated that an organization practicing sustainable public procurement should consider the three aspects of sustainability (economic, social and environmental) to create a more enduring approach to procuring goods and services that will contribute positively to the community and beyond. The study performed by Hoekman (2005) confirmed the findings of the study by Heald (2003) on fiscal transparency within public procurement practices that Effective procurement is sustainable procurement that promotes positive outcomes for the economy, environment, and society. In this respect, the public sector should promote sustainable procurement throughout the acquisition and disposition process and sustainability should be embedded in all procurement decision making.

Although the bulk of existing research on sustainable supply chain management focuses on environmental issues, a number of studies have focused on social issues. There are little or no studies that have combined the three elements; hence, the motivation in the present study to focus on the three pillars. As with the literature on green procurement practices, the tendency is for studies to focus on particular issues such as bribery or unfair contracting (Wood, 1995; and Carter, 2000), supplier employment conditions (Graafland, 2002; and Mamic, 2005) and ethnic minority suppliers (Carter *et al.* , 1999; and Krause *et al.* , 1999). Therefore, it would be interesting to evaluate the extent to which all the three aspects have been integrated within public institutions with respect to public procurement practices or process.

From a general perspective, it is important to note that as Evenett and Hoekman (2005) argued in their study on fitting environmental, economic, and social aspects to attain sustainable development, public procurement practice is a complex phenomenon of growing global importance. While performing an international comparison on efficiency of public



sector, the findings of the study by Afonso *et al.* (2005) established that public procurement accounts for around 45% of GDP among developed countries, albeit with considerable variation in the level and composition of expenditures. The importance of public procurement within the world economy has stimulated an established interest in how public money is spent, with an emphasis on transparency and openness within public expenditure processes (Heald, 2003), the scope for privatizing public sector activities and the stabilization, allocation and distribution effects of public expenditure (Persson & Tabellini, 2001).

Within the overall pattern of public procurement, that portion of public expenditure attributable to purchases of goods and services has been the subject of significant recent attention (Brühlhart & Trionfetti, 2004). As with total public expenditure, this interest arises in part from the absolute scale of public procurement with between 8% and 25% of the Gross Domestic Product (GDP) of Organization for Economic Co-operation and Development (OECD) countries (OECD, 2002) and 16% of European Union (EU) GDP being attributable to government purchases of goods or services (European Commission, 2006). Furthermore, public procurement is also a significant activity in the developing world with a study of 106 developing countries finding that the purchases of their governments account for approximately 5.1 percent of their combined national outputs (Evenett & Hoekman, 2005).

Weiss and Thurbon (2006) assert that within evolving discussions concerning public procurement, the role of government purchases as a stimulus for sustainable development has been a topic of particular interest in recent years. McCrudden (2004) describes sustainable procurement as procurement that is consistent with the principles of sustainable development, such as ensuring a strong, healthy and just society, living within environmental limits, and promoting good governance. This places government in two roles by participating in the market as purchaser and at the same time regulating it through the use of its purchasing power to advance conceptions of social justice (McCrudden, 2004). The advocacy for sustainable public procurement heightened in 2002 when the World Summit on Sustainable Development (WSSD) called for governments to promote public

procurement policies that encourage development and diffusion of environmentally sound goods and services (WSSD, 2002).

Sustainable procurement has had particular salience among supranational organizations and this has prompted the initiation of significant responses among some governments such as those in the European Union (McCrudden, 2004). For instance, in Canada, the federal government procurement policies emphasize on similar economically-oriented aspects of purchasing as those found in Europe including mandates concerning promotion of competition and value for money. Outside Europe and in particular Japan, moves to integrate environmental and social criteria in public procurement practices have so far emphasized environmental aspects. A case in view is a law on Green Purchasing that was passed in 2001 and compelled all government bodies to develop and implement green purchasing policy (ECCJ, 2007).

In South Africa, public procurement is considered as an important policy lever in the post-apartheid world. Specifically, the Black Economic Empowerment initiative meant the public sector prioritized buying from black-owned businesses in order to redress the economic advantages of white-owned businesses attributable to apartheid (McCrudden, 2004). In Kenya, very little is known about the extent to which sustainable procurement policies and practices are embedded within the practice of public procurement despite the fact that sustainable procurement has an increasingly high profile in policy circles around the world. This gap justifies the import of this study.

The Lake Victoria South Water Services LVSWSB (LVSWSB), the case for this study, was established under the Water Act 2002 vide gazette Notice No. 1714 of 12th March 2004 as a state Corporation reporting to then Ministry of Water and Irrigation and subsequently commissioned on 7<sup>th</sup> December 2004. The LVSWSB, whose core mandate is infrastructure development and licensing of Water Service Providers (WSPs), currently serves a total of 36 districts in 10 counties, and within its operational arm pits are 39 and 9 rural and urban WSPs respectively (LVSWSB, 2013). The LVSWSB is classified a procurement entity class A by the Public Procurement Oversight Authority (PPOA) of Kenya.



## 1.2 Statement of the Problem

The problem under study is lack of sustainable procurement practices amongst the public entities in Kenya and for the entities that try to incorporate sustainability within their practices, the extent of integration is too low owing to the fact that either one or of the sustainability pillars are incorporated instead of the three. The three pillars of sustainable procurement practices include environmental, economic, and social pillars. Public procurement is an important function of governance since associated expenditure has a great impact on the economy. It is utilized as an important tool for achieving economic, social and environmental objectives.

Despite its long existence, however, sustainability is yet to gain prominence in developing countries. The slow adoption pace implies that economies face hurdles in realizing goals set in the World Summit for Sustainable Development (WSSD) which identified public procurement as a necessary ingredient for social, economic and environmental sustainability. While public agencies in Kenya have embraced significant milestones in public procurement, it is still evident that sustainability is a major concern given the underperforming states of primary sustainability indicators such as unemployment, public project completions, and policy failures. At the current rate of 40%, unemployment is at an unprecedented peak.

Notably also, the much heralded government policy on 30% tender reservation for youth, women and disabled, has failed to yield the expected success levels. Specific to water sector, traces of sustainable procurement for infrastructural materials are evident. For instance, in 2014 the Ministry of Environment, Water and natural Resources issued an official circular to all regional development authorities requiring restricted acquisition of ductile iron pipes which had been certified as a sustainable product and with an operational life of over 100 years. However, the extent to which LVSWSB has adopted this and related environmental, social and economic sustainability is yet to be studied. Based on this, this study will analyze the extent to which sustainable procurement has been integrated in public procurement using the Triple Bottom Line approach.

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### **1.3 Objectives of the study**

Broadly, the study seeks to establish the extent to which sustainable public procurement is integrated in public procurement practices by analyzing the case of the Lake Victoria South Water Services (LVSWSB) in Kenya.

Specifically, the study is set to:

1. Establish the extent of environmental sustainability through public procurement at the Lake Victoria South Water Services LVSWSB;
2. Examine the extent to which social sustainability is integrated in public procurement at the Lake Victoria South Water Services LVSWSB; and
3. Determine the extent to which economic sustainability is integrated public procurement at the Lake Victoria South Water Services LVSWSB.

### **1.4 Research Questions**

The study will be guided by the following set of research questions:

1. What is the extent of environmental sustainability through public procurement at the Lake Victoria South Water Services LVSWSB?
2. To what extent is social sustainability integrated in public procurement at the Lake Victoria South Water Services LVSWSB?
3. To what extent is economic sustainability integrated in public procurement at the Lake Victoria South Water Services Board (LVSWSB)?

### **1.5 Scope of the Study**

The study is designed to investigate and analyze acquired information on integration of sustainable public procurement at the LVSWSB whose jurisdictional head-office is based in Kisumu town. The LVSWSB, established in 2004 vide Water Act 2002, is a state corporation under the Ministry of Environment, Water and Natural Resources (MEWNR). It is categorized procurement entity class A by the Public Procurement Oversight Authority (PPOA) of Kenya. Within this context, the study will conceptually focus on three thematic areas which include environmental sustainability, social sustainability, and economic sustainability.



## 1.6 Significance of the Study

The findings of this research study are expected to be applied entirely in the procurement functions of both public and private companies in aid of rationalizing short and long term objectives in line with sustainable procurement policies. Since the overriding philosophy in sustainable procurement is to identify responsive needs as well as creation of buyer-supplier relationships, the study is mirrored in a way that brings forth a clear understanding of best procurement approaches which enhance sustainability. This will not only benefit the LVSWB in achieving targets, but most importantly will allow the government to leverage public spending in order to promote the country's social, environmental and economic policies. Moreover, the study is expected to ignite scholarly interests from institutions and individuals to investigate and relate procurement approaches in other public entities.

