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Challenges to the Incorporation of Environmental Sustainability Issues into Construction Procurement at the Local Government Level of Ghana

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Abstract:A study was conducted with the aim of exploring the challenges affecting the incorporation of environmental sustainability issues into construction procurement at the local government level of Ghana. The research specifically studied nineteen (19) out of the twenty-two (22) district assemblies in the western region of Ghana, examined their construction procurement system and their challenges in incorporating environmental sustainability issues into their construction contracts. A literature review focused on the construction procurement process pertaining at the district level, questionnaires were used in the study. The study discovered that though the respondents were aware of the impact of construction procurement activities on the environment they do not pay attention to addressing these issues through the procurement processes. The study also noted that the major external challenges to incorporation of environmental sustainability issues into construction procurement are lack of government guidance, lack of knowledge in the industry, limiting standards and contractors desire for lower prices. The study identified four major internal challenges to the incorporation of environmental issues into construction procurement as: lack of roadmap or strategy, lack of knowledge and skills, weak processes, and lack of understanding of how to insert environmental issues into contracts. The study concluded that government need to expedite efforts to review the current procurement documents in order to provide a roadmap to incorporate environmental sustainability issues into the public procurement system. The study increased awareness on the importanceof working out a strategy to promote environmental sustainability issues through public procurement management.

Keywords:-construction procurement,environmental sustainability, sustainable public procurement

I. INTRODUCTION

Prior to the 1970s, there had been growing concern globally about the dangers human activities pose to the environment. However there were no known systems in place to address these growing concerns. Environmental Protection in Ghana can be said to date back to the colonial era. Laws existing then were mostly related to disease prevention and control. And they were often enforced in the bigger towns where government officers and factories were located.Following the 1992 Earth summit held in Bio-de-Janeiro, Ghana made a great stride with the establishment of the Environmental Protection Agency (EPA) on December 31, 1994 by the Environmental Protection Agency Act (Act 490). The Act 490 mandates the Environmental Protection Agency (EPA) to regulate the environment and ensure the implementation of government policies on the environment. The law mandates the EPA to ad infinitum improve and preserve the countries environment, while seeking solutions to global environmental issues (1).

Notwithstanding this huge environmental structure in Ghana, there is still evidence of gross environmental illiteracy among stakeholders in the construction, manufacturing, and procurement industries. For example in construction, destruction of natural vegetation is common; in manufacturing there is generally improper disposal of waste and improper storage and use of chemicals causing pollution and harmful emissions; and in procurement, buying unfriendly environmental products just to mention a few (2)(3)(4). This calls for the need to look at other alternatives to manage the environment to compliment the work of the Environmental Protection Agency (EPA). It is evident that the Environmental Protection Agency (EPA) alone cannot win the battle with the environment.

Sustainable Procurement has been identified by some researchers as one major alternative(5)(6). For example researchers such as (7)(8)(9) have identified that in the foreseeable future, customer demand and business competition will be the dominant reason for driving environmentally sustainable issues.

The UN Guidelines for consumer protection as expanded (1999) provides the mandate and legal basis for work on sustainable procurement. Agenda 21 focuses on the purchasing policies of governments, paragraph 54 of the Guidelines state that '*Government and International agencies should take the lead in introducing*

sustainable practices in their own operations, in particular through procurement policies.' What are the challenges to the incorporation of environmental sustainable issues into public procurement in Ghana?
The aim of the study was to find out the challenges in the incorporation of environmental sustainable issues into public procurement at the local government level. Specifically, the district assemblies a in the western region of Ghana was selected because the region is known to have crucial environmental concerns compared to the other regions such as: impacts of large and small scale mining, deforestation, industrial pollution (disposal of solid waste, effluent discharges and gaseous emissions), coastal erosion and sanitation, urban sanitation, water hyacinth/ marine pollution. The study intended to find out how these environmental problems could be addressed through procurement.

Finallythe study proposed solutions to the identified challenges with the aim of using the construction procurement process to address environmental challenges in the western region and how best the solutions can be adjusted and applied to other district assemblies in Ghana.

