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# Investigating the use of plastic bags in Lagos, Nigeria

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## **Abstract:**

Lagos State in Nigeria is faced with the massive problem of waste from plastic bags which causes the yearly flooding displacing thousands of residents and causes diseases like malaria. Plastic bags which became popular because of their versatility, affordability and durability have now become a major source of environmental degradation requiring the use of more environmentally friendly alternatives like Jute, woolen bags, and biodegradable types of plastic. The Nigerian legislature proposed a plastic bag prohibition bill to reduce the manufacture and use of plastic bags with fines and time behind bars which is Nigeria's first attempt at managing the menace of single-use plastic bags. The goal of this study is to determine reasons for the continued use of plastic bags to contribute to better management of plastic bags waste. It further investigates the available alternatives and willingness of the residents of Lagos to embrace some alternatives to plastic bags. Anonymous online surveys were distributed across social media platforms and interviews involving shop owners described as "givers" who are off social media in this study was carried out. Responses from both quantitative and qualitative sources have been analyzed using the Nvivo software and connection circles have been developed to describe feedbacks within the system. Results showed that the lack of alternatives and convenience are the biggest reasons for the continued use of plastic bags in Lagos, Nigeria. The results further show that the proposed bill has not made provision of alternatives to plastic bags and incentives for manufacturers of plastic bags revealing poor public participation in policy-making of this nature. Overall, respondents have indicated a willingness to embrace alternatives to plastic bags and have mentioned that the situation is worsened by poor waste management in the state. Recommendations included more extensive research into the use of plastic bags with a bigger sample size with both online and offline platforms. This could encourage effective public participation in policy-making important for creating useful nudges in behavioural change in the shift from plastic bags.

**Keywords:** Sustainable Development, plastic bags, alternatives, flooding, plastic bag prohibition bill, public participation

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## Summary:

The negative environmental impact of plastic in Lagos, Nigeria includes the yearly flooding during the rainy seasons which is more extreme from April to July and less extreme in the months of October to November. Flooding displaces thousands of residents, causes the spread of diseases like malaria and typhoid fever. It also results in loss of properties amounting to millions of Naira. Despite the known menace of plastic bags to man, animals, and the environment in general, residents of Lagos continue to rely on single-use plastic bags for their everyday needs like grocery shopping, wrapping of food items and even in acute situations for makeshift toilets. Despite thousands of tons of plastic waste generated daily in Lagos, only a tiny fraction is recycled which leaves an even larger amount back into the environment. Plastic bags have remained popular because of their affordability, versatility and durability making them the first choice in the absence of an alternative. Reasons for the continued use of plastic bags particularly in Lagos, Nigeria remains understudied, leaving room for assumptions and use of anecdotal evidence in policies centred on plastic bags waste management and general waste management. This is reflected in the 2018 Plastic bag prohibition bill which has been proposed by the Nigerian Legislature to cut down on the consumption and the manufacture of plastic. While this is commendable it begs the question of why residents of Lagos, like other parts of Nigeria, still use plastic bags. With many environmentally friendly alternatives to plastic bags like Jute, eco-plastics being made available to other countries across the world, Nigeria still imports primary plastic to meet the demand for single-use plastic bags which creates a cycle of constant use and more environmental damage. The purpose of this study was to answer these questions on why Lagos residents still use plastic bags, what alternatives are available to them and how this new information can be useful for effecting behavioural change on the switch from plastic bags.

Mixed methods of interviews and online surveys were used for this research to get relevant data from both the givers and receivers of plastic bags in Lagos, Nigeria. Anonymous online survey forms were used for one part of the study which was discussed with tables and pie charts. Nvivo software was used for interview transcription and coding into different themes to deepen the analysis of data collected. The connection cycle model for understanding the complexity of systems and one stock system model developed by Donella Meadows (2008) was used to summarize results as key elements in the use of plastic bags interact. The results show that the lack of alternatives to plastic bags was one of the biggest reasons for the continued use of plastic bags in Lagos Nigeria and respondents shown a high level of willingness to embrace alternatives if such were available. The results also show poor public knowledge of the proposed plastic bag prohibition bill which also reflected an unnecessarily high fine for use of plastic bags when provision for alternatives was absent in the bill.

This study contributes to a new aspect of studying plastic bags use in Nigeria. Nevertheless, more extensive research into the use of plastic bag involving larger sample size and resources is needed to corroborate and broaden the findings from this study. In addition, the use of social media platforms and other online research tools is recommended for public engagement in policy making on issues related to the Sustainable Development Goals (SDGs).

