

**PUBLIC PROCUREMENT AS A TOOL FOR ACHIEVING MILLENNIUM  
DEVELOPMENT GOAL 7: ENVIRONMENTAL SUSTAINABILITY.**

**(Case Study- Sekondi-Takoradi Metropolitan Assembly)**

**BY**

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**MASTER OF SCIENCE**

**IN PROCUREMENT MANAGEMENT**

**Department of Building Technology**

**College of Architecture and Planning**

**AUGUST, 2014.**

## DECLARATION

I hereby declare that this submission is my own work towards the MSc in Procurement Management and that to the best of my knowledge, it contains no material previously published by another person no material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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Signature

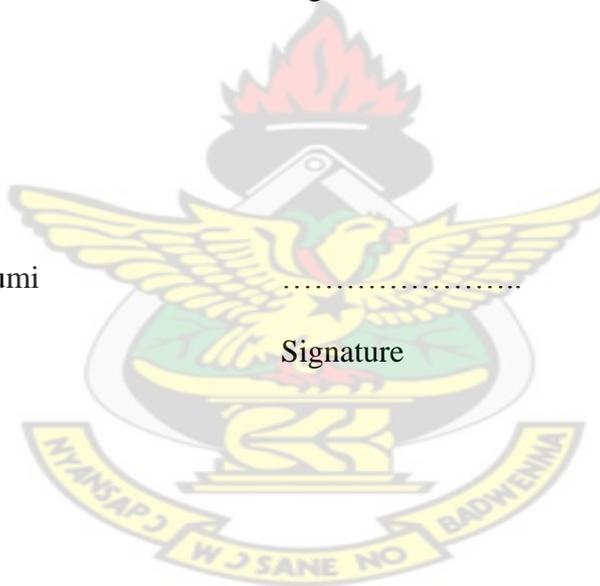
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Signature

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Date

## DEDICATION

I would like to dedicate this research work to my wife, Eunice Okrah and my children, Frank Asare-Kissi and Lydiana Obenewaa-Kissi for the prayers and moral support they gave during the programme.

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## ACKNOWLEDGEMENT

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## ABSTRACT

One burden on the Government of Ghana is to be able to achieve the Millennium Development Goals by the targeted dates. This has been the result of government rolling out many policies to enable the country to achieve the Millennium Development Goals. Although progress has been made in the other goals, the achievement of Millennium Development Goal 7: Environmental Sustainability seems to be a mirage.

This study sought to find out how Public Procurement can be used to help achieve Millennium Development Goal 7. Sekondi-Takoradi Metropolitan Assembly was used as case study due to the discovery of oil in commercial quantities in the Western Region resulting in an increase in economic activities. Qualitative analysis was done after one-on-one interviews with respondents. Non-probability purposive sampling technique was used to select Public Procurement Practitioners who are directly involved in the procurement process at the Sekondi-Takoradi Metropolitan Assembly.

The study revealed that Procurement Practitioners do not know much about Millennium Development Goal 7, although they unknowingly applied requirements one way or the other in their activities, which enhances the achievement of the goal. It was also revealed that public procurement can play a major role in the quest to achieving Millennium Development Goal 7.

It was recommended that Public Procurement Practitioners must be given the necessary training in the area of environmental sustainability in relation to their activities. They must also be encouraged to incorporate environmental sustainability specifications and requirements within the procurement process in order to help realize the dream of Millennium Development Goal 7. Finally, there must be policies

by government to enhance the use of public procurement to achieve Millennium Development Goal 7.

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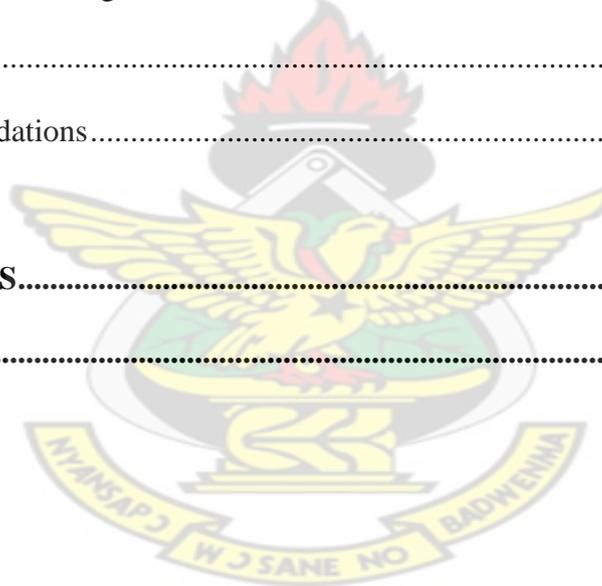


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# CHAPTER ONE

## INTRODUCTION

### 1.0 Background to the Study

Public procurement is the process whereby public organisations acquire goods, works and services from third parties.