II. PREVIOUS RESEARCH

2.1 Construction Procurement and Environmental Sustainability Issues in the Ghanaian Context

According to the Public Procurement Manual (2003) of Act 663, "Works" means work associated with the construction, reconstruction, demolition, repair or renovation of a building or structure or surface and includes site preparation, excavation, erection, assembly, installation of plant, fixing of equipment and laying out of materials, decoration and finishing, and any incidental activity under a procurement contract. Procurement may be defined as the process which creates, manages and fulfils contracts(10).It is described as a succession of logically related actions occurring or carried out in an explicit manner and which culminate in the completion of a major deliverable or the attainment of a milestone. The processes involved are underpinned by methods which mean documented and systematically-ordered collection of rules or approaches.

According to the British Standards Institution (2010),and the Public Procurement Act 663 (2003) construction procurement activities commence once the need for procurement is identified and end when the transaction is completed.

2.1.1 Principal Activities in Construction Procurement

There are six principal activities associated with the construction procurement process according to the British Standards Institution (2010), namely:

- Establish what is to be procured;
- decide on procurement strategies in terms of contract, pricing and targeting strategy and procurement procedure;
- solicit tender offers;
- evaluate tender offers;
- Award contract; and
- Administer contracts and confirm compliance with requirements.

Environmental issues can be included in any of these key procurement activities. Environmental sustainability issues may also be inserted in the tender document. The Procurement Directives of the European Commission states very clearly sections of a tender document where and how environmental sustainability issues can be introduced (11). The sections include:

- The subject matter of the contract;
- The technical specifications for the product/work/service;
- The selection criteria for candidates;
- The contract award criteria;
- The contract performance clauses.

The point is: Basic procurement ethics should not be compromised in any way with the introduction of environmental sustainability issues. Environmental sustainability issues can be included in tender documents as long as these principles are not breached(11).

2.1.2Environmental Management at the District Assembly Level

The Constitution of the Republic of Ghana 1992 provides that a District Assembly is the highest political authority in the district, and that the District Assembly has deliberative, legislative and executive powers. According to the Local Government Act there are three kinds of districts – districts, municipalities and metropolises – and each of them have an Assembly as the highest political authority in the district (Local Government Act No. 462 of 1993, Sections 1, 3 (1)):

- District Assemblies in districts with a minimum population of 75,000 people;
- Municipal Assemblies in districts with a minimum population of 95,000 people; and
- Metropolitan Assemblies in districts with a minimum population of 250,000 people.

The District Planning officer is the team leader of the District Environmental Management Committee, As part of hi responsibility, he incorporate environmental issues into their Medium Term Development Plan which normally has a four or five year lifespan depending on available funds and the time frame for the projects. The Environmental Management Committee respond swiftly to reports on allegations of activities that degrade the environment. Agyekwena (2010) explained that the services of the Police Force is sometimes sought to restore law and order on environmental issues in the communities where need be. Such reports are collated to enable the district to discuss and adopt appropriate action. According to Agyekwena (2010), some members of the District Environmental Management team are the National Disaster Management Committee (NADMO), the Environmental Health and Sanitation Unit, District Community Development Officer, the Ghana Education Service (GES), the Department of Social Welfare, the Gender Desk office the, representatives of traditional rulers and the Town and Country Planning most of whom already have basic information about the environment and are given further training. The Community Environmental Management Committees are set up and undergo training under the Ghana Environmental Management Project (GEMP) which was initiated in 2008 and funded by the Canadian International Development Agency (CIDA).

2.2Challenges to the Incorporation of Environmental Issues into Construction Procurement at the district level

Below, the challenges to the incorporation of environmental issues have been grouped under internal and external challenges.

2.2.1 Internal Challenges

Cost concerns: An investigation of green procurement practices in US firms revealed that cost concerns are the main obstacle for taking environmental issues into account in the procurement process(12). The situation is the same in developing countries(2). Fear of incurring costs is more considerable for SMEs which have generally less funds available and thus are more susceptible (13). To change the attitude, training has been recommended by many researchers as an effective remedy against 'environmental illiteracy'(2)(14).

