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Determinants of Compliance to Environmental (Impact Assessment and Audit) Regulations, 2003 in Implementation of Development Projects. A Case of Mombasa County, Kenya

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Abstract:-Environmental Impact Assessment (EIA) is an essential policy instrument for achieving sustainability in development. The enactment of the Environmental Management and Co-ordination Act, 1999 and Environmental Impact Assessment and Audit Regulations, 2003 in Kenya requires institutions and organizations carrying out new development projects to carry out Environmental Impact Assessment (EIA) and those with ongoing projects to undertake Environmental Auditing (EA). The purpose of this study is to establish compliance to Environmental Impact Assessment and Audit Regulations, 2003 by development projects Mombasa County, Kenya. The researcher was interested in establishing how developers' levels of awareness influence compliance to EIA/EA regulations, 2003. The extent to which public participation influence compliance to EIA/EA regulations, how compliance assurance strategies used by lead agencies influence compliance to EIA/EA regulations and finally to establish whether financial capacity of proponents influence compliance to EIA/EA regulations, 2003. The study consists of three chapters. Chapter one introduces the study and provides in-depth description of environmental impact assessment and environmental audits in Kenya and other parts of the world. It also brings out the problems at hand which includes involvement of the public in the EIA process, effectiveness of different compliance assurance strategies being used by lead agencies and the cost of EIA process in Kenya. Chapter two reviews literature and other related theories that have been researched in relation to Environmental Impact Assessment and Audit while chapter three provides the methodology to be used during the research. Descriptive research design was used for a population of 94 respondents from the directly affected persons, 84 respondents from regulated projects that should undertake E.I.A or Environmental Audits, 20 respondents from lead agencies was targeted and 9 respondents were CSOs was selected to participate in the study. This contributed to a sample size of 207 respondents. Primary data was collected through questionnaires while the research results was presented through frequency tables and percentages. Analysis was done using Pearson correlation method. It was established that all the project development employed at the Nyali constituency, Mombasa County positively influenced the compliance to the EIA/EA regulations, 2003 under the Project development in Nyali and that this influence was statistically significant at significance level of 0.05. It was concluded that environmental assessments should lead to development decisions informed by knowledge of the range of potential environmental and social impacts direct, indirect, interactive, and cumulative. It is recommended that future implementation of compliance to the EIA/EA regulations, 2003 in organizations should embrace not just one of these determinants but all of them as they influence the successful implementation to different extents.

Keywords:-Developers' levels of awareness, Public participation, Compliance assurance, Financial capacity and Compliance.

I. INTRODUCTION

In order to achieve sustainability in development, Environmental Impact Assessment (EIA) is a necessary policy instrument. The current changes in Environmental Policy in Kenya, the Environmental Management and Co-ordination Act, 1999 displays, requires institutions and organizations undertaking development projects to carry out Environmental Impact Assessment (EIA) and Environmental Auditing (EA). EIA Regulations (2003) defines environmental impact as a systematic examination conducted to determine whether or not a programme, activity or project will have any adverse impacts on the environment. Schwartz (2004) defines environmental audit study as a systematic evaluation of activities and processes of an ongoing project to determine how far these activities or programmers conform to the approved environmental management plan of that specific project and sound environmental practices.

Environmental Impact Assessment (EIA) is a key aspect of many large scale planning applications (Kariuki, 2002). EIA is meant to help us understand the potential environmental impacts of major development projects (Friends of Earth, 2005). EIA is a process that provides for an examination of the environmental consequences of development actions in a systematic, holistic and multidisciplinary way, also it is a critical tool in managing and clarifying the complex interrelationships between advance and the environment (European Union, 2013). However it is not decision making in itself.

According to World Business Council for Sustainable Development (2000) a fundamental aspiration of any development there should be sustainability and a better management of development in harmony with the environment. Also, according to Kariuki, (2002) EIA is both an inspiration and instrument for sustainable development provides all stakeholders in the planning system with a vehicle through which we can all seek to make continuous improvement.

According to Heinrich, (2006) National Environment Management Authority and other lead agencies understand the environmental effects of a development before deciding whether or not it should go ahead by gathering information carried out by the developer and other bodies. Environmental assessments put emphasis on using the best available sources of objective information and in carrying out a systematic and holistic process which should be bias free and allow the local authority and the whole community to properly understand the impact of the proposed development.

Environmental assessment should lead to better standards of development and in some cases development not happening at all (Emerton, Ndugire and Bokea, 2007). Proper mitigation measures on environmental assessments enables developments do go ahead and is a systematic process which leads to a final product, the Environmental Statement (ES). According to Kamau (2005) Environment Statement sets the information about the development in more detail than the non-technical summary and draws together the threads which have been explored through the technical reports. These issues can be summarized tinder various headings, depending upon the nature of the development proposed, and having regard to the various items identified in the EIA/EA Regulations, 2003. Unfortunately more often, both the EIA process and outcome can be complex thus confuse the local communities to know how the development might affect them (Okidi, Kameri & Aketch, 2008).

According to Donelly, Dala& Hughes (1998) lack or poor design of important compliance assurance tools, inadequate incentives provided by the regulatory framework, and insufficient institutional capacity and resources of enforcement authorities may lead to low compliance. The environmental compliance assurance programmers established by governmental agencies alone or in co-operation with other stakeholders helps to address these challenges through a broad array of actions (Puffy, 1998). However, its success is determined by the quality and integrity of the overall governance system, and on the priorities assigned to environmental issues by politics (Puffy, 1998).