It is estimated that public procurement represents 6% to 10% of Gross Domestic Product (GDP) of countries in the world (United Nations, 2009). According to Osafo-Marfo (2003), public procurement in Ghana forms about 50% to 70% of total government expenditure representing 14% of the country's GDP.

This means that public procurement represents a significant portion of government's spending and therefore affects largely the economy of most countries especially Ghana.

According to the World Bank (2003), savings of about US\$150million could be realised through better management of public procurement alone.

The Millennium Development Goals (MDG's) are aimed at addressing the problems of extreme poverty in its many dimensions; income poverty, hunger, diseases, lack of adequate shelter and exclusion, while promoting gender equality, education and environmental sustainability (United Nations Millennium Project, 2005).

A procurement system that is effective supports the aims and objectives of a country. This in the end helps them deliver high quality services to meet the immediate and future needs of the local people.

## **1.1 Problem Statement**

Since the adoption of the Millennium Declaration in 2000, the government of Ghana has rolled out policies such as the Ghana Poverty Reduction Strategy (GPRS I) in 2003-2005, the Growth and Poverty Reduction Strategy (GPRS II) in 2006-2009 and the Ghana Shared Growth Development Agenda (GSGDA), 2010-2013, all in the quest for achieving the Millennium Development Goals.

Although considerable progress has been made, five targets namely MDG1B of achieving full and productive employment and decent work, MDG3 of achieving equal share of women in wage employment in non-agriculture sector, MDG5 of reducing maternal mortality, and MDG7 target of reversing the loss of environmental resources and address problem of sanitation are unlikely to be achieved (Ghana Statistical Service, 2013).

It is against this background that the research wants to find out the role Public Procurement can play in achieving Millennium Development Goal 7: Environmental Sustainability in Ghana.

## **1.2 Aim**

The main aim of the study is to find out how Public Procurement can be used to achieve Millennium Development Goal 7: Environmental Sustainability.

## **1.3 Objectives**

The objectives of the study are;

- To find out the level to which public procurement practitioners understand Millennium Development Goal 7: Environmental Sustainability,

- To find out environmental issues being considered currently by public procurement practitioners,
- To identify strategies to be adopted within the procurement process in order to help achieve Millennium Development Goal 7: Environmental Sustainability.

#### **1.4 Justification for the Study**

To harmonise public procurement activities in Ghana, the Public Procurement Act of 2003 (Act 663) was introduced. According to the International Institute for Sustainable Development (IISD, 2012), the Government of the Republic of Ghana made a public commitment to developing a Sustainable Public Procurement (SPP) policy as part of its national strategy for sustainable development in December 2010. Public procurement is now seen as a major function of government that goes a long way to affect the aims and objectives of the country.

The study brings out clearly the contribution Public Procurement can make in achieving Millennium Development Goal 7: Environmental Sustainability. Finally, the study resulted in a document that could be useful to other scholars intending to undertake research on the subject matter.

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

This research was conducted in the Western Regional Capital, Sekondi-Takoradi with Sekondi-Takoradi Metropolitan Assembly as the case study.

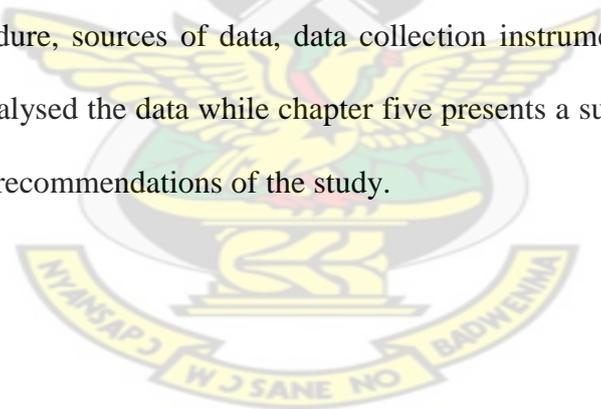
Apart from proximity and easy access to primary data for the study, Sekondi-Takoradi was selected due to the discovery of oil in commercial quantities in the region resulting in an increase in economic activities, which affects not only the region but also the country as a whole.

The study was also limited to strategies to be adopted towards achieving MDG7 target of reversing the loss of environmental resources and address problem of sanitation by the use of public procurement.

The limitation is because of the danger the loss of environmental resources and the problem of sanitation bring to bear on the health of Ghanaians.

### **1.6 Organisation of the Study**

The research has been grouped into five chapters. Chapter one gives a background information of the study which includes introduction, problem statement, aim and objectives, justification and scope of the study. Literature on Public Procurement and the Millennium Development Goals was reviewed in chapter two. Chapter three which is the methodology, comprises research design, population, sample and sampling procedure, sources of data, data collection instruments and data analyzes. Chapter four analysed the data while chapter five presents a summary of the findings, conclusion and recommendations of the study.



