



Sustinere

Journal of Environment and Sustainability

Volume 6 Number 1 (2022) 26-43

Print ISSN: 2549-1245 Online ISSN: 2549-1253

Website: <https://sustinerejes.com> E-mail: sustinere.jes@iain-surakarta.ac.id

RESEARCH PAPER

Comparative analysis on perspectives of environmental and non-environmental NGOs on solid waste management in Jos metropolis, Nigeria

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Article history:

Received 24 August 2021 | Accepted 1 April 2022 | Available online 30 April 2022

Abstract. This study aimed to make comparative analysis of perspectives of environmental and non-environmental NGOs in Jos Metropolis on key solid waste issues with a view to provide relevant data that would hopefully help in facilitating collaboration between the state and NGOs as well as between NGOs and relevant local and international development partners. Using purposive approach, 115 NGOs in the study area were identified and given the same questionnaire. The study revealed that there are just as many NGOs working in solid waste management (SWM) as there are NGOs that are not (50% each) and there was a link between the NGO categories across all of the parameters considered in the study. It also demonstrated that NGOs' organizational viewpoint on the solid waste issues examined in the study is unaffected by their orientation or primary field of activity, and that registration as a non-environmental NGO is not a disincentive to intervening the area of environment, particularly SWM. It is recommended that the state government adopts an all-encompassing approach or framework that allows for active NGO participation including all relevant stakeholders in the SWM initiatives undertaken by the responsible government agency. Similarly, local and development partners with interest in environmental protection need to assist the NGOs by partnering with them through funding, technical support, and research among other things.

Keywords: NGO; environmental NGOs; non-environmental NGOs; solid waste management

1. Introduction

The United Nations first coined the term Non-Governmental Organisation (NGO) in Article 71 in the charter of the newly formed United Nations in 1945 to distinguish between participation rights for inter-governmental specialised agencies and those for international private organisations in its charter (Lekorwe & Mpabanga, 2007; Mostashari, 2005). The idea was to give a consultative role to organisations which were neither government nor member states (Willets, 2002). NGOs are typically organised around a common purpose aimed at human wellbeing and social welfare such as poverty alleviation either at local, national or international levels in order to provide services and/or address community problems (Dibie, 2008; Tarrow, 2001).

According to Charnovitz (1997), NGOs are described as groups of individuals organised for the myriad of reasons that engage human imagination and aspiration. Ginga (1993) describes

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DOI: <https://doi.org/10.22515/sustinere.jes.v6i1.207>

NGOs as organisations that are not governmental, non-partisan, and voluntary and are dedicated to national or regional development causes. Dupuy et al. (2021) define NGOs as private, not for profit, non-state formal organisations that are not controlled or operated by governments or the market, but which may receive funding and other resources from governments and businesses. The World Bank (1995) defines NGOs as private organisations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services, or undertake community development. NGOs are value-based in nature (altruism and volunteerism being the two principal defining features) and mainly depend, in whole or in part, on charitable donations and volunteerism.

An environmental non-governmental organisation (ENGO) is an NGO that is established or registered with the mandate of making interventions that address, or contribute to address, environmental issues. According to Sandhu & Arora (2012), environmental NGOs typically take up causes related to the environment such as climate change, air pollution, deforestation, ozone layer depletion, waste management, biodiversity and land use, energy, conservation, environmental degradation, and land degradation.

Solid waste management (SWM) problem is a global phenomenon, and obviously more pronounced phenomenon in developing countries like Nigeria. In July 2020, the federal government of Nigeria approved the country's solid waste management policy which is said to provide a framework for a comprehensive integrated solid waste management wherein the federal, state and local governments, MDAs, institutions and NGOs will all play a part. However, experts and observers are quick to point to the fact that Nigeria already has sufficient and effective extant laws and policies on waste management, but enforcement/implementation has always been lacking (Ramos, 2018). In their study on waste governance in Nigeria, Ezeah & Roberts (2014) revealed that top-down waste governance model adopted in Abuja and Lagos was unsustainable and recommended policy reforms that would allow for non-state actors participation in waste governance. In advanced climates where inclusive and participatory municipal SWM systems have been employed, this has produced huge successes. Notwithstanding that some positive changes have been achieved through NGO-state relations in some countries, some challenges still exist, which could be region or country specific, or even globally prevalent. In a study in Kazakhstan, Kabdiyeva and Dixon (2014) categorise challenges into three: lack of trust between government and NGO arising from accountability and transparency issues, ineffective mechanisms of social contracting, and insufficient financial mechanisms at village. In Africa, policy and funding are major issues (Ramos, 2018; Yaaba, 2012; Anierobi & Efobi, 2013; Tukahirwa, 2011).

NGOs can no longer be relegated to simple advisory or advocacy roles but have to now be part of the way decisions have to be made (Simmons, 1998) as they are renowned for carrying out differentiations using different innovative approaches to tackle development related issues in society. Documented evidence on NGOs in SWM activities is rare in most third world countries such as Nigeria like in other areas, particularly Government-NGO partnership activities (Tukahirwa, 2011). However, there is some literature documenting NGO activities in SWM. For instance, study by Rahaman and Said (2018) revealed that NGOs in Zanzibar have recognised government's incapability to effectively manage municipal solid waste and are now involved in addressing the challenge, using different methods that include composting, recycling, and segregation. Singh & Dey (2015) working in different municipalities of Nanipur, India found the NGOs that are capable to make remarkable contributions in the management of municipal solid waste and hence recommended the municipal authority to work with NGOs and other local civic bodies in managing the solid waste problem in the municipality. Study by Rabbani et al. (2020) confirmed to be true the 'assumption that by allocating budget (funds) to NGOs for increasing consumer environmental awareness (CEA), the produced waste will be decreased. Similarly, a study in Shanghai by Arantes et al. (2020) revealed that NGOs are very effective intermediaries

between state and society in promoting environmental governance practices, and that a collaborative governance model can enhance public participation in waste classification, among other things, in urban areas.

Tukahirwa (2011) reported national and international NGOs involved in SWM activities in in East African countries of Uganda and Kenya such as advocacy services, capacity building, community sensitisation and mobilisation, recycling, construction of latrines, garbage collection, monitoring and advisory services, supporting other NGOs amongst others. His study also revealed over 70% of the CBOs and NGOs identified across the five districts of Kampala, Uganda carrying out activities in sanitation and SWM. Most of the NGOs and CBOs involved in sanitation belonged to Uganda Water and Sanitation Network (UWASNET), an umbrella organisation that helps with the coordination and updating member NGOs and CBOs with information on sanitation. Local NGOs were involved in the construction of alternating twin pitlatrines, while others were found to be successful in organising recycling activities. International NGOs assisted the local CBOs and NGOs in the implementation of development and management plans for sanitation and waste management while also providing local CBOs grants to buy equipment, such as wheelbarrows, spades, sacs, forks, and masks for garbage collection. International NGOs and local NGOs constructed toilets for individual households and communities. A number of sanitation technologies are implemented by these organisations, mostly ecosan, twin alternating and VIP toilets. Living Earth Uganda had built technical skills of local CBOs and NGOs in recycling.