Lack of understanding of how to incorporate environmental issues into buying: One study found that procurement officers are unsure of how to incorporate environmental issues in their buying (12). In terms of social responsible buying, it has been observed that: Even when they recognize the relevance of corporate social responsibility, many purchasing managers do not know how to concretely and systematically include social and environmental issues into purchasing decisions. They have little experience with such demands(12).

Reluctance to change from traditional practices: Ayarkwa, et al. (2010) identified that many procurement professionals are used to the traditional way of doing things and are reluctant to change and use innovative ways to promote environmental issues.

Conflict with company's objective: companies have objectives but many of these objectives are not aligned with the concept of environmental protection. Many see the need to incorporate environmental issues in their activities as conflicting with the objectives of the company (2).

Loss of competitive edge: competition drives green purchasing but loss of competitive edge makes firms reluctant to consider environmental friendly practices.

Lack of training and commitment: there is little knowledge on how to introduce environmental issues into the procurement process on the part of procurement officers. Also there is a problem with management commitment (12). Ayarkwa, et al. (2010) identified that lack of training and commitment by government hinders the implementation of environmental standards.

Accounting methods limit green reporting: there is no evidence that contractors are rewarded for taking measures to protect the environment during the construction stage. The traditional methods of valuation for building works have no consideration for protecting the environment in most cases(15).

Shortage of personnel: A barrier to the enforcement of environmental standards in construction has been found to be shortage of personnel. Often the limited numbers of employees are made to attend to more core businesses of the organisation rather than non-core businesses(2). Below is a summary of the challenges to the incorporation of environmental sustainability issues identified by some researchers.

Table 2. 1 Challenges to the Incorporation of Environmental Sustainability Issues into Procurement Management and Research Methodology Adopted (Adapted From *(12)*

INTERNAL CHALLENGES	REFERENCE	RESEARCH METHODOLOGY
Cost concern, Lack of understanding of how to incorporate environmental issues into buying, Reluctance to change from traditional practices, Conflict with company's objective, Loss of competitive edge Resistance of employees	Ayarkwa, Ayirebi-Dansoh, Amoah(2010)	Survey/questionnaire
Lack of understanding of how to incorporate green into buying	Cooper et al. (2000)	Case study/interviews
Focus on cost reductions at expense of green practices, lack of management commitment, lack of buyer awareness	Min and Galle (2001)	Survey/questionnaire
Lack of training	Bowen et al. (2001a, b), ayarkwah	Interviews/questionnaire
Lack of training and commitment	Carter and Dresner (2001)	Case study/interviews
Costs hinder greening in forest industry	Caro et al. (2003)	Survey/modelling
Accounting methods limit green reporting	Rao and Holt (2005)	Survey/questionnaire
Costs especially for SMEs	Hervani and Helms (2005)	Survey
Pressure for lower prices	Orsato (2006)	Case studies
Shortage of personnel	Ayarkwa, Ayirebi-Dansoh, Amoah(2010)	Literature review, survey and questionnaire

2.2.2 External Challenges

Lack of Regulation and Unclear regulations: Walker et al (2008) argues that Environmental legislation and regulation can inhibit innovation by prescribing best available techniques and setting unreasonable deadlines. On some environmental issues there are no regulations at all, and many are unclear.

Lack of government support: the government is responsible for taking the lead in sustainable development;notwithstanding, little support is provided in the areas of finance, and legal structure to incorporate environmental sustainability issues into construction procurement (Ayarkwa et al., 2010).

Poor Supplier Commitment: According to Vachon and Klassen (2006), companies are often not willing to barter information on green supply for fear of exposing flaws or leaking information to other companies for competitive advantage. In analysing relationships between one customer and twenty suppliers it was found that confidentiality was a major difficulty in green supply chains (Wycherley, 1999 cited in Walker et al 2008).

Specific Industrial Challenges: It has been found that there are different drivers, challenges and practices experienced by different companies in different industries and this may influence how reactive or proactive firms in a particular sector are to environmental supply (Zhu and Sarkis, 2006).

Unwilling to exchange information: Wycherley (1999) found that most companies are unwilling to exchange information on environmental friendly practices for fear of competition.

Summary of Challenges to the incorporation of environmental issues into procurement management is provided in the table below.