## CHAPTER TWO

### OVERVIEW OF PUBLIC PROCUREMENT, SUSTAINABLE PROCUREMENT AND THE MILLENNIUM DEVELOPMENT GOALS

#### 2.0 Introduction

This chapter focuses on the literature review of the subject. The broad areas of this chapter include Public Procurement, Key Principles of Public Procurement, Sustainable Procurement and Millennium Development Goals.

#### 2.1 Public Procurement

According to the United Nations Development Programme (UNDP, 2007), public procurement is the overall process of acquiring goods, works and services which includes all functions from the identification of needs, selection and solicitation of sources, preparation and award of contract, and all phases of contract administration through the end of a services' contract or useful life of an asset.

Public procurement dates back from between 2400 and 2800 BC. Written on a clay tablet found in Syria with an order for 50 jars of fragrant smooth oil for 600 small weight in grain (Coe, 1989).

In Ghana, public procurement is governed by the Public Procurement Act 2003, (Act 663). The Act resulted from the public procurement reform programme proposal aimed at promoting national development, enhancing harmony within other local and international laws; fostering competition, efficiency, transparency and accountability; facilitating ease of procurement administration; and ensuring value for money (Ministry of Finance, 2001).

### **2.1.1 Key Principles of Public Procurement**

The following key principles, drive public procurement.

**Value for Money (VfM):** Classified as the most important principle of procurement, by Bauld and McGuiness (2006), VfM in the public sector is considered to be the contributions to be made in order to advance the policies and priorities of the government and at the same time achieving best return and performance for the money being spent. The use of price based other than criterion such as technical capabilities; qualification of key personnel and past performance record for awarding contracts seems to be a fundamental mistake (Palaneeswaran et al, 2001 ; Rwelamila et al, 1999).

Bauld and McGuiness (2006), identified factors such as weak governing bodies, politics, tradition and lack of education and training programmes as barriers fighting against the achievement of VfM.

**Ethics:** According to the World Bank (2003), greater professionalism in the procurement function is required. Atkinson (2003), asserts that out of the 500,000 purchasing professionals in the United States, only 10% have been members of a professional Supply Chain Management Association, thereby benefiting from being trained in purchasing ethics; though purchasing professionals are expected to exhibit higher standard of ethical conduct. To avoid breach of codes of conduct, it is important for employees to be adequately trained.

**Competition:** According to Falvey (2012), competition in the procurement process helps government to acquire goods and services at lower cost. Competition helps the buyer make good use of the competitive market forces in order to obtain the best

offer. Competition prevents accusations of favouritism and fraud and also encourages more suppliers to participate in the tendering process.

**Transparency:** Transparency in public procurement hinges on openness in the whole process. Governments are expected to be transparent by adhering to higher standards of conduct by ensuring that their conduct will be opened for audit. Transparency requires that procurement procedures should be governed by clear rules and a means to verify that those rules were duly followed (Falvey , 2012).

**Accountability:** Accountability requires all public officials and practitioners of procurement be held accountable and responsible for their actions.

## 2.2 Sustainable Procurement

According to the World Commission on Environment and Development (1987, p.8) “Sustainable Consumption is the consumption that meets the needs of present without compromising the ability of future generations to meet their own needs.”

Procurement is said to be sustainable when it “integrates requirements, specificities and criteria that are compatible and in favour of the protection of the environment, of social progress and in support of economic development, namely by seeking resource efficiency, improving the quality of products and services and ultimately optimizing cost” (United Nations, 2009, p.4).

The traditional procurement system has focused upon value for money while the aim and challenge of sustainable procurement is to integrate environmental and social considerations into the procurement process in order to reduce the adverse impacts upon the health, social conditions and the environment thereby making significant

savings for public sector organisations and the community as a whole (United Nations Procurement Practitioners Handbook, 2006).

Sustainable procurement, according to the United Nations (2009) bases its choice of goods and services on;

- Economic considerations: such as value for money, life-cycle costing, quality, availability, functionality and innovation.
- Environmental considerations: the impact the product or service has on the environment over its life-cycle.
- Social aspects: consideration of human rights, labour conditions and employees' health and insurance, small and medium enterprises and local vendors, ban of companies which use child labour.

### **2.2.1 Drivers of Sustainable Procurement**

According to the European Commission (2004), the government's example function for society price reduction, considering life cycle costing (LCC) approach, climatic change and depletion of resources drive sustainable procurement. Carlsen and Calendar (2009), also identified sustainable public procurement to be able to help reach political, environment and social targets.

### **2.2.2 Barriers to Sustainable Procurement**

The European Commission (2004, 2007), identified high fragmentation of public procurement position, hard to evaluate due to lack of information, as barriers to sustainable procurement.

