

SUSTAINING COMMUNITY PARTICIPATION IN SOLID WASTE MANAGEMENT PROJECTS IN LAGOS CITY, NIGERIA

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ABSTRACT

This empirical study examined the influence of community participation in waste management projects and its sustainability in Lagos City, Nigeria. Descriptive survey design was adopted and 230 respondents participated in the study. The instrument employed for data collection was "Community Participation and Waste Management Sustainability Scale (CPWMSS)". Three null hypotheses were tested at 0.05 level of significance; also one research question was raised. Results showed that: community participation in awareness creation ($t\text{-cal} = 3.75$, $t\text{-tab} = 1.96$, $P < 0.05$) participation of local leadership ($t\text{-cal} = 1.96$, $t\text{-tab} = 0.35$, $P < 0.05$) and participation in mobilization ($t\text{-cal} = 3.16$, $t\text{-tab} = 1.96$, $P < 0.05$) have a positive influence on the sustainability of waste management projects. Based on these findings, recommendations such as: active participation of community members, consistent government policy on waste management were made towards the advancement of sustainability of waste management projects.

Key Words: Community, Participation, Waste, Sustainability, Project.

INTRODUCTION

Communities mostly in developing countries of the world are facing urban environmental problems particularly on how to manage waste generated day-in-day-out. These problems are partly caused by inadequate provision of basic social services such as: water supply, sanitation facilities, waste collection and disposal tools among others. Again, the neighbourhood areas of these communities suffered most. These areas are deprived of basic amenities and services. It is important to note that, many projects either by the government or the partnering agencies have been set up to deliver the basic services to these low-income areas and other areas that do not have such services. In order for these projects particularly the solid waste management to succeed and have a lasting impact, Osuji (1993), Anyanwu (1991) and Oyelami (2007) warned that community participation is essential.

Community participation therefore, is a process in which community members are involved at different stages and degrees of intensity in the project cycle. The reason for this is to build the capacity of the community and to maintain the services created after the facilitating government, agent or organization might have left. Thus, community participation plays an important role in the sustainability of projects. To this end therefore, services set up by the project originator to function without external assistance and to have a long-term impact on the environment and quality of life of the people, community participation is the essential key factor (Anyanwu, 1991).

In addition to the above, rapid urbanization and urban-rural migration causes enormous pressure on the urban communities. In line with this, cities import natural resources which are transformed into goods and services and in the end according to Geenhuizen Nijkamp (1995) are returned to the environment in the form of emissions and waste. This leads to local, regional and global environmental problems such as resource depletion, deterioration of air, water and soil quality, noise nuisance, lack of green space, waste generation and many others (Stanners and Bourdeau, 1995). These environmental problems also have socio-economic consequences on the inhabitants, for example, poor environmental qualities of cities can deprive citizens good quality because 'this affects their health and wellbeing'.

Government at all levels in Nigeria have at one time or the other set up sanitation authorities in both the rural, semi-urban and urban areas of the country. It must also be said here that the health and sanitation issues in Nigeria are under the concurrent power list, hence both the federal, the states and local government areas have the power to legislate on how to reduce waste in their respective domains. In the 1980s in Nigeria, debates about the environment became more complex. The attention of the scholars and analysts also centred on how to sustain projects meant for community development such as waste disposal and management and environmental conservations. Sustainable development therefore is the

development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987). Most studies by researchers focused on the environmental part of sustainable development, but sustainability according to Pal (1998) is much broader concept than just environmental protection. Sustainable development in the words of Paul (1987) and Pal (1998) is related to the quality of life in a community. It also means that the environmental, social and economic systems that form the community must provide a healthy, productive, meaningful life for all community residents, both in the present and in the future.

STATEMENT OF THE PROBLEM

The generation of waste and its management is one of major environmental problems in the developing nations of the world. Efforts have been made to properly manage the waste generated such as re-cycling, turning waste to wealth among others. The sustainability of these projects seems to be a day-dream. It is in line with this that this study surveys the influence of community participation on the sustainability of waste management projects in Lagos City, Nigeria.

THEORETICAL FRAMEWORK

This study is hinged on the theory of social structure. The theory states that there are bound to be variations in the behaviour of human beings and that such variations in terms of structure, culture and locations do influence the socialization process. In line with this, Aker (1998) posited that structural variables that result to varied forms of malbehaviour are consequences of the learned process which community members experience. Hence, an individual's location in the social structure of community as indicated by social characteristics such as: age, sex, occupation, educational attainment, income and family background determine one's behaviour and attitude in the community. In view of Aker's (1998) postulation, this theory gives credence to community participation towards sustaining waste management project in developing cities of the world.

OBJECTIVES OF THE STUDY

The objectives of this study are to:

- i. examine the influence of community participation in awareness creation on the sustainability of waste reduction in Lagos city;
- ii. find out the influence of local leadership on the sustainability of the waste management projects in Lagos city;
- iii. find out the influence of community participation in mobilization towards the sustainability of the waste management projects in Lagos city;
- iv. find out the problems militating against the effective community participation in waste management efforts in Lagos city.