Furthermore, a study by Ahsan et al. (2012 & 2014) revealed that there are 22 NGOs and CBOs involved in municipal SWM in Khulna, the third largest metropolitan city in Bangladesh. The study showed various activities of the NGOs in municipal solid waste management in Khulnar city, Bangladesh, ranging from collection from generation source and transfer to disposal sites, composting, medical waste management, recycling, institution building, mass awareness and mobilisation, capacity building, and local resource recovery approaches. The NGOs are involved in collection from generation source and transfer to disposal sites, involved in composting, and involved in medical waste management. Mahadevia and Parasher (2005) reported how NGO's involvement transformed waste management in Jharkhand, India through Institution building, mass awareness and mobilisation, capacity building and local resource recovery approaches. Worthy of mention is a study by Yoshimura and Karo (2005) which revealed how the participation of a local NGO (chonaikai) to address the waste headache resulting from recycling activity of plastic and paper wastes which made up to 60% of the waste volume in Nagoya, Japan resulted into a radical citizen behavioural change, community participation hence waste reduction.

Studies have shown that as the city of Jos expands in size, population and economy, its streets eventually become characterised with backlog of un-cleared refuse heaps (Eche et al., 2015). Solid waste is an eyesore in Jos metropolis and it is not uncommon to see indiscreet and illegal dumping of waste along the streets, market places, uncompleted buildings, undeveloped plots, collapsed buildings (especially due to violent conflict that rocked the metropolis over a decade ago). Da'am et al. (2020) who stated that SWM is yet to reach acceptable standard in Jos metropolis, also referred to the phenomenon as the most visible environmental problem facing the metropolis that is attaining a worrisome dimension with increasing urbanisation. From the Millennium Development Goals (2000 to 2015) and now the Sustainable Development Goals (2015 to 2030), the ugly scenario does not appear to be getting any better. The unfortunate situation made Peter and Ayuba (2014) to infer that municipal SWM has become a nightmare to planners and decision makers in the greater Jos metropolis. The mining activity in Plateau State left numerous mining pits of varied sizes and depths across the metropolis, some of which have become illegal dumping sites for residents. The relief of the area coupled with mining activities has made town planning difficult. As a result, settlements are scattered all around preventing vehicles from collecting solid waste, resulting in water and air pollution (Eche et al., 2015). In the same vein, study by Habila and Bogoro (2021) revealed that NGOs identified lingering violent

conflict as one of the causes of the problem as destroyed buildings have been turned into dumpsites; due to polarised resettlement nature on religious lines, the responsible agency waste collection officers cannot access certain locations for fear of being attacked; and agency workers cannot go out to collect wastes during a conflict thereby resulting to heaps of trash blocking roads and causing pollution of water and air.

In recent years, Jos as a city has witnessed a rapid proliferation of NGOs (Habila & Bogoro, 2021). The failure of state model to adequately address environmental and other societal challenges in the study area obviously results in the emergence of these entities, or individuals and groups of like minds, with a mission to fill the gap left due to the frailties of the public system being operated by the government in dealing with environmental issues in the area. These progressive organisations have different mandates or core area of work which guide them in the design and implementation of their project and programme intervention activities. Where government fails in its mandate to address societal issues that affect the public, NGOs normally step in to fill the gaps by carrying out specific initiatives. The era of MDGs witnessed an increase in the number of NGOs in Jos metropolis and, with the SDGs which are even broader, the proliferation of NGOs has only continued as faces of new NGOs keep on emerging around the greater metropolis. The study aimed to identify NGOs in the study area, determine their category (environmental or non-environmental) and involvement in SWM as well as obtain and analyse their organisational perspectives about the problem of SWM in the metropolis on comparative basis with a view to providing relevant data that would hopefully facilitate NGO collaboration particularly with public establishments and relevant local and international development partners seeking partnership relationships for intervention on SWM and other environmental issues.

2. Methodology

2.1. Description of study area

The pictures of Jos Plateau in Figure 1 show a mountainous area in the north of the state with captivating rock formations. Bare rocks are commonly scattered across the grasslands, which cover the plateau. The altitude ranges from around 1,200 meters to peak of 1,829 metres above sea level and years of mining activity have also left the area strewn with deep gorges and tales (Eche et al., 2015). The higher altitude gives Jos a near temperate climate with an average temperature of between 18 and 22°C thus making Jos one of the coolest cities in Nigeria and attracting many settlers from different parts of the country and people from foreign countries.

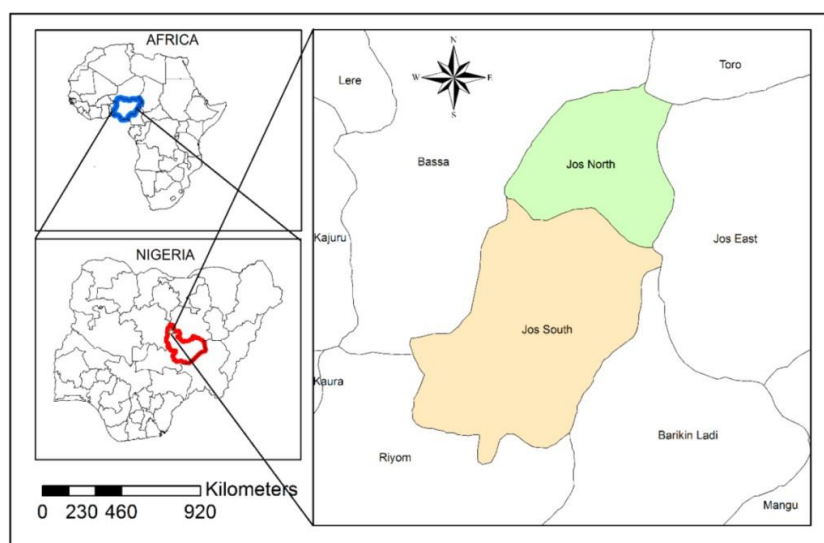


Figure1. Map showing Greater Jos Metropolis, Plateau State (Miner et al., 2020)