In Kenya, legislation on environmental issues had been scattered in several sectoral Acts. The EMCA (1999) provides for establishment of a legal and institutional framework for management of the environment and has adopted a centrally directed environmental scheme. The Act is the only single piece of legislation that contains to date the most comprehensive system of environmental management in Kenya (Angwenyi, 2004).

The Environmental Impact Assessment Guidelines and Administration Procedures (EIAGAP, 2002) and the Environmental (Impact Assessment and Audit) Regulations (EIAAR, 2003) were subsequently enacted and have become vital tools for EIA and EA implementation in Kenya. Section 58 (1) of the EMCA (1999) and section 3(3) of the EIA/EA Regulations, 2003 requires that an EIA be conducted for any development likely to have cumulative negative impact on the environment and obtain a license from the Director General of National Environmental Management Authority (EMCA, 1999). Section 138 of the EMCA (1999) imposes a penalty of imprisonment for a term not exceeding 24 months or a fine of not more than 2 million shillings.

A. Statement of the Problem

Despite the availability of robust regulations aimed at protecting the environment and thus providing quality surrounding for communities, there exist certain reluctances by many new investors and existing companies to comply with the regulations (Kamori-Mbote, 2000). Challenges of environmental management such as effluent discharge, air pollution, uncontrolled dumping of debris, unsustainable natural resources extraction, poor disposal methods of garbage have long term implications of which require long term policy solutions (NEMA, 2007). In some cases, developers for new projects which should undergo EIA study and those with ongoing activities that are required to undertake annual environment audits fail to do so due to cost implications (Amombo, 2006).

Kamori-Mbote (2000), states that during public and private sector participation in EIA process in Kenya,Non - Governmental Organizations and sectorial representatives more often lobby and petition the government in environmental sustainability issues thus deeming the process adversarial (conflict in nature). Most of EIA and EA reports done are not complete, easily understood, objective, factual and internally consistent because many contributors are involved in the process and thus fail to provide the essential information for decision- making and fail to communicate clearly the key findings to the public and other interested parties, (UNU, 2008). UNU (2006) further state that if the common shortcomings and challenges found in the EIA and

EA reports are addressed then higher standards of environmental assessment could be achieved.

In Kenya, the protest against the construction of a proposed 60-storey building in a central city park by the local peoplewith the support of non-governmental organizations (NGOs)is an example of one of the environmental unfriendly projects that were stopped (Kakonge, 1998). The Government is thus challenged to enforce all the written laws (Kamori-Mbote, 2000; Onyango, 2007). In its 2013-2017 Strategic Plan NEMA aims to ensure that public and private sector are increasingly sensitized to actively participate in environmental matters and they are confident that their views are incorporated in the decision – making process (Jansen et al. 1999).

There are several problems associated with environmental compliance in the sense that many people and organizations are not confident with environmental institutions' capacity (Onyango, 2007). There are many environmental laws ratified in place to be followed by individuals and firms to conserve the environment yet there exist a gap in implementing them (NCEA, 2008). According to Onyango (2005), environment is very vital as far as meeting the Millennium Goals and Vision 2030 is concerned. During the the assessment of a development on its likely impacts to the environment and thus need for environmental impact assessment, the sensitivity of particular receptors to environmental impact may include both social and ecological impacts (Rafique and Bronte, 2005). Such assessment may be done, for instance to determine not only environmental carrying capacity of an area in terms of wildlife, but as wellthe measure of pollution and its impact on human health (Natufe, 2001). This has become an extremely important and contentious area of environmental impact assessment and audit regulations.

EIA and EA as new concepts has not been readily understood and accepted as a tool in developing countries (World Bank, 1999). According to Rihm (2006), developers have resisted and argued that it is anti-development because laws and policies supporting it dictate that developments causing negative impacts should be discontinued. In a nutshell, EIA was considered just another bureaucratic stumbling block in the path of development. Secondly, it was conceived as a sinister means by which industrialized nations intend to keep developing countries from breaking the vicious cycle of poverty. Thirdly, the experts in the developing countries were foreigners who were viewed as agents of colonization (Schift, 1997). The need for EIA and EA has become increasingly important and is now a statutory requirement in many developing countries (Sadler, 1996).

B. Purpose of the Study

The purpose of this study is to establish influences to compliance with Environmental (Impact Assessment and Audit) Regulations, 2003 by development projects in Kenya with a focus on Nyali Constituency.

C. Research Objectives

The study is specifically set out to address the following objectives

- To establish how developers' level of awareness on EIA/EA Regulations, 2003 influences compliance to these Regulations, on development projects Mombasa County.
- To establish the extent to which public participation in development projects influence compliance to the EIA/EA regulations, 2003 Mombasa County
- To determine whether compliance assurance strategies used by lead agencies influence compliance to EIA/EA regulations 2003 on development projects Mombasa County.
- To examine whether financial capacity of project proponents influence compliance to EIA/EA regulations 2003 on development projects Mombasa County.

II. LITERATURE REVIEW

A. Influence of Awareness Level of Developers' According to EIA/EA Set Rules 2003

As per UNEP (2004), EIAis a designed approach for gaining and examination of information about the environmental information to be used in making decisions used in the development process. The information mainly composes of forecasts on how the environment can be affected by certain alternative actions if put in place. The data can also be used to help planners on the best wayto accomplish environmental changes if one alternative is selected and implemented. EA on its part focuses on the identification of real environmental effects arising from the day to day operations of a regulated facility (OECD, 1996). The environment consists of living things which are closely related to human, vegetation and animal. One of the best ways to conserve it is by awareness in the society especially for students as to apply it in future (Thapa, 1999). Environmental education is a means of creating knowledge, skills, abilities, comprehension, values, attitudes, and awareness among individuals and social groups towards the environment protection (Vanclay, 1999).

