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EFFECT OF STAKEHOLDER INVOLVEMENT ON IMPLEMENTATION OF SOLID WASTE MANAGEMENT PROJECTS IN NYAMIRA COUNTY, KENYA

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ABSTRACT

The objective of the study was to establish the effect of stakeholder involvement on implementation of solid waste management projects in Nyamira County in Kenya. The study was important to the County and National Government, NGOs, and public/society academicians, researchers. The study was directed by stakeholder theory. Questionnaires were used to collect data. Research design used was descriptive research since it described the phenomenon as it was based on different characteristics. The targeted population was heterogeneous and hence the need for a stratified random sampling technique. The target population was 220 employees of Nyamira County Government comprising Environment CEC and Directors, County and Sub-County Environmental Officers and Enforcement Officers. A pilot study test was conducted on 22 respondents which represented 10% of the sample. The test was done to check the dependability and legitimacy of the instruments. Data was gathered utilizing an organized survey which was administered personally. The data was then examined utilizing the Statistical Package for Social Scientists (SPSS). The study adopted a multiple regression analysis to determine the relationship between the independent variables and dependent variable. It was noted that there was a strong positive relationship between stakeholder involvement and implementation of solid waste management projects in Nyamira County in Kenya. The findings revealed that stakeholder involvement was very significant. Based on these findings, it was recommended that; the County needed to involve stakeholders in the implementation of solid waste management. County government should identify and involve all the stakeholders during the early phases of SWM projects because this would ensure that the stakeholders' interests and concerns about the project were captured, incorporated and addressed. The involvement of relevant stakeholders would also assist in monitoring and evaluation during implementation SWM projects.

Key Words: *Stakeholder Involvement, Solid Waste Management*

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INTRODUCTION

According to Pattnaik and Reddy (2010), solid waste management (SWM) includes efficient and effective gathering, transportation and disposal of garbage generated from households, street sweepings, construction works, non-hazardous industrial wastes and imported goods such as mitumba clothes. Solid waste management likewise alludes to the exercises intended to adequately gather, transport, treat and discard waste because of general wellbeing concerns, feel, characteristic asset protection and other ecological thought (Munala & Moirongo, 2011).In most urban cities solid waste management issues such as collection and disposal have been debatable issues due to their impact on the ecosystem. Litter is normally not only seen but also seen along roadways, inside numerous urban and per-urban networks. Waste management has crumpled triggering chaotic and widespread waste dumping which puts the health of inhabitants at great risk (Makwara & Magudu, 2013).

As stated by Marshall and Farahbakhsh (2013), solid waste management has turned into a test in most countries around the world. As the total populace moves up furthermore, the entirety of waste created develops the management of the solid waste created proceeds to pose a problem. Globally, solid waste volumes are increasing quickly and faster than the rate of urbanization and mechanization. Solid waste management is certainly not a troublesome procedure; it includes Lorries taking waste and dumping it in designated places far away from human settlements. However, in reality the process of implementing solid waste management is complex and requires precise interaction of the many stakeholders (Rouse, 2016). The Earth Summit held in Rio de Janeiro in 1992 outlined the problems caused by increasing volumes of solid wastes generated globally. After the summit traditional methods of dumping and burning of municipal solid waste were refuted as the only ways of dealing with solid waste materials (Musembi, 2012).

According to GIZ (2014), most African countries like Kenya do not know how to manage solid waste, but instead, know how to dump it. Waste management situation in Botswana is generally similar to other African countries where the services are irregular and the existing waste management systems are not sustainable. Waste gathering, transportation and disposal in Botswana like in other African countries are operated by local authorities. Litter bins used are not standardized and any receptacle can be used. At the same time, solid waste workers in Botswana are poorly remunerated and thus lack interest in their work. As a result, they are looked down upon by the community who consider their work as not very valuable. Vehicles used to collect and transport the solid waste are often inappropriate (Matsoga, 2010).

According to Njogu (2018), food wastes construe the largest portion of wastes generated in Kenya while other wastes such as paper, plastics and ceramics form the smallest portion. The situation in Kenya is replicated in other African countries. A study of four towns in Kenya (i.e. Nairobi, Nakuru, Mombasa and Kisumu) indicated that around 61% of the wastes produced consisted of residential wastes, followed by industrial wastes and wastes from hospitals and markets. It is normally acknowledged that huge amount of industrial wastes are generated from automobile industries, fabric industries, manufacturing industries, construction sites and power plants. The wastes produced vary based on the raw material used. For Africa region, the types of waste generated differ from country to country.