Table 2. 2 Summary of challenges to the incorporation of environmental sustainability issues into procurement management and research methodology adopted (Adapted from Walker et al , 2008)

EXTERNALCHALLENGES	REFERENCE	RESEARCH METHODOLOGY
Lack of regulation **Unclear regulations**	Porter and Van de Linde, 1995, cited in Walker et al 2008)	Survey/Questionnaire
Lack of government support **Lack of knowledge in the industry**	Ayarkwa, Ayirebi-Dansoh, Amoah(2010)	Survey/Questionnaire
Inhibits innovation **Poor supplier commitment**	Porter and van de Linde (1995)	Case studies
Unwilling to exchange information	Wycherley (1999)	Case study/interviews
Industry specific barriers **Different sectors have different challenges**	Zhu and Sarkis (2006)	Case study/interviews

III. RESEARCH METHOD

Explanatory research was used for this study. The target population for the study was made up of procurement officials, environmental officers, quantity surveyors, and district engineer. The addition of the procurement officers, district engineers and quantity surveyors helped in bringing to bear the challenges in incorporating environmental sustainability issues into the construction procurement process and also other problems in the procurement process at the district level. The procurement officers, district engineers and quantity surveyors helped in bringing out the driving factors pushing environmental issues into the procurement process. The inclusion of environmental officers helped the researcher to know the relevant environmental problems that could be solved through the procurement process.

In selecting samples to be included in the study, non-probability sampling techniques were used. Particularly the purposive sampling technique which is a non-probability sampling technique was used to select the procurement officers, environmental officers, district engineers and quantity surveyors. This is because it was believed that all these officers were responsible for construction procurement and were in the best position to respond to the research questions. Census sampling technique was used to select the twenty-two districts due to all the districts being in one region, Western Region; and the number of districts relatively small. Sample frame was collected from western Regional Coordination Council.The sample size was eighty-eight (88) people drawn from the population of twenty-two (22) districts of the western region of Ghana. The population were in four subgroups of twenty-two each from district engineers, procurement officers, environmental officer, and procurement officers. The personal visits to the respondents took place over a period of three months between May 2014 and July 2014

Questionnaires:this survey was carried out by delivering the questionnaires personally to respondents. The questionnaires had open-ended and closed questions. The population involved in this survey were stakeholders in construction procurement at the district level namely district engineers, procurement officers, environmental officer, and procurement officers. Since the research required professionals with knowledge in construction procurement at local government system, the purposive sampling method was used in selecting the people to be interviewed and to be served with questionnaires. The questionnaire used was appropriate because it was assumed that the procurement officers, environmental officers, as well as the contractors and consultants were literate and for that matter they could be able to respond to the questions unaided. Questionnaire facilitated the collection of data that ensured the best matching of concepts with reality; it provided the same responses from a given set of respondents and helped reduce inconvenience caused by unfavourable interview times and busy schedules.

IV. RESULTS AND DISCUSSION

Respondent Rate:twenty-two(22) people from each group were served with questionnaires. Out of the eighty-eight (88) people who were served with questionnaires, 60 (District Engineers =17, Quantity Surveyors =16 Environmental officers=14 Procurement Officers=13) valid responses were received, representing a response rate of 68%. In all a total of 60 respondents (from questionnaire) were used in the analysis. The details are in Table 1.

Table 4.1Number of Distributed Questionnaires and Response Rate

Questionnaires distributed	Total	Number Retrieved
By District	**22**	**19**
By Profession	**88**	**60**
District Engineers	22	17
Quantity Surveyors	22	16
Environmental officers	22	14
Procurement Officers	22	13

Background Information: In an attempt to establish a deeper understanding of the background of the respondents, this section describes the position of the respondent that were involved in the survey since the source of a data has an important role that its plays in the finding of a research (16). He stated that, you may be able to target the best institution for your research, but as to whether the right individuals in that institution are contacted is more important since the people that matter most are the once that are able to provide us with all the needed responds. Bodriguez (2008) indicated that the position held by any person form a great part in every responds that comes from that person. For instance if a Procurement Officer and a District Engineer are asked the same question say How long would it take for the construction of a toilet facility? Their responds to this question would defer since they all have different background.

