



Garden City or Garbage City: The Case of Port Harcourt Metropolis, Rivers State, Nigeria

Tombari Bodo^{1*}

¹*Department of Geography and Natural Resources Management, Faculty of Social Science, University of Uyo, Uyo, Akwa Ibom State, Nigeria.*

Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

Port Harcourt acquired the name "Garden City" for its neatness, beauty, organisation of the buildings and well constructed road networks across the entire city; but this once beautiful city has been overtaken by garbage. Hence, the objectives of this study were to find out why the solid waste management strategies employed by the Rivers State Waste Management Agency and their contractors are not working and provide best solutions in curbing the challenges militating against solid waste management of the city. Purposive sampling technique was used to determine the sample. Because of the time constraint and the wide area of coverage for this study; 10 areas consisting of 10 communities were selected based on their size, popularity and centrality. Oral interviews and field observation were the methods of data collection and the data obtained through oral interviews were analysed through simple coding, groupings, re-writing, transcribing and interpretations. The results revealed that the solid wastes generated are uncontrolled due to overcrowded settlements; an uncultured way of living of the residents; lack of the needed manpower and technology on the part of the solid waste contractors. It was also revealed that the Government do not carry out proper monitoring and uses unskilled and unqualified persons to

*Corresponding author: Email: tombarib@gmail.com;

carry out their jobs. It was concluded that to adequately clean up the city of Port Harcourt, the Government should stand up to their responsibility of keeping the city clean and sensitize the people on the need to package and dispose of their waste properly.

Keywords: Drainages; garbage; garden city; solid waste; solid waste management.

1. INTRODUCTION

Port Harcourt is one of the biggest and most pronounced cities in Nigeria because of its status as the operational headquarters to most of the multinational oil companies. This factor has also contributed to the rapid urbanisation of the city and its environs. Aside from this, Port Harcourt also acquired the name "Garden City" for its neatness, beauty, organisation of buildings and well constructed road networks across the entire city. In the 80s and 90s, the whole city used to be surrounded by beautiful trees and flowers; and heavenly relaxation spots (Isaac Boro Park in Diobu, Tourist Beach in Port Harcourt Town, Port Harcourt Zoo etc). It was within this period that the name, "Garden City" was earned. However, the environment of Port Harcourt has overtime been redefined and so also is the society with the trees gone and flowers lost from the streets. Currently, in Port Harcourt, everywhere you turn; one is greeted with solid waste that is conspicuously littered all over the major streets and in the drains.

Many have argued that the city of Port Harcourt has experience more development in recent years (or better put, progressing than the former) as we now have more new buildings scattered in many places over the city. But can this statement really be true? Can a building or buildings truly develop a place, especially when they are clustered or mounted on a drainage system (causing flooding) or seen to immediately cause traffic or obstruct the normal flow of human activities? Can a city be truly developed outside its surrounding? The evidence of every developed society, is in the beauty of its environment, either in its attractiveness or comfort of the surrounding [1]. The human environment explains a lot about how a society has evolved and the activities going on in the environment defines the society [2]. No society can grow outside its environment as the civilisation of the people will reflect on their surroundings showing how cultured, organised and politically managed they have become [1]. Thus, a decent environment can show progress, healthy living, advancement of technology and the civilisation of the people and good governance. On the other hand, a dirty

environment can reveal a state of disorder, lawlessness and poor governance.

Currently, Port Harcourt can be easily seen by a visitor as a garbage town, as one is free to litter the major roads as a resident or as a passenger in a moving vehicle. Rivers State Waste Management Agency mainly relies on open dumps and old landfills for waste disposal [3]. The continuous degradation, scarcity of land and the associated health hazard has mounted pressure on the agency to change their strategy [3]. One of the challenges that urban cities are facing currently is how to clear the continuous heaps of solid waste from the environment [2]. Like the case of Port Harcourt, the environmental officers and waste management contractors appears unable to combat the solid waste or regulate the unlawful and haphazard dumping of solid wastes on the streets and drainages, which clearly violates the Rivers State Clear Air and Health Edict of 1990 [2]. When the sanitation of a people is not taken seriously, the people will face needless diseases and death [2]. Unhealthy waste disposal is one of the biggest challenges facing developing countries today [4]. When solid waste is scattered around a city especially at the entrance points into the city (like the case of Port Harcourt from Eleme Junction axis); it can become a menace and an embarrassment¹. Some scholars have attributed the indecent littering of solid wastes on the major roads and waterways in Port Harcourt; to poor state of the solid waste management, poor funding, wrong lifestyle of residents and poor implementation of the necessary environmental policies [2,5,1]. This unsolved challenge has given birth to the rise in flooding in recent times in virtually every part of the city during the rainy season [6].

