

Challenges of Public Participation in Solid Waste Management at Nkanfoa Landfill Site in the Cape Coast Municipality of Ghana

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Abstract

Public participation in waste management is considered a sustainable approach to waste management as such it should be embraced. In municipalities of developing countries like Ghana, public outcry over the wrong location of waste dumpsites and poor public interest in waste management has called for this study to understand how public participation contributes to efficiency in solid waste management. For those living close to waste dump sites, conditions including odour and smoke pollution are believed to be avoidable when the public participates in decision making on the location of waste dump sites. This study investigated challenges facing Nkanfoa community regarding their involvement in waste management decision making. A mixed method approach was used to gain an in-depth understanding of the challenges associated with public participation in solid waste management. The findings showed that the community members feel their concerns are not factored into the decision making process of the assembly as such a lack of trust between them and the municipal assembly. Also, there is the perception that political office holders interfere in public meetings and are not accountable to citizens hence the public apathy towards collective waste management decision making and their unwillingness to pay for waste services. The study concludes that for community participation in waste management to be effective, there should be online platforms for verification of the extent to which assemblies engage the public in collective decision making and this should be one criteria for allocating more common funds to district assemblies that perform well on this indicator.

Keywords: public, participation, waste management, challenges, Cape Coast

1. Introduction

The global daily waste generation in 1965 was 635 metric tons and projected to reach 3,539 – metric tons by 2050 (Chen et al, 2020). More recent studies estimate global solid waste generation to be 2.24 billion tons in 2020 and is expected to increase further to 3.88 billion tons by 2050 (World Bank, 2022). Solid waste management issues are therefore big challenges to small and large cities as budget allocations for waste management have never been enough for municipalities (Abdel-Shafy & Mansour, 2018). The accelerated rate of solid waste menace is expected to worsen in the future given that villages are rapidly urbanizing and many shopping complexes are expanding with associated high amounts of solid waste generation of different compositions (Dikole & Letshwengo, 2020). The increase in global waste has created serious problems that are of environmental and public health concern (Sharma & Jain, 2020).

In Africa, it is estimated that 125 million tons of waste is generated a year (Niekerk & Wegmann, 2019) and this is expected to double by 2025 (UNEP, 2020). In Ghana, huge volumes of waste are produced daily but these wastes are not collected on time, neither are the wastes properly disposed of (EPA, 2002). In view of the challenges of waste disposal, residents close to dumpsites are not willing to accept waste dumpsites near their backyards (EPA,

2002) for reasons of smoke and visual nuisances, leachate pollution, bad odour and breeding of flies (Owusu et al., 2012). Major reasons for the large amounts of waste produced in cities include increased population growth and urbanization that have now overwhelmed city authorities responsible for managing the waste (Lissah et al., 2021).

The challenges of waste management have compelled the government of Ghana to tackle the management of solid waste by decentralizing waste management to local government authorities and private companies over a decade ago (Kyere et al., 2018). It would have been expected that, once money is allocated to city authorities to manage waste at the local level, the management of solid waste would be sustainable. Studies have however shown that the participation of citizens in waste management is key to any sustainable waste management as public participation in waste management involves public education and consultation for effective waste management (Stasiukynas et al., 2020). Lack of public participation in waste management is believed to have contributed to non-compliance with solid waste management directives such as refusal to segregate and recycle waste (Yusof et al., 2019).

Public participation is defined as the opportunity given to people who may be affected by or interested in a decision making process to be heard before taking final actions or decisions that affect their well-being using formal or informal channels of engagement (Lee & Sun, 2018). Governments and other institutions use public participation as a tool to gather citizens or customers to seek their views on issues in order to improve performance or meet public needs and expectations regarding income, security, and self-esteem (Suphattanakul, 2023). Literature shows different types of public participation engagements exist at different levels of beneficial outcomes and challenges. For example, analysis of 69 selected articles from Web of Science and Scopus shows 3 main types of public participation - access to information, consultation, and active participation (Abas et al., 2023).

In municipalities where community waste management efforts have been successful, the extent of success was attributed to public participation and cooperation of the private sector that has responsibility for managing waste (Sinthumule & Mkumbuzi, 2019). It is further argued that awareness creation on waste management improved solid waste management in many cities (Murdiman et al., 2017) and this requires strategic planning, inclusivity, transparency, continuity, and allocation of resources (Izdebska & Knieling, 2020).