RESEARCH HYPOTHESES AND QUESTION

Three research hypotheses and one research question were raised, tested and answered at 0.05 level of significance. These are as follows:

RESEARCH HYPOTHESES

H₀₁: Community participation in awareness creation has no significant influence on the sustainability of waste reduction in Lagos city.

H₀₂: Local leadership participation has no significant influence on the sustainability of waste management projects in Lagos city.

H₀₃: Community participation in mobilization has no significant influence on the sustainability of waste management project in Lagos city.

RESEARCH QUESTION

What are the problems militating against the effective community participation in waste management projects in Lagos mega city?

METHODOLOGY

This is a descriptive survey research where the investigator just collected data from the residents of the selected area, the coordinators of waste management project and the Highways Managers, on the influence of community members' participation in waste management projects in Lagos city, using a structured questionnaire and oral interview.

POPULATION AND SAMPLE:

The population for the study is made up of all the residents, coordinators of the waste management project and the Highway Managers. From the 15 waste-dumps site in Lagos city, only 1 was purposefully selected for the study.

The study was carried out at Abule-Egba area of Lagos city. This is because it has the highest number of residential houses around it and because it is one of the officially recognized waste-dumps in Lagos city. In the study area, 100 houses were randomly selected and 2 residents each were selected through balloting from the houses making 200 residents. Ten coordinators were also randomly selected. Simple random sampling technique was also used to select 20 Highway Managers. In all, a total of 230 respondents were involved in the study.

INSTRUMENTATION

The main instrument used for data collection was structured questionnaire tagged: "Community Participation and Waste Management Sustainability Scale (CPWMSS)". It was developed by the investigator. The instrument consisted of two sections "A and B". while Section "A" addressed the bio-data of the respondents such as: name of the community, sex among others, section "B" consisted of 5 items modified Likert type questionnaire on community participation and waste management sustainability in Lagos city.

The instrument was given to experts in environmental sanitation, health education and community development to critically examine it. The experts were specifically asked to look at the adequacy of the items in eliciting the appropriate responses from the respondents. Based on their suggestions, necessary corrections were effected before the final copies were subjected to Cronbach alpha reliability test. The questionnaire gave a reliability coefficient of 0.73.

The researcher with five research assistants visited the selected houses at Abule-Egba and administered the instrument to the residents. They were completed and returned on the spot. Also the coordinators of the waste management site were given the questionnaire to fill for on-the-spot collection. Efforts were made to explain portion of the questionnaire (where necessary) to the highway managers. These efforts by the researcher and the trained assistants ensured that the questionnaires were not misplaced or lost by the respondents. It took 20 working days to complete the administration of the instrument in all the selected houses and waste dump sites.

Out of a total of 230 questionnaires administered, only 168 were properly filled. It is therefore the 168 properly filled questionnaires that formed the basis of data analysis. T – test inferential statistical tool was used to analyze the 3 hypotheses generated for the study while simple percentage was used to analyze the research question.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

Hypothesis One

Community participation in awareness creation has no significant influence on the sustainability of waste reduction in Lagos city.

Table 1: T – test comparison of the relationship between community participation in awareness creation and waste reduction sustainability

Variables	N	X	SD	DF	P	t-cal	t-tab
Community participation in awareness creation	68	13.79	6.11	166	0.05	3.75	1.96
Sustainability of waste reduction	100	21.11	7.31				

Significant at 0.05

The null hypothesis was rejected because the t – calculated of 3.75 is greater than the t – tabulated of 1.96 indicating a significant positive influence between community participation in awareness creation and sustainability of waste reduction in Lagos city. This finding is in line with the earlier study conducted by Ahmed (1992) and Bulle (1999) which made it clear that apart from individual responsibility, people can be collectively responsible through participation in more or less organized activities like meetings, clean-up campaigns and awareness-raising activities. In the same vein, Anschuit (1996) in a similar study discovered that community participation may involve making material, financial or physical contributions to activities of solid waste management. This could be done when community members are working as cart operators or sweepers or even paying fees for waste collection. The study found out that in awareness creation members of the community do participate in such activities like: fund raising, campaign against indiscriminate waste dump, environmental sanitation among others.

Lending support to the above, one of the highway managers at Abule-Egba in Lagos city in an oral interview stated thus:

“Community members now participate voluntarily in waste management and they are ready to sustain it. They now discovered that clean environment reduced ill-health among them”.

HYPOTHESIS TWO

Local leadership participation has no significant influence on the sustainability of waste management in Lagos city.