Environmental awareness is the best way to strengthen justifiable development in any nation. Justifiable development can be defined as organizing principle to meet human development goals while at the same time sustaining the ability of natural systems to provide the natural resources and ecosystem services upon which the economy and society depend. The desired result is a state of society where living and conditions and resource use continue to meet human needs without undermining the integrity and stability of the natural systems.

(Dale and Hill 2001). According to Hansen, (1991) lack of knowledge on environmental education in institution has made theyouth to oversee the need of the environmental conservation in their day to day life. This is due to the fact

that they do not have day to day interaction with environmental issues and gaining of knowledge through formal or informal education. Furthermore, theworks of research done on this field shows that although education on the environment is taken up as a subject in the current curriculum, the subject has faced several limitations owing to its enactment. However, specializing on subjects can improve the efficiency of the content given to the students and at the same time increase their interest in the given field and at the same time ensure action is done.

Environmental awareness is one of the components in strengthening sustainable development of any country. Furthermore, Ziadat (2009) indicated that public awareness through educational programs is a crucial and an essential step toward sustainable developments. The development of environmental awareness within the public domain is a key element in the coming up of fundamental solutions for environmental problems that are blocking sustainability. Moreover, Mutemba (1996) stated that environmental opinions are commonly more common among the younger generation worldwide. According to Kok (2005), it should be conquered that educating the public on the environment is creating awareness as well as getting the knowhow of the relationship between humans and their immediate surroundings. The education on the Environment is interested with knowledge,attitudes, and values and has as its own goal towards accountable environmental conduct. Palmas (1999) stresses on the general need of education on the environment which is to assist the community to uphold the integrity and diversity of its neighboring environs, and to assure that ordinary resources are used in a manner that is justifiable and ecologically maintainable.

B. Public Participation on Eia/Ea Process and Compliance to The Eia/Ea Regulations, 2003 on Development Projects

All Kenyans have a right to clean and fit environment and should always work towards achieving a better surrounding though being engaged in tactics, development policies and processes for the management of the environment (EMCA, 1999). The stakeholders and local communities affected need to know the effects of their planned activity on their societal well-being and their quality of life (Duffy, 1998). Consequently, crucial information has to be freely shared in a freely understood language and format. Kakonge (1998) frazzled that for effective environmental management, there is necessity to avail “accessible” environmental information for the concerned parties.

According to Kakonge & Imevbore, (1993), public contribution in planning projects and curriculums is not common in African countries because there is no environmental legislation or its enactment. One of the privileged countries is Kenya, this is because there exists a permitting legal framework which enables the public to participate. The involvement of the public should occur through two main stages of the EIA process i.e. during the EIA study where the champion seeks and obtains the views of key participants and persons likely to be affected and after the submission of the EIA study report to NEMA after which the proponent must hold at least three public meetings with the pretentious parties and get their oral and written explanations (Onyango, 2007). More specifically, public involvement is required during scoping, impact valuation and extenuation, EIA study report review, enactment and monitoring.

It is important to define who the general public is, EMC (1998) does not define public involvement or engagement, it is very clear that this Kenyan legislative law (EMCA, 1999) directs the involvement of the public the helm of the impartiality of the environment and management. Section 1 (5) (a) highlights that the High Court was directed by opinion of public participation when arbitrating in such matters. Onyango (2007) highlights that the critical tools to contrivance public participation in Kenya have been public assemblies, workshops and written submissions. The most frequently tools used for participation of the community to integrate concerns of various sectors during strategic decision making include Participatory Rural Appraisal (PRA) and Inter-sectoral Multidisciplinary Expert Committees (IMEC). The author adds that, although these tools have been unregulated by law, they identify and highlight the concerns and aspirations of local communities for strategic decision-making processes.
Positive results are likely to increase public interest on the issue if they have an active role (Aketch, 2006). A good public relationship helps the authorities to encourage the people go on participating in the EIA/EA process. People can only be willing to be involved in public participation processes when their interest has been created, even though the procedures may be excellent. The authorities should also help the public to recognize how they can get involved and what the advantages might be for them (U.S Department of Commerce, 1994).

Everyone prone to the consequences or is a concerned party in a development project must be engaged in community participation exercise (Ahmed and Sammy, 1987). Strategies that can help one become more operational participant in environment impact assessment process for a development project can be of great benefit. This includes the public (including women, youth, and illiterate disabled), authority officials, businesses and NGOs.

The EIA/EA guidelines outlines public engagement in the process mainly through scoping, whereby key issues of concern are identified in initial stages, and through the review of EIA study report (NCEA, 2008). The scoping outcomes will determine the scope depth and terms of reference to be addressed within the Environmental statement. ECA (2005) scoping is a continuous exercise throughout the course of the project. It is a requirement of the law to have the proponent advertise the project and its expected outcomes. Additionally, the proponent is required to hold public gatheringfor consultation coordinated by an appointed qualified personwho records the commentsboth orally and in writing. Furthermore,the EIA report should be published in the Kenya Gazette notice and in a newspaper

circulating in the proposed project area for two consecutive weeks where the public are given a chance to inspect and submit their comments within a maximum period of sixty days. Any person may seek the extension of this period on application (EMCA, 1999). The EIA process, thus, gives opportunity to individuals and communities to raise issues that may directly affect their health and welfare or may infringe their right to a clean and healthy environment(Hansen 1991).

Kamori-Mbote, (2000) the existence of various reluctances by many in authority create obstacles of the involvement of the public or easy accessibility of information. For example, the records of EIA reports can only be obtained from NEMA at a fee of Ksh. 200. In a country where most of the population survive below the poverty line which is less than a dollar, (NEMA, 2007), this means information inaccessibility because in most cases spending is prioritized to other factors such as food (Amombo, 2006).

