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AN EVALUATION OF THE OPERATIONAL EFFICIENCY OF A PUBLIC AGENCY: A CASE STUDY OF ENUGU STATE WASTE MANAGEMENT AUTHORITY (ESWAMA) IN ENUGU CITY, NIGERIA

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ABSTRACT: *Enugu State Waste Management Authority (ESWAMA) is a public agency established in 2004 with the mandate for waste management in the urban areas in Enugu State including Enugu City. After 9 years of existence, it becomes necessary to evaluate its operational efficiency for the purpose of identifying its worth, strength and challenges. For this evaluation, 79 households served as respondents and were purposively selected from the three Local government areas that make up Enugu City. The questionnaire instrument used for data collection contained the 18 statutory functions of ESWAMA and respondents were requested to rate each function as follows; very good (VG), Good (G), Fair (F), Poor (P) and Unknown (U) depending on their perception. Relative Satisfaction Indices (RSIs) were computed for the 79 respondents across the 18 functions in keeping with Likert weighting scale. The results were combined with the outcome of the structured interviews and reasons adduced by the respondents. In accordance with Likert scale, 3 classes of efficiency were established for all the 18 functions. Result showed that ESWAMA scored pass mark in only 22.2% of its functions, and fair mark in another 22.2% and poor grade in 55. 6% of its functions. ESWAMA operational efficiency is therefore found to be very poor, partial and narrow in scope in relation to its entire statutory functions. Responsive leadership with good training, skill and knowledge in environmental sciences and management is recommended to improve its operational level of efficiency.*

KEYWORDS; Evaluation, Waste Management, Operational Efficiency, ESWAMA, Statutory Function.

INTRODUCTION

The management problems of solid waste in Nigeria is quite enormous due to the fact that the rate of generation is high while the mode of collection and disposal is abysimally rudimentary. This partly accounts for the indiscriminate heaps of solid waste that characterize the nook and cranny of almost all the Nigerian cities. According to Mba (2009), concern for wastes disposal problems has increased in urban areas in an attempt to find long lasting solutions to health problems attributable to improper waste disposal. According to NEST (1999), the problem of solid waste disposal, especially in the cities, has become one of the most intractable environmental problems facing mankind. This is due to a phenomenal increase in the volume

and composition of solid wastes generated daily in the cities starting form the period of oil boom in the 70's. This situation is attributable to several factors in Nigeria, namely, enhanced household income which has positive implication on the rate of consumption, increase in the rate of urbanization processes which resulted to increased number of cities and people living in them, high rate of industrial development most of which are concentrated in the cities and general improvement in the welfare of urbanities., In many Nigerian cities, the volume of solid wastes has overwhelmed urban administrators' capacity to plan for their collection and disposal. Thus, it is not uncommon to find urban streets and roads practically blocked by uncarted solid wastes (NEST,1999).

Part of the problems caused by solid waste emanates from the fact that management of solid waste is not an easy task particularly in Nigeria where militating factors such as ignorance, carefree attitude, government half spirited approach, poverty, lack of citizen participation/co-operation and poor funding reinforce each other to create the impression that efficient waste management is a mission impossible (Uchegbu, 1998)

There are two major approaches to waste management in Nigeria. They are private and public arrangements (Uwadiegwu and Chukwu, 2013). The private system is a contractual arrangement between waste generator(s) and a person or group of persons who undertake carting away of solid waste as a business pursuit while the public system involves a situation where government sets up a public agency with the mandate to collect solid waste from generators and dispose them at designated urban dump site. In many Nigerian cities both systems function side by side particularly where the public system becomes so inefficient that it has to be complimented by private system. This hybrid arrangement exist at Enugu, Port Harcourt, Aba, Owerri, Ibadan and Kano(FMHE,1998). While the public system is under the control, funding and supervision of the state government, the private system prospers by striving to offer satisfactory services so as to win more customers and as such ensures that efficiency is maintained (Omuta, 1988).

Enugu State Waste Management Authority (ESWAMA) was established through Enugu State Law (ENSL) No 8 and 12 of 2004 which also dissolved the Enugu State Environmental protection Agency. On establishment, ESWAMA was given the mandate to take the responsibility of the general cleanliness of the urban areas such as Enugu, Nsukka, 9th Mile Corner, Oji River, Obollor Affor, Awgu and any other settlement as may be designated as urban by the state Government from time to time. In other to ensure thoroughness and high efficiency of service, ESWAMA functions in partnership with the private sector participants (PSPs) which it supervises. Since 2004, both have co-operatively handled the solid Waste Management in Enugu City which involves the collection, transportation, processing, recycling or disposal of waste materials which are inevitable bye-products of human activities and direct outcome of modernism.