**Keywords: Sustainable Development, plastic bags, alternatives, flooding, plastic bag prohibition bill, public participation**

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## LIST OF ABBREVIATIONS

<b>ACC</b>	American Chemistry Council
<b>CLI</b>	Cleaner Lagos Initiative
<b>EPA</b>	United States Environmental Protection Agency
<b>FBRA</b>	Food and Beverage Recycling Alliance
<b>FMCG</b>	Fast Moving Consumer Goods
<b>FTA</b>	Free Trade Agreement
<b>HDPE</b>	High-Density Polyethylene
<b>LASEPA</b>	Lagos State Environmental Protection Agency
<b>LAWMA</b>	Lagos State Waste Management Authority
<b>LDPE</b>	Low-Density Polyethylene
<b>LGA</b>	Local Government Area
<b>LLDPE</b>	Linear Low-Density Polyethylene
<b>MOE</b>	Ministry of Environment
<b>NGO</b>	Non-Governmental Organization
<b>PSP</b>	Public Sector Participation
<b>PUMAU</b>	Public Utilities Monitoring and Assurance
<b>SDGs</b>	Sustainable Development Goals
<b>YES</b>	Yola Eco Sentials



# 1. INTRODUCTION

Nigerians constantly use plastic bags locally known as polybags or nylon bags daily for consumer goods and even for packaging of food items. The ubiquitous choice of plastic bags is partly because of the lack of available alternatives like paper bags, jute bags which can offer consumers some sort of reliability as plastic bags. This constant consumption of plastic bags in Nigeria along with single use, indiscriminate littering, lack of reliable alternatives and poor waste disposal systems results in negative environmental impact like the known yearly flooding resulting from blocked drainages across the city of Lagos. Plastic bags<sup>1</sup> have become popular because of their affordability, lightweight and durability making them handy and easy to use. Plastics are also known for their suitability for various applications in products and different properties leading to rapid consumption when compared to other man-made materials (Xu, et al., 2020) (Paletta, et al., 2019) (Geyer, et al., 2017). Central to this ubiquitous choice of constant use of plastic bags are the social norms such as requesting a free plastic bag and receiving for free after every purchase at local supermarkets, open markets or even taking delivery from online shopping in many parts of Nigeria.

In this age of recycling and circular economy, more “eco-friendly” options made from “paper, cotton, biodegradable, and reusable polypropylene non-woven bags” (Ashiq, et al., 2021) are now being made available in many parts of the world but such options remain largely unavailable for residents across big cities like Lagos in Nigeria. The lack of available alternatives and the convenience plastic bags offer could be a trigger for more reliance on plastic bags leading to even more environmental pollution. It is common knowledge among retailers that refusing to give a customer a bag after a single purchase can negatively affect sales of retailers. Many consumers in Nigeria do not take this refusal lightly, considering it as a reason not to return for another purchase. Most plastic bags are of poor quality, designed for single-use to be disposed of, then a new one is requested again after every purchase, a never-ending vicious circle of production-consumption-disposal. Drainage systems end up blocked during rainy seasons causing flooding which displaced millions of residents. Consequently, blocked sewage systems become the perfect breeding environment for mosquitoes causing malaria and over-flowing gutters pollute sources of drinking water leading to the spread of cholera and typhoid fever. Winds also carry poorly disposed plastic bags over long distances where they get entangled on trees and sometimes on electric cables.

Shopping bags made from polyethylene is commonly used in Nigeria known on the streets of Lagos, Nigeria as polybags or nylon bags. Polyethylene (PE) is a globally common product of plastic in the world, not just in Nigeria. The demand for Polyethylene (PE) increased by 20% from 2012 to 2017 (Saibuatrong, et al., 2017). Nigeria is one of the highest plastic consuming countries in Africa and a large producer. While Kenya is fighting planned importation of plastic waste in a new trade agreement with the United States, following the ban on plastic importation by China in 2018, Nigeria still imports plastics in primary and as finished products from the United States of America, the Republic of Korea and India. Nigeria is also a big plastic manufacturing country. In 2013 alone, plastic product companies in Nigeria had a production capacity of over 100,000 tons per year

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<sup>1</sup> Plastic bags refer to multipurpose carrier bags with handles made from polyethylene used for everyday needs like shopping, packaging at home, offices and commercial spaces in Lagos, Nigeria. Also known as polybags.

(Heinrich Böll Foundation, 2020). These figures show Nigeria has a plastic problem and polyethylene plastic bags which is the focus of this research is just one piece of the plastic puzzle.

Understanding the “why” in the use of plastic bags could become an important tool for drafting policies useful for behavioural change. In 2019, “The Plastic Bag Prohibition Bill” was adopted by the Nigerian Federal House of Representatives to prohibit the use and manufacture of plastic bags at the commercial and household level. The bill which would likely suffer a setback due to a “punitive approach” similar to other legislative steps taken may not be effective to curb the culture of plastic bag use (Nwafor & Walker, 2020). It has not taken into consideration the reasons why Nigerians still use plastic bags.

Mismanaged land-based plastic waste from coastal regions like Lagos is a major concern as it spills into the water environment threatening marine life and the ecosystem. This is reflected in environmental legislation and agreements across the world to reduce waste (Nwafor & Walker 2020). It is important to understand consumer perceptions on plastic bag use and to explore the potentials for replacing single-use plastic grocery bags with other sustainable alternatives. The overall goal of the proposed research is to investigate why people living in Lagos still use plastic bags especially at a time when there are more environmentally friendly options.

## 1.1. Research Questions

1. Why do people living in Lagos, Nigeria use plastic bags?
2. What are the alternatives to plastic bags available and are people willing to embrace these alternatives?
3. How can the responses from both questions 1 and 2 can be useful in effecting behavioural change from plastic bag use?