Broadcasting has proven to be an effective way of keeping the public informed of important issues. For instance, in the Testadis case study, TV reports were employed to raise the public's awareness of environmental issues and to exhibit that people could create a practical difference (UNECE, 2006).

A suitable way of growing the public's know how of environmental issues associated by development projects is through local radio station deliberations. This is because the radio is the most affordable and reliable mean of conveying a message to many people and allows them to participate in the discussion by making phone calls (Glasson and Chadwick, 1999). The price is also another factor which makes them effective because the can easily be arranged and they can also help in promulgating the station. Arranging for a radio panelattended by officials, Civil Society Organizations and experts in various fields including politicians,and the airtime given to one or two concerned citizens to make phone calls, is almost certain to get a positive reaction. The speakers ought to be well informed and equipped, with brief statements that form solutions the problems at hand. Delivery of leaflets and newsletters to public areas or in people's homes can also be an effective way of conveying information on issues of concern related with development projects in their locality (Glasson and Chadwick, 1999)Kamori-Mbote (2000), outlines that public involvement in EA in Kenya has often been "adversarial" (conflict in nature) with Non-Governmental Organizations and sectoral representatives often championing and petitioning the government on environmental and sustainability issues. According to Kakonge (1998) local people, environmentally unfriendly projects have been stopped with the support of non-governmental organizations. A very good example was the protest mounted by the Green Belt Movement in Kenya to stop the construction in a central city park of a proposed 60-story building.

C. Compliance Assurance Strategies and Compliance to EIA/EA Regulations 2003 on Development Projects

Environmental compliance is the use of available instruments with an objective of changing the code of behavior of regulated entities to comply with regulatory requirements, World Bank (1996). Its core functions are to endorse detect, voluntary compliance and reverse non-compliance, and, as appropriate, punish the offender (INECE, 2008).Assurance compliance is an important cyclical process of environmental regulation which links legislative requirements with the assessment of policy enactment and feedback thus allows the laws and policy instruments to be adjusted (UNEP and ACTS, 2001). Successful policy implementation depends upon the effectiveness of each element in this regulatory cycle. The main challenge of environmental compliance assurance is designing and effective and efficient tools that supports the policy objective, given that it involves various stakeholders both in government and non-government, and consumes a lot of time and resources (UNEP and ACTS, 2001).

The demand by the society for effective policies that supports high level environmental conservation and which resonates with robust economic development calls for high performance systems and designs that ensure compliance to environmental legislations (Ojiambo, 2002). In spite of the major milestones taken in developing these policies, OECD countries are still far much away in achieving their key environmental goals and one of the major setback is the so-called "implementation gap" which includes inadequate compliance with environmental requirements (OECD, 2009). The weakest link in implementing the environmental policies by non-OECD countries is Compliance assurance.

Insufficient incentives provided by the regulatory framework, lack or poor design of important compliance assurance tools, and inadequate institutional capacity and inadequate resources for the enforcement authorities are among the key factors that yield to low compliance level (BEST, 2006). The government agencies in cooperation with other stakeholders implement environmental compliance assurance programmes to address these challenges through a broad array of actions. However its success is determined by the quality and integrity of the overall governance system, and on the priorities assigned to environmental issues by the politics.

For an effective compliance assurance there should be the employment of promotion monitoring, and enforcement tools which are interdependent (EEA, 2005). A good example is the compliance promotion which targets inspections for improving the performance of regulated entities who are willing to comply on voluntary basis and compliance monitoring for those entities that are poor performers and smokes out violations which are subject to enforcement. Another good compliance promotion instrument is the dissemination of information to the public about enforcement cases (EEA, 2005).

Better environmental regulation should serve to reduce its regulatory burdens by improving its requirements, administration and enforcement without any compromise to environmental protection goal (Van Der Schraaf and Angelique, 2005). Such regulations can be improved through removal of redundant ones, merging regulations into a more manageable form, and resolving overlap or inconsistency within or between regulations (Defra, 2006). A better regulation can achieve compliance assurance through setting time limits for regulatory decision making, minimizing paperwork in terms of self-reporting, and better targeting of compliance monitoring activities so that developments saves time and resources on government inspections (Farmer, 2008).

There are critical forces in developing compliance assurance program strategies and priorities and at the same time delivering valuable information on policy implementation to political decision-makers are Transparency and accountability (VROM, 2002). The reasons for this openness include transparency of the permitting process, disclosing compliance monitoring and enforcement information, and the agencies being accountable for their performance (Hampton, 2005).

In Kenya, EMCA, (1999) developed an individual liability and corporate for environmental damage. This Damage can be assessed as the benefit which is unlawfully accrued as a result of non-compliance. If competent authorities do not adequately enforce environmental requirements Citizens, civil society organizations and NGOs on their behalf can take actions through petitioning the authority or even filling cases the authority in the National Environment Tribunal or Land and Environment Court.

D. Financial Capacity of Proponents and its Influence on Development Projects to Comply with EIA/EA Regulations 2003

Several environmental cases have been filed this is according to a study conducted on OECD countries (OECD, 2005). However there are arising challenges since the governments do not provide subsidies to companies, industries and institutions for achieving compliance with environmental requirements as a matter of principle (VROM, 2002). Likewise, there should be well outlined strategies on financial mechanisms available to private companies willing to invest in innovative environmental technologies.