Upon establishment, ESWAMA was statutorily assigned the functions as shown in Table 1.

Table 1: Statutory Functions of ESWAMA

S/N	Functions
A	To collect, remove, process, treat and safe dispose of domestic, hospital, commercial, institutional and industrial waste,
B	To recycle waste,
C	To design blue prints for the establishment of sewage disposal system and clearing sewage,
D	To advise and make recommendation to the ministry for improvements in collection, removal, processing, treatment and safe disposal of wastes,
E	To clean streets,
F	To remove and dispose abandoned vehicles,
G	To remove and dispose of carcasses of dead animals from public places,
H	To monitor the clearing, cleaning and maintenance of drainage facilities within the state,
I	To design, operate and maintain waste disposal facilities,
J	To prepare and update from time to time master plans for waste collection and disposal in the cities, towns and villages within the state and the control of the resultant waste system within the state,
K	To approve and close watch on all waste disposal systems in the state,
L	To do all such acts as appears to it to be requisite advantageous, convenient for or in connection with the carrying out of its functions or incidental to their proper discharge,
M	To enter into contract or partnership with any company, firm or person which in opinion of the Authority will facilitate discharge of its functions,
N	To train managerial, technical and such other staff for the purpose of the running of its operations and for waste management in general.

Source: Enugu State Law, No 8, 2004

What an ambitious assignment given to ESWAMA by the state government. The present Enugu State government led by Barr. Sullivan I. Chime went an extra mile to boast the performance of ESWAMA in the state by providing it on 18th April, 2008 with 15 waste compactor trucks and 1000 dumpsters for effective and efficient discharge of its assignment (Uwadiegwu and Chukwu,2013).In 2012 the state governor repaired all the broken down compactors and

increased the number of dumpsters as well as replacing damaged ones, all in the effort to make ESWAMA render satisfactory services to the inhabitants of Enugu City.

Moving around along the sheets and roads of Enugu City, one common environmental feature are indiscriminate dumping of solid wastes, uncleared heaps of solid wastes, solid waste-clogged drainages and several dumpsters overflowing with refuse along the streets and roads. One then wonders whether ESWAMA is living up to public expectations or not. In view of this, the aim of this study is to evaluate the operational efficiency of ESWAMA in the discharge of its statutory assignment. The outcome of this study will help in the redefinement of policies regarding the cleanliness of the cities in Enugu state and necessary measures for improvement.

Materials and Methods

This study carried out between July 2012 and May 2013 was basically case study and survey in design. One layout was randomly chosen from each of the three Local Councils that make up Enugu City. They are Coal Camp (Enugu North), Achara Layout (Enugu South) and Ugbene (Enugu East). A total of 79 households selected as follows;26 from Coal Camp, 26 from Achara layout and 27 from Ugbene, participated in the study. The 79 households who served as respondents were purposively selected with full guarantee to keep them anonymous throughout the study.

Data for this study were collected by questionnaires and structured interviews. Respondents were requested in the structured questionnaire to evaluate the level of performance of ESWAMA based on the functions assigned to it by the state government. For the purpose of survey thoroughness, function A in Table 1 was spread out into 5 functions as follows;

(i) refuse collection (ii) refuse removal, (iii) refuse processing, (iv) refuse treatment and (v) refuse safe disposal, thus bringing ESWAMA statutory functions into 18 in number. For the evaluation, respondents were to assign any of the following criterion, very good (VG), Good (G), Fair (F), Poor (P), or Unknown (U) to any of the 18 functions as perceived by the respondent. Below each function, respondents were asked to indicate their reasons for the criterion chosen. In addition, interviews were held with officials of ESWAMA and PSPs.

Analysis of the responses was based on simple proportional percentages of the number of responses on each criterion across the 18 functions in keeping with Likert weighting scale. This is used to measure the Relative Satisfaction Indices (RSI) of respondents as far as the operational efficiency of ESWAMA is concerned. The RSIs were computed for the 79 respondents across the 18 functions. The computation was based on the assumption that a respondent's rating on all the 18 functions taken together constitute empirically derived indicators of the respondent's level of relative satisfaction with ESWAMA performance. The RSIs therefore represent the aggregate of the respondent's rating expressed as a percentage of the aggregate of the respondents judgment on the 18 functions.