Other strategies for effective public participation in waste management revolve around advocacy, counselling for garbage collectors, counselling of households, and monitoring the waste sorting behaviour of households (Zakianis et al., 2018). Civil and corporate actions such as the participation of society, non-governmental organizations, public and private enterprises are key to the effective management of solid waste as intellectual and cultural dimensions embedded in these organizations facilitate the process of public participation (Şeren, 2019). In situations where there are no clear waste management structures and plans in place, the extent of community participation campaign is low (Sekarningrum et al., 2020).

A survey conducted in the Cape Coast Metropolis by the World Bank and the Cape Coast Municipal Assembly (CCMA) revealed that solid waste management was ranked by residents as the second most important urban service that requires urgent attention (CCMA WASH Master Plan, 2014). The Cape Coast Municipality has experienced uncontrolled dumping of waste, smoke nuisance, leachate pollution, bad odour, and fly's nuisance for decades (Gyimah, 2021). In view of the bad experiences of residents concerning solid waste management, demonstrations were organized with road blocks leading to the dump site with the view to prevent dumping of waste at Nkanfoa. The non-involvement of citizens in waste management compelled the Environmental Protection Agency of Ghana to review its regulation (L.I. 1652) of 1999 to demand from the local government authorities to ensure that local citizens are involved in deciding how solid waste is managed in Ghana. Given this provision in the district environmental by-laws of Ghana, this study was conducted to find out the forms of public participation in Nkanfoa and the extent to which citizens or residents are involved in decision making on waste management. This is important because no study has been conducted in Ghana on community participation in solid waste management and the concerns of residents living close to the landfill sites. This study will therefore fill such a research gap in Ghana and other developing countries.

1.1 Concept of Public Participation

Public participation is defined as citizens involvement in community engagements that allow stakeholders to voice out their concerns before decisions are taken on issues that concern how their waste should be managed (Hostovsky et al., 2010). Public participation in waste management has gained a lot of worldwide attention from theorists and practitioners of public participation (Neshkova et al., 2011). Participatory approaches to decision making ensure that bureaucrats and elected officials are not allowed to solely decide how waste should be managed, instead citizens actively engage in policy-making through the process of consultation (Peters et al., 2000). At such public meetings, facilitators engage the public by listening to them and negotiating desirable outcomes that are devoid of

conflicts during planning processes before waste management decisions are taken (Westin, 2019). In situations where public participation is done just for the sake of display to satisfy regulatory and legal requirements without commitment to such processes, public views end up not being included in decisions that affect the public when it comes to waste management (Arnstein, 1969). Decision-making processes that incorporate the views of the public help to build confidence and trust of the public and make citizens accept and own waste management policy outcomes (Cohen, 1989). Despite the importance of such policies, factors such as financial constraints, inadequate capacity building, cultural issues, institutional factors and time constraints may hinder the participation processes (Ahenkan et al., 2013).

The concept of citizenship participation can be said to have something to do with the rights people have to exercise in their own development. It is a democratic right within the social and community development arena in which social and other essential amenities like water and sanitation facilities are provided to the people (Heleba, 2019). The aim of participation is to give voice to people who hitherto have been disenfranchised in decisions that affect them. Community participation has changed and is changing (McEvoy, et al., 2019). However, its main idea is to give people their democratic right to participate in issues that have bearing on them.

McEvoy et al., (2019) view participation as letting people's wishes known. It also includes giving them the right to provide their local knowledge and developing their capacity within the communities they live in. Even though all the reasons for citizens' participation in decision making and projects are important, one cannot do without pointing out its ability to promote desirable relationships between people and those being ruled and the ruling class (Rose, 2003).

This paper uses Arnstein's (1969) ladder of participation (Figure 1) to serve as a useful model for showing how people in the study area participate in waste management.