Table 4.2 Position of Respondent

Response	Frequencies	Percentage %
Procurement Officer	**13**	**21.7**
District Engineer	**17**	**28.3**
Quantity Surveyor	**16**	**26.7**
Environmental Officer	**14**	**23.3**
Missing value	**0**	**0.0**
Total	**60**	**100**
Source: Field Survey 2014		

The data presented in Table 4.1 above shows that, a high number of the respondents, representing 28.3 percent are District Engineers. Whiles 26.7 percent involved with the survey are Quantity Surveyors it is followed closely by Environmental Officers which scored 23.3 percent, 21.7 percent of the total respondents are Procurement Officers. We are sure of a good result since the majority of the respondents are experienced in issues into construction procurement in the district level and of high competency to provide data which is credible and representative.

Table 4.3 How Long Have You Been in Professional Practice

Response	Frequencies	Percentage %
<5 years	**14**	**23.3**
5-10 years	**17**	**28.3**
>10 years	**29**	**48.3**
Other	**0**	**0.0**
Total	**60**	**100**
Source: Field Survey 2014		

Empirical studies have been conducted to investigate the number of years one has been in the profession. Rodriguez-Rodriguez (2011) indicated that people that stay long within the same profession know more about their work and gain a lot of experience since they have constantly been dealing with the same work over and over again Previously, other authors have considered the number of years one stay in a particular work as reducing productivity stating that, when the same job is done over a period of time it becomes boring and laziness set in.(17)(18)argue in their research that, newly employed worker comes on board with new experience and work with zeal but as they stay on the same work they become use to the old experience they game in with. But they concluded that even though that could be a possibility experience is always gaining from the job but them advice that workers should always seek for on the job training. Drawing from these experiences, there was a need to know how long our respondent has been on their respective professional work for us to determine their

level of experience on their respective work. The criteria for experience and professionalism in the context of this research are determined as the number of years of practiced.

From Table 3 above, 23.3 percent of the respondents involved with the survey have been in the Profession for less than 5 years Meanwhile 28.3 percent of the respondent has been in the profession between 5 and 10. But 48.3 percent which form the large part of the respondent has stayed in their respective profession for a period of more than 10 years. The conclusions drawn on these findings are that, the results give indications that the respondents have reasonable experience in their respective field. Furthermore, the findings suggest that most respondents are regularly active and have had the chance to be part of a lot of issues into construction procurement in the public sector. It seems therefore plausible to conclude that those who responded to the survey are sufficiently experienced in issues into construction procurement in the public sector and are competent to provide data which is credible and representative.

Awareness of Impact of Construction Activities on the Environment: Respondents were asked to rate the impact of their construction activities on the environment. The results are presented in table 4.7 below and discussed.

Table 4. 4 Impacts of Construction Activities on the Environment

Rating	Low	Medium	High	Total
ResponseFrequencies (%)	Frequencies (%)	Frequencies (%)		
Noise and vibration impacts	11(18.3%)	30(50.0%)	19(31.7%)	60(100%)
Air quality impacts	20(33.3%)	16(26.7%)	24(40.0%)	60(100%)
Visual impacts	32(53.3%)	8(13.3%)	20(33.3%)	60(100%)
Water quality impacts	7(11.7%)	13(21.7%)	40(66.7%)	60(100%)
Construction waste impacts	20(33.3%)	5(8.3%)	35(58.3%)	60(100%)
High energy consumption	40(66.7%)	15(25.0%)	5(8.3%)	60(100%)
Deforestation	9(15.0%)	12(20.0%)	39(65.0%)	60(100%)
Other	5(8.3%)	10(16.7%)	45(75.0%)	60(100%)
Source: Field Survey 2014				