In statistical term, the RSI is given as

$$\frac{Nef}{Ei} \times \frac{100}{1}$$

where N, is the number of rating criteria, ef, is the number of functions, Ei, is the maximum score of a function across the rating criteria while RSI, is the relative satisfaction index. The computation shows that the least RSI for a respondent is 25% while the maximum is 100%.

Based on this, three classes of efficiency in keeping with Likert scale were established. RSI from 20 – 50 is poor, 50-70 is fair while 70-100 is good.

Reasons for rating decision and the interview responses were content analysed and used in the classification of the functions into three efficiency grades (Table 2).

Table 2: Efficiency Classification

S/N	FUNCTION	Good G	Fair F	Poor P
1	Refuse collection		62	
2	Refuse removal		68	
3	Refuse processing			25
4	Refuse treatment			26
5	Refuse disposal		63	
6	Recycling of waste			20
7	Designing of blueprint for refuse disposal			22
8	Advise to government for waste management improvement			20
9	Cleaning of streets	78		
10	Removal and disposal of abandoned vehicles	76		
11	Removal of dead carcasses from public places	79		
12	Monitor the cleaning and maintenance of drainages	81		
13	Design and maintenance of disposal facilities		64	
14	Updating of waste disposal master plans			32
15	Close watch on all waste disposal systems			28
16	To undertake functions that will enhance their assignment			27
17	To enter into partnership for the discharge of its assignment			30
18	To train personnel and staff for their operation			24
	PERCENTAGE COVERAGE	**22.2**	**22.2**	**56.6**

Source: Fieldwork, 2013

RESULTS AND DISCUSSIONS

The operational efficiency of ESWAMA varied significantly from function to function. It is only capable of performing satisfactorily in 22.2% of its statutory assignments and this is in the areas of (i) cleaning of streets/roads (ii) removal and disposal of abandoned vehicles (iii) removal and disposal of carcasses of dead animals from public places and (iv) monitoring the cleaning and maintenance of drainage facilities within Enugu City.

ESWAMA is found to perform fairly well in another 22.2% of its government assigned functions. These include; (i) refuse collection, (ii) refuse removal (iii) Refuse disposal and (iv)design, maintenance and operation of waste disposal facilities.

ESWAMA is found to perform poorly in the discharge of more than half of its mandate which constitute the remaining 56.6%. The functions where ESWAMA is grossly found wanting include (i) Processing of refuse, (ii) Refuse treatment, (iii) Recycling of waste, (iv) designing of blueprint for the establishment of sewage disposal system and clearing of sewage, (v) advising and making recommendations to the Ministry for improvements in collection, removal, processing, treatment and safe disposal of wastes, (vi) to prepare and update from

time to time master plans for waste collection and disposal in the cities etc and the control of the resultant waste system (vii) approval and to close watch on all waste disposal systems (viii) undertaking activities that are requisite advantage and convenient in connection with the discharge of its functions, (ix) entering into contracts or partnerships with any company, firm or person which will facilitate the discharge of its functions and (x) training of managerial, technical and such other staff for the purpose of running its operations and for waste management in general.

The fact that ESWAMA in Enugu City is found to be performing creditably well in only 4 out of 18 functions, fair performance in another 4 out of the 18 functions and uncomfortably very poor in 10 out of statutory 18 functions, is as disappointing as it is discouraging and societally unacceptable. The reasons adduced for such poor and unsatisfactory performance include the following;

(1) **Leadership Problems:** The most formidable problem which militates against high level performance in ESWAMA activities relate to leadership inadequacies in the areas of training, knowledge and skills. Waste management function is not a simple business for just anybody but a specialized activity which requires adequate training, knowledge and skill in environmental management which can only be acquired in studies from environmental sciences. Unfortunately, ESWAMA leadership has always been based on political appointments of political colleagues whose interest are more on revenue generation than on satisfying public objectives. The use of political colleagues for ESWAMA leadership is counterproductive.

(2) **Poor Perception of what Constitutes ESWAMA Functions:** The literal interpretation and understanding that ESWAMA function consists of and limited mainly to solid waste collection and disposal is shallow and restrictive. This accounts for why ESWAMA concentrates on refuse collection and disposal with no visible attempts to diversify efforts to cover comprehensively all functions within its mandate. This again is an offshoot of myopic leadership with limited knowledge and skill about the multi-dimensional issues involved in waste management.