Regulated entities are rational when making compliance decisions: they decide whether to comply or not based on the balance between expected compliance costs (i.e. expenses for technological and management improvements to meet environmental requirements) and non-compliance costs (i.e. value of monetary penalties, civil liability, etc.) (ECA, 2005). Non compliances have always been due to the low fines imposed on those who break the environmental laws, to curb this the concerned authorities should set hefty penalties on the compliance defaulters they should also work to make non-compliance response swift, certain, and fair; imposing high penalties which outweigh non-compliance benefits; and raising awareness of enforcement actions (UNECE, 2006).

Most of the EIA spending is on carrying out environmental studies, and writing the EIA reports. These costs are billed largely on project proponent or project promoter (UNECE, 2006). According to Lee (1995) preliminary studies conducted during project scoping are also a significant part of the project design costs, although these will usually be incurred irrespective of whether EIA is required or not. Other costs may arise through fees charged by the competent authority for processing the EIA. The competent Authority makes the final decision on whether the project should go on or not with input of other statutory lead agencies (UNECE, 2006). Generally, Sadler (1996) outlines that EIA costs amount is less than 0.5 % of the overall capital cost. However where the cost is in excess of 1% are unusual, and may particularly occur for controversial projects that are located in sensitive environments, or where good EIA practice is not followed.

The cost of carrying out Environmental Impact Assessment in Kenya varies significantly. National environment Management Authority charges 0.1% of the total project cost with a minimum ofKes. 10,000 without upper capping. Moreover, there are costs for paying EIA/EA experts who undertake the process (NEMA, 2007). What makes compliance to EIA/EA regulations in Kenya to be expensive is the fees payable to the experts. This fee is not documented and neither are there guidelines for proponents who propose to undertake new development projects or undertake environmental audits for ongoing projects. Other additional costs include mobilization for public participation through public hearings, focused group discussions and administering questionnaires (EIA/EA Regulations, 2003).

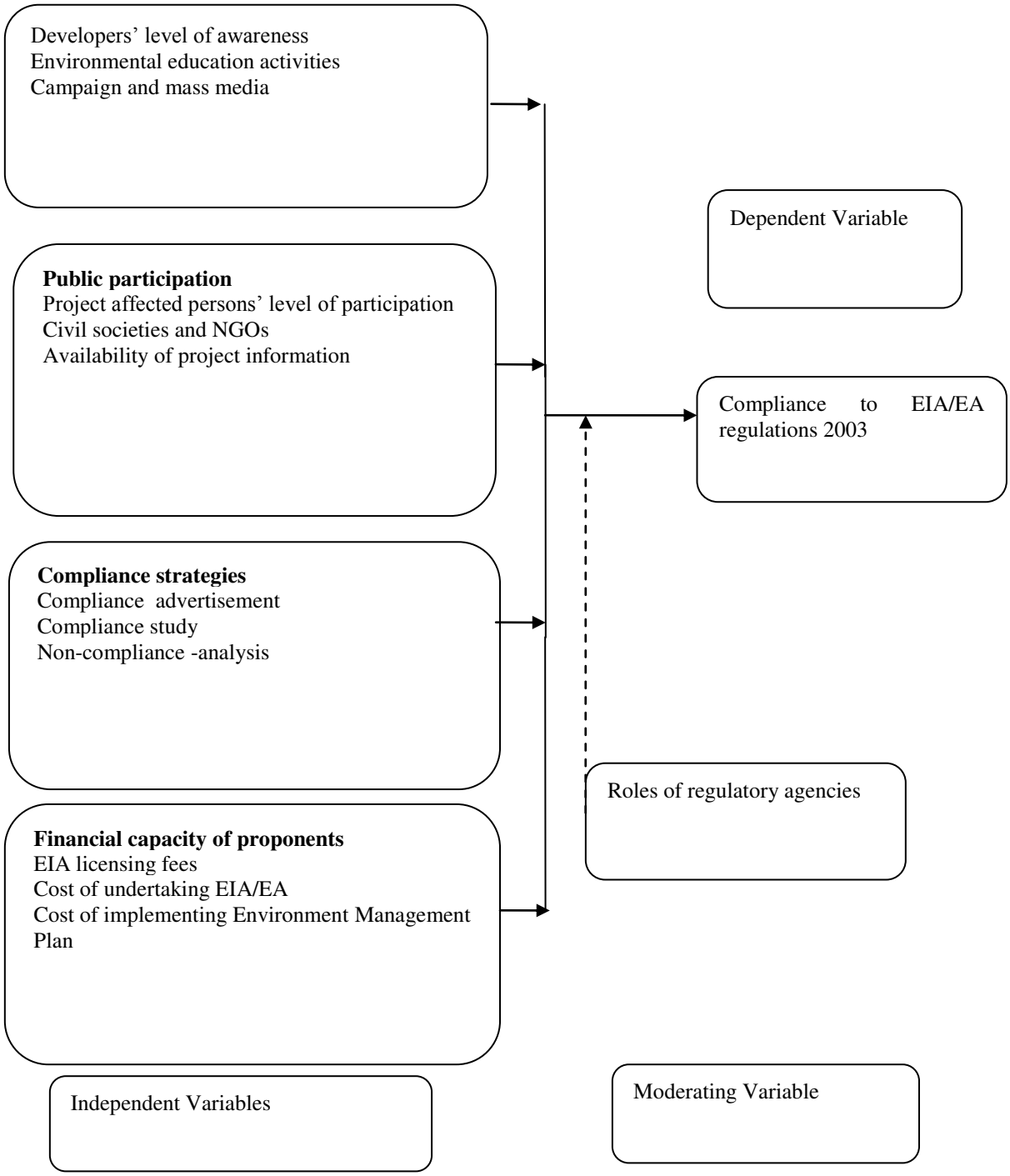

Fig. 1

III. RESEARCH METHODOLOGY

A. *Research Design*

The study adopted a descriptive survey research design and also census survey. Descriptive survey research design is a systematic and empirical inquiry into which the researcher does not have a direct control of independent variable as their manifestation has already occurred or because they inherently cannot be manipulated (Mugenda & Mugenda, 2003). Descriptive research design is concerned with finding out about the how, who, when and where of a phenomenon so as to build a profile. In this study, descriptive research design has been chosen because of its ability to create a profile about a phenomenon.