High cost and the high level of management support requirement are also major barriers to sustainable procurement (Carlsen and Calendar, 2009).

Incite Sustainability (2009), also identified and categorized challenges to the implementation of sustainable procurement as;

### ***Market challenges***

- Limited environmental verification scheme
- Limited availability of environmentally sound products (and the poor quality of some of these products)
- Limited number of suppliers of green products

### ***Institutional challenges***

- Limited experience
- Limited management buy-in and unwillingness to change
- Decentralised procurement structure of supply chain management in the public sector

### ***Other challenges***

- Perceived price premium on green products
- Fear has been expressed that with many green products being more durable, the threat of increasing theft would make the use of the life cycle costing concepts invalid.
- Concern that small medium and micro suppliers might be pushed out of business through not being able to supply green versions of products.
- Aligning with supply chain and financial management legislation

### **2.2.3 Sustainable Public Procurement Policies**

In 2002, the World Summit on Sustainable Development (WSSD), entreated governments to promote public procurement policies that encourages development and diffusion of environmentally sound goods and services (WSSD, 2002).

In April 2006, Canada issued a policy on green procurement which requires that environmental considerations be bedded into the procurement decision making process in the same manner as price, performance, quality and availability (United Nations, 2009).

According to Incite Sustainability (2009), social elements of sustainable procurement are currently addressed through the preferential procurement legislation in South Africa, at the neglect of green procurement.

Preferential procurement legislation with the goal of contracting with persons or categories of persons, historically disadvantaged by unfair discrimination on the bases of race, gender or disability as social elements of sustainable procurement is being practiced in South Africa at the peril of green procurement.

#### ***Ghana's Sustainable Public Procurement Policy (SPP)***

According to the Institute for Sustainable Development (IISD) (2012), the government of the republic of Ghana made a public commitment to developing a sustainable public procurement (SPP) policy as part of its national strategy for sustainable development in December 2010. With the IISD acting as technical consultant and led by the Public Procurement Authority (PPA) of Ghana and supported by the Swiss Secretariat for Economic Affairs (SECO), Ghana Task Force (GTF) for SPP comprising various stakeholders grouped and mandated to work with

the PPA in change of the design and the implementation of the sustainable public procurement policy.

The sustainable public procurement policy is specifically although subject to review is specifically designed to:

- Promote compliance with relevant environmental and social laws and regulations as they apply to public procurement;
- Enable procuring entities to design and implement sustainable procurement action plans and assign responsibilities;
- Embed environmental, social and governance criteria in procurement decisions
- Identify and prioritize spending categories to provide for incremental implementation;
- Raise capacities of procurers and enterprises that do business with the government;
- Integrate environmental and social criteria into public procurement framework agreements, e-procurement initiatives and supplier diversity programs;
- Provide initiatives to support Small Scale Enterprises (SME's); and
- Support the implementation of an internationally recognised procurement assessment program.

### **2.3 Millennium Development Goals**

In the year 2000, 189 countries at the Millennium Summit, declared to eliminate poverty, create a climate for sustainable development; and ensure human rights, peace and security for the entire world (United Nations, 2010).

The goals are as follows;

***MDG1: Eradicate Extreme Poverty & Hunger***

- Halve, between 1990 and 2015 the proportion of people whose income is less than \$1 a day.
- Achieve full and productive employment and decent work for all, including women and young people.
- Halve, between by 1990 and 2015 the proportion of people who suffer from hunger.

***MDG2: Achieve Universal Primary Education***

- Ensure that by 2015 children everywhere, boys and girls alike will be able to complete a full course of primary schooling.

***MDG3: Promote Gender Equity and Empower Women***

- Eliminate gender disparity in primary and secondary education, preferably by 2005 and in all levels of education no later than 2015.

***MDG 4: Reduce Child Mortality***

- Reduce by two thirds, between 1990 and 2015, the under-five mortality rate.

***MDG 5: Improve Maternal Health***

- Reduce by three quarters the maternal mortality ratio.
- Achieve universal access to reproductive health.

***MDG 6: Combat HIV/AIDS, Malaria and Other Diseases***

- Have halted by 2015 and begun to reverse the spread of HIV/AIDS.

- Achieve by 2010, universal access to treatment for HIV/AIDS for all those who need it.
- Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.

### ***MDG 7: Environmental Sustainability***

- Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.
- Reduce biodiversity loss, achieving by 2010 a significant reduction in the rate of loss.
- Halve, by 2015 the proportion of the population without sustainable access to safe drinking water and basic sanitation.
- By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.

### ***MDG 8: Global Partnership***

- Develop further an open rule-based predictable, non-discriminatory trading and financial system.
- Address the special needs of least developed countries, land locked countries and small island developing states.
- Deal comprehensively with developing countries' debt.
- In co-operation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.
- In co-operation with the private sector, make available benefits of new technology especially ICT's.