The study area covers a land area of approximately 1362 km² and is made up of six local government area councils (Jos North, Jos East, Jos South, Bassa, Barkin Ladi and Riyom) which are jointly referred to as Jos metropolis in what is known as the Greater Jos. It is located in north central geo-political region of Nigeria. It lies between latitude 09° 52' N and longitude 008° 54' E. The area is experiencing increasing population and urbanisation resulting in increase of waste generation and its management challenge (Da'am et al., 2020; Eche et al., 2015) and has a combined population of 1,315,301 according to 2006 census with a growth rate of 4.5% (Wapwera et al., 2015; Fola Konsult Limited, 2009). According to the 2006 Nigerian National Census, the headquarters of Jos North are located in the city center of Jos, with a total area of 291 km² and a population of 429,300 people. Generally, the NGOs are concentrated in the more urbanised areas of Jos South and Jos North Local Government Areas of the Greater Jos metropolis although their work extends beyond their locations.

2.2. Data collection and analysis

A structured questionnaire was first designed which was pre-tested to ensure suitability and ethical compliance before finalisation and use in the field. Before administering the questionnaire, adequate explanation was given to the organisations about the survey and permission or consent of each NGO was obtained before participation. The administration of structured questionnaires to the various NGOs was done during working hours and in their offices. Each organisation was allowed to set a convenient time. The study did not set out to pick a pre-determined number of NGOs, but to identify as many NGOs as possible. Thus, as many NGOs as possible operating in the study area, regardless of their orientation or nature and activities they implement, were identified for the study. By using purposive approach, 115 NGOs in the study area were identified and given the questionnaires. From that number (mixed groups), the NGOs were sorted out into two broad categories (environmental and non-environmental). The NGOs that were carrying out SWM activities were further sorted out from the general group regardless whether they are environmental or non-environmental NGOs so as to determine which of them in the metropolis were actually making any interventions on SWM. The same questionnaire was administered to all categories of NGOs to generate research data. The data collected in the course of the investigation were reported using descriptive statistics in the form of charts and graphs.

3. Results and discussion

3.1. Survey participating NGOs

The study identified 115 NGOs operating in the study area, all of which are non-profits. A total of 96 NGOs responded to the questionnaires, giving a response value of 83.5%. The respondent organisations comprise local and international NGOs some of which are faith-based NGOs, having different thematic areas of intervention, visions, and missions. All the NGOs were found carrying out one form of intervention or the other (or a combination of interventions) across different thematic areas in Jos metropolis. The activities of most of the NGOs were often beyond the metropolis. The NGOs were broadly categorised into two: environmental and non-environmental NGOs. The environmental NGOs in this study refer to NGOs whose mandate or core area of work includes environment where they were legally registered to carry out interventions in the area of environment, either as the only thematic area of intervention, or more, regardless of whether or not they ever carried out any intervention on any environmental issues. On the other hand, the non-environmental NGOs refer to NGOs that environment is not part of their mandate or core areas of work.

3.2. Distribution of NGOs by thematic area of work/intervention

The distribution of NGOs according to their thematic or core area of intervention is presented in Figure 2. The analysis revealed that there are nine different core areas.

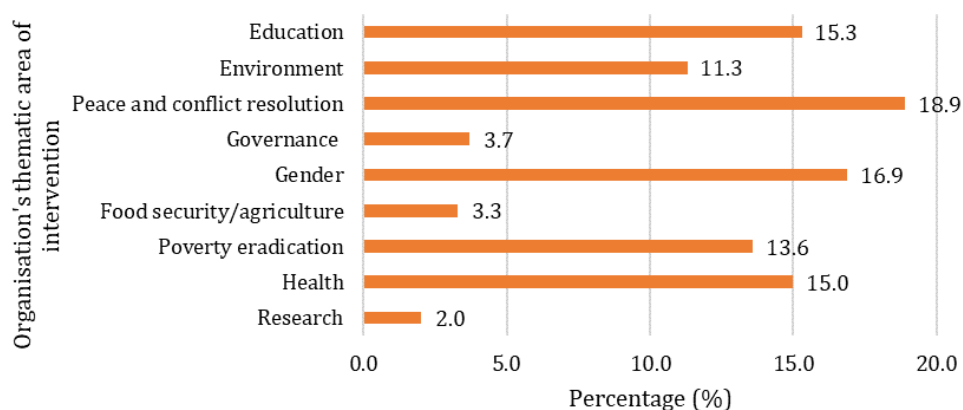


Figure 2. Distribution of NGOs by thematic area of intervention

The study revealed that there are more NGOs involved in peace and conflict work (about 19%) in Jos metropolis than any of the nine core areas identified. This is a multiple response question and so it does not mean that an NGO found in education, for instance, will not be in another thematic area. It was also found that the NGOs depend mainly on grants from donor agencies and philanthropic organisations and individuals to fund their major project initiatives so availability of funding source could account for why the NGOs decide to go into multiple work areas.

As can be seen from Figure 2 above, environment is the sixth major area of work of NGOs in the study area. Although environment is among the top core areas of NGO work in the metropolis, most of the work the NGOs do in environment, particularly SWM, are self-funded, small scale rather than big scale donor-funded initiatives, as in the case of peace and conflict resolution. NGOs in the study area carry out small interventions in environment protection because they see there is a dire need to contribute their quota toward service to humanity. Other areas identified by the study include gender and education, human rights, relief/humanitarian services, empowerment/vocational skills, care and support, rehabilitation, preaching, and counselling amongst others. Therefore, by this finding, one can infer that the NGOs in the study area have the capacity and diversity of skill sets that enable them to make project and programme interventions that can help to address SWM problems amongst other social issues in the study area.

Generally, Figure 2 reflects the SDGs to some extent, given that the areas of intervention of the NGOs in the as they prefer to focus more on areas where a lot of resources are being channelled toward the SDGs by the federal and state governments as well as international development partners. The nature of NGOs and the kinds of activities they are carrying out in the study area falls within the context of the definitions of NGO given by the World Bank (1995), Charnovitz (1997), Sandhu & Arora (2012), Dibie (2008) and Tarrow (2001) which show that NGOs all over the world are established for a myriad of causes and are found carrying out various activities aimed at human wellbeing and social welfare to provide services or address community problems such as environmental protection, addressing social inequalities, peace and conflict, poverty eradication, health, food and agriculture, and education among others.