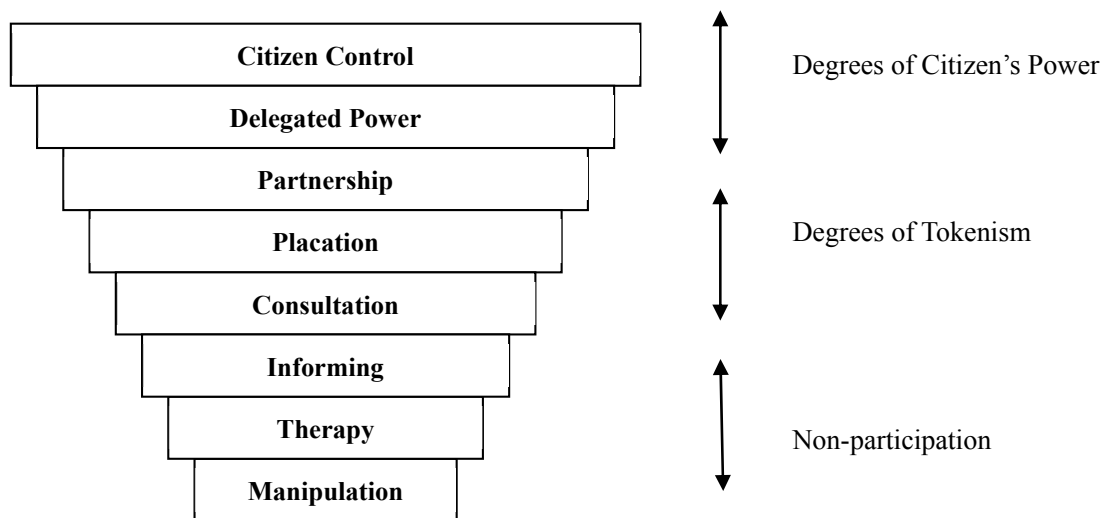


Figure 1. Ladder of Participation

Source: Arnstein (1969)

At the bottom of Arnstein's (1969) ladder of participation is manipulation and therapy which have all been described as non-participation because people do not take part in decisions that affect them. Instead, decisions at this stage can be said to be imposed on the citizens. The next three stages of informing, consulting and placation are akin to telling the people the intentions of the institutions or people with power what will happen. This stage is described as tokenism. The distinction between informing and placation is that, with placation, which is a higher level of participation, power holders only placate the people because they have already decided what would be done. Partnership is the least form of degree of citizenship power. The highest form of participation according to Arnstein is citizen control.

Choguill (1996) criticized Arnstein's ladder on the grounds that power is not all that people, especially those in developing countries seek to attain. Hyman and Shingler (1999) also point out that citizen participation is not only related to power within a community but can be closely associated with economic, social, and political factors (Gbedemah, 2018). Arnstein's ladder of participation can be said to be too simple because it assumes that people with authority in communities will seek the interest of everybody in the community. However, this does not happen

in real world situations. Also, the stratification of society into gender, ethnicity and income at times introduces differences. Even though Arnstein’s model has been re-interpreted, refined, and revised, most of the new typologies retain a “*hierarchical approach and uncritically embrace citizen control as the pinnacle of involvement*” (Tritter & McCallum, 2006: 158). The next section discusses the methodology used for the study.

2. Methodology

2.1 Study Area

Cape Coast is the regional capital of the Central Region and is geographically located at Latitude 50.07’ to 50.20’ north of the Equator and Longitude 1° 11’ to 1° 41’ west of the Greenwich meridian. This is where the Nkanfoa landfill dump site is also located. The landfill is un-engineered, and the sole landfill used by waste disposal contractors in Cape Coast covering an area of 10 hectares. Currently, about 3 hectares of the land is covered with refuse dumped indiscriminately near residential units of flats, informal structures and bungalows. This landfill is located on the outskirts of the municipality which is an emerging residential area given the construction of new residential buildings. The choice of this site to serve as a landfill was made independently by the Municipal Assembly. The wrong location decision taken by the Assembly led to the emergence of a major cholera outbreak in 2014 that prompted a public protest that called for the fumigation or closure of the dump site. Figure 2 shows a map of the study area.