### **2.3.1 Global and National Overview on the Progress of Millennium Development**

#### **Goal 7; *Environmental Sustainability***

According to the Inner City Fund (2010), the world is a distance away from achieving the sanitation target by 2015. In 2008 about 2.8 billion people worldwide did not have access to improved form of sanitation.

The global rate of deforestations is quite alarming with a rate of 5.2 million hectares per year over the period 2000 – 2012.

Slum dwellers grew from 767 million to 828 million over the same period.

Ghana is unlikely to achieve the target of reversing the loss of environmental resources, reducing the proportion of people without access to improved sanitation and achieving significant improvement in the life's of people living in slum areas.

Although current statistics are not available, there are suggestions that the country is rapidly losing its forest cover. The country saw a decline in its forest cover from 32.2 per cent to 24.2 per cent from 1990-2005.

The Ghana Statistical Service (2013) asserts that poor toilet facilities, liquid and solid waste disposal problems are as a result of poor development planning / poor infrastructure, inadequate funding for logistics, infrastructure and landfills and ineffective delivery of sanitation agencies.

### **2.4 Sustainable procurement in the procurement process**

According to the United Nations Procurement Practitioner's Handbook (2006), the sustainable procurement process is not different from the traditional procurement

process. It incorporates sustainable interventions throughout the various stages of the procurement process.

Sustainable procurement goes through the following stages;

***Planning and needs assessment of a procurement activity***

At this stage, what the procurement process is meant to achieve is to drive the decisions taken. A number of analyses, such as a sustainable procurement risk assessment, supply market analyses, stakeholder analyses, demand analyses, etc. are done depending on the sustainability issue(s) that may be affected by the procurement action.

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***Planning the requirement***

Procurement planning involves transforming stated requirements or organizational goals and objectives into measurable activities to be used to plan, budget and manage the procurement function within the organization. This is not different from the traditional procurement process where procurement planning and forecasting is necessary to ensure an effective, efficient, strategically viable and sustainable result.

***Requirement definition***

In developing specifications human/labour rights and environmental performance criteria should be introduced to meet specific requirements of the specified outcome, desired by the procurement action. This stage is key to all types of contract. Consideration is given to available alternatives, which are less environmentally and socially damaging. Environmental and social integrity of suppliers are also looked at by way of their policies and practices.

Purchasing for Sustainability (n.d.) provides some examples of criteria to consider when determining potential environmental and social impacts of goods, services and works during the requirement definition stage as cited by the United Nations Procurement Practitioner's Handbook (2006).

**Table 1: Sustainable procurement in the procurement process**

Criteria	Factors to consider
<i>Environmental</i>	
Fit for the purpose and provide value for money.	Ensure that the product you are considering does the job you want it to do for all potential users, including groups with specialist needs where appropriate.
Biodegradability	Some products may be suitable for composting. Where that is the case, ensure that the materials can break down speedily and safely.
Design for disassembly	When products are made up of thousands of different types of materials, particularly plastics and metals, it helps if they are designed to be easily taken apart or disassembled so that the materials can be recycled. This is particularly relevant

	to electronic and electrical products such as fridges, televisions, personal computers and printers.
Minimum use of virgin and non-renewable materials.	Wherever possible, the use of recycled or re-used materials should be encouraged, as these generally have a much lower impact on the environment. Examples include computer processor cases or road aggregate.
Resource, energy and water efficiency.	Running costs are often overlooked when procuring products. Seek equipment that is energy efficient, such as Energy Star rated products. Also check that your product does not have a 'knock-on' effect of using more resources, e.g. specifying paper towels over hand-driers may increase the volume of paper you dispose of, which also has a cost.
Fault controls to prevent unnecessary waste	When specifying plant equipment, such as boilers, ensure that you specify metering and monitoring equipment. Whilst it might increase acquisition costs

	<p>it will alert you to inefficient use and enable you to reduce running costs, spills or waste problems.</p>
<p>Maximum durability, reparability, reusability, recyclability and upgradeability</p>	<p>Essentially this is a quality issue. Seek long-life products, that will survive being mistreated, that can be repaired, reused and ultimately recycled. Importantly, seek products that enable you to upgrade them and improve performance over time rather than having to buy new equipment to do the same job.</p>
<p>Minimum packaging</p>	<p>Most products are bought with excessive levels of packaging, either to add cosmetic value, or to enable the product to survive poor handling. Packaging has to be disposed of once it has performed its task, and in most cases the cost of disposal falls to the customer, not the supplier.</p>
<p>Maximum use of postconsumer materials</p>	<p>There are many grades of recycled materials. Where possible seek materials that have been used once and are being</p>