3.3. Proportion of environmental and non-environmental NGOs in the study

This analysis disaggregates the NGOs into two broad categories; those that registered as environmental NGOs or as non-environmental NGOs. The study revealed that, of the NGOs that participated in the survey, 35.4% are registered as environmental NGOs, while 64.6% were registered as non-environmental NGOs. This implies that, of the NGOs that participated in the study, there are more non-environmental than environmental NGOs registered and operating in

the metropolis. It has been discussed earlier that there are multiple factors that account for the establishment, existence, or presence of NGOs in a particular place and time. Basically, prevailing issues requiring intervention, availability of funds, and how favourability of working environment amongst other things would be of significant influence.

3.4. NGOs actively involved in SWM activities and those not actively involved

The proportion of NGOs that were found carrying out SWM activities and those that were not carrying out any SWM activities (NGOs actively involved in SWM and those not actively involved regardless whether they are environmental or non-environmental NGOs).

The analysis revealed that the NGOs that are actively involved in solid waste activities and those that are not involved in any solid waste activities in the study area account for 50% each. In other words, there are as many NGOs that are involved in SWM initiatives as the NGOs that are not involved in any form of SWM initiatives in the metropolis. This is not, however, to say that the proportion of environmental to non-environmental NGOs in the study is a 50-50 scenario, as one of the key study findings was that most of the non-environmental NGOs were still involved in solid waste activities, and not all the environmental NGOs were necessarily found carrying out any solid waste initiatives. The fact that half of the NGOs in the study were found to be involved in various SWM activities goes to show the severity of the problem in the metropolis. This finding here is in line with studies by Ahsan et al. (2014), Tukahirwa (2011), Yoshimura & Karo (2005), and Mahadevia & Parasher (2005) which have all revealed how the participation of NGOs has significantly helped to address the waste across the study areas.

3.5. Proportion of environmental and non-environmental NGOs actively involved in SWM activities

As can be seen from Figure 3, 53% of environmental NGOs were found to be carrying out various SWM activities, while 47% of the non-environmental NGOs were found carrying out different SWM activities. The study revealed that some of the organisations not registered as environmental NGOs were found carrying out some activities in SWM sub area of environment. This shows how some of the NGOs have gone beyond their mandate into environmental management, although this may not necessarily be a diversion from their vision or mission per se. The analysis revealed that of the 64.6% non-environmental NGOs in the study, 47% of them are involved in solid waste initiatives, while of the 35.4% of the environmental NGOs, 53% are involved in solid waste activities. However, by virtue of their registration or mandate, it would suffice to say that the drive and passion to make intervention in SWM is much more among the non-environmental NGOs than their environmental counterpart.

Several factors could account for the influx of non-environmental NGOs into solid waste sub area of intervention. One factor is that many of the non-environmental NGOs consider solid waste problem to be of very high priority to them than do many environmental NGOs, or that non-environmental NGOs are better equipped to mobilise resources, or have more access to sources of funding, both of which influence their involvement. The type and location of the NGOs is also a factor. For instance, the study found that many of the non-environmental NGOs in the study region, such as religious and health based organisations, as well as women's groups, perceive solid waste as a common social issue that they must address regardless of mission. These small organisations were found to be more responsive in making more small, short-term or 'emergency interventions' to address pollution and waste problem than the bigger ones. The NGOs in this category argue that, as far as they are concerned, any communal or societal problems affect them, and hence they have no limits to the breadth, sacrifice, or service they may provide to humanity. Therefore, they would not be restricted to just certain areas based on what they were registered to do in the face of emergency or critical community challenges. In other words, based on their arguments, NGOs

should be driven by the wave and tide of the moment, not to only respond to issues that fall within their core area of work. This is in line with PAX, KACE & HoACS (2017) who see NGOs as organisations that work for the benefit of the general public at large; and the OECD’s Development Assistance Committee’s Advisory Group on Civil Society and Aid Effectiveness (2008) that refers to NGOs as groups of people who organise themselves to pursue shared interests in the public domain.

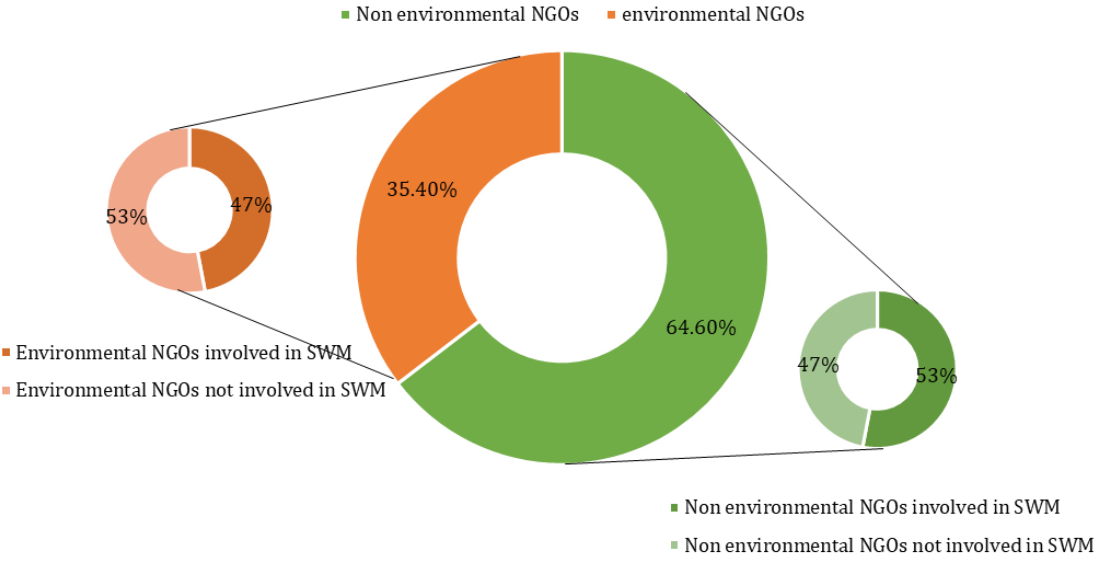


Figure 3. Proportion of environmental and non-environmental NGOs involved in solid waste management