### 1.1.1. Study Area

Lagos state located in the coastal southwestern region of Nigeria has a reputation that precedes it far beyond the shores of the Atlantic Ocean (Lagos State Government, 2018). With an official population estimate of over 17 million people, 3 % rise from 2019 (world population review), Lagos is not only Nigeria’s biggest economic hub, but it is also a major financial centre in Africa. Around 6,000 people come into Lagos state daily from all over Nigeria to trade in major markets like Idumota, Mile 12 and for work, according to data collected by the Nigerian Environmental Society (2017). The biggest percentage of plastic waste in Nigeria is found in the famous coastal city of Lagos. During the 2018 launch of the “Clean-Up Lagos Waterfront Initiative”, the Lagos state commissioner for environment quoted the 2015 Wall Street Journal report which stated that the Lagos state alone generated 0.17 million metric tons of plastic waste per year. As a coastal city, constant research on the impact of poorly managed land-based plastic waste on land and marine environment is required at different levels.



Figure 1: Map of Lagos State showing all the 20 Local Government Areas (Source: <https://www.mapsof.net/nigeria/lga-lagos>)

## 2. PLASTICS AND PLASTIC BAGS

The suitability of plastics for various “applications and use in a multitude of products, including wide-ranging properties like versatility and adaptability has led to more production and consumption of plastic, surpassing most other man-made materials” (Xu, et al., 2020) (Paletta, et al., 2019) (Geyer, et al., 2017). The term “plastics” does not refer a single material even though we often we speak of it as a single material. There are different plastics specifically designed for different purposes and from different materials. Plastics are produced from fossil fuels (petroleum-based, crude oil sources), renewable materials (sugarcane, starch, specific type of vegetable oils) and salts (PlasticsEurope, 2019). The type of material used partly determines whether the type of plastic will biodegrade or remain in the environment after use. Plastics made from non-renewable petroleum and natural gas materials consumes between 8% to 10% of the total global oil production during manufacturing. It takes an estimated 10,240 barrels of oil to produce 100 million plastic bags (Geyer, et al., 2017). Plastic made from non-renewable carbon sources like petroleum accelerates climate change impact. According to the Plastic Atlas (Heinrich Böll Foundation, 2020), it would amount to around 56 gigatons of emission from Green House Gases (GHG) like CO<sub>2</sub> by 2050 keeping global warming below 1.5 degree Celsius. This estimation would mean “10 to 13 per cent of the remaining carbon budget” will be used up by plastic production alone. (Heinrich Böll Foundation, 2020). It follows that worldwide, nearly 2 million plastic bags are used each minute and you could use the same quantity of energy from manufacturing 12 plastic shopping bags to drive a car for at least a mile (Earth Policy Institute, 2014).

Plastic bags are among the “top five items found in beach and river clean-ups” (Parker, 2019) making up a large portion of mismanaged plastic waste ending up in the ocean from Africa's coastal and island countries like Egypt, Nigeria, South Africa, Algeria and Morocco who are among top 20 marine debris contributors globally (Jambeck, et al., 2018). Most plastics cannot decompose because they are “traditionally petroleum-based” (Landon-Lane, 2018). Plastics products like polyethylene bags that do not decompose at the end of their useful life when they enter the environment remain “as solid waste at the end of their usable life cycle” (Saibuatrong, et al., 2017) eventually polluting the environment, animals and humans. These types of plastics photodegrade under sunlight even though the process is slowly inefficient (Bashir, 2013) in this anthropogenic era of increased human activities leading to environmental degradation.

According to Plastics Europe (2019):

- Global plastics production in 2018 peaked at 360 million tons, an increase from 348 million



tons in 2018, of which Africa and the Middle East contribute 7% to the distribution.

- 9.2 billion tons of plastic have been produced between 1950 and 2017.
- In 2018, over 1.13 trillion of mostly plastic packaging were used for food and drinks in the European Union (EU). The agricultural sector uses around 6.5 million ton of plastic yearly worldwide.

The escalating use of different forms of plastic including plastic bags and inadequate plastic waste management systems has led to accumulation both on land and water environment (Villarrubia-Gómez, et al., 2018). Broken down plastics into tiny toxic pieces called microplastics are ingested by both aquatic and terrestrial animals, ending up on our dining tables (Braun & Traore, 2015). 80 % of marine plastic debris comes from land sources, a percentage which will accumulate and increase by 2025 in the absence of proper waste disposal management systems. In the past 15 years, humans have produced more plastic than ever in history. (Jambeck, et al., 2015). Noteworthy is how different interpretations of what plastic degradation means has become a challenge for attaining uniformity in the classification of plastic degradation, in the absence of any “international standard for the degradation of plastic” (Landon-Lane, 2018), especially in research. Uniformity in the approach of what degradation means in a specific context is important for designing solution against plastic pollution and clarifying the ecological hazards concerning the resilience of plastic polymers (Webb, et al., 2013) (Scalenghe, 2018). In addition, the debate surrounding the difference between and the meaning of the words “biodegradable” and “degradable”, used interchangeably complicates discourses around plastic recycling and types (Commonwealth of Australia, 2016),