	<p>reused to perform a repeat or new function, rather than materials that have been reused from a manufacturing process waste which has never been used by the consumer.</p>
<p>No (or reduced) polluting with minimum use of toxic chemicals, ozone and other pollutants.</p>	<p>These products help reduce your environmental impact,</p>
<p><i>Social criteria</i></p>	
<p>Health and safety standards</p>	<p>These should never be overlooked and it is sensible to evaluate many products with a qualified health and safety officer. Examples include electrical equipment, vehicles, cleaning chemicals and furniture.</p>
<p>Local production</p>	<p>Sourcing your purchases from local suppliers means that the economic benefits can be felt in the communities in which you live and work. This inward</p>

	investment can help ensure the ongoing economic sustainability of your local area through job creation.
Ethically sourced	You should seek to ensure that the products you buy are not exploiting child labour, or labour and economies in the developing world and that you meet recognised fair trade standards wherever possible.

**Source: Purchasing for Sustainability, Forum of the Future as cited by the United Nations Procurement Practitioner’s Handbook (2006).**

***Sourcing***

Supplier sourcing and evaluation strategy allows the procurement function to address gender and empowerment as well as poverty eradication issues.

This is achieved by including suppliers from identified minority groups and/or from specific geographic and demographic regions and ensuring local content and representation in the bidding process.

Environmental and social issues are considered during supplier pre-qualification exercises. If assessment shows that the majority of impacts are in the raw materials stage, the focus should be on the supplier’s own environmental supply chain management policies. If the impacts are in the manufacturing stage, then the focus should be on the supplier’s environmental management system for their business.

### *Solicitation*

Solicitation documents should contain sustainability specifications and requirements designed in the previous stages. Potential suppliers must then be able to show they are able to meet those requirements.

### *Evaluation and contracting*

The evaluation and contracting stage makes use of the standard evaluation methods; however, it should place specific emphasis on use of weighted and ranked criteria incorporating the specific performance criteria and specifications that address sustainable procurement factors.

The evaluation process should also include a risk analysis, a cost analysis and modelling and a life cycle analysis (cradle to grave) particularly if the procurement process features environmentally sensitive issues.

Sustainability evaluation criteria is key to undertaking thorough and consistent assessments of sustainability performance of suppliers' bids and proposals

Some environmental evaluation criteria to consider in tenders are:

- **Air pollution** - to include measures taken to reduce emissions, particularly of key pollutants, and looking at efforts to exceed statutory requirements.
- **Biodiversity and habitats** - a specific aspect of land use, where biodiversity and important habitats are recognised and measures taken to protect and enhance them.
- **Climate change** - measures taken to monitor and reduce greenhouse gas emissions should be highlighted in this criterion.
- **Resource use and intensity** - to include energy, water, raw materials and land as resources, and to focus on the efficiency of their use. Linked to waste, air pollution and water pollution.

- **Transport** - to consider measures that reduce overall transport requirements, and to encourage a modal shift away from road transport (people and freight).
- **Waste** - to include measures to reduce, re-use and recycle wastes.
- **Water quality** - to include measures to reduce discharges, particularly of key pollutants, and looking at efforts to exceed statutory requirements, and rewarding efforts to meet water quality objectives and targets.

#### ***Monitor and control***

This stage involves monitoring suppliers' performance throughout the contracting period, meeting delivery deadlines and setting quality standards as well as installation, after sales services and warranty provisions. Where sustainability criteria have been set, these should be monitored during this stage.

#### ***Monitor and assess the desired 'outcome' achieved***

The final stage of the sustainable procurement process, is measuring the results against the outcome that was initially set. The results and lessons learned should then be fed back into stage one. The outcome may be difficult to measure, or may need to be measured in intervals over a certain time period. Specific indicators may also need to be developed to facilitate meaningful measures.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter focuses on the procedure used in obtaining relevant data to achieve the objectives of the study. It covers the study area, research design, population and sample size, sampling technique, sources of data and instruments, data analysis and presentation of the study.

#### **3.2 Study Area**

Sekondi-Takoradi is one of the 17 Districts in the Western Region of Ghana. It is the capital of the Western region. With a land area of 49.78km<sup>2</sup>, it has a population of 8140 persons/km<sup>2</sup>. Sekondi is the administrative capital. The Sekondi-Takoradi Metropolitan Assembly (S.T.M.A.) has a mission to improve the living conditions through the provision of sustainable socio-economic development and good governance responsive to the needs of the people.

#### **3.3 Research Design**

According to Kothari (2004), the research design is the conceptual structure within which the research is conducted. It embodies the procedure for collection, measurement and analysis of data.

Two types of research approaches exist, namely, quantitative research qualitative research. Quantitative research results in numerical data that can be converted into numbers. Its focus is on counting and classifying features and constructing statistical models and figures to explain what is observed.

The purpose of it is to quantify and generalise results from a sample to the population of interest. Structured techniques such as the use of questionnaires or telephone interview are employed.