The NGOs' solid waste intervention activities are primarily low-cost, short-term, with the exception of high-cost, long-term programs that would require support from donor agencies. The NGOs usually raise small amounts and mobilise community members and groups such as residents, youth or women, to evacuate bridges or culverts blocked by garbage, evacuate heaps of garbage blocking roads or passages, sweep and collect refuse or garbage near residential areas, community markets, schools, and religious worship centres amongst other things. The finding revealed that most of such NGOs were established by one or few individuals and or hardly have operational systems and policies in place. Decision making process was found to be much easier with the smaller than the bigger organisations. Thus, it is much easier for most of the NGOs to decide to make an intervention on any issues they consider to be of topmost priority or significance to them at any given time. Except for a very few NGOs, most of the environment-based NGOs that are involved in SWM activities were found to be the small ones. A few of the big NGOs, especially international NGOs were found to be providing technical and/or financial support to small groups to make interventions in SWM. In general, however, the study showed that the majority of NGOs stick to specific area(s) for which they were established, particularly NGOs and larger NGOs, which insist on being focused in order to allow for specialisation and efficiency in the specific areas for which they were registered to cover (or mandate). Therefore, given the proportion of non-environment NGOs found carrying out activities in SWM, it suffices to infer that thematic area is not restrictive or a deterrent to the NGOs as far as intervention in social issues is concerned. In other words, SWM is not limited to environmental NGOs in the study area and thematic area in which the NGO may have registered to work, and the NGO’s mandate does not limit its scope or area of intervention. Similarly, study findings by Ahsan et al. (2014) revealed 22 NGOs and CBOs involved in municipal SWM in Khulna, the third largest metropolitan city in Bangladesh.

3.6. Comparison of NGO perspectives of on whether or not solid waste constitutes serious problem to Jos metropolis

Figure 4 presents the comparative views of environmental and nonenvironmental NGOs on whether or not in their own view Solid Waste constitutes a serious problem to Jos metropolis. The study results show that all the NGOs, environmental and non-environmental alike and whether involved in SWM or not, understand the issue and unanimously agree that it poses a serious problem to the metropolis. This is clear as only a tiny percentage of the non-environmental NGOs disagree. The context why 1.0% disagrees is not well understood, but there is a possibility it could be individual organisational judgment, or it may be linked to the respondents' depth of understanding of the problem in the study area. The 1.0% that 'disagree' could possibly be a few non-environmental NGOs that have not been, or are not, involved in any SWM activities in the area. It is reasonable to argue that NGOs that were registered with the mandate to carry out interventions in environmental matters would have a better understanding of the issues than the non-environmental NGOs who were not registered with the main purpose to do any work on environmental issues.

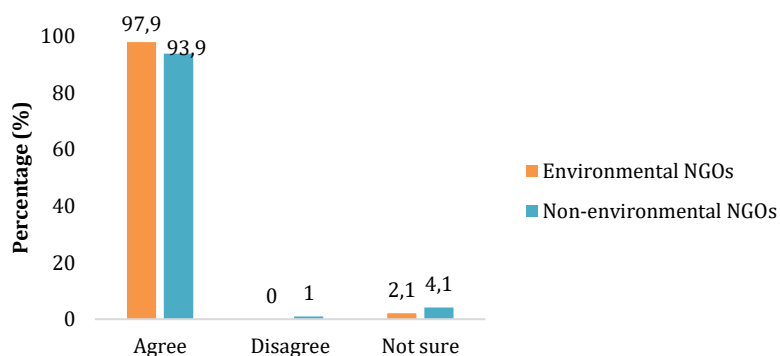


Figure 4 Comparison of NGO perspectives on whether or not solid waste constitutes serious problem to Jos metropolis

In any case, there is a very thin line between the two categories of NGOs regarding their knowledge and perception of solid waste problem in the area. What is clear from the findings, however, is that nearly all NGOs, regardless of their work area inclination, consider solid waste problem in Jos metropolis a serious matter that needs to be tackled. This shows a clear association between the two groups of respondent organisations, or that there is a strong harmony between both NGO groups, that solid waste constitutes a menace in the metropolis. In other words, this finding is an indication that the NGOs generally understand the environmental phenomenon of solid waste in the study area. This finding is buttressed by Eche et al. (2015) who reported that in Jos city there is prevalent indiscreet and illegal dumping of wastes along the streets, market places, uncompleted and collapsed buildings, and undeveloped plots of land. Maton et al. (2016) and Ayininuola & Muibi (2008) also reported that, in most Nigerian cities, wastes are not properly collected and, even where proper collection may be possible, only a small fraction receives proper disposal (Maton et al., 2016; Ayininuola & Muibi, 2008). In the similar vein, study findings by Karanja (2005), Tukahirwa (2011) and Yaaba (2012) all showed that NGOs and CBOs are aware of the Solid Waste problem, as evidenced by their growing involvement in community environmental management activities such as sanitation and SWM to complement state and private sector efforts.

3.7. Comparison of NGO perspectives on whether or not NGO-NGO partnership would help significantly in addressing solid waste problem in Jos metropolis.

A comparative analysis of the views of environmental and non-environmental NGOs as to whether partnership or collaboration between and among NGOs would significantly help to address SWM problem in Jos metropolis or not is presented in Figure 5.

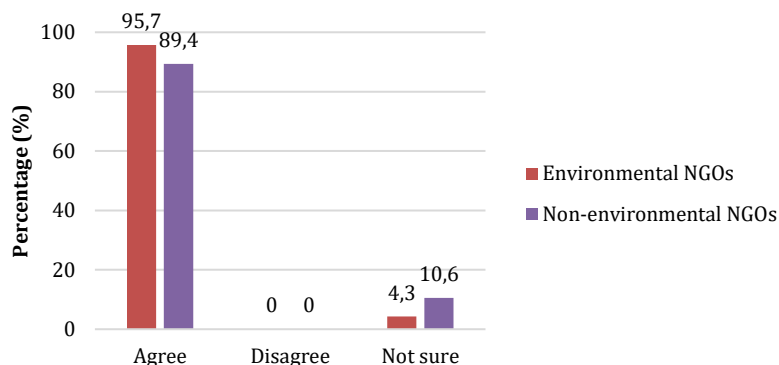


Figure 5. Comparison of NGO perspectives on whether or not NGO-NGO partnership would help significantly in addressing Solid Waste problem in Jos metropolis

Looking at the analysis, the ‘agree’ response is strong among the non-environmental NGOs although it is strongest among their environmental counterpart. This is understandable, because it is rightly expected that NGOs who were registered with the mandate to carry out interventions in environmental matters would have a better understanding of the issues than the non-environmental NGOs who were not registered with the main purpose to do any work on environmental issues. Costello & Gerdes (2011) rightly observed that partnerships among organisations working at various socio-ecologic levels have been identified as key elements in achieving change. Based on this result, therefore, it is obvious that both environmental and non-environmental NGOs generally agree that the partnership between NGOs in combating solid waste debacle would help to address the problem in Jos metropolis significantly. It can be seen that the percentage responses of those who disagree and those who are not sure is not significant, therefore this in no way negates the strong ‘agree’ view held by both both NGO categories. The 4.3% and 10.6% environmental and non-environmental NGOs that are ‘not sure’ could be those who are not involved in any environment protection or solid waste activities, or perhaps a case of individual organisation’s judgment; and may be linked to the respondents’ depth of understanding of the issue in the study area; or possibly a lack of involvement or understanding of the benefits of partnerships in community/development work. It is understandable for the non-environmental NGOs, but of course it is expected that their Environmental counterpart should be more knowledgeable on this topic. The 1.0% that ‘disagree’ could possibly be a few non-environmental NGOs that have not been, or are not, involved in any SWM activities in the area. Interestingly, there is no organisation that has expressed disagreement.