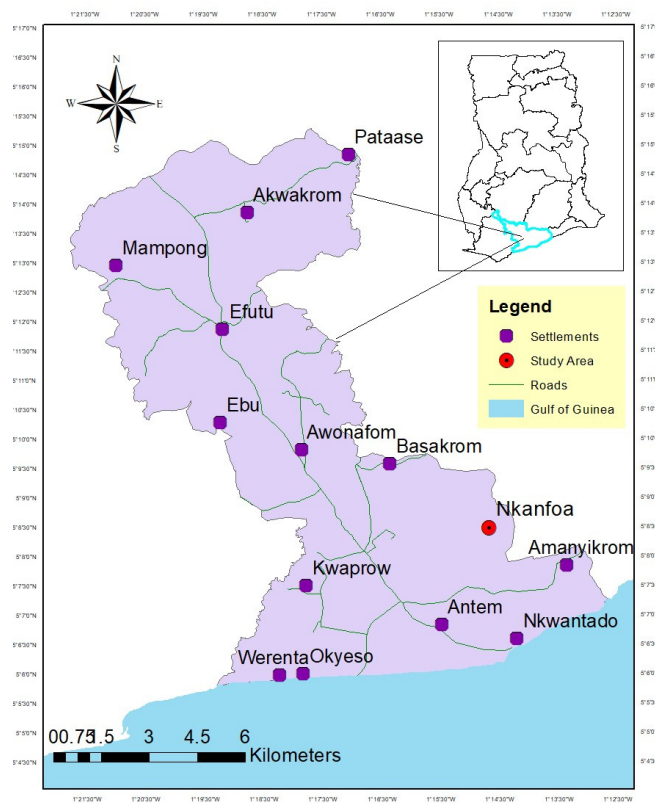


Figure 2. Map of Cape Coast Nkanfoa showing landfill site

Source: Adanu 2023

2.2 Study Design

Research designs are the plans, procedures and frameworks that researchers use as guides to answer research questions (Cresswell, 2014). The research approach adopted for this paper is both quantitative and qualitative but more emphasis was laid on the qualitative aspect. The study started with a site visit to ascertain the conditions of the area. This was followed by a literature review. The site visits and review of the literature helped to conceptualize and state the challenges of the study area. The study methodology explained how the data was collected and analyzed. Figure 3 presents the detailed study design adopted for the study.

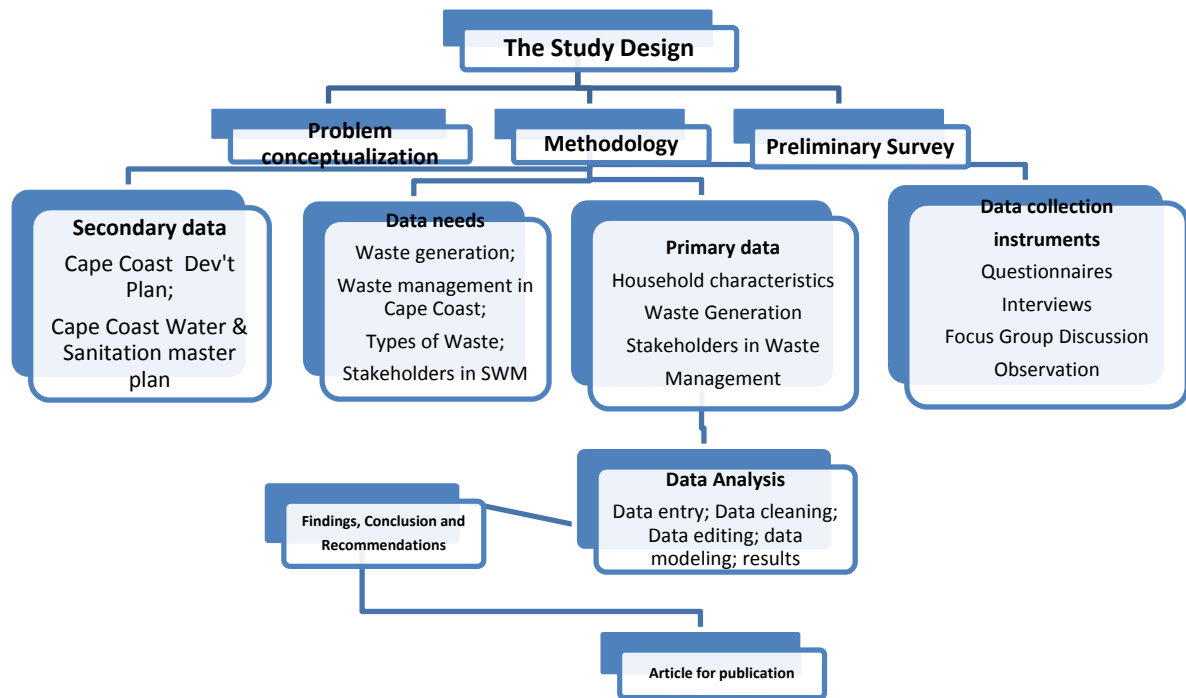


Figure 3. A flow chart of the adopted research design

A flow chart of this nature was described by Creswell (2014) as an explanatory sequential mixed-method design. It helped to collect data by administering questionnaires, conducting interviews among sampled participants and subsequently, the analysis and presentation of the study results.