Descriptive survey research involves field survey where the researcher goes to the population of interest to ask certain issues about the problem under the study. Descriptive research design can also be described as a systematic,

empirical inquiring into which the researcher does not have a direct control of independent variable as their manifestation has already occurred or because the inherently cannot be manipulated (Kombo & Tromp, 2006). On census survey it is involved where the target population is of a small number. The entire population is taken as the sample size. Inferences about relationships between variables are made from concomitant variables.

B. Target Population

According to Mugenda & Mugenda (2003) a population is the entire group of individuals, events or objects having a common observable characteristic. Also population is a well-defined or set of people, services, elements, events, group of things or households that are being investigated (Ngechu, 2004). The study targeted proponents implementing or have implemented either private or public developmental projects, those that manage facilities that require annual environmental audits, project affected persons, Civil Society Organizations (CSOs) and lead agencies. The study was done in Mombasa County specifically in Nyali constituency because Nyali is one of the fast growing constituency in the county, it has variety and diverse projects thus suitable for the purpose of this study.

In this research the researcher targeted the community of Nyali who are directly or indirectly affected by the development projects. The researcher considered using the directly project affected persons with a population of 1500, 504 respondents from regulated projects that should undertake Environmental Impact Assessment or Environmental Audits, 20 lead agencies and 9 CSOs. 2033 respondents made the target population, whereby the researcher randomly sampled the respondents from the directly affected persons and the regulated projects. All the lead agencies and CSOs who are involved in the EIA and EA process were taken as the population.

C. Sample Size and Sampling Procedure

The sample size had far reached implication on this study. Probability of getting a representation of the target population was of great significance. Participants to the study include respondents from Project Affected Persons, regulated projects, CSOs and lead agencies. The study sample size was calculated using Yamane Formular (1967) for the regulated projects and project affected persons. In this formular, sample size can be calculated at 3%, 5%, 7% and 10% precision levels. Confidence level to be used is 95% with degree of variability (p) equivalent to 50% (0.5). For the lead agencies and CSOs, all the target population was taken as the sample size.

$$n = \frac{N}{(1 + Ne^2)}$$

n = Desired sample size when population is less than 10,000
e = Sampling error/ precision level
N = Study population

In this study sample size was at precision level of 10% (e=0.1).

D. Sample Size

According to Kombo & Tromp (2006) a sample is a group in a research study on which information is obtained. In this research, 94 respondents from the directly affected persons, 84 respondents from regulated projects that should undertake E.I.A or Environmental Audits, 20 respondents from lead agencies was targeted and 9 respondents from CSOs was selected to participate in the study. This contributed to a sample size of 207 respondents.

E. Sampling Procedure

The study used stratified random sampling to select a sample of management. In stratified random sampling, the population is divided into subpopulations called strata whereby each is characterized by internal homogeneity which differs from any other strata (Hunt and Tyrrel, 2001). Stratified random sampling is designed to ensure that sub-groups or strata are fairly represented (Park, 1992).

Stratified random sampling technique was used since population of interest was not homogeneous and could be subdivided into groups or strata to obtain a representative sample.

F. Data Collection Instruments

The study collected both primary and secondary data for the purpose of investigating the compliance to EIA/EA regulations by development projects. Primary data was collected using a questionnaire while secondary data was obtained from reports and publication.

This study utilized a questionnaire as the data collection instrument. The questionnaire designed in this study comprise of two sections. The first part is designed to determine the demographic characteristics of the respondent, while the second part consists of questions where the four variables were focused. The questionnaire is designed in line with the objectives of the study. To enhance quality of data to be obtained, Likert type questions was included.

According to Kombo & Tromp (2006) structured questions are used in an effort to conserve time and money as well as to facilitate in easier analysis as they are in immediate usable form; while the unstructured questions are used so as to encourage the respondent to give an in-depth and felt response without feeling held back in revealing of any information.

G. Data Collection Procedure

Data collection involved a self-administered questionnaire. The researcher took the questionnaires physically to the respondents. The researcher left the questionnaires with the

respondents and collected them later once they were filled. This took a duration of two weeks.

H. Data Analysis Techniques

Before processing the responses, the completed questionnaires were sort and the data entered for completeness and consistency. The data was coded to enable the responses to be grouped into various categories. The data collected was both quantitative and qualitative and it was analyzed by descriptive analysis techniques. The data was coded by use of SPSS (v.22). Data analysis was done using Pearson correlation and the findings to be presented using frequency tables and percentages.

IV. DATA ANALYSIS, PRESENTATION AND INTERPRETATION

A. Questionnaire Return Rate

A total of 207 questionnaires were distributed to the respondents. After the questionnaires were filled by the respondents and collected, they were screened and sorted out by the researcher.

the study revealed that there was good representation in gender Mombasa County, Mombasa County. It was found out that males were the majority (153) accounting to 80% of all the respondents while females (39) accounting to 35% of all the respondents. The findings revealed that majority (115) respondents are between 31 – 40 years representing 60%, 20 respondents are above the age of 40 years representing 25%, and 12 respondents are of the age between 20 – 30years representing 15%. It can therefore be observed from the findings of the study that most of respondents were in the age bracket of 31 – 40 years. Findings shows that there were no respondents who have less than secondary education, 10% have secondary education, 25% have tertiary education and 80% have university education. Majority of the respondents were diploma and degree holders indicating that they were able to interpret the questionnaires as per the expectation of the researcher.