Partnerships between organisations working at various socio-ecological levels have been identified as key elements in achieving change (Costello & Gerdes, 2011). Tukahirwa (2011) had reported on the Uganda Water and Sanitation Network (UWASNET), which is made up of like-minded NGOs and CBOs working in sanitation and across Kampala’s five districts. This finding is an indication that the NGOs generally understand the importance of working collaborating as progress partners to address community problems which is a key approach used in their work. It should be noted, however, that the NGOs pointed to the fact that any effort of theirs was just to ‘fill

a gap' and that the main responsibility rests on government who controls the resources and makes the policies. This position can further be supported by findings of studies conducted by Yaaba (2012) and Anierobi & Efobi (2013). Habila & Bogoro (2021) revealed that in Africa, policy and funding are major issues affecting SWM. Rabbani et al. (2020) also confirmed the 'assumption that by allocating budget (funds) to NGOs for increasing Consumer Environmental Awareness (CEA), the produced waste will be decreased.'

3.8. Comparison of NGO awareness of Government-NGO partnerships in solid waste management in Jos metropolis

Figure 6 is the presentation of comparative analysis of perspectives of environmental and non-environmental NGOs on their awareness of any existing Government-NGO partnerships in SWM (environment protection) in Jos metropolis. The investigation revealed that, generally, NGOs in the metropolis whether registered as environmental organisations or not and whether or not involved in any solid waste or environmental management initiatives in general, were not aware of any Government-NGO partnerships in the study area.

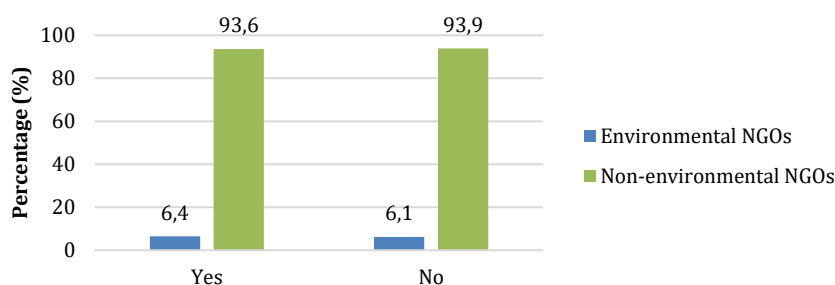


Figure 6. NGOs awareness on government-NGO partnerships on solid waste/environmental management in Jos metropolis

The analysis clearly revealed that there is no significance difference in the views of the two NGO categories about the existence of Government-NGO platforms on solid waste or any environment-based management initiatives in Jos metropolis. This is further underpinned by the fact that even the percentage of 'Yes' and 'Not Sure' responses is not significant to alter the commonly held view of the two categories of NGOs. This then paints the picture of the reality - that there are no existing Government-NGO fora or platforms on solid waste or indeed any environment-based management activities in Jos metropolis. Since there are NGOs in the study that have been in existence since before Nigeria's return to democratic rule in 1999, it could be said that either during the military era (pre-1999) or during democratic era (from 1999) to date, there has not been any partnership or collaborative effort between the government and NGOs in the broad area of environmental management in the metropolis. The 6.2% that said to respond 'Yes' may be a very few NGOs that said that the Ministry of Environment had at some point invited them as stakeholders to certain meetings after which nothing happened positively. Furthermore, if there was any existing relationship between government and NGOs on SWM, the NGOs operating in the metropolis would have been part of it, or at least they would be aware of it through such means as the media or other NGO networks and coalitions. In the same spirit, if the government had at any time partnered with NGOs to work as a team on any solid waste or environmental management initiative, the NGOs would have known and said so.

Although effort had been made at some point by the government to privatise the collection and disposal of solid waste in Jos metropolis, the policy had not included NGOs in the scheme. For instance, the Plateau State Environmental Protection and Sanitation Agency (PEPSA) revealed that

in 2003, the Plateau State Environmental Protection and Other Matters there-to law 2001 was amended with the view to make room for the privatisation and commercialisation of SWM, a provision that could allow for the engagement of private commercial waste operators licensed by the then Ministry of Environment and Mineral Development. The Plateau State Ministry of Environment then attempted to implement the privatisation and commercialisation of waste collection and disposal in the state, registering 10 private commercial organisations with the mandate to carry out refuse collection and disposal on commercial basis in Jos metropolis. Consequently, the Environment Ministry constituted an Intervention Team to take care of the waste collection and disposal in areas that the private organisations could not cover. However, no NGOs were included in the partnership arrangement and only in a matter of few months the initiative had collapsed. NGOs are usually driven by some factors to seek collaboration with government and other development partners. Unfortunately, partnerships do not exist or are unsuccessful in most countries, particularly in less and under developed ones. Technical and financial assistance, institutional support, adapting a programme to a particular area, promotion of accountability and transparency, and enhancement of people’s participation in government programmes are just a few of the reasons that have been discovered (Vadaon, 2011). This finding aligns with the reasearch of Wilson and Scheinberg (2010) which reported that the Public Private Partnership (PPP) model woefully failed in Nigeria because government authorities only contract large-scale private companies, leaving out NGOs and other stakeholders from the formal partnership arrangements in SWM, making the model ineffective, non-inclusive, un-encompassing and therefore unsustainable. Similarly, a study by Virginietes, Can and Yue (2020) in Shanghai showed that NGOs are very effective intermediaries between state and society in promoting environmental governance practices, and that a collaborative governance model can enhance public participation in waste classification, among other things, in urban areas. Uwadiogwu & Chukwu (2013) and Anierobi & Efobi (2013) had also found an inherent lack of accommodation for the informal sector (in particular) the NGOs in SWM by the state models in use. Similarly, accountability and transparency, funding and policy issues have been identified by Kabdiyeva & Dixon (2014), Tukahirwa (2011), Yaaba (2012), Anierobi & Efobi (2013) and Wilson and Scheinberg (2010) as major challenges hindering Government-NGO relationships.