Qualitative research on the other hand generates non-numerical data. The primary aim is to gain an understanding of underlying reasons and motivations. It provides insight into the setting of a problem, generates ideas and helps to understand human behavior and reasons behind it. Structured, semi-structured or unstructured interviews are used for the collection of primary data.

The study uses the qualitative method. A case study approach was used as the design for the study.

This is because the researcher wanted to study a particular subject in a particular organization. The method has the ability to generate answers to questions such as 'why,' 'what' and 'how' (Saunders, 2007). Case study is defined as "a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple source of evidence" (Robson, 2002).

Case-studies are analysis of persons, events, decisions, periods, projects, policies, institutions or other systems that are studied holistically by one or more methods.

### **3.4 Population and Sample Size**

The target population for the study were public procurement practitioners who are directly involved in the procurement process at the Sekondi-Takoradi Metropolitan Assembly (S.T.M.A.) namely; the Assistant Quantity Surveyor, Environmental/Sanitation Officer, Architect, Supply Officer and the Assistant

Planning Officer. Non probability purposive sampling technique was used in the selection of respondents to collect primary data on the subject.

The sampled respondents were five (5) in number. In all, interviews were conducted for all the five (5).

### **3.5 Sampling Technique**

Saunders, (2007) identified sampling techniques to provide a range of methods that allow researchers to reduce the amount of data they collect by considering only data from a subgroup rather than all possible cases or elements.

Purposive sampling technique was used to select respondents whose views were solicited on the Role of Public Procurement in Achieving Millennium Development Goal 7: Environmental Sustainability.

Purposive sampling method was used because the criterion chosen allowed the study to focus on people who would most likely have the experience, knowledge or the insights into the role public procurement can play in achieving Millennium Development Goal 7.

Kothari (2004) explains that purposive sampling is a type of non-probability sampling which could also be called judgment sampling or deliberate sampling. It is characterized by the use of judgment and deliberate effort to obtain representative samples by including typical areas or groups in the sample.

### **3.6 Sources of Data and Instruments**

Both primary and secondary sources of data were used for the study. The primary data was obtained from respondents through one-on-one structured interview questions. Secondary data was obtained from library, Internet, journal articles, news papers and research reports. The secondary data was necessary in order to gather relevant information to guide the conduct of the research project.

One-to-one interview was the main primary data collection instrument used for the study.

Structured interview questions were used to guide the researcher in interviewing the public procurement practitioners. Structured interview involves the use of questionnaires based on a predetermined and identical set of questions.

The choice of one-to-one interview was motivated by its adaptability in controlling the response situation, arranging a mutually convenient time and place, and controlling the sequence and pacing of the questions asked.

Interviews have the potential of probing deeply into the respondent's beliefs, attitudes and inner experiences.

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

This section deals with the methods of data analysis used. Qualitative method of data analysis was used to analyse the data. The interview responses were analysed by listing all the important ones related to the study. This gave the general idea of the study with respect to the role of public procurement in achieving Millennium Development Goal 7: Environmental Sustainability.

## CHAPTER FOUR

### ANNALYSIS, DISCUSSION AND PRESENTATION OF DATA

#### 4.0 Introduction

This chapter deals with the results and discussion of the field data on the role of public procurement in achieving Millennium Development Goal 7: environmental sustainability.

#### 4.1 Demographic characteristics of Respondents

This section covered the position, educational level as well as the number of years of experience in the procurement industry.

##### **Demographic Characteristics of Respondents**

##### ***Positions of Respondents***

The respondents for the study were one (1) Assistant Quantity Surveyor, one (1) Environmental / Sanitation Officer, one (1) Architect, one (1) Supply Officer and one (1) Assistant Development Planning Officer.

##### ***Qualifications of Respondents***

Two (2) of the interviewed procurement practitioners hold Masters Degree, two (2) hold First Degree and one (1) of them holds an International Diploma.

### ***Number of years in procurement industry***

Whiles three (3) of the respondents had over ten (10) years of experience in public procurement, one (1) had between six (6) and ten (10) years and the other, between one (1) and five (5) years.

### **4.2 The level to which public procurement practitioners at S.T.M.A understand millennium Development Goal 7: Environmental Sustainability.**

Out of the five Public Procurement Practitioners interviewed, three of them had very little knowledge about Millennium Development Goal 7. The remaining two officials knew about the subject matter.

### **4.3 Environmental Issues being considered currently by procurement practitioners at S.T.M.A.**

From the interviews conducted, all the procurement practitioners declared that they consider environmental sustainability issues in their activities. Among the considerations given for environmental sustainability are; waste minimizing, natural resource use efficiency, reduction of air pollution, and land degradation reduction. It was emphasized that the environmental protection agency is most consulted to undertake environmental impact assessment of proposed works projects.