B. Descriptive Statistics on Developers level of Awareness on Compliance to EIA/EA Regulations

47.5% of the respondents were not aware of the EIA/EA regulations adequately Mombasa County, Mombasa County though in different extents. Only 11.2% of the respondents were totally inadequate with this assertion while 41.3% of the respondents are aware though in different extents. The standard deviation and mean on level of agreement in respect to the level of awareness of EIA/EA regulations to the respondents is 0.28091 and 2.51 respectively. This indicates that there is need to sensitize on the same Mombasa County, Mombasa County projects developers to make them be aware of EIA/EA regulations.

The respondents strongly agreed that developer's level of awareness influence compliance to the EIA/EA regulations while 20% agreed to the questionnaire item that it influence at a moderate extent. Only 13% of the respondents 'said that it developer's level of awareness influence compliance to the EIA/EA regulations at a lower extent. At 67% agreement with a mean and standard deviation of 1.45 and 0.16211 respectively, it implies that developer's level of awareness influence compliance to the EIA/EA regulations Mombasa County, Mombasa County.

On the issue of sufficient on awareness of public roles as stipulated in the EIA/EA Regulation, majority of the respondents with a mean and standard deviation of 2.64 and 0.29488 have a response of 56.3% are insufficiently aware of their roles as stipulated in the EIA/EA regulations, there were also a 3.6% who were not even unaware of role they are supposed to play, while 40.1% are at least sufficiently aware of the role stipulated in EIA/EA regulations. Spearman correlation analysis was conducted at 95% confidence interval and 5% significance level and was a 2-tailed test. Amoderate positive correlation between Developers level of awareness and its Influence on EIA/EA regulations 2003 conducted Mombasa County, Mombasa County with a Spearman's value of 0.462. This finding shows that the Developers level of awareness is positively correlated with its Influence on compliance EIA/EA regulations 2003 in Nyali. The value of 0.462 for a sample size of 192 at significance level of 0.05 is statistically significant.

C. Descriptive Statistics of Public participation on Compliance to EIA/EA Regulations

77.3% of the respondents were interested in taking part in EIA/EA regulations, though in different extents. Only 5.2% of the respondents were totally not interested with this assertion while 17.5% of the respondents are aware though in different extents. This indicates that the participants are willing to comply with the regulations and the negative impact will be minimized and mitigated. Also it will enhance compliance to all other relevant laws. In this people will work and live in a safe environment where there are free of various environmental hazardous.

The statement to determine the extent to which public are ranking EIA/EA regulations 2003 in terms of public participation Mombasa County, Mombasa County was analysed. 58% of the respondents fairly agreed that there is public participation in EIA/EA regulations while 32.5% agreed there is good public participation in EIA/EA regulations. Only 4% of the respondents' said that public participation in EIA/EA regulations is poor implemented. At 58% agreement with a mean and standard deviation of 2.63 and 0.29348 respectively, it implies that there is good public participation in EIA/EA regulations Mombasa County, Mombasa County. Also most of the respondent agreed that EIA/EA regulations has been used to improve public/compliance assurance strategies in Kenya at large.

The statement to determine at what stage the project affected persons (PAPs) are involved in the EIA/EA process in Kenya. On the issue of stages of project affected persons involved in EIA/EA process in Kenya, majority with a mean and standard deviation of 2.1 and 0.23479 respectively and percentage response of 38.8% of the respondents are said that it is involved mostly during the initial stages and also 31.3% said it is during all stages or phases of the project, there were also a 21.3% who said that its during project implementation stage, while as less as 8.6% it is whenever demanded by the project affected persons. 60% of the respondents strongly agreed that there is involvement of civil societies are agitating for EIA/EA regulations 2003 for development projects in Kenya, while 27.5% agreed there is an average involvement of civil societies are agitating for EIA/EA regulations 2003 for development projects in Kenya. Only 7% of the respondents' said that there is poor involvement of civil societies are agitating for EIA/EA regulations 2003 for development projects in Kenya. At 65.5% agreement with a mean of 2.34 and standard deviation of 0.26553, it implies that there is good involvement of civil societies are agitating for EIA/EA regulations 2003 for development projects in Kenya. Amoderate positive correlation between Public participation and its Influence on EIA/EA regulations 2003 conducted Mombasa County, Mombasa County with a Spearman's value of 0.386. This finding shows that the Public participation is positively correlated with its Influence on EIA/EA regulations 2003 in Nyali. The value of 0.386 for a sample size of 192 at significance level of 0.05 is statistically significant.

D. Descriptive Statistics on Compliance Assurance Strategies

The findings indicated that non-compliance response enforcement are the mostly used compliance assurance strategies by lead agencies in Kenya with a response percent of 51.3%. Compliance promotion strategies had 28.4% and compliance monitoring strategies had 20.3%. This indicate that there should be a negotiated compliance to EIA/EA regulation by the lead agencies.

E. Descriptive Statistics on Financial Capacity of Proponents

The findings indicated that EIA/EA expert fees may hinder the compliance to Environmental (Impact Assessment and Audit) Regulations with a response percent of 51.3% followed by the duration of the EIA/EA process with a percentage response of 28.7%, then Cost of implementing Environmental Management Plan and EIA license fees which had a response of 15% and 5% respectively. The EIA license fees hinder the process with a less extent because the fee was recently scrubbed off. This indicates that the EIA/EA expert fees also needs to be reviewed so as to meet the financial capacity of on implementation of the regulation.