Polyethylene bags common in Nigeria are single-use, expendable plastics manufactured deliberately for mostly packaging and one-time use before disposal like grocery bags, containers, plastic straws, cups and party packs (Dumbili & Lesley, 2020). With a focus on single-use, plastic packaging accounts for 26% of annual plastic production, resulting in losses between \$80–120 billion from the global economy and externalities amounting to \$40 billion (World Economic Forum, 2016) (Landon-Lane, 2018). A report by the United Nations Environment Programme (UNEP, 2018) stated that plastic packaging makes up almost half of all global plastic waste according, much of which is single-use plastic. According to the United States Environmental Protection Agency (EPA), as much as one trillion plastic bags are used each year globally and only 5% gets recycled (Anderson, 2016). Another peer reviewed study (Geyer, et al., 2017), states that of the 8.3 billion metric tons of plastic produced, only 9% is recycled, close to 79% end up in landfills or discarded into the environment, 12% incinerated (Xu, et al., 2020) (Geyer, et al., 2017).

Plastic bags popularly known as polybags or Nylon bags in Nigeria are an integral part of the everyday routine of millions across Nigeria. Plastic bags used for shopping, packaging and mostly single-use are common in households, offices, shopping malls, local markets, schools etc. across Nigeria. This research is focused on plastic bags from Polyethylene sources. Polyethylene (PE) is one of the most common plastic products in the world, not just in Nigeria. The demand for Polyethylene (PE) increased by 20% between 2012 to 2017 (Saibuatrong, et al., 2017). The type and purpose of each bag determine the composition and polymer branching.



*Image 1; Popular Carrier bags with brand logos in Nigeria (Polymer Packaging Nigeria/Google Images)*

With more environment-friendly options of plastic grocery bags made from “Kraft paper, cotton, biodegradable, and non-woven reusable polypropylene” becoming more popular (Ashiq, et al., 2021), the lack of such sustainable and reliable alternatives in large quantities cities across Nigeria has meant that Nigerians are yet to catch up with the trend.

## 2.1. Plastic Importation and Production in Nigeria

The African continent is being hailed as leading the global fight against the ban on plastic bags with many of those bans coming from Sub-Saharan African counties led by Kenya. In a recent US-Kenya Free Trade Agreement (FTA) which included removing import tariffs, there is also the plastic waste burden. Kenya is trying to push back an estimated 500million tons of plastic waste export from the US per year lobbied by the American Chemistry Council (ACC) whose members include Shell, Exxon, Total, Dupont and Dow, a push back on the Basel Convention “enhancing the control of the transboundary movements of plastic waste” (Basel Convention, 2019, Whitehouse, 2020) thereby

limiting the entrance of plastic waste into low- and middle-income countries from 2021. Africa as a continent is already suffering from weak infrastructure is faced with the possibility of more than doubling plastic waste from 4.4million metric tons in 2010 to 10.5 million metric tons in 2025 (Jambeck, et al., 2018). According to The Africa Report, “The US exported more than 1 billion pounds of plastic waste to 96 countries, including Kenya, in 2019” (Whitehouse, 2020). Most plastic waste was exported to China until January 2018 when China banned plastic importation (Heinrich Böll Foundation, 2020) forcing the United States to find elsewhere to export its plastic waste.

Being one of the Africa’s highest plastic consumer and producer in Africa, Nigeria has a history of plastic resin production, between 2009 and 2015, Nigeria produced 2.3 million tons of primary plastics and in 2013 alone, plastic product companies had a production capacity of over 100,000 tons per year (Anyagou, 2021, Heinrich Böll Foundation, 2020). Despite being counted as one of the 34 out of 54 countries in Africa haled for banning plastics, Nigeria remains Africa’s second-largest importer of plastic in the primary form which is used for production of more items with high local demands. Accounting for 75% of imported plastics in primary forms are polyethylene, polypropylene, polyvinylchloride, and polyesters. Between 1996 and 2017, Nigeria imported more than 20 million tonnes of plastics, a figure that could double by 2030 if reliance on plastic is not controlled. 17% per cent of plastic import comes from the United States of America, closely followed by the Republic of Korea at 13% and India at 9% (Heinrich Böll Foundation, 2020). These figures show Nigeria has a plastic problem and polyethylene plastic bags which is the focus of this research is just one piece of the plastic puzzle.

### Primary forms of plastic imported to Nigeria and use

Table 1: major primary form of plastic importation and uses in Nigeria. Source; (Heinrich Böll Foundation, 2020)

Forms	Uses
Polypropylene and other olefins	Plastic diapers, margarine containers, yoghurt boxes, syrup bottles, rakes, plastic bottle caps, biscuit wrappers, crates, drinking straws, among others.
Polyvinylchloride	Pipes, wire and cable sheathing, synthetic leather products, shower curtains and food packaging.
Polystyrene	Disposable cups, plastic food boxes, insulation, egg boxes and seed trays, among other items.
Other categories of plastics like amino resins, phenolics and polyurethanes	Cushioning foams, thermal insulation foams and surface coatings

#### 2.1.1. Plastic Waste Disposal and Negative Environmental Impact

As a consequence of poor trash disposal systems in many major cities in Nigeria like Lagos (Nnaji, 2015), the culture of indiscriminate waste littering and the absence of proper recycling mechanisms, these plastic bags end up in illegal waste dumps across the states. The drainage systems end up

blocked causing yearly flooding which usually lasts throughout the rainy seasons from April to July in coastal areas like Lagos State, displacing millions of residents. Clogged sewage systems become the perfect breeding environment for mosquitoes and flooding washes away footpaths, causing people to move around in dirty water from overflowing gutters, polluting major sources of drinking water leading to the spread of cholera and typhoid fever (Olubanjo, 2019). Winds also carry poorly disposed plastic bags over long distances where they get entangled on trees and sometimes on electric cables. (Ramaswamy & Sharma, 2011).