Nyamira County is situated in the former Nyanza Province. The County covers an area of 899.4 km^2 and was existed in Kisii County as a district but was later upgraded to a county. Nyamira County has five sub-counties: Manga, Nyamira South, Nyamira North, Borabu and Masaba North. Its headquarters is Nyamira town which is the largest town in the county and which had an urban population of around 42,668 (KNBS & Census, 2009).

Nyamira County like other counties experiences rural-urban migration which had contributed to growing population and currently its headquarters had an estimated population of 50,000 growing at a rate of 4% to 5% per annum. Nyamira County Environment Department was responsible for the management of solid waste which included improving public health, environment, and maintenance of cleanliness in public places.

Statement of the Problem

Majority of the third world countries have difficulties in executing solid waste management to their people (Abduli, 2017). Urban solid waste management in Kenya poses a severe environmental problem. According to the Kenya National Bureau of Statistics, census carried out in 2009, the urbanized population consisted of 32.3% with more than 12.4 Million Kenyans living in urban areas (KNBS, 2009). As a result the municipalities had consequently experienced serious problems in implementing solid waste collection problems over the years with the collection rate falling to 25% of the 110,000,000 tons produced (Senkoro, 2013). This was due to the fact that most local establishments in developing countries spent decimal percentage of their spending limit on reject gathering and transfer however can as it were account for between 30-50% of MSW (Hoornweg, 2009).

Nyamira County was facing with daunting challenges related to the implementation of solid waste management projects because of an expansion in populace, financial development, deficient authorization of waste strategies and enactment, unethical practices, technological factors and stakeholder involvement, the county continues challenges (Dawda, Azizi & Munda, 2012). Over 42,668 urban people live in Nyamira town and markets generated above 450 tonnes of municipal solid waste per day (KNBS, 2009 & Nyamira County Government, 2018). This waste required more than 20 acres of land to implement solid management projects. Getting this size of land in Nyamira Region was a major test given that county had not put aside land for this sort of venture.

Implementation of solid waste management projects in the urban areas was a problem within the County. Every resident of Nyamira County was a potential generator of waste and thus a contributor to this problem. To generate waste was one thing, and the way the generated waste was managed or disposed off was quite a different issue. It had more often turned out that the rate at which solid waste was produced was far higher than the ability to capably deal with this waste. This prompted the volume of solid waste produced to go beyond what the county facilities can accommodate (Nyamira County, 2019).

Stakeholders' involvement appeared to be a major huddle to the execution of solid waste management projects. The Nyamira Government didn't have a rigorous approach to address these issues and therefore being a hindrance to the execution of solid waste management. This examination looked to research to what degree these factors were a challenge to the implementation of solid waste management projects.

The objective of the study was to investigate the extent to which stakeholder involvement was a challenge on the implementation of solid waste management projects Nyamira County, Kenya.

LITERATURE REVIEW

The stakeholder theory emanated from concepts that were introduced by Freeman (1984) in the mid-1980s, the theory suggests that the operations and work of every organization should be re-conceptualized to inspire contemplation of new outside stakeholders, and thus extending the boundaries of the organization beyond the conventional group of employees, customers, suppliers and shareholders. The stakeholder theory also proposes an innovative way of rationalizing the roles of the society. The theory indicates that the necessities of the stakeholders can't be accomplished without viable fulfilment of the

requirements of the stakeholders thus turning attention to other goals beyond the goals of profit and value expansion to serve all stakeholders (Hawkins, 2016).

Jonker and Foster (2012) noted that in using the stakeholder theory approach, organizations are projected to manage sensibly a prolonged network of interests from various stakeholders traversing progressively penetrable organization borders and recognize an obligation of care towards conventional interest groups as well as quiet parties such as the environment and the communities (Simmons, 2014). The theory maintains that those whose lives are contacted by an institution or an undertaking hold a privilege and commitment to take an interest in coordinating its activities (Lewicka & Slralecka, 2016).