(3) **Lack of Planning:** ESWAMA operates without ground information and planning. Thus, any organization such as a public agency whose operations are not based on sound planning and implementation framework has planned to fail and is bound to fail. ESWAMA lacks a blueprint for its activities and is thus based on the science of muddling through whose results are usually disjointed and segregated.

(4) **Lack of studies and Surveys:** ESWAMA is operating without initial surveys and studies which will reveal areas of potential constraints and challenges that need to be addressed for successful operation as well as the existing potentials that need to be harnessed for effective local resources utilization for enhanced waste management. Working without adequate data derived from survey leads to frustration, disappointment, and inability to withstand sudden environmental change.

(5) **Sudden and Incessant Changes in Leadership:** ESWAMA has witnessed three sudden changes in leadership within the past five years. This represents a serious political interference in the smooth operation of the agency. Sudden change in leadership is inimical to commitment, operational focus and direction as well as on organizational objectives.

(6) **Lack of Autonomy:** ESWAMA is established to be a body corporate with perpetual succession and as such to be self-sustaining. It has not been able to generate adequate fund to enable it become self-sustaining and autonomous so as to permit it carter for itself and achieve it social obligations. It still depends on the state government for sustenance with attendant political bottlenecks and bureaucracy which in most cases frustrate its programmes.

RECOMMENDATIONS

1. Strong Administration

There is every need to bring to a halt the current practice of adopting political sentiment for the appointment of ESWAMA administrators and chief executives for the purpose of serving as compensation for politicians who played one role or the other considered vital for the past political success. For strong administration and leadership, there is need for men of caliber, and ideas, men with the pre requisite discipline and the experience behind them, good managers of people; to design and administer waste management. Equally required are the services of skilled environmentalists such as Town Planners, Environmental Managers, Architects, Geographers, Land and Estate Surveyors and other environmental literate scholars. A personnel with relevant knowledge, training and skill will be more interested in demonstrating his capabilities for finding solutions to the practical problems of mankind than pursuing self centred interests which provide feul for woeful failure and regrets in many cases. Appropriate knowledge and sound skill are self-motivating factors that engineer professionals to seek positive results and shun the shame of failure. This will serve as spring board for good performance and satisfaction of public interests. It is to be pointed out that unpoliticised implementation of section 3 subsection 2e of Part II of ESWAMA Law which states that Board of Directors of ESWAMA shall consist of two persons to be appointed by the Governor, being persons who by reason of their ability, experience or specialized knowledge of matters relating to environment and waste management, will go a long way to improve the services of ESWAMA.

2. Establishment of Planning and Statistics Department

This Department will consist of a team of experts who will be involved in research and studies to generate relevant data for short and long term plans. Research will provide base data for waste management master plans and blueprints which will provide the road map for day to day operations. Research will reveal the necessary lines of action to adopt in order to improve operational performance.

3. Private Sector Partnership (PSP)

The programme of Private Sector Partnership should be pursued with greater vigor and commitment in order to get as many private organizations as possible involved in waste management. Involvement of the private sector including the traders, business people, schools, churches, mosques, clubs, traditional rulers etc will enhance the services of ESWAMA.

4. Creation of House of Assembly Committee on Waste Management

Waste Management will become a more public issue that is operated under policy guidelines if waste management committee is created in the State House of Assembly. This will be in addition to the introduction of Waste Management Advisers to the State governor as earlier suggested by Uwadiegwu and Chukwu (2013). Waste Management and sanitation are serious issues that deserve the attention of State House of Assembly. Equally important is the involvement of the Local Government Councilors in waste management. There is need for the

creation of waste management committees in both Enugu North, Enugu East and Enugu South Local Councils to take waste management decisions and lend helping hand to ESWAMA in the waste management within their local government areas.

CONCLUSION

The operation of ESWAMA is partial and too narrow in relation to the scope of its statutory functions as spelt out in 2004 ESWAMA law. It concentrates to garbage collection, disposal and sanitation in the city to the utter negligence of many other equally significant functions. This accounts for why its operational efficiency is found to be very low since it scored pass grade in only 22.2% of its functions. Though it scored fair mark in the areas of refuse collection, refuse removal and disposal but a lot more needs to be done to enhance its efficiency to satisfactory level. ESWAMA as a public agency needs articulate leadership with relevant training, skill and knowledge requisite for environmental management including waste management and which must not be subject to political manipulations that can lead to establishment of stooge leadership.

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