2.2.1 Population and Sample Size Determination

The research was conducted at Nkanfoa, a community in the Cape Coast Municipality in the Central region of Ghana. The targeted population of this location was 3680 per the 2010 National Population and Housing Census data. The sampling frame comprised a list of community members, some of whom are waste pickers at the landfill site.

A total of 361 respondents participated in the study. The total number of participants was derived from Slovene’s equation below:

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

Where: n= the sample size, N = population, e= margin of error

The population of Nkanfoa township as at the time of the study was 3,680. The study assumed the margin of error for this research to be 5% of the total estimated population of the community. This margin of error helped to ensure that the confidence level of the findings was within a scientifically accepted range of 95%.

Thus, the sample size derived from the population of the study site was calculated as below;

$$n = \frac{3680}{1+3680*0.05^2} = \frac{3680}{10.2} = 360.78.$$

The sample size for the study was therefore rounded up to 361.

2.2.2 Sampling Technique

The study aimed at producing data and findings based on a representative sample as such attempt was made to

gather data that is representative of the sampled population. The sampling procedure was therefore guided by a general rule in the social sciences that suggests the use of a large sample to facilitate generalization (Kline, 1980). To this end, a random sampling procedure was used to administer the questionnaires. Samples were based on a system of intervals as outlined by Cohen et al., (2007). Households in the community were numbered and the 5th household formed the basis for selecting individuals in houses for administration of the questionnaire.

In terms of the Focus Group Discussion (FGD), the purposive sampling method was used in identifying respondents. This technique was used to ensure that the respondents sampled were people directly involved in public meetings and hearings so that they could provide relevant information to answer the research questions. The FGDs were held for two groups. The first group were five (5) officials made up of a male representative from the Cape Coast Municipal Assembly, a female Municipal Environmental Health Officer, a male from the Municipal Waste Management Office, a male from the Development Planning Office, and the Assembly Member for Nkanfoa who is a male. The second group was residents living in Nkanfoa community where the landfill is sited. Eight (8) people were selected for the FGD. They were selected based on their resident status. The criteria were: the person should be living around the landfill site for over five (5) years. The reason for choosing people who have been living around the landfill site for a minimum of five (5) years was because they would have had experiences related to calls for meetings or participation in the management of the solid waste site.

Key issues discussed during the focus group discussion were on types of community participation engagements in the municipality and Nkanfoa town in particular, types of people invited, dates of engagement, and challenges encountered in the processes.

2.2.3 Research Instruments, Ethical Issues and Data Analysis

The study employed a questionnaire as the main instrument for gathering primary data which was complemented by FGD. The interview questionnaires were designed for data collection through several means including closed-ended and open-ended means (Neuman, 2013). The questionnaires were administered to the people through face-to-face means. The questionnaire had three different sections. The first section was on questions that helped to derive the demographic characteristics from the respondents. The second section covered public awareness and participation. The third section was on public perceptions and challenges of solid waste management in the community.

The consent of participants in the study was sought and approval was given orally before the study was undertaken. This was done to affirm the obligation the study has to the research community, research participants and groups. Ethics was adhered to in the study because it helped the participants and the study to come out with the truth, integrity, and honesty which were all outlined in the ethical application and the certificate for this study. Based on the ethical consideration of this study, the anonymity of the respondents was guaranteed.

The data were entered into the Statistical Package for Social Sciences (SPSS) for analysis. The package was used to analyse the data into frequency tables and graphs. The qualitative data from interviews and focus groups were recorded and transcribed to explain the views, concerns and expectations of the respondents on issues bothering them and proposed solutions as presented thematically under the results section below.