3.9. Comparative NGO perspectives on the performance of responsible government agency in SWM in Jos metropolis

The comparative analysis of perspectives of environmental and non-environmental NGOs as to whether or not the responsible government agency was performing well, or doing enough, to tackle solid waste problem in Jos metropolis is presented in Figure 7.

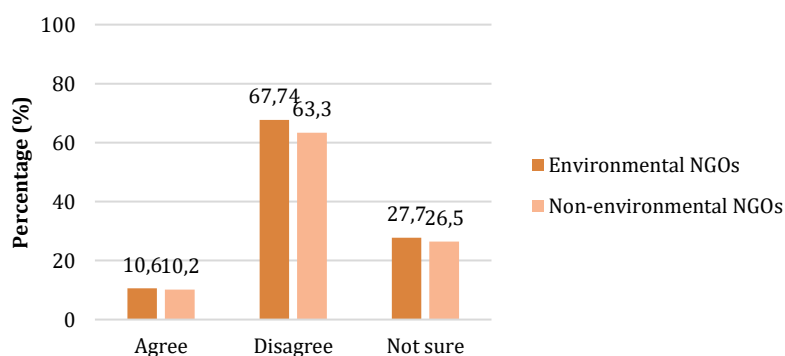


Figure 7. Comparative NGO perspectives on the performance of government agency in SWM in Jos metropolis

Based on this study finding, it is a commonly held view amongst environmental and non-environmental NGOs that the government agency tasked with statutory responsibility to manage solid waste in Jos metropolis was not doing enough to tackle the problem. This is because over 60% of both categories of NGOs do not agree that government agency, despite the effort being made, was doing enough to deal with the problem in the metropolis. Only a little over 10% agree that the agency was doing enough and 27.7% of both categories of NGOs are not sure, but this is not significant to change the general position of both NGO categories that the responsible agency was not doing enough to deliver on their mandate. The 'Not Sure' response might indicate that most NGOs are new to the study, because they provided candid perspectives of their organisations, they do not want to commit to a subject about which they are unfamiliar. Similarly, NGOs who strongly believe and argue that the responsible agency is underfunded by the government are unlikely to claim that the agency is failing. One-man NGOs, especially those owned by government officials and politically inclined individuals, may sometimes be reluctant to give opinions on matters that may be unfavourable to the government.

The Chi-square degree of difference displays a general held view among the organisations about their dissatisfaction of the responsible government agency, revealing a general held view among the organisations about their displeasure with the responsible government agency. As a result, there is no significance difference between environmental NGOs and their opposite counterpart in their views as to whether the government was doing enough to tackle solid waste problem in the study area. In other words, orientation or area of work does not influence organisational perspective about whether or not the government agency was performing well or doing enough to address the problem in the metropolis. It is reasonable to argue that the government agency cannot be said to be doing enough because government policies and systems on SWM are not inclusive and effective (Habla & Bogoro, 2021; Ramos, 2018; Ezeah & Roberts, 2014; Wilson and Scheinberg, 2010; Tukahirwa, 2011; Yaaba, 2012; Anierobi & Efobi, 2013).

3.10. Comparative organisational perspectives on NGO performance in SWM in Jos metropolis

Figure 8 presents the analysis of comparative views of environmental and non-environmental NGOs as to whether or not these NGOs are doing enough to tackle solid waste problem in Jos metropolis. The scenario here is more interesting because, looking at the analysis of their responses, it is clear that the NGOs are more critical about themselves than they are about the government. Imagine that none of the non-environmental NGOs agrees that NGOs are doing enough as against only 6.4% of their environmental counterpart. It is likely that the few environmental NGOs that agree that NGOs are not doing enough may be new in the study area and/or those who may not be conversant with the context.

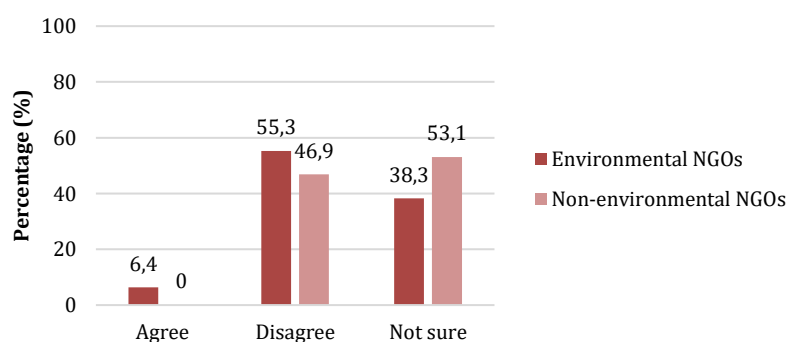


Figure 8. Comparative organizational perspectives on NGOs performance in SWM in Jos metropolis

We have seen that most NGOs involved in SWM activities were not registered as environmental NGOs, but the severity of the problem and passion to serve humanity drove them to get involved. Such passion might have been expressed with some degree of overzealousness in this circumstance. This context is very difficult to explain, but it is possible that where organisations are unable to fulfill their mandate, or if they are unable to implement their annual programme projections and plans (which most NGOs do), they are likely to score themselves objectively and could have been realistic in their responses to say that they are not doing enough, or nothing at all. What is clear and important from the analysis is that half of the NGOs in the study area agree that NGOs are not doing enough to tackle solid waste problem in the metropolis. The Chi-square test of association found a relationship between the two categories of NGOs, implying a fairly common agreement amongst the respondent groups that NGOs are not doing as expected of them to address the solid waste problem of the study area.

It should also be noted that the percentage of 'Not Sure' responses recorded among the NGO categories is higher than anywhere else in the study and it was more among the non-environmental NGOs. Most of the NGOs felt this question was a difficult one for them to respond to and would have wanted somebody else to assess their performance other than do so by themselves, further arguing that it was difficult to gauge their performance using the same criteria used in assessing government's performance. Although they would not give much credit to their effort, the NGOs argued that, if they had fractions of government agency's funding, they would do far better and the impact of their activities would be well obvious in the metropolis. Others argued that if government were operating an inclusive system where NGOs are involved in the process of SWM in the metropolis, their contributions would be much more impactful and the metropolis would be better for it. This is in line with the findings of a research by Habila & Bogoro (2021), who identified the unaccommodating government policy on waste management/system that does not allow room for NGOs participation as the leading challenge facing NGOs in their SWM effort in Jos metropolis. Other key challenges identified by the study include inadequate funding sources to NGOs and CBOs and lack of continuity in government policies. This is also corroborated by the findings of Ramos (2018) which stated that policies on SWM in Nigeria are not lacking, but implementation has always been the issue. One can deduce that the perspective of NGOs on whether or not NGOs themselves are doing enough to tackle SWM problem in the study area is not in any way influenced by their orientation as environmental or non-environmental NGOs.