## 1.7 Conceptual Framework

The study presupposes that sustainable public procurement is dependent on ability of the LVSWB to integrate environmental, social, and economic dimensions in the public procurement process. Fig. 1.1 diagrammatically presents the underlying variable relationship

### Independent Variables

### Dependent Variables

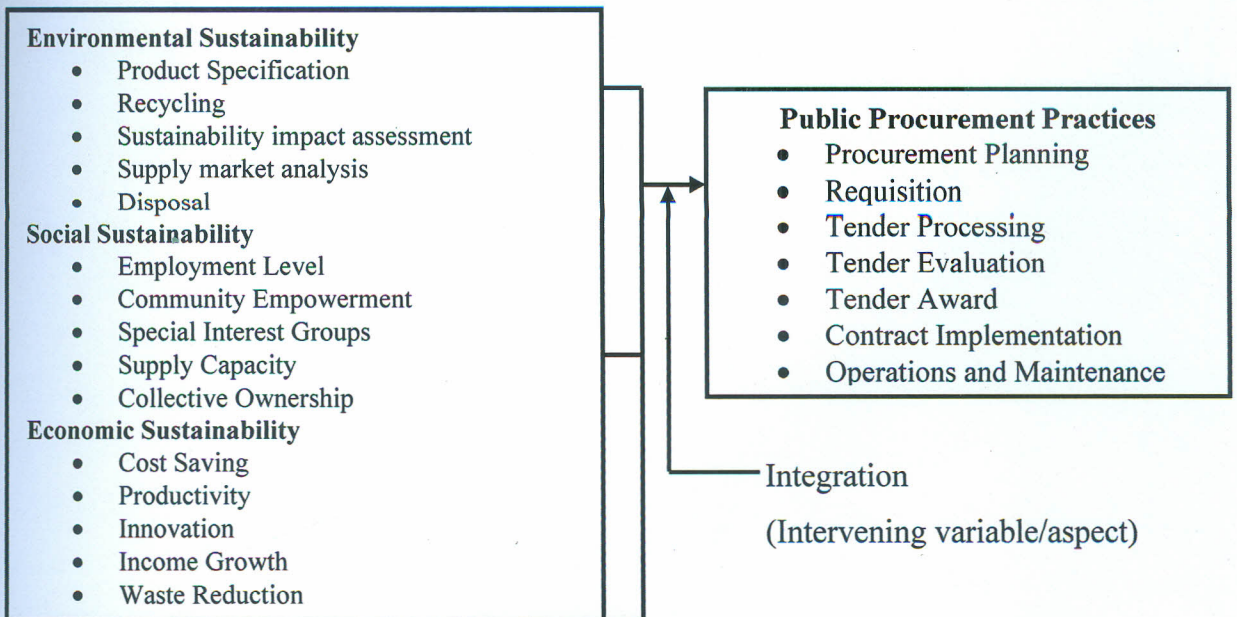


Fig. 1.1: Sustainable Public Procurement Practices; Source | Adapted from Elkington (1994)

With the conceptual framework, the study identified public procurement practise as dependent variable whereas environmental sustainability, social sustainability, and economic sustainability as the independent variables. As a dependent variable, public procurement practices entail the various steps or stages that an entity follows in the procurement process. The main steps include procurement planning, requisition, tender processing, tender evaluation, tender award, contract implementation, and the aspect of operations and maintenance.

On the other perspective, the environmental sustainability is defined in the study on the basis of product specification, recycling activities, sustainability impact assessment, supply market analysis, and disposal. Social sustainability is an independent variable that is defined in the study from the perspective of employment levels, community empowerment, special interest groups, supply capacity, and collective ownership. In the last independent variable, the study investigated the concept of economic sustainability from the perspective of cost savings, productivity, innovation, income growth, and waste reduction.

The intention of the study was to establish the extent of integration of the various concepts of environmental, economic, and social sustainability aspects within the different stages that form public procurement practice.



## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Introduction

This section discusses reviewed literature relating to the study's thematic areas. The review includes the concept of sustainable procurement, triple bottom line (TBL) and sustainability, sustainable procurement policy frameworks in the world, and dimensions of sustainable procurement.

### 2.2 Theoretical Framework

A theoretical framework refers to how the researcher develops thoughts on what the possible answers could be, these thought and theories are then clustered into themes that frame the subject. This research mainly focused on sustainable procurement practices in Kenya with a special reference to Lake Victoria South Water Services Board. The underpinning theory for this study is the triple bottom line (TBL).

Triple Bottom Line (TBL) sustainability is the premise that public procurement should take economic, social, and environmental impacts into consideration. The concept has been applied widely by scholars and practitioners as widespread interest in public procurement grows. As such, many definitions for the TBL are used to explain this three-pronged approach. Simply put, the TBL is an accounting framework that incorporates three dimensions of performance: social, environmental, and financial. It can also be thought of as the three Ps: people, planet, and profit (Slaper, 2011). A more elaborate definition comes from Krajnc and Glavic (2005), who explain TBL as the creation of goods and services using processes and systems that are non-polluting, conserving energy and natural resources, economically viable, safe and healthful for employees, communities and consumers, socially and creatively rewarding for all working people. Savitz (2006) further explains that TBL captures the essence of sustainability by measuring the impact of an organization's activities on the world including both its profitability and shareholder values and its social, human and environmental capital. Common among all of these definitions is an emphasis on sustainable procurement that is not focused on only one goal.

In order to fully understand TBL approach to sustainability, it is important to recognize that the concept originated in a business and corporate setting. Most attribute the advent of the term triple bottom line to Elkington, who in 1994 wrote about this “win-win-win” strategy. He contended that it had become increasingly clear that business must play a central role in achieving the goals of sustainable development. Companies needed to become more responsive to what he saw as competitive and strategic challenges of growing concern over the environmental and social justice by consumers. He saw the triple bottom line as a major feature of the business environment in the coming century. Since this time, the private sector has indeed become more attentive to tracking and reporting environmental and social impacts in addition to their finances; tools such as life-cycle analysis and corporate citizenship reporting have become common-place in the private sector. Companies are now realizing more than ever that they can no longer ignore negative externalities, namely negative environmental impacts, and that it is unsustainable to follow an economic model with a narrow focus on economic gains (Wirtenberg, 2012).

Evidence of the broad appeal of TBL framework can be seen in the adoption of this concept of sustainability by international development organizations. A seminal example of this is the 1987 United Nations report “Our Common Future”, also known as the Brundtland Report, in which the World Commission on Environment and Development argued very strongly that a single focus only on environmental issues would be a grave mistake. It was perhaps the first time that the international community recognized that the environment does not exist separately from human actions or needs, and that the environment is inseparable from development or poverty alleviation (Slaper, 2011). Another prominent global commitment to the three pillars of sustainable development comes from the United Nation’s Agenda 21, an international framework for sustainable development that offers a practical approach on local levels. According to Dodds *et al.*, (2012), the 27 principles underlying Agenda 21 promote the centrality of social equity and environmental protection to development for current and future generations.

While triple bottom line sustainability is often envisioned as a set of three interlocking rings, perhaps a more accurate understanding should nest the economy within society, which in turn is nested within the environment. This depiction more clearly articulates the fact that



the economy depends on society, which more broadly depends on the environment (Giddings et al., 2002). Slaper (2011) also argues that TBL sustainability is a relatively straightforward concept that should be used regionally and on a small scale by communities to encourage development growth in a sustainable manner. Without emphasis on community and shared responsibility, true sustainable development cannot occur (Rogers & Ryan, 2006).

A final relationship in the literature on the triple bottom line is that between environmentalism and entrepreneurship. Anderson (1998) argued that environmentalism and entrepreneurship share key commonalities in that they are both founded on social processes and attitudes. Environmentalism can be the basis for entrepreneurial opportunity, as entrepreneurs are agents of change who are most likely to address environmental concerns. Entrepreneurs can give real substance and form to environmentalism (Anderson, 1998). Dixon and Clifford (2007) coin the term “ecopreneurship” to describe people and organizations that create economically viable businesses while retaining their core environmental and social values. They generate economic value as a by-product of social and environmental value and filter the potential of resources through the lenses of environmental and social commitment.

### **2.3 Concept of Sustainable Procurement**

The concept of sustainable procurement has recently acquired a high degree of salience in policy circles internationally (Brammer & Walker, 2011). The concept builds on the traditional procurement practice which it seeks to extend through the adoption of sustainability principles. Procurement is defined as acquisition of goods, works and/or services from the supplier. The procurement process is viewed as involving sourcing, contracting, monitoring and evaluation, and expediting. Sustainable procurement is a process of acquiring goods, works and services from a supplier that provides the optimum combination of whole life costs and benefits to meet the customer’s requirements. It is a process whereby organizations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organization, but also to society and the economy, while minimizing damage to the environment (Coggburn, 2004).

Price Waterhouse Coopers (PWC) (2010) describe sustainable procurement as a process of purchasing goods and services that takes into account the social, economic and environmental impact that such purchasing has on people and communities. It is about considering what the products are made of, where they have come from, who has made them, how they are transported and how they are eventually disposed of. Sustainable procurement means taking into account economic, environmental and social impacts in buying choices. This includes optimizing price, quality and availability, but also environmental life-cycle impact and social impacts linked to product/service's origin (PWC, 2010).

The PWC (2010) acknowledges that in both private and public sectors, there is increasing pressure from customers, clients, government and the public to put sustainable procurement into practice. The 2002 World Summit on Sustainable Development stated that relevant authorities at all levels should promote public procurement policies that encourage development and diffusion of environmentally sound goods and services. Moreover, organizations practicing sustainable procurement meet their needs for goods, services, utilities and works not on a private cost-benefit analysis, but with a view to maximizing net benefits for themselves and the wider world. In so doing they must incorporate extrinsic cost considerations into decisions alongside the conventional procurement criteria of price and quality. These considerations are typically divided thus: environmental, economic and social (also known as the triple baseline). The important areas of environmental concerns are; more efficient use of raw materials in manufacturing operations, pollution and waste, and energy savings (PWC, 2010).

#### **2.4 Dimensions of Sustainable Procurement**

Traditionally, business has focused on shareholder wealth maximization. However, due to globalization, a company's license to operate is no longer granted by a single interest group but by public stakeholders who have access to a company's financial and non-financial information. Consequently, there is a growing recognition that the value of corporate activity is defined too narrowly in that it influences the economic, social and environmental factors that it sustains. This recognition has led to the increasing popularity of the Triple



Bottom Line (TBL) or sustainable procurement, in the supply chain perspective (Hens, 2010).

According to Colbert and Kurucz (2007) environmental, social and financial impacts should be taken into account when corporate business strategy is defined. The idea behind the TBL paradigm is that a corporation's ultimate success or health can and should be measured not just by the traditional financial bottom line but also by its social, ethical and environmental performance. This factor is an important milestone in the journey toward sustainability. TBL is mostly used to define a firm's impact on the economic, social and environmental bottom lines. The claims are that if a company performs in all three bottom lines it will be more successful in its financial bottom line (Gray, 2006).

Hens (2010) regards sustainable procurement as a dynamic procuring condition in which the economic, environmental and social systems meet the needs and wants of the present generation, while maintaining or increasing the resource and productive capacities that are donated to the future generations. Sustainable procurement is hence construed as a positive change which does not occur at the expense of the environment sustainability, social sustainability, and economic sustainability (Hens, 2010).