Based on Noise and vibration, 30 of the respondents representing 50.0 percent said it has medium impart, 19 of them representing 31.7 percent also said it has high impart whiles just 11 of them representing 18.3 percent are saying it has low impart. Also, based on Air quality, 24 of the respondents representing 40.0 percent said it has high impart, 20 of the respondents representing 33.3 percent said it has low impart with the rest 16 of them representing 16.7 percent said it has medium impart. More so, concerning Visual impart, 32 of the respondents representing 53.3 percent are saying it has low impart, 20 of them representing 33.3 percent are also saying it has high impart whiles few 8 of the respondents representing 13.3 percent are saying it has medium impart. However, based on water quality, 40 of the respondents representing 66.7 percent are saying it has high impart, 13 of the respondents representing 21.7 percent are also saying it has medium impart with just 7 of them representing 11.7 percent are saying it has low impart. With construction waste impart, 35 of the respondents representing 58.3 percent are says it has low impart, 20 of them representing 33.3 percent are saying it has medium impart and few 5 of the respondents representing 8.3 percent are saying it has high impart. Furthermore, Based on High energy consumption impart, 40 of the respondents representing 66.7 percent are saying it has low impart, 15 of the respondents representing 25.0 percent are also saying it has medium impart whiles 5 of the respondents representing 8.35 percent are saying it has medium impart. Also concerning deforestation impart, 39 of the respondents representing 65.0 percent said it has high impart, 12 of them representing 20.0 percent said it has medium impart whiles 9 of the respondent representing 15.0 percent are also saying it has low impart. Last but not the list, based on other impart, 45 of the respondents representing 75.0 percent said it has high impart, 10 of them representing 16.7 percent said it has medium impart with just 5 of the respondents representing 8.3% said it has low impart. It means that based on impart construction procurement activities have on the environment, majority of the respondents representing 66.7 percent are in agreement withwater quality impart as impart on construction procurement activities on the environment with least number of respondents representing 11.7 percent disagree with that by saying it has low impart.

Challenge Facing the Incorporation of Environmental Sustainability Issues into Construction Procurement

DESCRIPTIVE STASTISTICS OF CHALLANGES

CODE	VARIABLE
X1	Difficulties in inserting environmental issues in a bid
X2	Lack of consensus on EM standards within the sector
X3	Lack of support from senior management team
X4	Lack of support from other staff and workers
X5	Lack of roadmap or strategy
X6	Lack of management commitment
X7	Other procurement targets
X8	Contractors' abilities
X9	Lack of knowledge/skills
X10	Resource limitations
X11	Poor communication
X12	Weak processes
X13	Cost reduction focus
X14	Implementation costs are too high
X15	Lack of training
X16	Complex documentation processes/procedures
X17	Loss of competitive edge
X18	Focus on reducing cost at expense of environmentally
X19	Resistance of employees' friendly practices
X20	Lack of contractor awareness
X21	Costs of improvement are too high
X22	Accounting methods limit green reporting
X23	Pressure for lower prices environmental
X24	Conflict with assembly's objective
X25	Lack of understanding of how to insert issues in contracts
X26	Reluctance to change from traditional practices
X27	Shortage of personnel
X28	Lack of tailor-made training
X29	Lack of support from suppliers/ contractors
X30	Lack of government guidance/support
X31	Volume of sustainability information
X32	Lack of supplier commitment
X33	Language and cultural differences
X34	Unwilling to exchange
X35	Limiting standards
X36	Competitive pressures
X37	Lack of knowledge in the industry
X38	Inhibits innovation
X39	Unwilling to exchange information
X40	Contractors desire for lower prices
X41	Poor contractor/supplier commitments

Table 4.6 Challenges to the incorporation of environmental sustainability issues into construction procurement at the district level