V. SUMMARY OF FINDINGS

This section presents the findings from the study on the influence compliance to the EIA/EA regulations, 2003 on development projects at the Nyali constituency, Mombasa County. It was established that all the project development employed at the Nyali constituency, Mombasa County positively influenced the compliance to the EIA/EA regulations, 2003 under the Project development in Nyali and that this influence was statistically significant at significance level of 0.05. Following the research carried out at the Nyali constituency, Mombasa County of the project development, 47.5% of the respondents were not aware of the EIA/EA regulations adequately Mombasa County, Mombasa County though in different extents, 68% of the respondents strongly agreed that developer's level of awareness influence compliance to the EIA/EA regulations, and on the issue of sufficient on awareness of public roles as stipulated in the EIA/EA regulation, majority with 56.3% of the respondents are insufficiently aware of their roles as stipulated in the EIA/EA regulations. The study established that there exists a significant relationship between the developer's level of awareness and compliance to the EIA/EA regulations, 2003 under the Project development in Nyali, with $p \leq 0.05$ and Spearman's rank correlation coefficient of 0.462. The study established that majority of the respondents were in agreement with the positive role that public participation played in influence of compliance to the EIA/EA regulations, 2003 Mombasa County, Mombasa County. Majority of the respondents at 77.3% of the respondents were interested in taking part in compliance with EIA/EA regulations, though in different extents 58% of the respondents fairly agreed that there is public participation in EIA/EA regulations, on the issue of stages of project affected persons involved in EIA/EA process in Kenya, majority with 38.8% of the respondents are said that it is involved mostly during the initial stages and also 31.3% said it is during all stages or phases of the project and 60% of the respondents strongly agreed that there is involvement of civil societies are agitating for EIA/EA regulations 2003 for development projects in Kenya. The study established that there is a significant relationship between public participation and influence of compliance to the EIA/EA regulations, 2003 in Nyali with $p \leq 0.05$ and Spearman's rank correlation coefficient of 0.386. The findings indicated that non-compliance response enforcement are the mostly used compliance assurance strategies by lead agencies in Kenya with a response percent of 51.3%.

The EIA license fees hinder the process with a less extent because the fee was recently scrubbed off. This indicates that the EIA/EA expert fees also needs to be reviewed so as to meet the financial capacity of on implementation of the regulation.

VI. CONCLUSION

Based on the findings of the study, the following conclusions are made on the influence compliance to the EIA/EA regulations, 2003 on development projects at the Nyali constituency, Mombasa County. The standard deviation and mean on level of agreement in respect to the level of awareness of EIA/EA regulations to the respondents is 0.28091 and 2.51 respectively. This indicates that there is need to sensitize on the same Mombasa County, Mombasa County projects developers to make them be aware of EIA/EA regulations.At 67% agreement with a mean and standard deviation of 1.45 and 0.16211 respectively, it implies that developer's level of awareness influence compliance to the EIA/EA regulations Mombasa County, Mombasa County.

All the four determinants studied influenced the implementation compliance to the EIA/EA regulations, 2003 Mombasa County, Mombasa County to almost similar extents as demonstrated by the correlation coefficients that were moderate for Developers level of awareness, Compliance assurance strategies and financial capacity of proponents and weak for public participation. Developers level of awareness has been found to be an effective determinant in implementation of compliance to the EIA/EA regulations, 2003 as it provides a platform through which all other determinants can be enhanced.Environmental assessments should lead to development decisions informed by knowledge of the range of potential environmental and social impacts direct, indirect, interactive, and cumulative. Projects that move forward with little or no consideration of such impacts are leading to an increasing number of protests, in some cases violent. There is a growing awareness among communities all over the developing world regarding the connection between the environment and livelihoods as well as the implications of this nexus for human rights. The likelihood of conflict is particularly high when environmental assessment practices are weak and there is a surge of projects with significant potential environmental and social impacts. Such is the case in many regions in the world today, notably, but not exclusively, the Nyali Constituency.

In Nyali Constituency of Mombasa County, environmental insecurity is likely to worsen if environmental assessment practices do not move closer to the standards set by international best practices. If current trends continue, ambitious development projects will escalate the risk of potential conflicts due to power asymmetries among the Nyali Constituency and growing environmental and human insecurities that will be borne by the millions of people dependent on the Nyali Constituency.

VII. RECOMMENDATIONS

On the basis of the findings from the study, it is recommended that:

- Future implementation of compliance to the EIA/EA regulations, 2003 in organizations should embrace not just one of these determinants but all of them as they influence the successful implementation to different extents.
- Continue to provide technical assistance in developing and/or improving the regulatory frameworks governing EIA/EAs and assist countries in elaborating or improving technical guidelines for EIA/EA.
- Help build capacity to conduct effective EIAs/EAs by focusing research on additional case studies, particularly concerning the management of international project development.
- Recognize their crucial role in involving the public, especially potentially affected communities, in the EIA/EA process. Such involvement has been proven to lead to higher quality EIAs/EAs.
- Recognize that they play a crucial role in providing external, independent review. Such a review can be important, especially in controversial projects, adding objectivity and rigor to the EIA/EA process.
- Officially recognize throughout their bureaucracies that environmental integrity is tied to the nation's long-term economic, political, and human security.
- Based on the findings it was recommended that there is need to raise the level of awareness of the developers so that they can comply with the requirements in the EIA/EA Regulation 2003.
- Compliance promotion should be more enhanced as an assurance strategy other than of enforcement so as the project developers can comply willingly with the EIA/EA regulations. This will lead to continue improvement on operations in regards they have on environment.
- The competent authorities should adhere to the stipulated period for the EIA/EA processes so that implementation of projects is not delayed.

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