#### **2.4.1 Environmental Sustainability**

The purchasing function is today an important contributor to strategic success, helping firms meet the challenges of an increasingly competitive and dynamic environment. Suppliers not only are instrumental in the value creation of the firm, they also significantly influence its environmental impact (Paulraj, 2011). Because purchasing is at the beginning of a green supply chain, a firm's environmental efforts cannot be successful without integrating environmental goals into purchasing activities. Given its gate-keeper role, purchasing could foster green product or process innovation among supply chain members (New, Green & Morton, 2000).

Srivastava (2007) defines environmental or green procurement as purchasing involvement in supply chain management activities in order to facilitate recycling, reuse, and resource reduction. Bowen et al. (2001, p. 42) expanded on this definition and defined green supply as "supply management activities that are attempts to improve the environmental

performance of purchased inputs, or of the suppliers that provide them. They include activities such as co-operative recycling and packaging waste reduction initiatives, environmental data gathering about products, processes or vendors, and joint development of new environmental products or processes.” From these definitions, sustainable procurement implies strategic intent of minimizing environmental damage without compromising on attainment of desired value from a supply chain.

Anecdotal evidence suggests that green purchasing and supply, by reducing disposal and liability costs, conserving resources, and improving public image, improves a firm’s economic position. Carter *et al.* (2000) provided the first empirical examination of the relationship between environmental purchasing and firm performance. Using questionnaires from original equipment consumer products manufacturers and compustat-reported financial data, they found that environmentally friendly purchasing policies led to increased firm performance as measured by net income. This contradicted Min and Galle’s (1997) previous findings according to which the two most highly rated obstacles to effective green purchasing were purchasing managers’ perceptions that environmental programs were costly and that recycling was uneconomical.

Zhu and Sarkis (2004) considered both green purchasing and cooperation with customers regarding environmental requirements as external green supply chain management (GrSCM) and investigated them along with other practices like internal environmental management, investment recovery, and eco-design. Using a sample of manufacturing firms in various industries in China, these researchers reported positive relationships of external GrSCM with environmental performance, positive economic performance, and negative economic performance. However, these findings did not hold true when green purchasing was considered an individual GrSCM practice. Based on surveys in the Chinese automotive industry, Zhu *et al.* (2007) found that green purchasing had a negative influence on environmental performance, whereas no significant impact was detected on other performance aspects. Vachon and Klassen (2006) assessed the impact of environment-related or green project partnerships, that is, the extent of interaction between a plant and its primary suppliers and major customers in developing and implementing pollution prevention technologies, at the plant level. Using US and Canadian plants in package



printing industry, they reported that, as the extent of green project partnership with primary suppliers increased, delivery performance and environmental performance improved. However, no significant relationship was found regarding other dimensions of manufacturing performance, such as cost, quality, and flexibility.

Using case studies of seven Small and Medium-Sized (SME) suppliers in Korean automobile industry, Lee and Klassen (2008) examined how the GrSCM strategy of a large buying firm influences the development and deployment of suppliers' environmental capabilities. These researchers conjectured that buyers' monitoring-based GrSCM positively influenced the initial development of suppliers' internal environmental management capabilities (EMCs), and that buyers' support-based GrSCM was positively related to improvement of suppliers' internal EMCs. Further, Iraldo (2010) surveyed facility managers from all manufacturing sectors in seven countries (Canada, France, Germany, Hungary, Japan, Norway, and US), and found that making specific requests to suppliers to assure a certain performance level, and involving them in GrSCM practices could enable a firm to better manage its own environmental performance.

#### 2.4.2 Social Sustainability

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Sustainable development also implies an improvement in the quality of life through education, justice, community participation, and recreation. Recently social sustainability has gained an increased awareness as a fundamental component of sustainable development to encompass human rights, labour rights, and corporate governance. The goals of social sustainability are that future generations should have the same or greater access to social resources as the current generation (Macintosh & Wilkinson, 2006). Colantonio (2008) recognizes social sustainability as a fundamental component of sustainable procurement, becoming increasingly entwined with the delivery in sustainable community discourse and the urban sustainability discourse. Davidson and Wilson (2009) define social sustainability as a life-enhancing condition within communities, and a process within communities that can achieve that condition.

Bramley *et al.* (2006) provided an operational explanation of social sustainability, where two ideas were identified at the core of social sustainability. Firstly, social equity issues or

more collectively “sustainability of community” is fundamental to the concept. Secondly, the concept is concerned with the continued feasibility, health and performance of society itself as a communal entity. This is not to suggest that these two dimensions are completely independent of one another, merely, that this is a useful conceptual distinction. Examination of social sustainability level requires both of these dimensions to be covered.

Barron and Gauntlett (2002) explored the scope of social sustainability through a formal consultation process, including meetings, discussions and presentations. Their findings showed that the goals are what make society strong and livable, now and into the future are including equity, diversity, interconnectedness, quality of life, and democracy and governance. These findings bring to light that social sustainability occurs when the formal and informal processes, systems, structures, and relationships actively support the capacity of current and future generations to create healthy and livable communities. Social sustainable communities are impartial, varied, associated, and autonomous and provide excellent quality of living (Barron & Gauntlett, 2002).

Chan and Lee (2008) reviewed significant success factors for social sustainability and referred to maintenance and improvement of well-being of current and future generations. Public procurement in order to be socially sustainable should create a harmonious living environment, reduces social inequality and divides, and improves quality of life in general. These identified significant success factors are provision of social infrastructure, availability of supply opportunities, accessibility, preservation of local characteristics, and ability to fulfil psychological needs (Chan & Lee, 2008).

### **2.4.3 Economic Sustainability**

The moral obligation or pure desire to contribute to society might be the reason for adopting sustainable procurement practices for some businesses (Tzschentke *et al.*, 2004); but for many the business case for sustainability and the benefits related to sustainable procurement practices tie the commercial interest of business to the goals of society (Miller & Twining-Ward, 2005). Economic sustainability refers to a business’s ability to make profit in order to survive and benefit the economic systems at the local and national level (Roberts & Tribe, 2008). Sustainable businesses consider their economic impact on the community, such as



job creation, local wages, and their contribution to local economic growth. Also suppliers and an engagement across the supply chain to ensure similar values and practices are issues of economic sustainability. At the same time businesses need to maintain corporate profitability and internal financial stability (Landrum & Edwards, 2009).

Successful economic sustainability can only be reached when the holistic principle of sustainability is understood and integrated into the strategic planning of the business. If sustainability initiatives are seen as add-ons or as another performance variable the full economic benefits of sustainable business practices will not be reached (Larson et al., 2000). Strategic sustainability represents a commitment demonstrated by top management that moves beyond compliance and efficiency to avoid risks and minimize costs (Dunphy et al., 2007). The integration of sustainability into strategic planning will also require businesses to develop a more long-term focus and thus help them to examine threats and opportunities (Hitchcock & Willard, 2009). It is essential that sustainability is perceived as a company-wide goal that incorporates every aspect of business and its relationships. This requires a system thinking that everything is related in some way and each part and each person in the business can contribute towards more sustainability (Landrum & Edwards, 2009).

The most cited economic benefit of sustainable procurement is the reduction of costs (Landrum & Edwards, 2009; Bohdanowicz *et al.*, 2004; Hitchcock & Willard, 2009), which is the prime motive behind introducing environmental initiatives. In particular the rising costs for water, energy and waste disposal led many businesses to look for alternatives. Operational measures are for example recycling systems, using recycled materials, installing water-saving devices, using low energy light bulbs, energy-conservation measures such as insulation or solar-powered water heating systems. These initiatives focus exclusively on the environmental dimension of sustainable procurement practices (Landrum & Edwards, 2009).

## **2.5 Sustainable Procurement Policy Frameworks around the World**

The policy context concerning public procurement in the United Kingdom is based on a set of guiding principles, including transparency, competitiveness, accountability, efficiency, legality, and integrity, that have the ultimate aim of supporting the delivery of best value for money in public procurement. Best value for money is defined as the optimum combination

of whole life cost and quality to meet the customer's requirement. Significantly, through the focus on whole life costing, the definition of best value of money gives scope to public bodies to take social and environmental policy objectives into account in their procurement activities (McCrudden, 2004). To further support and encourage this recognition, the UK Government, as part of the implementation of its 2005 Sustainable Development Strategy, stated its ambitious goal to be amongst the leaders in the EU on sustainable procurement by 2009. In order to stimulate the development of sustainable public procurement, a Sustainable Procurement Task Force was established in 2005 and since then regions of the United Kingdom (Northern Ireland, Scotland, Wales) and various areas of the public sector (Education, Health) have provided sustainable procurement guidance and policy that reflects their interpretation of how principles of sustainability can be applied to their particular contexts (McCrudden, 2004).

Public procurement in the European Union is governed by a set of similar national policy frameworks concerning the objectives of public procurement, coupled with an overall policy framework that is designed to open up the EU's public procurement market to competition, outlawing "buy-national" policies and to promote the free movement of goods and services. Regarding the state of policies in EU countries concerning sustainable public procurement, there is considerable variation both in the extent to which countries have developed and implemented policy, and in the character and focus of such policy frameworks where they exist.

In contrast to the predominantly environmental character of policy discussions concerning sustainable procurement in the UK and Europe, sustainable procurement policy frameworks in the United States, have, consistent with the constitution, a particular emphasis on avoiding discrimination and providing equal opportunities (McCrudden, 2004). For the United States, these issues have most clearly been crystallized in the development of federal policies that promote procurement from women and minority owned businesses with some emphasis on purchasing from indigenous peoples. The focus on issues of discrimination also played an important role in shaping US government policies in respect of purchases from overseas in that procurement (or non-procurement) from Northern Ireland and South Africa were used as a lever to place pressure of the UK government to stop religious



discrimination, and upon the South African government to end apartheid (McCrudden, 2004).