Table 2: T – test comparison of the relationship between community participation in planning and preparation and waste management sustainability

Variables	N	X	SD	DF	P	t-cal	t-tab
Local leadership participation	133	19.35	6.31	166	0.05	1.96	0.35
Sustainability of waste management	35	19.41	7.16				

Significant at 0.05

The null hypothesis stated above was rejected because the t -calculated of 1.96 is greater than the t -tabulated of 0.35. This shows a significant positive influence between the participation of local leaders and sustainability of waste management. The study found out that local leaders play important role in community participation. It is apt to note that the responsibilities of community leaders is to encourage people to subscribe for waste collection, to make sure that people pay the fees, to stimulate the separation of waste and to monitor the performance of the service providers. In a study on waste reduction conducted by Abiodun in 1989, the study revealed that local leaders acted as negotiators for local authorities, supervise the performance of local authorities and private enterprise and also acted as pressure group to obtain services from the local authorities. Again, Vande Klundert and Lardinois (1995) buttressed this when they stated that: community leaders are involved in various activities of waste management such as: promoting re-use and recycling of materials, hiring waste collectors, collecting fees for waste removal and making arrangements with local authorities investigations. Bulle (1999) avers that the success of sustainability of community participation in waste management depends on actors involved such as community-based organizations (CBOs), micro-enterprises and local leaders.

In line with the above a member of Abule-Egba community in Lagos city stated thus:

“Our leaders are influencing our participation in waste disposal and they are encouraging us to live in a clean environment. Through them our participation is now on daily basis, apart from every Thursday of the week and monthly sanitation exercise”.

HYPOTHESIS THREE

Community participation in mobilization has no significant influence on the sustainability of waste management projects in Lagos city.

Table 3: T – test comparison of the relationship between community participation in mobilization and sustainability of waste management projects

Variables	N	X	SD	DF	P	t-cal	t-tab
Community participation in mobilization	75	11.57	5.23	166	0.05	3.16	1.96
Sustainability of waste management projects	93	19.09	6.43				

Significant at 0.05

The null hypothesis stated above is rejected. This is because the calculated value of 3.15 is greater than the t - tabulated value of 1.96 at the alpha level of 0.05. Rejecting this hypothesis simply means that community participation in mobilization strategy has a significant positive influence on the sustainability of waste management projects in Lagos city. The study found out that, it is very germane that the communities themselves identify the waste problem as their problem and that its solution is for their own benefit. Therefore, mobilization strategies like awareness-raising, campaigns, sensitization, house-to-house campaigns, pasting of posters, leaflets and handbills, community meetings, radio, television jingles and other forms of mobilization should be the lots of community members. In line with this, Gozum (1994) argued that mobilization strategies can be used to assess the ability to pay for services and to create demand for appropriate and achievable levels of service. In this way, community members will participate and be willing to pay for the service(s) rendered. Again, McCommon, Perez and Rosensweig (1998) noted that good mobilization and communication strategies ensured that community's expectations of the projects and services do not exceed what is reasonably achievable and affordable.

RESEARCH QUESTION

What are the problems militating against effective community participation in waste management efforts in Lagos City, Nigeria?

Table 4: Problems militating against effective community participation in waste management efforts

	Relevant Problems	Frequency	Percentage
i.	Inconsistent government policy	28	16.67
ii.	Inadequate training and retraining of Highway Managers	29	17.26
iii.	Poor access to requisite information among residents	31	18.45
iv.	Exposure of Highway Managers to risks	30	17.86
v.	Waste dumps not properly kept and maintained	25	14.88
vi.	Uncooperative attitudes of some community members	25	14.88
	Total	168	100.00

Source: Field Survey, 2011

In table 4 above, the investigation observed some factors that have hindered the effective community participation in waste management projects in Lagos city, Nigeria. These include, among others, the inconsistent government policy on waste management issue (16.67%), inadequate training and retraining of highway managers (17.26%), poor access to requisite information among the community members (18.45%), exposure of high managers to risk, health hazard etc. (17.86%), waste-dumps not properly kept and maintained by the authorities concerned (14.88%) and uncooperative attitudes of some community members on the proper keeping of wastes generated (14.88%). It is obvious that the respondents weighed these factors heavily and each appears to have almost the same strength with each other. The findings rather corroborate a pilot project on community participation in solid waste management in Bangalore, India, where it was discovered that problems like inconsistent government policy, poor attitude of the people, lack of good maintenance of waste-dumps sites and the likes hindered the effective participation of community members. In the same manner, Fashakin (1985), Fatokun (1997) and Mehta (2000) argued in their respective findings on waste management that problems such as exposing the waste managers to

risks, uncooperative attitude of the community members are some of the hindrances towards effective participation and sustainability of waste management projects in cities in developing nations of the world.

CONCLUSION

One of the preconditions for the sustainability of waste management projects is community participation. Community participation has been adjudged to be one if not the only veritable tool towards the sustainability of projects. In community participation community members are seen as partners to be involved in all phases of project cycle and not just as passive beneficiaries for whom new services are set up. This study therefore concluded that for the continuity and sustainability of waste management projects in Lagos city to be maintained, community partnering and participation should be given optimal priority.

RECOMMENDATIONS

This study therefore recommends thus:

- i. that there should be active participation of community members in awareness creation towards sustaining waste management projects;
- ii. that local and community leaders as agents of community development should take active parts in waste management projects;
- iii. community participation in mobilization for waste reduction, sanitation exercise, and campaigns should be given priority;
- iv. problems like poor attitude of the people, inconsistent government policy, inadequate training and retraining, and the likes should be properly addressed to enhance the sustainability of projects.

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