Before now, the surrounding of the Rivers State Waste Management Agency on Ikwerre road, used to be an eyesore as the entire premises used to be so dirty and unkempt. Like Mr. Wuchie, a resident that sells building materials in the area recounted, "During this period, they use to wonder how such an agency can adequately sanitise the State when their own compound and the surrounding settlements around them are in a mess". Realistically, to successfully combat the

heaps of solid waste off the streets of Port Harcourt, all hands must be on the desk; the State Government and the residents must take responsibility for ensuring that the environment is clean at all times and not only on special days that are set out for sanitation but for every other day. This study aims to finding solutions to the problems militating against the waste management of Port Harcourt Metropolis.

1.1 Objectives of Study

The objectives of this study were to:

1. Find out why the solid waste management strategies employed by the Rivers State Waste Management Agency and their contractors are not working;
2. Provide best solutions in curbing the challenges militating against solid waste management of the city.

1.2 Study Area

Port Harcourt is the largest city of Rivers State and it is the capital city. Some have alleged that Port Harcourt started a long time ago as a fishing settlement [7] while some others claimed that it was part of the farmland of Diobu village. Port Harcourt is located in the humid tropics of the southern part of Nigeria [8]. The city is located

geographically within latitude $4^{\circ}45^1$ and $4^{\circ}55^1$ North and Longitude $6^{\circ}55^1$ and $7^{\circ}05^1$ East². The modern Port Harcourt is now very extensive, and it will be difficult for one to ascertain the actual dimension of the city. It consists of the former European quarters now called Old Government Residential Area (GRA) and New Layout areas (i.e Port Harcourt Local Government Area); the main city that now covers the entire Obio-Akpor and part of Eleme and Oyigbo Local Government Areas. The Greater Port Harcourt region, spans into eight Local Government Areas which included Port Harcourt, Okrika, Obio-Akpor, Ikwerre, Oyigbo, Ogu-Bolo, Etche and Eleme.

2. METHODOLOGY

2.1 Nature and Sources of Data

The study adopted a qualitative approach which is most appropriate for exploring people's opinions about how they feel about their environment or a situation that has affected them [9,10,11]. The survey type of design was considered best for this study, since this method validates that, collecting and analyzing data from a few people or items can be used as representative of the entire group [9,12]. This study was rooted in primary and secondary data that falls within the focus of this study.