Variables	Mean	Std. Deviation
X1	**2.19**	**0.23**
X2	**2.53**	**1.85**
X3	**2.66**	**0.22**
X4	**4.05**	**0.44**
X5	**0.47**	**1.11**
X6	**1.99**	**0.27**
X7	**3.89**	**1.57**
X8	**4.08**	**0.21**
X9	**0.23**	**0.50**
X10	**2.33**	**1.02**
X11	**0.21**	**0.80**
X12	**0.86**	**1.25**
X13	**1.41**	**0.54**
X14	**1.57**	**0.19**
X15	**2.06**	**0.44**
X16	**2.14**	**1.06**
X17	**1.85**	**0.88**
X18	**2.33**	**1.24**
X19	**2.71**	**0.63**
X20	**2.10**	**0.45**
X21	**2.83**	**0.34**
X22	**3.86**	**0.13**
X23	**4.28**	**0.55**
X24	**3.91**	**1.14**
X25	**2.77**	**0.30**
X26	**1.03**	**0.21**
X27	**0.49**	**0.71**
X28	**2.50**	**1.17**
X29	**4.27**	**0.18**
X30	**0.100.15**	
X31	**2.08**	**0.83**
X32	**2.15**	**1.26**
X33	**1.55**	**0.49**
X34	**3.21**	**0.34**
X35	**2.91**	**0.52**
X36	**4.980.09**	
X37	**0.35**	**1.28**
X38	**1.74**	**0.81**
X39	**2.09**	**0.79**
X40	**1.62**	**1.24**
X41	**2.28**	**0.16**
Source: Field Survey 2014		

The above table, depict the mean and the standard deviation of the challenges to the implementation of EMS at the District level. It can be seen that the factor X36 ("Competitive pressures") recorded the highest mean value of 4.98 with a corresponding standard deviation of 0.09 being the least number of standard deviation. X30("Lack of government guidance/support") recorded the least mean number of 0.10 and a corresponding standard deviation of 0.15. This explain that respondents rated it mostly under 1 and 2, implying that it is the most importance when it comes to challenges of the implementation of EMS at the District level.\\

V. DISCUSSION

Awareness of Impact of Construction Activities on the Environment: (19), in his research to evaluate the effect of men activities on the environment pointed out a number of things that are affected during construction among them were deforestation, water pollution, visual impacts, waste generation and air pollution. According to him even though contractors are aware of all this negative effect on the environment, little is done to safe guard residents, the forest and water bodies. Table 4.7 above shows the respondent's responses on the impacts that

construction procurement activities have on the environment. Overwhelming as expected, the findings lean to the understanding that, though the respondents are aware of the impacts that construction procurement activities have on the environment they do not pay attention to it when procurement is being done.

Challenge Facing the Incorporation of Environmental Sustainability Issues into Construction Procurement :

It can be seen that factors such as Lack of support from senior management team, Lack of roadmap or strategy, Lack of management commitment, Lack of knowledge/skills, Poor communication, Weak processes, Implementation costs are too high, Complex documentation processes/procedures, Loss of competitive edge, Focus on reducing cost at expense of environmentally, Reluctance to change from traditional practices, Shortage of personnel, Lack of knowledge in the industry and Inhibits innovation recorded low mean values. This suggests that they have been rated high by the majority of the respondents. More so, challenges like Lack of support from other staff and workers, other procurement targets, Contractors' abilities, accounting methods limit green reporting, Pressure for lower prices environmental and Conflict with assembly's objective record high mean values. This means that they have been rated low by the respondents.

When introducing environmental issues into construction procurement, public sector organizations, such as the district assemblies are often limited by international and national procurement laws. The procurement law requires entities to have a transparent and non-discriminatory procurement process(20). These regulations do not allow procurement entities to introduce irrelevant pre-qualifications to contracts (20). Often times, procurement entities are concerned that environmental sustainability would be considered an irrelevant pre-qualification. However, with careful wording and interpretation of the law, procurement entities can show that environmental sustainability is relevant to the contract (20).

VI. CONCLUSIONS

This objective was anchored in the notion that, despite the many developments that have occurred in the procurement operations at the District Assembly level, there are still potential bottlenecks hindering the full realisation of the procurement objectives in that sector. The major external challenges to incorporation of environmental sustainability issues into construction procurement are lack of government guidance, lack of knowledge in the industry, limiting standards and contractors desire for lower prices.

Moreover, the study identified four major internal challenges to the incorporation of environmental issues into construction procurement as: lack of roadmap or strategy, lack of knowledge and skills, weak processes, and lack of understanding of how to insert environmental issues into contracts. On this note, the study has explored the contending challenges confronting the incorporation of construction environmental sustainability issues into the procurement operation at the District Assembly level. This calls for government to expedite efforts to review the current procurement documents to incorporate environmental sustainability issues into the public procurement system.

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