According to Friedman (2016), the main purpose of stakeholder theory is to enable board of directors and managements to understand their stakeholders' environments and to manage the relationships that exist in their companies more effectively and within the existing agreements. It also helps directors and managers to improve the estimation of the consequences of their actions and to minimize their harms to stakeholders. Phillip (2013) points out that the most crucial challenge in stakeholder theory is establishing a justification for managerial attention to stakeholders akin to that justifying maximizing shareholder wealth. Any sensible avocation for boosting investor riches must, at its center, be an ethical contention. Jensen (2011) proposes value maximization of stakeholder theory which states that a firm cannot maximize value if it ignores the interests of its stakeholders.

Stakeholder theory contends that any decisions made by managers' should put into consideration the welfares of the stakeholders. Since there is no one specific interest of the stakeholder groups such as the profit maximization of the shareholder theory, it is difficult for managements to determine one stakeholder interest that will meet the firm's objectives and the interests of all its stakeholders (Jensen, 2011). According to Pinches (2014) it is shameful that a lot of project management thinking still rotates around Friedman's old fashioned management theory in which stakeholders are only stakeholders that matter. Stakeholder theory focuses on managing projects upwards and trying to identify the key stakeholder either an individual or groups. Project managers indeed make decisions about the implementation of projects without considering the implication of this decision on all stakeholders. This consequently brings about conflicts or resistance from the stakeholders project implementation.

This theory is relevant to this study in that it highlights the need for stakeholders and information about their involvement and expectation on the execution of solid waste management. The theory thus supports the stakeholder involvement as one of the independent variable on implementation of solid waste management projects which is an area of concern in this study.

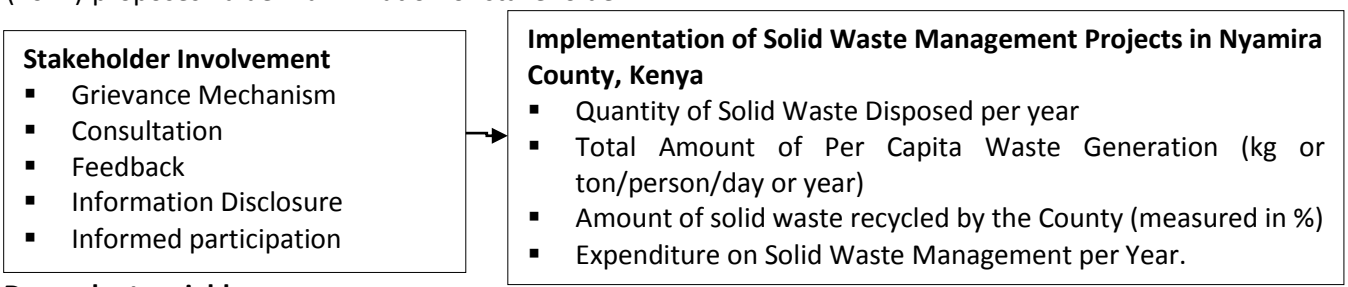

Figure 1: Conceptual Framework

Stakeholders are the individuals or groups who are directly or by implication influenced by the undertaking development and use. Stakeholders get involved either through invitation or on their own preference because of the value they bring to the project. This value is the critical when engaging

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resistant, reluctant, or ambivalent stakeholders. Some stakeholders do not understand the value they bring to the project because project leaders do not or cannot clearly explain to jobs and duties of the various stakeholders. Other stakeholders may be resistant because the benefits they will receive from the system have not been clearly explained or their concerns about the system have not been fully addressed (Reed, Graves & Stringer, 2019).

The level of stakeholder participation during the implementation of a project will certainly fluctuate; project managers should work hard to ensure that the participation is never non-existent. Ideas for involving people within the organization during policies implementation include the presenting the design, workshops, newsletters, open forums and recurring agenda items in established departmental meetings. Keeping people involved will facilitate the change process by ensuring people comprehend the "why" behind the change, not just the “what” of the change. Lack of stakeholder participation with the project can lead to huge resistance to change (Kesby, Evely & Christie, 2010).

Limited involvement/participation leads to lack of understanding, which results in costly mistakes when implementing solid waste management. Lack of participation of key influencers in an organization can lead to the whole project, or at least parts of it not succeeding. Think about how individuals included will feel in light of the progressions that specifically influence them. Anticipate their pain points, changing roles, fear of redundancy, training and accountability. This varies from organization to organization and was dependent on the culture fostered by management. Within each organization reactions to change will vary between individuals and was dependent of a range of factors, including personal upbringing and previous experiences of change (Toscano, 2016).