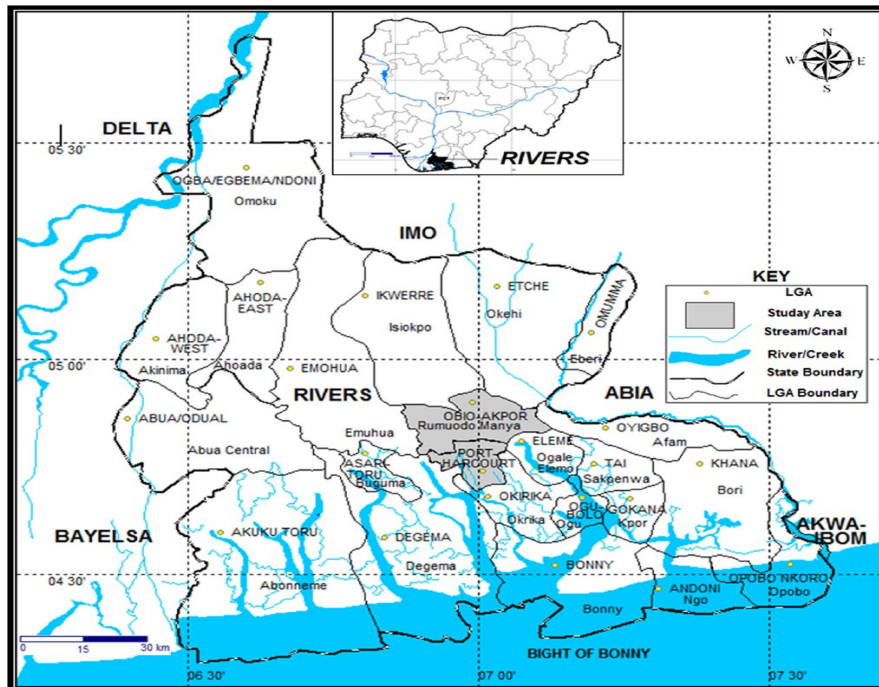


Fig. 1. Map of Rivers State showing Port Harcourt metropolis (Source: Akukwe and Ogbodo)[13]

2.2 Population and Sampling Procedures

The study population is a collection of all items whether of people or of objects or of events, that are to be considered in a given problem or situation [12,14]. Since it is not practicable to collect data about the entire population, a sample was chosen to represent the whole population of Port Harcourt metropolis [15,12,14]. Thus, the population figure of Port Harcourt metropolis is 902,749 (comprising 462,350 and 440,399 for Obio-Akpor and Port Harcourt LGAs respectively) according to the 2006 population census of Nigeria [16]. Purposive sampling technique was therefore used to determine the sample. Because of the time constraint and the wide area of coverage for this study; 10 areas consisting of 10 communities were selected based on the size, popularity and centrality as shown in Table 1.

Table 1. Data collection distribution

Selected communities in Port Harcourt	No. of interviews
GRA axis (Phase 1-3, Orazi, Eligbam)	4
Borokiri (Town)	2
Rumuola	2
Rumuokoro	2
Rumoukuta	2
Diobu (Mile 1-3)	4
Rumuigho	2
Eliparanwo	2
Iwofe	2
Woji	2

Field study, 2018

2.3 Method of Data Collection and Analysis

2.3.1 Observations

Observation is defined as a purposeful, systematic and selective way of watching and listening to an interaction or phenomenon as it takes place [17]. Participant observation occurs when a researcher participates in the activities of the group being observed in the same way as the members, with or without their knowing that they are being observed. Non-participant observation occurs when the researcher does not get involved in the activities of the group but remains aloof just watching, observing and listening, drawing conclusions from his observations.

In this study, the observation method was used to study the entire community environment and behaviour all through the day to see how solid wastes were disposed by the residents and how they were collected by the various waste management contractors. We used the two type of observation (Participant and Non-Participant) effectively during oral testimonies to observe behaviour (in the form of sudden annoyance, excitements, provocations, and outburst) of respondents. A digital camera was discretely used to take pictures of activities around the community that may be relevant in this research.

2.3.2 Oral Interviews

These Interviews involved asking questions from those who have information about a phenomenon that the researcher has not been able to observe directly [18,19]. In this study, the interviews were focused on persons who were 18 years and above and have stayed in Port Harcourt for a longer period. Thus, oral interviews were used to achieve the objectives of the study.

2.4 Method of Data Analysis

For this study, data analysis was done manually which is very accepted by previous scholars since the quantity of data was manageable and was not too large [20,21]. The data obtained through oral interviews were analysed through coding, groupings, transcribing, interpretations, and re-writing,.

3. RESULTS AND DISCUSSION

3.1 Hindrances to Solid Waste Management

In an oral interview conducted across the chosen communities, respondents gave their opinion on the matter. An elderly woman who claimed to be an indigene of Rumuola community asserted that, *"the problem of waste management in Port Harcourt started gradually yesterday (as in many years ago) and it is now surfacing today. The number of people currently residing in this city has gone beyond its capacity, as no government can manage the waste of so many people in a small enclosed space.* She saw the overpopulated, crowded and unmanaged population as the problem of solid waste management in Port Harcourt. Another elderly man (preferred to called Mr. Vincent) also from Rumuola community revealed that, people are so crowded in the available houses that are built so closely together over a very small area; he

explained that, this is the reason why a small settlement can produce solid waste that is equivalent to the same quantity produced in a whole Local Government in the rural areas. The emphasis here is again placed on the unmanaged population and the tendency of a small settlement housing a very large population than it is expected or required.