Canadian federal government procurement policies include emphasizes similar economically-oriented aspects of purchasing as those found in Europe including mandates concerning promotion of competition and value for money. However, in addition to these, Canadian public procurement policies include foci on non-discrimination and ensuring procurement opportunities for Aboriginal businesses. The Canadian federal government founded the Office of Greening Government Operations (OGGO) in 2005, which developed the policy on green procurement in 2006. Through this policy, all government bodies need to formulate green procurement targets and all personnel responsible for procurement need to be trained in green procurement. The OGGO provides purchasers with a decision making toolkit and a checklist on their website to encourage them to consider sustainability.

In Japan, moves to integrate environmental and social criteria in public procurement practices have so far emphasized environmental aspects. For example, a law on Green Purchasing was passed in 2001 that compelled all government bodies to develop and implement green purchasing policy. The law requires government agencies to establish annual goals, integrate these with purchasing decisions and to report on performance relative to goals (ECCJ, 2007). In South Africa, as in the United States, public procurement was seen as an important policy lever in the post-apartheid world. Specifically, the Black Economic Empowerment initiative means the public sector prioritizes buying from black-owned businesses in order to redress the economic advantages of white-owned businesses attributable to apartheid.

## **2.6 Empirical Literature**

Steurer and Konrad (2007) examined the state of development of national action plans regarding green or sustainable public procurement in the EU, arguing that these are not only one of the most comprehensive instruments fostering green or sustainable public procurement, they are also the type of instrument applied most often in EU member states. Of the 27 EU member states, their analysis showed that only a third of governments had adopted an action plan concerning sustainable public procurement by April 2007, with a

further 5 countries having a draft policy concerning sustainable public procurement that hadn't yet been adopted. The emphasis of much of the policy that has been implemented in the EU is environmental rather than social in character. For instance, in Italy there is a mandate that 30% of goods purchased by public administration comply with ecological criteria, while Denmark, France, Netherlands and the United Kingdom have public procurement policies specifically for wood and paper products, and in Belgium there is an initiative to ensure that 50% of government vehicles comply with specific environmental criteria (Steurer & Konrad, 2007).

According to Kinyanjui (2010) developing countries in Africa, such as Nigeria, Ghana, Malawi, and Kenya have failed to achieve infrastructure development goals due to application of poor procurement processes. The study found that poor state of many roads in Kenya and other public infrastructures is greatly influenced by low emphasis on the employed procurement process and major reforms on public procurement processes could play an important role towards development of country's road infrastructure. Kirungu (2009) found that while the legal and regulatory framework is demand adequate, the most significant risks in procurement are found in the institutional environment and performance of the procuring entities in complying with the procurement law and its regulations.

In a survey conducted by PPOA (2008) it was found that over 70% of procuring entities in Kenya lost over 1 billion shillings as result of application of poor procurement processes. Further, according to the study by Price Water House Coopers (2010), over 50% of public enterprises in Kenya do not comply with procurement regulations and this has created corruption loopholes and other malpractices on procurement processes. Mithamo, Iravo and Mbithi (2013) undertook a study at KeRRA and found that the level of procurement regulations adherence was low and this hindered administration of the procurement process in road public sector organizations. As a result of this, the study noted that there were frequent cases of procurement related disputes which were an indication of non-compliance of procurement regulations and declined efficiency and effectiveness in the procurement process.

According to Evenett and Hoekman (2005), public procurement is regarded as a complex process that is also very significant for the global growth. Evidently, the significance of



public procurement has been discussed by Afonso *et al.* (2005) who claim that the concept accounts for 45% of the GDP amongst the developing countries. Owing to the significance of the public procurement process, there has been a growing interest amongst scholars and other stakeholders across the globe. Weiss and Thurbon (2006) are critical that the increasing debates and discussions on public procurement especially with regards to its significance to the global economy, there has been increasing interest on enhancing the sustainability of the process. McCrudden (2004) claims that sustainable procurement is congruent with the various principles that achieve sustainable development such as the aspects of making sure that there is strong, healthy, and just society. Such societies should live within environmental limits as well as promoting good governance. McCrudden (2004) also adds that there has been a salience amongst supranational firms with respect to sustainable procurement, which has resulted into promoting significant responses amongst specific governments and entities. Therefore, every public entity aims at ensuring that there is a sustainable approach in managing public procurement.

It is with the same interest that the current study sought to establish how public entities can integrate different aspects of sustainability within their public procurement process. Lake Victoria South Water Services LVSWSB was picked as the public entity to help in understanding how specific aspects of sustainability have been integrated into the public procurement process. Three main sustainability concepts identified included environmental sustainability, social sustainability, and economic sustainability. The study aimed at understanding the extent to which different aspects of the sustainability concepts have been integrated within the operations of the public procurement. As a result, the study sought to establish the idea of incorporating sustainability within the concept of public procurement process amongst various public entities.

## **2.7 Research Gaps**

Although existing works show an understanding and acceptance of the sustainable procurement concept and its related elements, there has been less attention in investigating how the practice should be prioritized for optimization of water service provision. Thus, it is literally unclear how the three elements (economic, social and environmental) interact optimally especially for procurement decision making and implementation purposes within

the water sector where there is an inevitably frequent interaction between man and nature. Furthermore, despite studies on the sustainability of procurement process, the bulk of such researches have mainly focused on environmental issues. Notably, there are a few number of studies have focused on social issues. In this regards, there are little or no studies that have combined the three elements.

As with the literature on green procurement practices, the tendency is for studies to focus on particular issues such as bribery or unfair contracting (Wood, 1995; and Carter, 2000), supplier employment conditions (Graafland, 2002; and Mamic, 2005) and ethnic minority suppliers (Carter *et al.* , 1999; and Krause *et al.*, 1999). This to some extent explains why sustainable procurement in Kenya has not explicitly been emphasized by public policies and possible lack of acceptance in business practices given that the three pillars are not adequately or extensively explained towards explaining the concept of sustainability in public procurement practices. In addition, the review depicts that sustainable procurement has been studied less in the public and service sectors. It is also implied that studies on sustainable procurement have been evident in the developed countries while minimal inputs have been spent in the developing world.

These thus provide both conceptual and contextual justifications for undertaking this study. Therefore, it would be interesting to evaluate the extent to which all the three aspects have been integrated within public institutions with respect to public procurement practices or process. It is on this basis that the current study focused on a developing nation, Kenya besides the fact that it tried to combine all the three pillars of sustainability, that is, economic, social, and environmental pillars.



## CHAPTER THREE: RESEARCH METHODOLOGY

### 3.1 Introduction

This section discusses the methodology that was used to identify, collect and analyze data. Specifically, it covered the research design, study area, target population, sample size and sampling procedure, data collection methods, instrument validity and reliability, and analysis.

### 3.2 Research Design

Sunders *et al.* (2007) define research design as a detailed outline of how an investigation will take place. In other words, a research design is a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. In this respect, a research design typically includes how data is to be collected, what instruments will be employed, how the instruments will be used and the intended means for analyzing data collected.

The study adopted a descriptive survey research design. Cohen et al (2000) advocates for this method because of its ability to ascertain detailed description of existing situation. According to Yin (2003), descriptive survey research design is structured to examine a number of logical sub-units or units of analysis within organizations. In this study, the use of descriptive research design was important since the intention was to gain broader understanding of the sustainable public procurement in the context of LVSWBS. Through this design, the researcher was able to generate answers to the questions of 'why?' as well as 'what?' and 'how?' regarding sustainable public procurement.

### 3.3 Study Area

Study participation was drawn from various procuring entities in the water sector institutions serving under the LVSWBS, formed vide Water Act (2002) and geographically covering the southern part of Lake Victoria basin. The LVSWBS's jurisdictional area is about 31,734 km<sup>2</sup> out of which 4,128 km<sup>2</sup> is lake waters constituting about 13% of the catchment area. To the North, the LVSWBS neighbours Lake Victoria North Water Services LVSWBS (LVNWSB) whose headquarter is at Kakamega town, while Rift Valley Water Services

LVSWSB (RVWSB) whose headquarter is based in Nakuru town borders LVSWSB to the South. In terms of service proviso, LVSWSB serves six full counties of Kisumu, Siaya, Homa Bay, Migori, Nyamira and Kisii while Bomet, Kericho, Narok and Nandi counties are partly covered. Within this coverage, the State agency interacts with other service organs such as sub-county water offices, WSPs, and CBOs which are spread all over the region (LVSWSB, 2014).

### 3.4 Target Population

This study was designed to obtain relevant data from all independent and core procuring entities in the water sector under LVSWSB. These entities included 13 water service providers, 76 sub-county water officers, 15 contractors, and 2 from LVSWSB head office. From each procuring entity, the accounting officers, heads of procurement/supply chain management and individual project managers were selected to participate in the study, resulting to a target sample size of 106 participants from the population of 144 (Table 3.1).

### 3.5 Sampling

#### 3.5.1 Sample Size

Cresswell (2003) asserts that the entire population may not be easy to study. A researcher, therefore, has to draw a sample from the study population. In this study, the Yamane model was used to obtain the sample size from all other strata other than the head office. This model was preferred due to its ability to reduce a large population to manageable sample units having a defined level of significance.

According to the model,

$$n_s = \frac{N}{\{1+N(e^2)\}} \dots \dots \dots \text{equation 1}$$

Where;

- $n_s$  - Sample Size
- $N$  - Population Size
- $e$  - Precision level (at 0.95 confidence interval,  $e = 0.05$ )

Given  $N = 142$ , then;

$$n_s = \frac{142}{\{1 + 142(0.05^2)\}}$$

$$= \underline{\underline{104}}$$



Other than the participants from the board, the study also picked some more participants from the head office owing to the fact that they also have adequate knowledge and experience when it comes to procurement process. The sample representation of the participants from head office was obtained from the population of two (Procurement Manager and Procurement Officer).

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

$$= \underline{\underline{2 \text{ participants}}}$$

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Therefore, a total of 106 (104 + 2) were used as a representative sample for the entire population under study. The participants were selected by proportional stratified random sampling technique at a sampling ratio of  $104/142 = 0.73$  as shown in Table 3.1.