**4.4. Procurement Strategies to be adopted within the procurement process by public procurement practitioners to help achieve Millennium Development Goal 7: Environmental Sustainability.**

On the strategies to be adopted to achieve Millennium Development Goal 7, the interviewees said that environmental impact assessment of all procurement activities must be conducted, more especially works. They also agreed that in the development of specifications, environmental sustainability issues must be incorporated.



## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter presents the summary of the findings, conclusion and recommendations arrived at per the role of public procurement in achieving Millennium Development Goal 7: Environmental Sustainability.

#### 5.1 Summary of Findings

The study was set out to find out how public procurement can be used to achieve Millennium Development Goal 7: Environmental Sustainability. After analyzing the interview response, the following findings were made:

- i. Procurement Practitioners do not know much about Millennium Development Goal 7, although they unknowingly applied requirement one way or the other in their activities, which enhances the achievement of the goal.
- ii. It was also revealed that public procurement can play a major role in the quest to achieving Millennium Development Goal 7: Environmental Sustainability.
- iii. Again, it came out that strategies such as incorporating environmental sustainability specifications and requirements within the procurement process can help achieved Millennium Development Goal 7.

#### 5.2 Conclusion

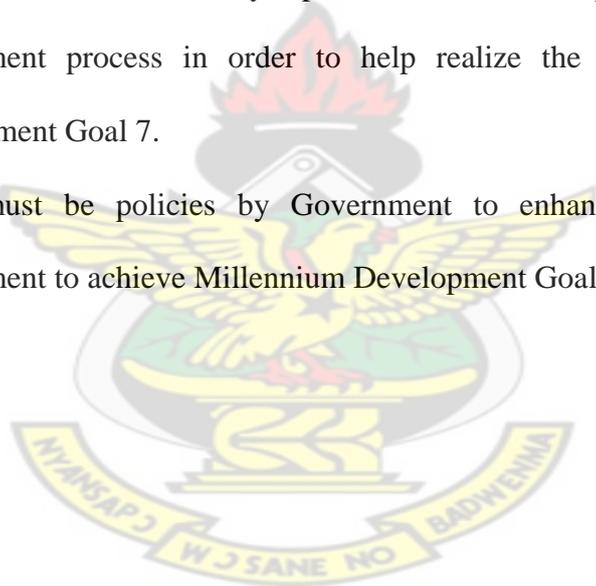
The country's quest to achieve Millennium Development Goals, including Goal 7: Environmental Sustainability through the introduction of various policies has not yielded the required results. Based on the findings, of the study, it can be concluded

that public procurement can help achieve Millennium Development Goal 7: Environmental Sustainability.

### **5.3 Recommendations**

The following recommendations when considered will help achieve Millennium Development Goal 7:

- i. Public procurement practitioners must be given the necessary training in the area of environmental sustainability in relation to their activities.
- ii. Public procurement practitioners must be encouraged to incorporate environmental sustainability specifications and requirements within the procurement process in order to help realize the dream of Millennium Development Goal 7.
- iii. There must be policies by Government to enhance the use of public procurement to achieve Millennium Development Goal 7.



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**APPENDIX**

**PUBLIC PROCUREMENT AS A TOOL FOR ACHIEVING MILLENNIUM DEVELOPMENT GOAL 7: ENVIRONMENTAL SUSTAINABILITY IN GHANA.**

**INTERVIEW SCHEDULE FOR PROCUREMENT PRACTITIONERS IN THE SEKONDI-TAKORADI METROPOLITAN ASSEMBLY**

**[S.T.M.A.]**

This interview strives to collect data on how Public Procurement can be used to achieve Millennium Development Goal 7: Environmental Sustainability in Ghana. Please help complete these questions. Your response is assured of utmost confidentiality, as the result will be used for academic purposes only.

**SECTION A: Background Information**

1. Name of interviewee

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2. Position of the interviewee

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3. Place of interview

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4. Date of interview

.....

5. Time of interview

.....

6. What is your highest qualification? MSLC ( ) SS/SSS ( ) Diploma ( ) First Degree ( )

Masters Degree ( ) others (specify):

.....

7. How long have you been in the procurement industry? 1-5years ( ) 6-10years ( )  
Over  
10 years ( )

**SECTION B: The Level to which Public Procurement Practitioners at S.T.M. A understand Millennium Development Goal 7: Environmental Sustainability.**

8. Do you know about Millennium Development Goal 7; Environmental Sustainability?

Yes [ ] No [ ]

If yes, briefly explain what you know about MDG 7.

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**SECTION C: Environmental Sustainability issues being considered currently by procurement practitioners at S.T.M.A**

9. Do you consider environmental sustainability issues in your procurement activities?

Yes [ ] No [ ]

10. If yes, what are some of the environmental issues you consider?

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