Incineration of waste is still a big part of waste management in many parts of Nigeria. The challenge with incineration is that it becomes a major source of environmental pollution and hazard releasing carbon dioxide into the environment, even the best industrial waste incineration mechanism does not guarantee pollutants escaping into the atmosphere (Heinrich Böll Foundation, 2020). In some cases, they remain in the environment for years even when those areas become residential areas as the city develops. Non-degradable fractions of waste like plastic bags remained buried for 13 years in former landfills at Mpape landfill in Abuja, Nigeria (Ayuba, et al., 2013). Due to the different chemicals added to the plastic base to boost the desirable characteristics which make plastics versatile, the accumulation of such chemicals in air and dust indoors poses serious health risks. (Heinrich Böll Foundation, 2020). In Singapore, the paper had a higher environmental footprint compared to plastic shopping bags in lifecycle assessment research (Ashiq, et al., 2021) proving that a switch to alternatives like paper requires consideration of the kind of infrastructure available and the make-up of materials.



*Image 2: Illegal Waste dump in Ojota Area of Lagos (Spiff Moses Noah, 2021)*



Figure 3: Plastic bag litter in Ketu Alapere axis of Lagos (Spiff Moses Noah, 2021)



Image 4: Littered Canal behind Alapere Estate, Lagos (Spiff Moses Noah, 2021)



Image 5; Abandoned dumping site with plastic bags in Lagos (Spiff Moses Noah, 2021)





Image 6: littered gutter with different types of plastic in Lagos (Spiff Moses Noah, 2021)

An estimated 15, 000 tons of waste is generated daily in Lagos, of which 50 per cent is plastic and only 30 per cent of that is recyclable. In other words, over 7,500 tons of plastic waste is created daily but only 2,500 tons can be recycled; the remainder ends up in the waterways and illegal dumpsites across the city (Ojewale, 2019). In another report, Lagos is said to generate between 7.5 kg to 45kg of plastic waste per capita per year. “About 20 million tons of primary plastics and plastic products were imported into Nigeria through Lagos ports between 1996 to 2017” (Heinrich Böll Foundation, 2020), a number that is expected to rise to over 40 million tons by 2030 according to the 2020 Plastic Atlas, aggravating the already existing plastic pollution in Lagos, Nigeria. According to the Food and Beverage Recycling Alliance (FBRA), Lagos State produces half of the estimated 150,000 annual metric ton of used plastic waste in Nigeria (Ibukun, 2019).

### 2.1.2. Plastic Waste Recycling

The Lagos State Environmental Protection Agency, LASEPA, announced in 2020 that “it is set to ban all single-use plastic bags within its premises from Monday, 13th January 2020 in a move to protect the environment and encourage eco-friendly products while calling for suitable and multiple-use alternatives to prevent pollution and avoid disposal problems” (Lagos State Government, 2020). In 2012, Lagos Waste Management Authority (LAWMA), introduced waste banks, buy-back programme to improve waste management in the Lagos metropolis. The idea was two recycling initiatives called “waste to wealth” and a buyback waste programme for residents of the state to earn money from specific waste items on the streets as landfills could no longer take all the non-biodegradable materials. In August 2016, Cleaner Lagos Initiative (CLI) was launched by the Ministry of Environment, and the Public Utilities Monitoring and Assurance Unit (PUMAU). In 2019, the state waste management board in its road map to a more resource-efficient Lagos announced its plans to optimize generated waste for a zero-waste economy. Among listed strategies were Public Sector Participation (PSP), waste sorting, recycling and public enlightenment on plastic waste management in the 20 local government areas of the state (Adeyemo, 2019). Lack of adequate waste disposal infrastructures (Nnaji, 2015) and the high cost of recycling has increased the reluctance to invest in recycling in Lagos, compounding the complexity and potential for recycling. While local Initiatives like Wecyclers, Kaltani, Risley Bridge Company and Recycle Point collaborates with local scavengers picking specific types of plastic bottles, polyethylene bags and empty sachet water packs in exchange for money per kilograms, only a very little percentage is eventually recycled compared to overall plastic waste in Lagos. Some of these initiatives crush the plastic bottles into pellets, bricks

and Ecobarter, an NGO in Abuja, Nigeria's capital city has gone further to convert plastic bags into items like school bags. One other initiative which has included the conversion of plastic bags waste to bags, mats and other household items in empowerment program is the "Waste to Wealth Program" in collaboration with Yola Eco Sentials (YES) started in 2012 by the American University of Nigeria, Yola, Northern Nigeria (Ating, 2016). In the absence of proper, sustainable recycling mechanisms, large quantities of empty plastic bottles and plastic bags collected can end up accumulated in warehouses. The non-existence of a bill signed into law at the federal or state level enforcing the control of plastic waste and poor waste disposal infrastructure creates a vacuum for different NGOs to operate independently. The buy-back program launched in 2012 by the Lagos State Government to curb plastic waste and used by many recycling initiatives in the state has failed to deliver on the promise of cutting down plastic waste, especially plastic bags.