### 3.5.2 Sampling Procedure

The sampling procedure employed in this study was stratified sampling. Stratified sampling entailed the dividing of the population into separate groups, called strata. There were four main strata, namely, water service providers, sub-county water officers, LVSWSB contractors, and LVSWSB head office. Then, a probability sample (often a simple random sample) was drawn from each group. Based on the probability sample, the study was able to identify the representative sample that would help in collecting relevant and adequate information towards achieving the set objectives of the study.

Table 3.1: Sampling Size Calculation:

Study Strata	Population Size	Stratum Sample Size
1. Water Service Providers	18	$0.73 \times 18 = 13$
2. Sub-County Water Officers	104	$0.73 \times 104 = 76$
3. LVSWSB Contractors	20	$0.73 \times 20 = 15$
4. LVSWSB Head Office	2	2
<b>Total</b>	<b>144</b>	<b>106</b>

Source: LVSWSB, 2014

From each stratum, unique codes were assigned to study participants on whose basis final participants were selected randomly until maximum limits per stratum were attained. This application of stratification technique ensured that every identifiable and distinct procurement subgroup made contributions to the study's generalizations regarding sustainable procurement within the entire region.

### **3.6 Data Collection**

#### **3.6.1 Sources of Data**

Research data was obtained from both secondary and primary sources. The secondary sources included the institutional procurement policies and procedures, website articles, project reports, and public circulars on procurement. On the other hand, primary data was accessed from the selected study participants.

#### **3.6.2 Data Collection Procedure**

The secondary data was collected by desk review with the help of a standardized proforma featuring authority of the source, content, attributed causes, and recommendations thereof. According to Robson (2002), desk review technique involves critical assessment of documentations without necessarily or if need be prior to going to the field of study. On the other hand, primary data was collected by use of semi-structured and self-administered questionnaire. Using questionnaire in the study was appropriate because it explored the perceptions, attitudes, feelings and behaviour of the respondents toward sustainable procurement. The data collected was in the same form from all the respondents. According to Babbie (2007), researchers use questionnaires so that they can obtain information about the thoughts and intentions of the research participants in a large population.

#### **3.6.3 Instrument for Data Collection**

Colin and Julie (2005) assert that validity of an instrument is a measure of how well an instrument measures what it is targeted to measure. In this study, prior to actual instrument administration, the researcher sought professional opinion on sustainable procurement and public approaches to procurement from supply chain experts to judge the appropriateness of its items (Saunders, Lewis and Thornhill, 2007). Thereafter, the comments were incorporated



in validating the questionnaire. In addition, the indicators used were obtained from tested theoretical underpinning. The researcher also acquired a good knowledge of theory relating to the concept to ensure that decisions are objective on possible variables expected.

The reliability of instruments was guaranteed by ensuring that questions asked during data collection had definite responses and unambiguous. Also, the items were closely related with the study's pre-designed objectives. According to Grey (2004), unambiguous and clear questions are likely to be more reliable, and the same goes for items on a rating scale for observers. Further, reliability was realized by measuring the study construct using more responses. When more responses are used, individual errors that respondents make when answering a single item cancel each other out.

### **3.6.4 Reliability and Validity Test for Data Collection Instrument**

#### **Testing for Reliability**

A data collection method or instrument is considered reliable if the same result is obtained from using the method on repeated occasions whereas a measurement method or instrument is considered valid if it measures what it intends to measure (Saunders, Lewis and Thornhill, 2007). Reliability estimates evaluate the stability of measures, internal consistency of measurement instruments and interrater reliability of instrument scores (Hair et. al., 2010). The test-retest reliability method is one of the simplest ways of testing the stability and reliability of an instrument over time. Test-retest reliability is the most common measure of reliability. In order to measure the test-retest reliability, the study had to give the same questionnaire to a different set of respondents on two separate occasions. The study referred to the first time the interview was given as T1 and the second time that the questionnaire was given as T2. The scores on the two occasions were then correlated. This correlation is known as the test-retest-reliability coefficient, or the coefficient of stability. On the item level, the correlations ranged between 0.6 and 0.8. The overall reliability of total retest scores was 0.84. When stratified by water service providers, sub-county water officers, LVSWSB contractors, and LVSWSB head office, the total score reliability approximated 0.80 for all the categories.

## **Measuring Validity**

The process of developing and validating an instrument is in large part focused on reducing error in the measurement process. Validity is the extent to which the interpretations of the results of a test are warranted, which depends on the particular use the test is intended to serve. Even though Saunders, Lewis and Thornhill (2007) explain that validity is measured in terms of face, content, criterion, and construct, the project used content validity measure. With respect to content validity, it entails the subjective measure of how appropriate the items seem to a set of reviewers who have some knowledge of the subject matter. Content validity usually consists of an organized review of the survey's contents to ensure that it contains everything it should and doesn't include anything that it shouldn't. In finding out the content validity of the questionnaire, the project compared the test task with the content of the behavior. Despite being an empirical and not a logical method, content validity measure was preferred to other forms of measuring validity in the study.

### **3.7 Data Analysis and Presentation**

Research data in a raw form, that is, before these data have been processed and analyzed, convey very little meaning to user groups (Saunders, Lewis and Thornhill, 2007). Data analysis involved both quantitative/metric data (nominal, ordinal and scale forms of data) and the other involving qualitative/non-metric data (textual data). The quantitative data was analyzed using descriptive statistics which involved measures of distribution (percentages) and measures of central tendency (mean scores and standard deviations). According to Hair et al (2010), this statistical approach is essential when finding a way of condensing the information contained in a number of original variables into a smaller set of factors with a minimum loss of information. The statistics were generated with the aid of the computer software, Statistical Package for Social Sciences (SPSS) Version 20.0.

The study's qualitative data obtained was analyzed using content analysis procedure, whereby the pools of diverse responses were reduced to a handful of key issues in a reliable manner. This was achieved through a stepwise process that involved two broad phases: firstly, taking each person's response in turn and marking in them any distinct content elements, substantive statements or key points; and secondly, forming broader categories to



describe the content of the response in a way that allowed for comparisons with other responses. The categories obtained in second phase were numerically coded and then entered into the data file and treated as quantitative data. Moreover, some of the key points highlighted in first phase were quoted verbatim for the purpose of illustration and exemplification to retain some of the original flavour of the response. Data was presented using frequency tables and bar charts.

## CHAPTER FOUR: RESULTS AND DISCUSSION

### 4.1 Introduction

This chapter presents the data obtained from the participants as well its analysis. The presentation of data and its analysis is in form of descriptive statistics and the analysis of the results from the perspective of the research themes. This chapter also provides a deeper understanding of the results and findings regarding sustainable public procurement and integration in Kenya.

### 4.2 Descriptive Statistics

In conducting the study, it was important to understand the general formation of the employees within Lake Victoria South Water Services LVSWSB. Information on the general formation of the employees was effective in understanding whether the data obtained emanated from participants with the required level of knowledge, skills, and expertise in dealing with public procurement within the LVSWSB.

The descriptive statistics regarding the data on the employee formation within the LVSWSB are illustrated in the following sections:

**Table 4.2: Descriptive Statistics on Institution Served**

Institution Served		
N	Valid	106
	Missing	9
Mean		2.39
Std. Deviation		.751

Institution Served					
		Frequency	Percent	Valid Percent	Cumulative Percent
	LVSWSB Head Office	2	1.7	1.9	1.9
	Sub-county Water Office	76	66.1	71.7	73.6
Valid	Water Service Provider	13	11.3	12.3	85.8
	LVSWSB Contractor	15	13.0	14.2	100.0
	Total	106	92.2	100.0	
Missing	System	9	7.8		
Total		115	100.0		



From the results, on average the respondents served sub-county water offices ( $M = 2.39$ ,  $SD = 0.751$ ). Out of the 106 interviewed participants, the majority of the respondents (66.1%) were from Sub-county water office followed by the participants in the LVSWSB (13.0%), participants who were water service providers formed 11.3% of the total participants and the least were from the head office, 1.7%.

**Table 4.3: Descriptive Statistics on Current Position**

Current Position

N	Valid	95
	Missing	11
Mean		1.55
Std. Deviation		.500

**Current Position**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Accounting Officer	43	40.5	45.3
	Procurement/Supply Chain Officer/Manager	52	49.1	54.7
	Total	95	89.6	100.0
Missing	9	11	10.4	
Total	106	100.0		

Based on the results obtained, 40.5% of the participants were Accounting Officer, 49.1% were Procurement/Supply Chain, and 10.4% were Officer/Managers. It is important to understand the 10.4% (11) of the participants did not state their current position within the board courtesy of the questionnaires that were obtained. In addition, the study established that on average respondents served as procurement/supply chain officer/project manager ( $M = 1.55$ ,  $SD = 0.5$ ).

The study also asked the participants on the amount of time they have spent serving the board. From the responses obtained, results indicated that on average the respondents have been serving the entity for more than three years ( $M = 3.695$ ,  $SD = 1.7971$ ). This means that on average the interviewed respondents have spent more than 3 years in serving the organisation; hence, understand the procurement process.

**Table 4.4: Descriptive Statistics on Length of Service**

**Statistics**

Length of Service		
N	Valid	103
	Missing	3
Mean		3.695
Std. Deviation		1.7971

The last aspect on general information was the annual procurement value. The results of the study confirmed that on average the annual procurement value is Ksh. 166,930,392.16.

**Table 4.5: Descriptive Statistics on Procurement Value**

**Statistics**

Value of Procurement Value		
N	Valid	102
	Missing	4
Mean		166930392.16
Std. Deviation		198502837.244

According to results of the general information of respondents, it is evident that the respondents had the right knowledge, skills, and expertise in providing information related to procurement process within Lake Victoria South Water Services LVSWSB.

### **4.3 Results Analysis and Discussion**

Apart from establishing the employee formation in respect to institution served, position served, length of service, and the annual procurement value, the study sought to achieve its main objectives through answering the research questions. The following sections provide the results and analysis of the answers to the research questions obtained from the respondents during the primary research.