A community chief in Borikiri (Town axis) of Port Harcourt declared, *"The waste collectors (contractors) are doing nothing, they are just creating more problems for us. I have observe over time and seen these waste collectors bathing (robbing the dirt on their bodies carelessly), scattering them all over the place and then, all over street; they go around with an already over-filled truck to carry more waste and then, litter the content of the truck on the streets they follow to their supposed destination. I believe that by the time they get to their final destination, they might even have an empty truck with nothing to dispose off, as the streets they drove through were already used as mini deposit points"*. The problem identified here is that the contractors that are tasked with the responsibility of clearing the waste are also contributing in the dirtying of the surroundings they are supposed to keep clean.

Mrs. Comfort, a landlady resident at Rumuokoro community explained in an oral interview that, the contractors responsible for clearing the solid waste in Port Harcourt lacks the technical know how and do not always have enough manpower for the job. She explained further that Rumuokoro axis especially around the junction where the community daily market is, requires a minimum of ten trucks that must always come at least twice daily to be able to keep the area clean. In another interview, Mr. Amada explained thus, *"Port Harcourt used to be a clean town when compared to other cities in Niger Delta, but today some will say that Uyo, Calabar or Asaba are cleaner cities than Port Harcourt. We used to have receptacles in front of two to three buildings on every streets in Port Harcourt even up to the early 90s; now I am surprised that the government has chosen major junctions (like Market junction on Ikwerre road) in Port Harcourt for open waste disposal. In some cases, two to three communities have just one point for open waste disposal. It is this kind of management of waste that has turned Port Harcourt into a garbage city"*. A staff (name withheld) of the Rivers State Waste Management Agency during an interview acknowledged that the dirty-state of the city is a well known fact by everyone and the

Government is doing their best to avoid garbage taking over the entire city. He emphasized that the waste management agency are doing the best they can, but the job of cleaning Rivers State is beyond the agency. In his exact words, he asserted that; *"the agency has fewer staffs and lacks the capacity to keep the state clean; this is the main reason they depend on contractors for the management of solid waste. This lack of man-power is why they cannot carry out proper monitoring and adequate research to ascertain the quantity of waste generated in different disposal points in Port Harcourt"*.

Mr. Waribo, a resident in GRA (Amaechi drive) in an interview, blamed the Rivers State Government for the current waste management challenges in Port Harcourt. In his own opinion, he said, *"there are experts in waste and environmental management and city planners (town planners), but rather people without knowledge are placed in such sensitive offices. The government should avoid playing politics when giving appointments especially in positions that require sound knowledge to function"*.

The summaries of hindrances to solid waste management as stated by respondents are:

- i. Overcrowded settlements: from our field observation, we noticed that between Rumuola and Rumuokuta; Diobu (1,2 and 3); and Borikiri axis (the waterside inclusive) are so many clustered thickly occupied open and hidden settlement with thousands of people living in some areas. The wastes generated in these areas are heaped openly (without proper packaging) on the express-way, on the demarcation at the centre of the road or on one side of the road;
- ii. The uncultured way of life of the residents: like the respondents rightly observed, throwing dirt around is the culture of the people of Port Harcourt. It is normal to litter or disposes solid wastes indiscriminately on the streets and in the drainages. There is no law that correct or cautions one to do otherwise;
- iii. The Rivers State Waste Management Agency (RIWAMA) lacked the manpower and the needed technology to manage solid waste in Rivers State and as such, employ the services of contractors to do their own job. But the available contractors are grossly inadequate and do not carried out their job efficiently;

- iv. There is also the issue of the carelessness on the part of the contractors and even the residents. RIWAMA do not have an effective monitoring team;
- v. Managing waste of any kind requires knowledge. Unqualified persons are recruited to proffer solutions on waste management.