### 2.1.3. Public Awareness and Plastic Bag Ban across Africa

While public plastic recycling is an important part of people's lifestyles in countries like Sweden due to public awareness in line with the Sustainable Development Goals (SDG), recycling designs must fit within specific cultural categories to improve the overall waste recycling as what works in Sweden may not work well within the Nigerian society. Cultural perception of the general waste management system can affect the outcome of a recycling design as this is dependent on varied interpretation (Henriksson, et al., 2010). Coupled with cultural perception, recycling is not enough to help Nigeria overcome the plastic burden. The kind of plastic bags available to Nigerians are designed for single-use, which plays perfectly into an existing culture of constant plastic bag use, lack of public awareness, absence of alternatives and poor waste disposal systems. "Recycling accounts for only 14% of plastic packaging, which decreases to approximately 5% after wastage and inefficiencies in the recycling process, compared to recycling rates for paper and iron/steel, which is 58% and 70–90% respectively" (Landon-Lane, 2018). Recycling polyethylene bags in Nigeria is more expensive than producing new polyethylene bags, making the recycling option unattractive to manufacturing companies in Nigeria (Ayuba, et al., 2013) who rely on importation of cheap primary forms of plastic. To manage plastic bags waste in Lagos with already weak infrastructure, recycling and waste disposal mechanism must be considered but what is even more important is to understand how the culture of plastic bags must change to reduce demand and production. It is also important for alternatives to plastic bags to be introduced along with public awareness in a way that is not seen as a punishment to encourage citizens to embrace it.

In 2019, "The Plastic Bag Prohibition Bill" adopted by the Federal House of Representative after the third reading may likely suffer a setback (if and when it is fully implemented) due to "punitive approach" similar to other legislative steps taken may not be effective to curb the culture of plastic bag use (Nwafor & Walker, 2020). The adopted bill means Nigeria is waking up to the reality of the plastic bag problem following the steps taken by other African countries like Kenya, South Africa, South Sudan and Rwanda who have backed the ban on plastic bag use with policies of paying for shopping bags, fines for using, manufacturing, importation and life behind bars. As of 2019, 34 countries in Africa have either passed a law or attempted to ban plastics totally (Green Peace, 2020) (Nwafor & Walker, 2020). Of these 34 countries, 16 have focused on achieving a total ban on plastic bags through punitive measures of fines going as high as \$38,000 or four years behind bars in Kenya for use of plastic bags (Parker, 2019) even though there is very little to show for implementation and decisive actions on a larger scale. Rwanda was hailed by the United Nations in 2008 as Africa's cleanest city for its ban on biodegradable plastic bags has a target of becoming the first-ever plastic-free nation (Clavel, 2014). The country has also offered tax incentives to encourage plastic manufacturing companies to consider recycling and creating a thriving space for eco-friendly alternatives. The downside has been the excessive use of paper bags which poses unintended environmental concerns like more waste and failure of paper bags as alternatives not being able to deliver on the affordability and reliability of plastic bags. The ban in Rwanda has also created a black

market for plastic bags which is still being smuggled into the country (Clavel, 2014) (Down To Earth, 2013).



*Image7; Map showing 34 countries banning plastic bans across Africa. ([GreenPeace](#), 2020)*

These 34 countries which have passed some type of plastic bag ban at different levels are Eritrea, Republic of Benin, Tanzania, Uganda, Senegal, Cote d'Ivoire, Nigeria, Madagascar, Mali, Tunisia, Malawi, Mauritania, The Gambia, Kenya, Rwanda, Mauritius, the Democratic Republic of the Congo (Congo Kinshasa), Congo Brazzaville, Seychelles, Burkina Faso, Botswana, Zambia, South Africa, Gabon, Ethiopia, Cameroon, Djibouti, Morocco, Niger, Togo, Zimbabwe, Cape Verde, Burundi, Guinea Bissau.

Government policies aim to influence societal behaviour through legislation, sanctions, taxes, fines with reasons that include conferring social, economic and community benefits (Australian Public Service, 2018). Spoken and written language (van Dijk, 1985), how “ideologies function” (Breeze, 2011) is an integral part of policy making and understanding the context of policy goals as well impact. “Language plays an important role in the exchange of information and communication of knowledge on society, history, culture, traditions, and customs” (Manzoor, et al., 2019).