#### **4.3.1 Environmental Sustainability**

The first question of the study sought to find out the extent of environmental sustainability through the public procurement at Lake Victoria South Water Services LVSWSB. The answers to the research question one were obtained from the responses to questions five to



nine of the questionnaire. The results of the responses coupled with the analysis of the same are illustrated in the descriptive statistics.

**Table 4.6: Descriptive Statistics for Environmental Sustainability Aspects**

**Descriptive Statistics**

	N	Mean	Std. Deviation	Variance
Environmental Issues	106	1.76	.823	.677
Environmental Components in Tender Doc	97	1.20	.399	.159
Policy to Recycling	105	1.72	1.042	1.086
Environmental Sustainability Assessment	106	1.29	.457	.209
Disposal of Materials	105	2.11	.847	.718
Valid N (listwise)	96			

On average, the respondents claimed that Lake Victoria South Water Services LVSWSB has a moderate extent to which environmental issues have been incorporated in the product specifications ( $M = 1.76$ ,  $SD = 0.823$ ). The results also indicated that averagely, the respondents confirmed that in every tender document there are environmental components that are specified ( $M = 1.20$ ,  $SD = 0.399$ ). Incorporating environmental issues within the tender document is an essential way through which a firm may enhance environmental sustainability within the procurement process. With respect to policy of recycling infrastructural input, the respondents confirmed that the LVSWSB moderately encourage such policies ( $M = 1.72$ ,  $SD = 1.042$ ).

Moreover, the results of the study also indicated on average, the respondents confirmed that unlike in many organisations, Lake Victoria South Water Services LVSWSB conducts environmental sustainability assessment prior to tender award ( $M = 1.29$ ,  $SD = 0.457$ ). Lastly, in regards to the methods used in disposing off of wastes, the study established from the participants that averagely, the LVSWSB uses burying as the main disposal method ( $M = 2.11$ ,  $SD = 0.847$ ) even though other methods were also identified as useful ways of getting rid of the wastes by the LVSWSB. From these results, it is evident that Lake Victoria South Water Services LVSWSB engages in environmental sustainability within its public procurement process.

It is important to establish the relationships of the current findings and those of the previous studies. The study has established that environmental sustainability is one of the key drivers of the public procurement practice within Lake Victoria South Water Services especially with respect to protecting the environment. The findings of this study are congruent with those of New, Green, and Morton (2000) who in their studies explained that the concept of environmental sustainability is one that involves making decisions and taking action that are in the interests of protecting the natural world, with particular emphasis on preserving the capability of the environment to support human life. On a different perspective, Paulraj (2011) performed a study on the relationship between internal resources and capabilities while focusing on the sustainability of supply management as well as the entire organisation. The findings stated that in attaining sustainability, it is important to focus on the environmental aspects, that is, protecting the natural world.

While confirming the results of the current study in respect to environmental pillar as a concept to consider within business processes, Paulraj (2011) explains further that environmental sustainability is about making responsible decisions that will reduce your business' negative impact on the environment. It is not simply about reducing the amount of waste produced or using less energy, but is concerned with developing processes that will lead to businesses becoming completely sustainable in the future. With regards to the public procurement process, Srivastava (2007) also confirmed that environmentally sustainable public procurement is a process whereby organizations that expend tax-payers money meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits to the organization whilst minimizing damage to the environment.

On the basis of the results of the study, different aspects have been identified to be responsible for meeting the needs for goods, services, works and utilities within the Lake Victoria South Water Services LVSWSB in a way that ensures better living standards by generating benefits to the LVSWSB whilst minimizing damage to the environment. Some of the factors that help in attaining environmental sustainability as proposed by Carter et al. (2000) include emissions to air, land and water, climate change, biodiversity, natural resource use and water scarcity over the whole product life cycle. From the study, it was



established that Lake Victoria South Water Services LVSWSB has adequately incorporated environment issues within the product specifications as well as inclusion of the Environmental Impact Assessment reports as part of all consultancy contracts Terms of Reference (TOR).

Zhu and Sarkis (2004) also confirmed the findings of the current study by explaining in their findings that every producer, manufacturer, or distributor should ensure that the products are developed in a way that minimizes negative environmental impacts. By incorporating environmental issues within products, Lake Victoria South Water Services LVSWSB is very conscious about the environment as indicated in the findings. As a result, the procurement process within the LVSWSB aims at enhancing environmental sustainability based on the findings, which are in line with the findings of Zhu and Sarkis (2004), Carter et al. (2000), Srivastava (2007), and Paulraj (2011) amongst others. Besides incorporating environmental issues in the product specifications of the LVSWSB, Lake Victoria South Water Services LVSWSB also ensures that environmental components are also specified within the tender documents. Indisputably, Lake Victoria South Water Services LVSWSB has effective policies for recycling infrastructural inputs through engaging in various disposal processes such as burying, fire destruction, and sell for recycling as some of the ways for disposing off wastes from the LVSWSB. From this perspective, it is evident that Lake Victoria South Water Services LVSWSB has enhanced environmental sustainability within the public procurement process.

#### **4.3.2 Social Sustainability**

In the second research question, the study aimed at establishing the extent to which social sustainability was integrated in public procurement process at Lake Victoria South Water Services LVSWSB. The answers to the second research questions were derived from responses to questions 10 to 15 of the questionnaire (**Appendices**). The results and analysis of the responses obtained from the respondents regarding the questions are illustrated in the following descriptive statistics.

**Table 4.7: Descriptive Statistics for Social Sustainability****Descriptive Statistics**

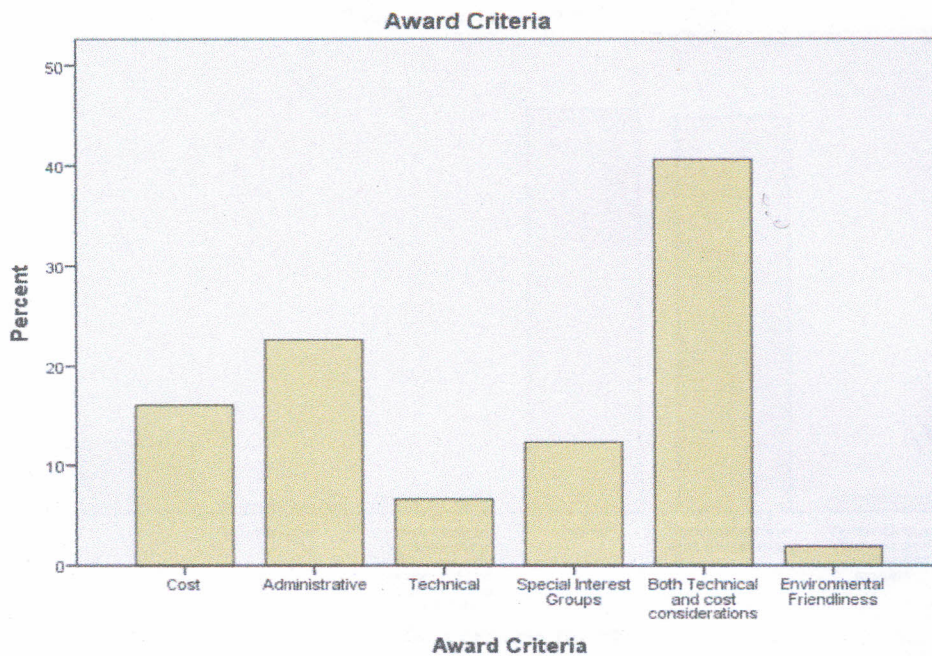
	N	Mean	Std. Deviation	Variance
Award Criteria	106	3.44	1.616	2.611
Awarding of Special Interest >Ksh 1m	89	4.65	2.841	8.070
Criteria for Employment Provision	96	1.40	.492	.242
Barrier to Special Interest award	102	2.34	.790	.624
Inclusion of Community in Procurement	104	1.46	.520	.270
Valid N (listwise)	83			

*Source: Results obtained from SPSS*

Based on the responses, Lake Victoria South Water Services LVSWSB averagely uses technical criteria to award contracts ( $M = 3.44$ ,  $SD = 1.616$ ). However, majority of respondents confirmed that the LVSWSB (within the institutions and positions they serve) employ both technical and cost considerations as the main criteria for awarding contracts (**Fig. 1**). Another aspect identified by the study regarding social sustainability is awarding of tenders to special interest groups. When asked how many special interests they had awarded contracts worth more than Ksh. 1 million, respondents confirmed that on average five contracts had been awarded to special interests ( $M = 4.65$ ,  $SD = 2.841$ ).

Other aspects identified by the study regarding social sustainability included criteria for employment provisions, barriers to special interest group tender award, and inclusion of local community in procurement. The results showed that on average the LVSWSB adopts some criteria for employment provisions ( $M = 1.40$ ,  $SD = 0.492$ ) besides including the surrounding community in procurement through awarding of low-value tenders ( $M = 1.46$ ,  $SD = 0.520$ ). However, the awarding of tender to special interest was averagely affected by financial incapacity ( $M = 2.34$ ,  $SD = 0.790$ ).