Callahan (2017) carried out a study involving projects which had been implemented by stakeholder participation and established that supporters of participatory processes claim that they contribute to improve social capital, promote democracy, reduce conflict, and develop accountability and advance fairness and justice. In contrast, critics dismissed participation as inefficient, time-consuming, costly, politically naïve, and unrealistic, disruptive and lacking broad representation. The study also found that participation provides not only a mechanism for obtaining the consent of the governed in more specific ways than are possible for implementation of projects like solid waste management and also have the side effect of reducing litigation and adversarial confrontations. Lastly, a denser relationship with the public, based on consistent opportunities for meeting and sharing concerns, is likely to build trust and credibility to facilitate policy implementation and revision processes (Dietz & Stern, 2018).

Assad and Goddard (2010) tried to build up the impact of partner inclusion on the implementation of solid waste management. The study employed descriptive survey design. The study targeted a population of 170 respondents. The study revealed that stakeholders in any project during project implementation include the government and its agencies, the financiers, and the beneficiary’s stakeholder participation is more concerned with involvement of members of a defined community in at least some aspects of project design and implementation. The dimension of partner support amid the implementation of solid waste management projects will certainly fluctuate; project managers should work hard to ensure that the participation is never nonexistent in order to avoid resistance from stakeholders. Ideas for involving people within the organization during policies implementation include the presenting the design, workshops, newsletters, open forums and recurring agenda items in established departmental meetings. Keeping people involved will facilitate the change process by ensuring people comprehend the why behind the change, not simply what of the adjustment in the usage of solid waste management. Nonattendance of partner

support with the venture can prompt immense protection from change.

Goddard (2010) completed an analysis on the impacts of partner in the board on the implementation of solid waste management. The study employed descriptive survey design. The study targeted a population of 80 respondents. The study revealed that community in community projects like solid waste management they should be completely included on the grounds that they influence them regarding their everyday activities. In order for people to feel secure about change, they must have an appreciation of what their world will look like after the project has been implemented. By learning people's emotions, it is possible to begin to address the root causes of emotion. In any changing situation the majority of people experience emotions caused by the uncertainty of the outcome. Fear leads to users not properly engaging in the project, increasing the chances of the solution missing vital information and decreasing the potential estimation of the venture that can add to the business. Users either switch off and concentrate their efforts on finding alternative jobs or become non-committal, citing time constraints, lack of understanding or financial gaps to overcome by process change. At worst the stakeholders/users will do their best to sabotage the project.

METHODOLOGY

The researcher made extensive use of a descriptive research design and this was adopted to acquire an in depth analysis of the challenges facing implementation of solid waste management projects in Nyamira County, Kenya. The study was carried out in all the Fourth-Five (45) markets in Nyamira County. The target population was 220 Environmental Officers of the County Government drawn from environment department. Questionnaire was the main instrument used in data collection. The questionnaire helped the researcher to collect data on knowledge, opinions as well as attitudes of respondents towards the challenges facing implementation of solid waste management projects in Nyamira County. To confirm validity, questionnaires were confirmed by the research supervisor and research experts. Data in this study was collected by use of close and open ended questionnaire items. It was then classified into distinct themes, coded, entered and analyzed using SPSS. Quantitative data was analyzed using descriptive statistics and presented using frequency distribution tables, mean and standard deviation.

RESULTS

The study sought to determine the effects of stakeholder involvement on the implementation of solid waste management projects in Nyamira County. The respondents were asked to indicate the extent to which they agreed or disagreed with statements regarding stakeholder involvement based on 4 point Likert scale where : 1=Strongly Disagree, 2=Disagree, 3=Agree and 4=Strongly Agree. Means of between 4.1400 - 3.7000 and standard deviation of between 7.23091 -0.76265 were registered. It was clear that low level of consultations within the stakeholders impacts negatively implementation of solid waste management projects. (4.1400), further, minimum information disclosure within the stakeholders disrupted the implementation of solid waste management projects (4.0400), absence of stakeholders' feedback slowed down the implementation of solid waste management projects (3.8800), lack of grievance resolution mechanism among stakeholders affected the implementation of solid waste management projects (3.7600) and lack of grievance resolution mechanism among stakeholders affects the implementation of solid waste management projects (3.7000). These findings are consistent with the argument by Reed and Stringer (2019) and (Goddard, 2010) that during the implementation of projects if stakeholders were not involved they would do their best to sabotage the entire project of solid waste management projects. The results were presented in table 1.