3.11. Comparative NGO perspectives on the use of an all-inclusive and participatory SWM approach in Jos metropolis

A comparative analysis of perspectives of environmental and non-environmental NGOs on whether an all-inclusive and participatory approach or system would significantly improve solid waste problem in Jos metropolis is as presented in Figure 9.

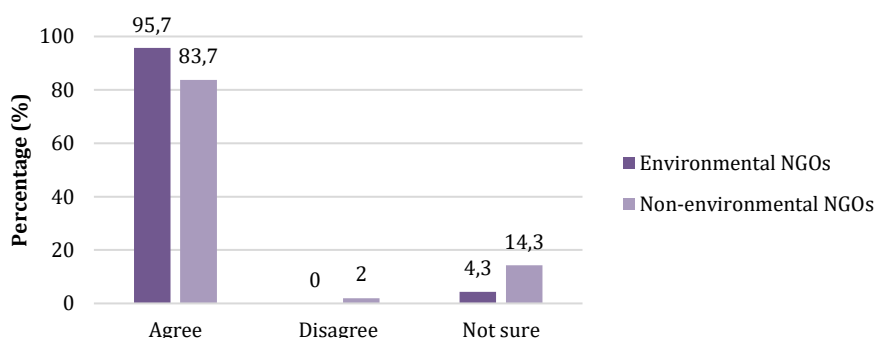


Figure 9. Comparative NGO perspectives on use of an all-inclusive and participatory SWM approach in Jos metropolis

The study discovered that both categories of NGOs agree that the use of an all-inclusive SWM system where government involved relevant stakeholders, including NGOs, would significantly improve the solid waste situation of Jos metropolis. As can be seen, there is an association between the two groups of respondents, implying that irrespective of their orientation as environmental or non-environmental organisations, the NGOs hold a common view that the introduction of an all-inclusive system of SWM by government will significantly result in the improvement of the solid waste problem in the metropolis.

This finding shows that the NGOs understand the significance and power of inclusivity, active participation, and joint efforts to fight a common cause, all of which offers greater potential for a more sustainable success over a societal issue. No environmental NGOs disagree, which is unsurprising given that NGOs are well-known champions of inclusive government and democratic procedures as change agents. NGOs are advocates of inclusive planning and implementation of public projects and programmes and this has become a characteristic feature of the initiatives they formulate and implement. In the design and implementation of their projects and programmes, NGOs typically target disadvantaged groups in society such as girls, women and children, the poor, internally displaced persons, minority groups, less privileged individuals, groups or communities, persons living with disabilities, and so on. and they always deploy inclusive approaches and participatory tools. NGOs that belong to certain coalitions and networks very well understand the importance of working in a team. It is somewhat unclear that there was 14.3% 'Not Sure' among non-environmental NGOs. This is likely to be individual organisation's judgment especially when an organisation is not familiar with the context, or terminology, very well. From the analysis, one can deduce, that the need of using an all-inclusive and participatory method in tackling the solid waste problem is understood by NGOs regardless of whether they are environmental or non-environmental. This finding is in conformity with Tukahirwa (2011), Anierobi and Efobi (2013), and Yaaba (2012) who argued that a key gap and weakness of the waste management system in most developing countries including Nigeria is that the roles of the informal sector, particularly the third sector (non-profit organisations or NGOs and CBOs) is inherently lacking. Furthermore, Ezeah and Roberts (2014), Wilson and Scheinberg (2010), and Uwadiogwu and Chukwu (2013) all have revealed through their studies that state models of SWM used by government were not encompassing and inclusive, hence unsustainable and ineffective in Nigeria. The state models in use in developing countries, according to Anierobi and Efobi (2013), have an inherent lack of accommodation for the informal sector in SWM.

4. Conclusion

This study identified a large number of NGOs in Jos metropolis comprising environmental and non-environmental NGOs which are found to make interventions in various areas including the area of environment and in particular SWM which is the main thrust of the study. Although the study discovered that there were more non-environmental NGOs operating in the study area, there were comparatively equal percentage of NGOs that were found involved in SWM initiatives than those that were not.

One key finding was that the SWM model in use by the government is not inclusive and does not provide space for the participation of NGOs. It was also a key revelation that most of the non-environmental NGOs were found carrying out various SWM activities in the study area, arguing SWM was not an exclusive preserve of environmental NGOs, that their mandate is the society therefore, as far as they are concerned, all community or societal problems is their mandate and thematic area of work and so they have no limits as to scope, sacrifice and service they can render to humanity. Thus, in the face of emergency or critical community challenge such as the solid waste problem in the metropolis, they would not be restricted to mandate or thematic area of operation.

A comparative analysis of the perspectives of both NGO categories revealed association in the parameters considered in the study. That is to say that, generally, orientation as environmental or non-environmental organisations did not result in significant difference in their perspectives over the issues considered. For instance, the NGOs generally agreed that solid waste is a serious problem in Jos metropolis; they agree that Government-NGO and NGO-NGO partnership and collaboration will help address solid waste problem in the metropolis significantly; that both government agencies responsible for SWM and NGOs alike are not making enough effort to address solid waste menace in the metropolis; that the SWM model/system in use is not accommodating of NGOs and they also believe that the government's employment of an all-inclusive SWM approach, in which NGOs and other key stakeholders are brought in to actively engage in the process, will considerably aid in more effectively and sustainably addressing the problem of solid waste in the metropolis. It is recommended that the Plateau State government considers these NGOs as partners in progress and embrace them freely by way of adopting an all-encompassing framework that allows for their active participation including all relevant stakeholders in the various environmental management initiatives undertaken by the responsible government agencies. By bringing the NGOs to the table, the government would benefit from their reach-out and mobilising power, innovative approaches, wealth of experience and skill set, and accountability and transparency. Similarly, other local and development partners with interest in environmental management, in particular SWM, should come to the aid of NGOs in the metropolis by partnering with them through funding, technical support, and research among other intervention initiatives. The majority of the NGOs are dedicated and have demonstrated a very good understanding of the context, geography and issues, but funding sources are lacking. NGOs need to explore collaborative ways of sourcing funds and intervention on SWM and other environmental issues afflicting the study.

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