3.2 Solutions to Adequate Solid Waste Management

During the intensive oral interview in the study area, some of the respondents believed that proper city planning or restructuring of the main city is the only way out. As one of the respondents, said it; *“most of the already built-up areas should be restructured, and this will require the State Government demolishing some structures (buildings) that do not fit into their Master Plan”*. A university professor (name withheld) resident in the Old GRA explained that the Government have to employ the services of competent persons to study and do adequate research on the city garbage situation, looking at the original design for waste management and marrying it with the current city challenges; with the view of reducing more damage and crisis that may come with restructuring of the normal way of things of the people. Mrs. Comfort in an oral interview, suggested that, the cleaning the city of garbage requires some technicalities in order not to spread diseases. In her opinion, modern machines that are capable of recycling the waste into resource or something useful should be purchased; and this should be acquired by the State Government.

A community chief in Borikiri while adding his opinion on the matter asserted that, *“the State Government should see the task of clearing the city of solid waste as a developmental project. A society that is clean and beautiful with trees and flowers is already developed like what we see in the European and North American countries”*. In this sense, the priority of the respondents beyond every other developmental project by the Government is for their surroundings to be clean. In another interview, Mr. Waribo, asserted thus, *“Aside from the State Government who has bigger blame in this matter, everyone should be well cultured and civilized enough in the disposing of solid wastes. When the supposed decent parts of the city (GRA Phase 1,2 and 3) is filled with garbage at everywhere you turn; then what will you now expect from squatter settlements all over the city. The State*

Government should make provisions for this sector and issue sanctions and punishments for defaulters.

The best solution to a problem is when it is coming from those who are living and suffering from that problem [22,23]. Thus, the solutions proffered by the respondents could solve the challenges of waste management in Port Harcourt if the necessary institutions would take these recommendations seriously. From our field study, we noticed that new houses are sprinkling up everywhere all over the city that is not checked by the Government. Every new house will accommodate more people that will generate more solid waste and create more problems for the Government. The challenge here is that, more people are still relocating to the compacted areas (Rumokuta, Rumuola, Rumuokoro, Borikiri and Diobu) of Port Harcourt. Most of these people are moving from the rural areas to the city are squatting with their wards while hoping for the greener pasture. The government can indirectly move people willing from the city by channelling major development to new lands or to distant Local Government Areas (LGAs) away from the main city. Headquarters of some major Government establishment could be taken out of the city. This will reduce generated waste per unit area. The Government should employ the services of the resident universities (that is supposed to serve as research centres to their community) or independent academicians in finding more sustainable scientific based solutions to the problem of solid waste management that is associated with the urbanized city of Port Harcourt.

The State Government can employ specialist or environmental research scientist into sensitive positions of the Rivers State Waste Management Agency (RIWAMA) and also employ more hands in the running of the day- to -day solid waste disposal of the city. Environmental education of the people is very essential to achieve success in the solid waste management of Port Harcourt [24]. The people of Port Harcourt are used to throwing their solid waste on the streets, drainages and all over their environment; a re-orientation is necessary. Throwing solid waste around the surrounding may lead to spread of diseases.

4. CONCLUSION

Every beautiful and developed city all over the world has a well defined solid waste

management plan. The city of Port Harcourt has been taken over by heaps of garbage in different parts of the city and this trend can get worsen during the raining season. During the raining season, water from the overfilled drainages that, couldn't find its way from the city to the rivers and sea, could over run the city destroying houses and properties. To adequately clean the city of Port Harcourt, the Government should take the responsibility of cleaning up the city seriously and sensitize the people on the need to package and dispose of their waste properly.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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APPENDIX



Plate 1. A typical residence on Ameachi Drive GRA, Port Harcourt (Fieldwork, 2018)



Plate 2. Roads littered with solid wastes on Ikwerre Road, Port Harcourt (Fieldwork, 2018)



Plate 3. A scavenger scattering waste in search for a precious item (Fieldwork, 2018)



Plate 4. Commercial activities going on normally in a dirty environment (Fieldwork, 2018)



Plate 5. Drains and the surrounding are covered with solid wastes (Fieldwork, 2018)



Plate 6. A broken down truck over a solid waste dump (Fieldwork, 2018)

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