Table 1: Effects of Stakeholder Involvement

Statement	Mean	Standard Deviation
Lack of Grievance Resolution Mechanism among stakeholders affects the implementation of SWM projects.	3.76	1.11685
Low level of consultations within the stakeholders impacts negatively the implementation of SWM projects.	4.14	7.23091
Absence of stakeholders' feedback slows down the implementation of SWM projects.	3.88	0.84853
Minimum Information disclosure within the stakeholders disrupts the implementation of SWM projects.	4.04	0.80711
Informed participation is incorporated on the implementation of SWM projects	3.7	0.76265

The study also sought to determine the implementation of solid waste management projects in Nyamira County. The respondents were asked to indicate the extent to which they agree or disagree with statements regarding ethical practices based on 4 point Likert scale where : 1=Strongly Disagree, 2=Disagree, 3=Agree and 4=Strongly Agree. Means of between 4.3800 – 4.1600 and standard deviation of between 0.91607 -0.69429 were registered. It was clear that a reflection on the amount of solid waste recycled by the county (%) was a reflection of the rate of implementation of solid waste management projects in the county (4.3800), further, the total amount of solid waste generated per capita (Kg) had an effect on implementation of solid waste management projects (4.2100), Quantity of solid waste disposed is a reflection of the level of implementation of solid waste management projects (4.1600), the expenditure on solid waste handled per year was a replication of the excellence of implementation of solid waste management projects (4.1360). The results were presented in table 2.

Table 2: Implementation of Solid Waste Management Projects

Statement	Mean	Standard Deviation
Quantity of solid waste disposed is a reflection of the level of implementation of solid waste management projects.	4.1600	0.91607
The total amount of solid waste generated per capita (Kg) has an effect on implementation of solid waste management projects.	4.2100	0.77222
The amount of solid waste recycled by the county (%) is a reflection of the rate of implementation of solid waste management projects.	4.3800	0.83324
The expenditure on solid waste handled per year is a replication of the excellence of implementation of solid waste management projects.	4.1360	0.69429

CONCLUSIONS

The study results revealed that stakeholder involvement was the most significant challenge facing the implementation of solid waste management projects in Nyamira County. From descriptive analysis, the study findings clearly revealed by majority of respondents agreed that low level of consultations among the stakeholders impacts adversely execution of the management of solid waste. Many of the respondents strongly agreed that minimum information disclosure within the stakeholders disrupted the implementation of SWM projects, absence of stakeholders' feedback slowed down the execution of SWM projects, lack of grievance resolution mechanism among stakeholders also affected the execution of SWM projects and lastly, majority of respondents strongly agreed that lack of grievance resolution mechanism among stakeholders affected the implementation of solid waste management projects.

Further, the study revealed that the independent variable stakeholder involvement statistically,

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strongly and significantly correlated to implementation of solid waste management projects had positive relationship with the dependent variable. Thus from these quantitative results it was deduced that the study which sought to determine stakeholder involvement affected n the implementation of solid waste management projects was achieved.

The regression coefficients of the study showed that stakeholder involvement had a significant and positive influence in the implementation of solid waste management projects. According to Kesby & Christie (2010) when stakeholders are not involved in projects especially during implementation they end up creating a resistance which may eventually lead to delays in project completion.

The study recommended that the County identified and involved all the stakeholders during the early phases of SWM project because this would ensure that the stakeholders' interests and concerns about the project were captured, incorporated and addressed. The involvement of relevant stakeholders would assist in monitoring and evaluation during implementation SWM. The county also needed to ensure that there was high level of consultations and transparency with all the stakeholders at all the stages of the project implementation. There was need to seek compromise with the conflicting stakeholders through dialogue. Moreover, the study recommended for the use of stakeholders feedback to inform and redesign the project accordingly.

Challenges facing the implementation of solid waste management projects in Nyamira County in Kenya are not exhaustive as far as the implementation of solid waste management projects is concerned hence further research should be carried out to unearth other challenges. Further studies can be done in other counties for the purposes of making findings and recommendations with those of the current study.

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