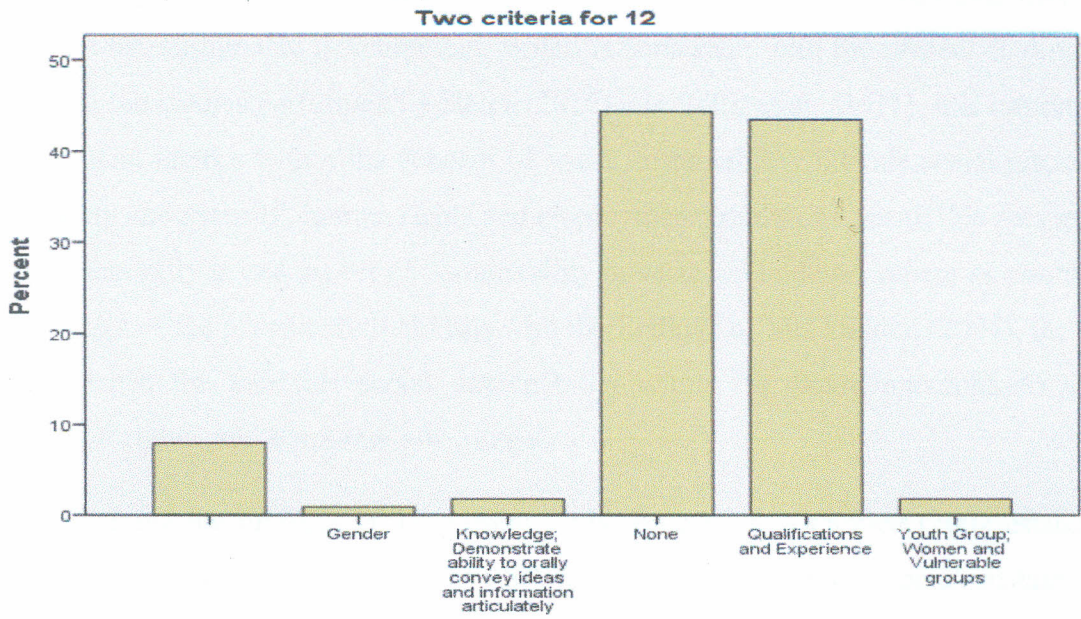




**Figure 4.1: Awarding Criteria**

In respect to the social sustainability within the procurement process in the LVSWSB, the study also obtained qualitative data on two main criteria used in employment provisions and the key benefits that the LVSWSB achieves by involving the surrounding community in the procurement process. The responses indicated that qualification and experience are the main two criteria used by the LVSWSB in employment provisions (**Fig. 2**). On a different perspective, the study established that Lake Victoria South Water Services LVSWSB derives several benefits from including the surrounding community in procurement process. Some of the benefits derived from such inclusions are illustrated in **Fig. 3**.





Two criteria for 12

Figure 4.2: Criteria for Employment Provisions

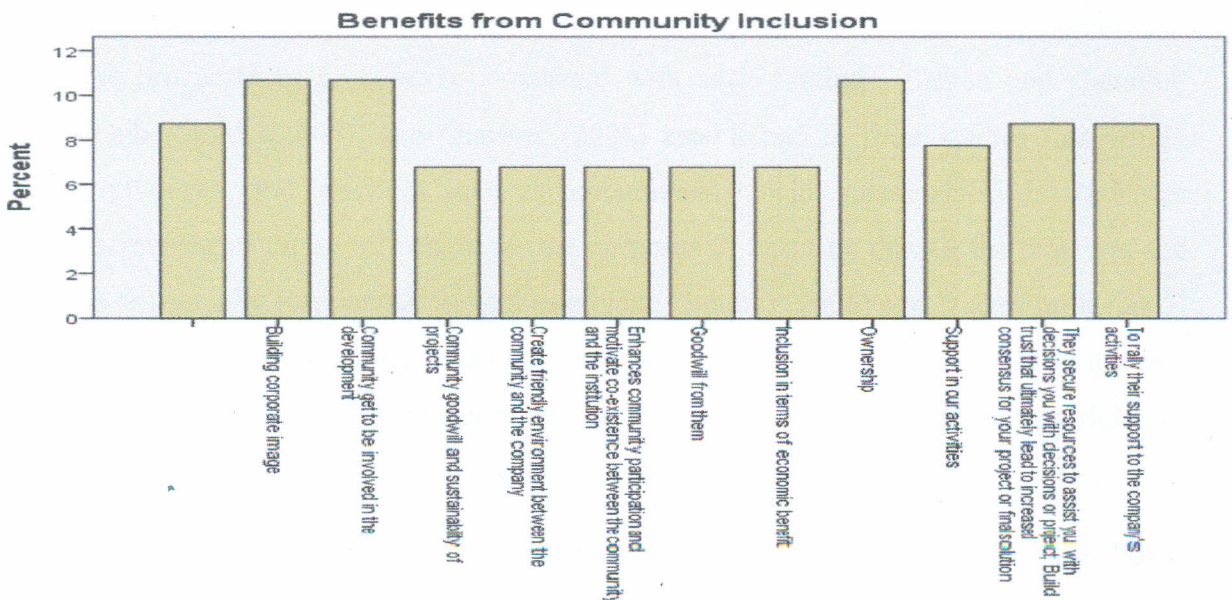


Figure 4.3: Benefits derived from Community Inclusion

The findings of the study are consistent with Helen (2010), Belfit et al. (2011), McCrudden (2004), and Davidson and Wilson (2009) who confirmed that social sustainability is an important aspect in every business practice especially given that it enhances the development of processes and structures which not only meet the needs of its current members but also support the ability of future generations to maintain a healthy community. In their findings, Davidson and Wilson (2009) also add that the social aspect of



sustainability examines the social relationships, interactions, and institutions that affect, and are affected by, sustainable development, which is consistent with the present findings. As identified in the studies performed by Helen (2010) and Belfit et al. (2011), it is important to note that social factors within the concept of social sustainability include social justice and equity; safety and security; human rights and employment conditions. From this perspective, social sustainability is one aspect of sustainability or sustainable development as established in the findings of the present study. In line with the findings of McCrudden (2004), the study also established the fact that social sustainability within the board encompasses human rights, labour rights, and corporate governance.

While confirming the findings of the present study, Barron and Gauntlett (2002) established in their studies that there are generally different ways of achieving social sustainability within the procurement practices. In the study, the different ways identified included use of award criteria, awarding of special interest, developing criteria for employment provision, identifying and overcoming barriers to special interest awards, and inclusion of community within the procurement process. In consistent with such findings, Barron and Gauntlett (2002), DuberSmith (2005), and Gunther (2006) established in their studies that within business processes and practices such as procurement, social sustainability is attainable through screening of the supply chain for the purposes of ensuring that all the practices and processes are socially responsible as well as ethical. Gunther (2006) and DuberSmith (2005) in attaining social sustainability, business practices and processes should not be harmful especially in relation to social indicators that include labour conditions and human rights of workers.

In other findings consistent with the present study, Stevels (2002) and Jonas and Tom (2014) performed studies, which established the fact that the concept of social sustainable procurement involves the idea of generating positive social outcomes with the purchase of goods, services and works, thereby value-adding to the procurement. According to the results of the study, it is evident that LVSWSB engages in several social aspects including adopting specific criteria for awarding tenders, awarding tenders to special interest groups, and including the surrounding community in labour intensive procurement contracts. These aspects are all about including the community and ensuring that the community is

adequately involved in procurement process. Consequently, Lake Victoria South Water Services LVSWSB has been at the fore front in making sure that the procurement process is socially sustainable and the results are consistent with numerous other studies.

### 4.3.3 Economic Sustainability

In the last research question, the study sought to find out the extent to which economic sustainability has been integrated in public procurement within Lake Victoria South Water Services LVSWSB. The answers to research question three were obtained from the responses to questions 16 to 18. The following descriptive statistics illustrate the answers to research question three with a view of attaining the third objective of the study.

**Table 4.8: Descriptive Statistics for Economic Sustainability**  
Descriptive Statistics

	N	Mean	Std. Deviation	Variance
Cost Saving Benefit	106	1.75	.728	.530
Influence of Procurement on Service Quality	106	1.28	.453	.205
Innovative Additives	106	3.75	1.301	1.692
Rewarding of Innovation	106	3.55	1.325	1.755
Less Innovation in Supplier Products/Services	106	2.28	1.067	1.138
Nature of Services/Products no Innovation Idea	106	2.20	1.214	1.475
Valid N (listwise)	106			

*Source: Results obtained from SPSS*

The study established that on average the employees of Lake Victoria South Water Services LVSWSB believe that the cost saving benefits within the body in relation to their institutions is high ( $M = 1.75$ ,  $SD = 0.728$ ). The other aspect identified in the study was the fact that the procurement process within the LVSWSB has positively influence the quality of service provision amongst the various institutions under study ( $M = 1.28$ ,  $SD = 0.453$ ). In question 18, the study identified four main aspects regarding innovation and the procurement approach employed by Lake Victoria South Water Services LVSWSB. From the data, it is evident that the employees insist on innovative additives in specified products ( $M = 3.75$ ,  $SD = 1.301$ ) and that there is reward for innovative inclusions ( $M = 3.55$ ,  $SD = 1.325$ ). Averagely, the respondents disagreed that there is less innovation in supplied products and services ( $M = 2.28$ ,  $SD = 1.067$ ) while the employees also disagreed that the



nature of services/products does not need innovative ideas ( $M = 2.20$ ,  $SD = 1.214$ ). In this perspective, the study confirmed that there is enhanced innovation in supplied products and services on one hand and that the nature of services and products require innovative ideas for enhancing quality.

Landrum and Edwards (2009) consistently confirmed the findings of the present study by asserting that economic sustainability is attainable through various strategies aimed at employing existing resources optimally in order to attain a responsible and beneficial balance usually over the longer term. In a different study that is in harmony with the present findings, Vincent and Abbie (2011) established in their studies that other than the fact that procurement practices should be consistent with the laid down policies and regulations, such practices should involve the use of assorted assets of the company efficiently to allow it to continue functioning profitability over time, which is about economic sustainability. In a different study, Roberts and Tribe (2008) established that procurement practices within business entities should have the ability to support a defined level of economic production indefinitely. The idea of supporting the economic production indefinitely assists in attaining the required level of economic sustainability. Hence, economic sustainability is very important in business practices.

According to the results in chapter four, Lake Victoria South Water Services LVSWSB has identified specific aspects that enhance economic sustainable procurement. Such results are consistent with the finding of Dunphy et al. (2007) who identified various economic factors that enhance economic sustainability of procurement process. Some of the factors identified by Landrum and Edwards (2009), which have also been established in the present study, include the costs of products and services over their entire life cycle, such as: acquisition, maintenance, operations and end-of-life management costs (including waste disposal) in line with good financial management. From these factors, the study identified cost saving benefits, influence of procurement on the quality of the products and services, and specific aspects of innovation, which are also consistent with the findings or results of the studies performed by Hitchcock and Willard (2009).