#### 2.1.4. Behavioural Change and Incentives to Switch from Plastic Bags

Influencing human behaviour can be complex with wicked problems like climate change, plastic pollution which poses a great challenge for policies delivering on targeted outcomes with implications for the society (Australian Public Service, 2018). Context, chosen language, metaphors, the figure of speech, framing, narratives “in policies in a bid to attract or persuade” requires thorough analysis to understand the gap in theory and execution (Gasper & Apthorpe, 1996). In Japan, Psychological intervention approach in the consumption of plastic bags was conducted in Japan showing the impact of the right interventions for behavioural change (Ohtomo & Ohnuma, 2014). Knowing why people use plastic bags in Lagos, Nigeria, constant public awareness on the dangers of plastic bags by the government, more of incentives for taking personal responsibility with less punitive measures, availability of reliable alternatives will provide a deeper understanding of the narratives, beliefs underlying the problem of plastic bags (Bartels, 2020). Lack of proper legislative tools, weak infrastructures, measurable indicators and zero incentives like effective public enlightenment will result in a legislative setback. With more Nigerians now slipping into poverty, worsened by the coronavirus pandemic (Andam, et al., 2020), the desire to embrace environmentally friendly behaviour slowly dies. The pandemic could add as many as 150 million people to the



extreme poverty<sup>2</sup> line and countries in Sub-Saharan Africa will be amongst those severely affected (The World Bank, 2020). Poverty is strongly linked to environmental degradation, hazards, socioeconomic status and policies that do not acknowledge this linkage (UNESCAP, n.d.). People are more focused on survival in poor countries like Nigeria compared to countries like Sweden with a higher standard of living, availability of safety nets, thriving infrastructure and high public enlightenment (Scott, 2006) (Banerjee & Duflo, 2011).

Despite talks on climate change and activities on the SDGs, many Nigerians remain disengaged towards environmental pollution partly because of the need to survive first, lack of effective public enlightenment and much-needed waste disposal infrastructure. Such indifference becomes a barrier to policy implementation in the absence of personal responsibility (Australian Public Service, 2018) due to poor public commitment and alternatives to plastic bags. Theories of behavioural change like social cognitive theory, the theory of planned behaviour or the transtheoretical method look deeply into elements that compel people to behave the way they do. Understanding these elements like intentions, norms, nudges, fear, and response efficacy can help policymakers design policies targeted at behavioural or attitude change (CommGap, n.d.). Intent towards the use of plastic bags is linked to beliefs and plays key roles in environmental impact in China as the Theory of Planned Behavior (TPB) used in the study shows (Ying, et al., 2017).

### **3. METHODOLOGY AND METHODS**

The mixed-method approach provides a comprehensive approach to gathering data and also known as the concept of triangulation in social science research. Mixed methods provide more reliable results than relying on either qualitative or quantitative methodologies (Haq, 2014). Researchers can “present multiple findings of a single phenomenon by deploying various elements of quantitative and qualitative approaches in one research” (Bouchrika, 2021). Mixed research methodology requires researchers to tactically understand and consider the different dimensions of the methods they choose to combine and balance that with validity issues. (Schoonenboom & Johnson, 2017). Using a mixed-methods approach offers a foundation for an informed interpretation and analysis in breaking down the underlined construct/narratives (Howlett, et al., 2020) in social science research. The mixed-methods approach has been chosen for this research to combine empirical and in-depth contextualization in understanding practical problem like plastic pollution. Quantitative research like online surveys is useful in gathering data for understanding human behaviour, psychology (Lamiell, 2003), social structure, patterns and exploring large scale relationships (Roberts & Winters, 2012). Qualitative research like interviews goes “beneath the surface” offering a holistic understanding of human behaviour (Mariampolski, 2001). Quantitative data gathering is an important tool with the strengths of use in broad interpretation and assessing behaviours or phenomena (Rahman, 2017). Combining qualitative research methods with quantitative methods goes beyond a generalization of a group of people with collected data to a deeper understanding from an individual perspective in this research.

The coronavirus pandemic has limited movement and the opportunities for in-person survey with Lagos residents, making online tools a viable option. A 2019 research survey has shown that researchers can benefit from using social media with “additional formal training regarding the correct

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<sup>2</sup> Extreme poverty is defined as living on less than \$1.90 a day

application and interpretation of metrics” (Lemke, et al., 2019). The quantitative methodology approach uses objective understanding based on organized data learning towards “positive scientific tradition” in sourcing data needed for kind of research (Autio, 1995) (Ruokolainen, 2003). Social media growth over the years has changed the approach to research and facilities information sharing as more scientists now use platforms like Twitter and LinkedIn (Collins, et al., 2016). Scientists are increasingly embracing social media surveys as it helps to build communication and collaboration across geographical borders (Nature Cell Biology, 2018). According to data by Statista, there were an estimated 25million Nigerian social media users. 94% used WhatsApp, 87% used Facebook, 50% used Twitter and 67% used Instagram (Statista, 2020). These figures show that there are many Nigerians on social media platforms sufficient to get the required data for the online survey targeted at Lagos residents. The social media survey is also useful for collecting data on key determinants (Umer, et al., 2018) in the daily use of a plastic bag.