3. Results

3.1 Background of Respondents

The study at Nkanfoa waste dump site in the Cape Coast municipality comprised 60% males and 40% females. In terms of age, 9% of those interviewed were less than 18 years, 42% were between 18 - 25 years, 22% were 26 - 35 years, 24% were between 36 - 55 years, and 3% were above 56 years. Most of the people interviewed (51%) come from households with less than 3 members, 31% had 3 - 5 people in the household and 15% had more than 5 but less than 10 people in the household. The rest 3% claimed they were more than 10 in the household. The gender and age composition of those interviewed shows the inclusion of all who matter when it comes to finding out about the level of public participation in waste management decision making in the municipality.

In terms of employment, the respondents said they were engaged in different economic activities. About 80% claimed they were government workers, whilst 6% claimed they were traders. The rest of the 14% of respondents claimed they do menial jobs like picking waste, farming, and fishing. These respondents are from diverse backgrounds with different experiences that produced rich debates during the focused group discussion.

3.2 Major Concerns of Residents on the Landfill

Management of landfill sites is a major problem confronting assemblies in Ghana and the study area is no exception. The main reason for not managing landfill sites properly can be attributed to finance. The unwillingness of the

public to pay for the collection and dumping of waste has contributed to the dumping of waste on the roadsides or open drains which is a bad practice that some of the residents engaged in. According to the findings, people are not willing to stop this practice because it saves them money. Some residents of the community are simply reluctant to subscribe to waste bins and pay monthly charges for services rendered to them as they consider the service charge as expensive given the price range of (GH¢50) to (GH¢70) per month in 2022. Most of them are willing to use the skips but most of the time, these skips are not emptied on time leading to dumping of waste on the ground. A major concern of this study was to ascertain the concerns of respondents living close to the landfill site and the responses can be seen in Table 1.

Table 1. Major concerns of residents living close to the landfill site

Main Concerns	Number of responses	Percentage
Seeing garbage on the site	34	9.4
Smoke coming from the site	85	23.5
Insects flying around	53	14.7
Air pollution (smoke) & bad odour	152	42.1
Dust from the landfill site	27	7.5
The site of birds flying all over the place	10	2.8
Total	361	100

The main concerns of respondents were air pollution and bad odour emanating from the burning of waste mentioned by 42.1% of the responses. This is followed by smoke coming from the site and insects flying around their dwellings.

3.3 Participation of the Public at Meetings to Air Their Views

The study results showed that public hearings on waste issues at the municipality take different forms such as community hearings and discussions during communal clean-ups. Information from the focused group discussion showed that the processes of public engagements and how public meetings are held vary. Some respondents for instance mentioned that *“the Cape Coast Municipal Assembly sometimes call on households at the enclave of the waste dump site to undertake clean-up exercises of the area through communal labour. They asked us to focus on our immediate environments. The majority that engages in the clean-ups are the youth who have the energy to work”* (A participant at the FGD @ Nkanfoa).

In other instances, the municipal assembly occasionally invite the public for public hearings and meetings with the aim of evaluating the Assembly’s performance when it comes to waste management. During such meetings local chiefs, Unit Committee Members, Assembly Members and residents get the opportunity to ask questions and also make inputs into how best the solid waste dumpsite should be managed. The Assembly Member for the Nkanfoa electoral area stated at the focused group discussion that *“when we attend such meetings at the assembly, the inputs made by residents are often not included in the decision making process”*. It was also stated that the municipal authority consulted the communities when they had the intention of creating the dumpsites but objections of the public especially those living around Nkanfoa dumpsite were ignored by the assembly hence such meetings were seen by residents as gatherings for issuing out instructions rather than real meetings for deliberations.

At a focused group discussion involving chiefs, Unit Committee Members, Assembly Members, and a participant from the Environmental Protection Agency, it emerged that a major concern among stakeholders concerning such meetings was the issue of the non-implementation of the views of residents. A resident at Nkanfoa points out that the assembly sets its own agenda based on what is convenient for them. At such meetings, the assembly is not willing to take diverging views from the public. This situation creates mistrust between conveners of public meetings (municipal assembly) and the public. The mistrust has made it difficult to come to a consensus on issues discussed at public meetings at Nkanfoa hence the statutory provisions and purpose of public engagements are not achieved.