The results showed that LVSWSB has several aspects of economic sustainability in procurement process in place. For instance, the study identified the fact that the cost saving

benefit within Lake Victoria South Water Services LVSWSB is high. In addition, Lake Victoria South Water Services LVSWSB has been involved in ensuring that there is enhanced quality in service provision. Similarly, Roberts and Tribe (2008) established in their studies that procurement practices should be cost effective and efficient besides ensuring that they (practices) add value to the stakeholders in question. Dunphy *et al.* (2007) performed a study that consistently confirmed the aspect of innovation as one of the many drivers of economic sustainability. In the study, the findings confirmed that innovation continues to be the epicentre of the operations of LVSWSB. Consistently, Dunphy *et al.* (2007) confirm that without innovation it becomes difficult for an entity to be cost effective. On the basis of the study findings, all the products and services within LVSWSB require highly innovative ideas that enhance the quality of the products and services. Hence, LVSWSB has been able to enhance economic sustainability within its procurement process.

In the last question, the respondents were asked to provide recommendations to public entities in sustaining environmental, social, and economic interest through procurement. The recommendations provided by the respondents varied as illustrated in the table below:

**Table 4.9: Overall Recommendations**

	Frequency	Percent	Valid Percent	Cumulative Percent
Compliance and Enforcement; sustainable management of natural resources; capacity building a sewage management	16	13.9	13.9	21.7
Consider and include environment, society, and economic interest in their tendering process	14	12.2	12.2	33.9
I highly recommend	7	6.1	6.1	40.0
Involve the community awarding low value tender and protection of environment by self-disposal of waste	15	13.0	13.0	53.0
None	6	5.2	5.2	58.3
Procurement duration as provided in PPOA Act should be reviewed with intention of reducing the time frame	13	11.3	11.3	69.6
Public entities need to double their efforts in dealing with these aspects	8	7.0	7.0	76.5
Public involvement in the environment	7	6.1	6.1	82.6
Recycling of all products, conservation of environment is critical	6	5.2	5.2	87.8
Reuse and recycling model that has been adopted by developed world	12	10.4	10.4	98.3



	Frequency	Percent	Valid Percent	Cumulative Percent
Technology of using storing and maintaining documents in electronic form; and to employ the use of e-procurement which discourages hard copy print-outs and encourages electronic materials/documentation	2	1.7	1.7	100.0
Total	115	100.0	100.0	

*Source: Results obtained from SPSS*

From the table, majority of the respondents recommended that there is a need for compliance and enforcement; sustainable management of natural resources; and capacity building a sewage management. Another good number recommended that there is a need to involve the community awarding low value tender and protection of environment by self-disposal of waste. Indeed, these are some of the useful ways through which public entities can engage in sustaining environment, society, and economic interest through public procurement.

#### 4.4 Chapter summary

Chapter four of the study has provided the results and analysis. Based on the results and analyses, answers to the research questions have been obtained. Undoubtedly, the study has elaborated on the extent to which environmental sustainability, social sustainability, and economic sustainability have been integrated or incorporated within the public procurement of Lake Victoria South Water Services LVSWSB. From the varied aspects of environmental sustainability, social sustainability, and economic sustainability, it is evident that Lake Victoria South Water Services LVSWSB has to a wider extent incorporated specific aspects that will ensure that the procurement process is environmentally sustainable, socially sustainable, and economically sustainable. Besides, the study has also obtained various recommendations from the employees of Lake Victoria South Water Services LVSWSB on how to improve on the same. The three main concepts identified include environment, social, and economic sustainability. On the basis of the present study, LVSWSB has employed various aspects towards understanding the sustainability of public procurement and integration in Kenya.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Summary of Findings**

Based on the results and analyses, the study obtained data on different aspects of environmental sustainability, social sustainability, and economic sustainability. According to the results, it is evident that Lake Victoria South Water Services LVSWSB has, to a wider extent incorporated specific aspects that will ensure that the procurement process is environmentally sustainable, socially sustainable, and economically sustainable. Aspects identified that are incorporated within the Lake Victoria South Water Services LVSWSB is the public procurement process that enhance sustainability include incorporating environmental issues in the product specifications, meeting the specified environmental components in the tender document, effective policy for recycling infrastructural inputs, award criteria, minding about the special interest groups when awarding contracts, criteria for employment, inclusion of the community in tendering, cost saving concepts, improving quality of products and services through procurement, and the concept of innovation. These aspects have been able to help Lake Victoria South Water Services in achieving sustainable public procurement process.

### **5.2 Conclusions**

Indisputably, public procurement has become an essential element in promoting sustainable economic development besides protecting the environment. In addition, public procurement remains an essential policy tool. Notably, sustainable procurement relates to principles aimed at achieving sustainable development such as the aspects of making sure that there is strong, healthy, and just society. Sustainable procurement has close connection to sustainable development and the former advocates for consumption behaviours that have little or no negative environmental impacts. Sustainable procurement has also been an avenue towards achieving economic development in the long run. Consequently, the current study aimed at establishing the extent to which sustainable public procurement is integrated in public procurement. In order to achieve the general objective, the study concentrated on establishing the extent of environmental sustainability, social sustainability, and economic sustainability through public procurement at the Lake Victoria South Water Services



LVSWSB. The study was structured into six main chapters, namely, introduction, literature review, methodology, results and analysis, discussions, and conclusions and recommendations. The study opted for Triple Bottom Line model in explaining the concept. A descriptive survey research design was preferred to other research designs. Due to constraints in time and finance, the study used stratified random sampling to pick 106 participants from a population of 144 employees in the LVSWSB. The specific strata included water service providers (13 participants), sub-county water officers (76 participants), LVSWSB contractors (15 participants), and LVSWSB head office (2 participants). Data was obtained courtesy of primary and secondary research and analysed using the SPSS software.

### **5.3 Recommendations**

With evidences confirming the significance of sustainability within the procurement process of public entities, the study recommends the following to all public entities in Kenya and across the world. Firstly, public entities need to ensure that environmental issues are incorporate within the specifications of their products and services in addition to ensuring that all tender documents have specified environmental components in a bid to enhance environmental sustainability of the public procurement process.

Secondly, there is a need for public entities to develop effective and adequate policies regarding environmental protection. Environmental protection can be attained in numerous ways including through recycling of waste products and emphasis on EIA reports for all works contracts. Developing effective and adequate environmental protection policies will enable public entities to enhance the sustainability within the procurement process.

The other recommendation is that the entire surrounding community should be highly incorporated within the procurement process in a bid to enhancing social sustainability. The surrounding community can be incorporated in different ways. For instance, the community can be given first priorities in the award of tenders and in employment for labour intensive contracts. There are numerous benefits that public entities are likely to derive from incorporating the surrounding community in the entire process such as in promptly obtaining

way leave for infrastructural contracts to avoid accruing interest on penalty for delayed contracts.

Lastly, the study also recommends that apart from enhancing innovation within the procurement process, there is a need to enhance the cost saving policies and activities. The cost saving policies and activities are very essential in providing specific benefits related to cost savings such as attainment of the specific objectives and goals with the minimum possible costs. Such benefits are likely to help in making the entire process of procurement achieve enhanced value for money.

#### **5.4 Limitations of the Study**

Despite the fact that the study or project was able to accomplish its aims and objectives, there are limitations that prevented deeper insight into sustainable public procurement within public entities through a case study of Lake Victoria South Water Services LVSWSB. In respect to the study, there were limitations revolving around constraints in financial resources and time. Financial resources are very significant in putting together all the requirements of the study or project. For instance, there was a need to employ research assistants to help in collecting more data and information. In addition, the project required adequate financial resources to develop data collection instruments as well as data analysis instruments regarding sustainability within procurement process. Obtaining adequate data collection and analysis instruments and employing adequate research assistants were constrained by insufficient financial resources. However, through the proposal, the project was able to collect some funding for the project. Moreover, the project prepared a budget and ensured that all the required resources for completing the project were identified, listed, and obtained. The project also suffered from time constraints. The time period for conducting the project to help understanding sustainability within procurement process in LVSWSB was inadequate. In order to ensure that the major activities were adequately fulfilled, the project developed a timeline, which ensured that all the projects are adequately attained.

Notably, the project also suffered from the large scope of operation of the organization. Lake Victoria South Water Services LVSWSB serves a wider region in the republic of



Kenya and has numerous different institutions that also engage in public procurement process. As a result, analysis of the sustainability within public procurement process required a study of all the institutions corresponding to the LVSWSB. However, the study of all the institutions was made difficult owing to the extensiveness of the firm. Consequently, the study employed stratified random sampling in order to ensure that every institution within Lake Victoria South Water Services LVSWSB were not only represented but adequately analysed in regards to understanding the sustainability in the procurement process.

## **5.5 Areas for Further Research**

Since the study was performed amidst various limitations, there are specific areas recommended for further research. Firstly, there is need for further research to confirm the findings and results of the study. Confirming the findings and results of the present project will enhance the reliability and validity of the project. Therefore, the project proposes that further studies should be conducted to ascertain or disapprove the findings and research of the project.

Secondly, it is evident that the contemporary business environment is a fast computerised society. In this respect, there is evidence that public entities are likely to suffer from social impacts associated with the use of technology especially within the procurement process. In this respect, the present project proposes that further studies should be conducted in order to identify the social impacts that are likely to have impact on public entities that are incorporated technology within the procurement process.

Thirdly, the present study proposes that further studies should be conducted on a wider perspective that contains numerous factors of the sustainability concept. Even though the study concentrated on the three broad perspectives of sustainability, that is, environmental, social, and economic, time constraints limited the study to picking only a handful of aspects in each perspective. Hence, the study recommends for more studies in the same area but incorporating varied numerous factors from each perspective for a wider application context.

Lastly, the present study proposes further studies on the same concept but through comparing different public entities. So far, the study has only used information from Lake

Victoria South Water Services LVSWB as a public entity in Kenya. However, there are numerous other public entities. What's more, it is not obvious that the practices within Lake Victoria South Water Services LVSWB, which is a public entity, are identical across all the public entities in Kenya. Consequently, study should be conducted that analyses a case of different public entities and making the necessary recommendations.



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