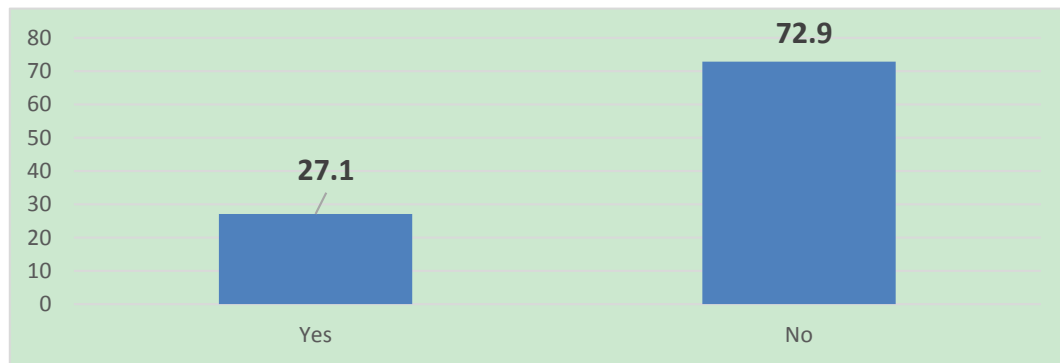


Figure 4. Attendance of respondents at community meetings

As can be seen from Figure 4, only 27.1% of the respondents claimed they had ever attended meetings organized by the assembly. The remaining 72.9% said they never attended any meeting organized by the assembly. The main reasons assigned for not attending meetings were political interference in the meetings and the decision-making process. Political interference in the study area takes the form of giving information to party members of ruling parties to attend such meetings and support the agenda of the government. Furthermore, the selective picking of party loyalists to attend public hearings to propose decisions that have already been decided on at the assembly makes such meetings unfairly represented. The meetings can thus be said to be lopsided as only a few neutral residents attend. In effect, the public does not trust the process of participation. Even though the Local Government Act (2016), Act 936, do not endorse partisanship in decision making it is done tacitly.

Participants at the focus group discussion further pointed out that the Nkanfoa assembly officials know some knowledgeable people in the community who can contribute meaningfully to discussions at the public meetings, but they do not invite them to the public hearings or meetings because their views are likely to oppose the government agenda. A participant at the FGD pointed out that, *“the assembly most of the time strategically fix meeting dates during working hours such that people and elites in the community who can give professional advise will not be able to attend because they have to be at their work”*. This is intentionally done to prevent unpleasant comments from such influential people and professionals. Because of the day and time that meetings are held to deliberate on waste issues, people develop apathy towards waste management. In the words of a participant, *“some citizens do not care about where waste dumpsites are located hence are not bothered to attend public meetings”*.

Furthermore, the lack of transparency and accountability on the part of the municipal assembly put the public off when they hear about public meetings scheduled by the assembly. The issue of poor accountability to the public by the assembly on revenue generated from dumping of waste by companies and how the revenue is spent has been a source of worry to residents. Since the assembly does not account to them, they also do not have the interest to participate in meetings. Also, one assembly member averred: *“Can you believe that as an assembly member, I am mostly not informed about meetings and even if the information for such meetings is provided they come very late”*.

On a few occasions when residents attended public meetings and asked the assembly why they did not give an account on waste management revenues, the response given by the coordinating director was that the assembly does not have money to organize public meetings but this response did not go well with the public. A former representative of Nkanfoa community at the municipal assembly pointed out that although residents deserve to be informed about *feedback on whatever decisions were made on their behalf, I can't do it, especially when my work as an assembly member is almost like a voluntary one*.

Respondents also complained that the municipal assembly has the notion that residents are not professionals and do not have the technical knowledge to give advice on how waste should be managed as such meetings with them will not be useful to the assembly. Given the lack of cooperation among stakeholders, many residents resisted attempts to locate waste dumpsites near their homes by boycotting all public meetings scheduled for that purpose. An official from the Environmental Protection Agency remarked during the focused group discussion that if the public participates in discussions concerning waste management and monitor operations at landfills they will learn some useful lessons that would help to make useful suggestions on the best ways to manage the dumpsite but such meetings do not come on for obvious challenges mentioned earlier.

Table 2. Ways residents around the landfill site want to participate in its management

Proposed ways to participate	Number of responses	Percentage
Meetings held during weekends	37	10.2
Engender the landfill	98	27.2
I don't want to participate	34	9.4
Community should manage the site	12	3.3
Relocate the landfill	178	49.3
Others	2	0.6
Total	361	100

It is important to manage landfill sites on a sustainable basis but findings from the residents in Table 2 show that they are not happy with the authorities as far as the siting of the landfills in their community is concerned. It is important to involve the community in the management of the landfill since it will be difficult to relocate the landfill now. As can be seen from Table 2, some of the respondents want the meetings of the assembly to be held during weekends so that they can take part in the decisions on managing the landfill since the facility impacts directly on them. In fact, the landfill site looks unprotected and uncontrolled leading to the breeding of insects and birds. The landfill in its current state of management is a danger to environmental and public health. According to the chiefs, people are not ready to buy land around the landfill site. Those who already built their houses are willing to sell them at lower prices and move out of the area. It is the view of residents that, the landfill should not be located where it currently is. The next section is on the discussion of the findings.

4. Discussions

The study on public participation in waste management at Nkanfoa waste dump site involved 60% males given the predominant role played by males as family heads. The 40% females who participated in the study did so as the heads of their households since they were alone in their houses. Gender disparity in waste management can be bridged by writing policies and enforcing them to improve women participation in solid waste management in developing countries. This can be done through public education to change attitudes and stereotypes about gender norms regarding masculinity and femininity in waste management (Amoah et al., 2023)

Public participation in waste management is done in the study area through the call for meetings, and organized communal cleanups where waste management issues are discussed. This form of public participation is at variance with most public participation approaches that involve organized meetings between government officials, private companies and citizens to discuss waste management issues confronting the public (Daka & Madimutsa, 2020). Major challenges of public participation in waste management are public apathy, the perception of corruption among waste management administrators; and unwillingness to pay for waste collection services. Other studies in Ghana showed similar challenges of non-compliance with principles of competitiveness, accountability, transparency, and value for money when holding public meetings (Volsuuri et al., 2022).

The politicization of public meetings hindered the inclusion of public views in waste management decision making in the municipality. Turner (2014) for example, observed that officials who organize the meetings rather talk for long hours and leave little time for dialogue with their listeners and this attitude keeps people away from the meetings. This kind of approach to public participation has been described as tokenism, where people's concerns are not considered in decision making (Arnstein, 1969). Further studies show that public views are often not included in decision makings as their inputs are ignored when it comes to making waste management decisions (Oteng-Ababio, 2014). The use of political influence to push people to accept what politicians desire instead of what the people wish for, discourages them from attending subsequent meetings (Ezedike et al., 2020). Furthermore, bureaucracy by governments creates challenges when it comes to implementing decisions taken at public meetings (Nayak et al., 2014).

Other challenges to public participation in waste management include a lack of transparency among some chiefs who are custodians of the lands used for landfills. The chiefs also do not account to their subjects on royalties paid to them by the government and other institutions. In communities where accountability is relegated to the background, the communities get agitated when waste dumps are located near their neighborhoods. As a result of such agitations truck drivers who go to dump waste at the landfill sites get attacked by the public. This finding is similar to what Oteng-Ababio (2014) found in his study about assembly officials and drivers of waste trucks who

come under attack by the public. These findings resonate with Bawole (2013) that high levels of dissatisfaction and distrust among residents towards waste managers have contributed to the lack of interest in public meetings. This study's results add to the knowledge of challenges of public participation in waste management as core issues that have to be addressed to make public participation in waste management effective and sustainable.

5. Conclusions

The purpose of this study was to understand the forms of public participation in Nkanfoa, a community in the Cape Coast municipality and what the challenges are. The study results showed that public participation in waste management decision making were done through community meetings and organized community clean ups where part of the working time is used to discuss issues of community concerns. It is the view of Arnstein (1969) that this form of public participation is the lowest forms of participation based on the ladder of participation. Challenges of community participation in the study area were non-inclusion of community concerns in assembly decision making, lack of trust between the public and the assembly, political interference in public meetings, public apathy and lack of accountability on the part of those entrusted with financial responsibility on behalf of the public. Recommendations of the study participants on effective waste management were that the landfill should be relocated due to the pollution in the community. Other recommendations were that the landfill should be engineered to lessen the pollution it is causing. The study concludes that for public participation to work effectively and be sustainable, all district assemblies should have online public participation verification platforms. The performance score of assemblies should influence the allocation of district assembly common funds annually.

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