Published research on plastic pollution has influenced the use of mixed method approach because of the social and economic features of Nigerian society. In particular, the complexity of big cities like Lagos with such a large population, decentralized waste management systems and a lot of economic activities, many of which are informal and hidden, involving the use of plastic bags with visible environmental impact. As a result, a single method may not be sufficient to give the data needed to answer the questions of this research. The previous methods used include; literature review was used to highlight the research gap in plastic pollution in Nigeria (Dumbili & Lesley, 2020); A systemic peer review of government policies and reports has been used to comprehensively examine anti-plastic policies in West Africa (Issahaku, et al., 2020); Survey design method used for researching willingness of residents in Awka, Anambra State, South Eastern Nigeria to embrace alternatives to plastic bags (Iheukwumere, et al., 2019) and plastic bag consumption behaviour in Ecuador (Zambrano-Monserrate & Ruano, 2020). A semi-structured questionnaire was used in determining the usage, impact, and disposal of plastic bags on the environment in Jimma City, Ethiopia (Adane & Muleta, 2011). A textual analysis technique has been used to weigh in on the ban of carrier bags in South Sudan (Kwori, 2019). Discourse analysis has also been used for the interpretation of policies (Nwafor & Walker, 2020) (Australian Public Service, 2018) (Tummers, 2019).

The mixed-method approach I chose combines the semi-structured questionnaire (Adane & Muleta, 2011) used in similar research in Jimma City, Ethiopia and the survey design method (Iheukwumere, et al., 2019) used in Awka, Anambra State, South Eastern Nigeria. The two methods fit well within the context and style useful for the study area of Lagos, Nigeria. Sourcing data was done through an anonymous online survey that permits data collection from residents across the 20 local government areas of Lagos State has been done using the Google online form survey which summarized data for further analysis with Microsoft Excel and Nvivo qualitative research software. It is also important to note that the use of semi-structured interviews gave a background for understanding the issues affecting plastic bag pollution from both the consumer and retailer perspectives relevant to this study. Interviews allowed for direct interaction and deeper context to data collection.

### 3.1. Methods

A mixed-method approach that combines both anonymous online surveys as quantitative and semi-structured interviews as qualitative methods have been used as a tool to gather data about retailers and their customers. Considering the study is focused on the daily use of plastic bags and the underlining factors that contribute to this decision, the population of this study were the residents of Lagos State who are online, including customers and retailers distributed across the 20 local government area.

#### 3.1.1. Online Survey (Quantitative Data)

The online survey questionnaire comprised 20 questions divided into three sections with multiple-

choice responses in the English Language (see appendix A4). The first section contains the general description and purpose of the survey, the second section contains socio-economic data for respondents like Local Government Areas (LGA), age, gender, education and occupation. The third section of the survey contains the questions on the use of plastic bags ranging from the number of bags used per day, asking for a plastic bag or being given, knowledge of the negative impact of plastic bags on the environment, disposal of used plastic bags, alternatives to plastic bags, awareness of the plastic bag probation bill passed by the house of representative and willingness to pay for a plastic bag. (see appendix). All the questions were made compulsory to ensure uniformity in the number of questions responded to and personal information has not been collected or stored to enable respondents to give a less biased response to the survey. The online survey was designed with the consideration of avoiding duplicity of responses which requires a sign in with a real email address. After the online survey form was closed for responses, the data summary was extracted through the backend of the Google survey form into a Microsoft Excel sheet. The part of the form requiring respondents' opinion on their support for or against the plastic ban proposed in the bill was extracted and coded under specific themes with Microsoft Excel, further reducing the data amount for better analysis and drawing results.

### 3.1.2. Semi-Structured Interviews

Interviewees selected for the semi-structured interviews were categorized as *givers* (retailers, store owners who give plastic bags) and *receivers* (the consumers who normally get for the bags with or without asking). The semi-structured interviews included randomly selected respondents (15 receivers and 15 givers) across the 20 local government areas. Interview lasting between 30-45 minutes was done through phone recording in response to 10 direct questions on plastic bags each (see appendix A2 and A3).

Before analyzing collected data, preparation was made by checking and confirming responses to be sure no question has been skipped. The recorded interviews were transcribed and the responses from the receivers and givers were put in separate files to avoid mix up. The responses to each of the questions from each file were then coded and categorized under specific themes used for identifying patterns in responses of both consumers and retailers. This analysis has been done with NVivo qualitative research software. Consent was obtained from the interviewees before the recorded phone interviews and I have used my student email in correspondence with the interviewee to prove that recorded information has been for academic purposes only and to encourage feedback. The interviews. were conducted in the English language, even though a bit of Nigerian Pidgin English has been used to break down some parts of the interview for some shop owners.

### 3.1.3. Copy of Plastic Bag Prohibition Bill

A copy of the plastic probation bill was also used as a secondary source for gathering data. Questions on the content of the bill like proposed fines, punishment and definition of an offence, in this case, has been included in the interviews and surveys to establish perceptions of the proposed ban on plastic bags. PDF copies and links for accessing it online was sent to participants of the semi-structured interviews. (see appendix A1)

### 3.1.4. Use of Connection Circles

Connection circles have been used to understand the complexity of the causes and effects in the use of plastic bags in Lagos, Nigeria. A connection circle is used at the end of the results to summarize the data from the interviews and online surveys. Connection circles are tools for relationship building useful for promoting and understanding complexity (Rasmussen, 2016). Connection circles are important “graphic organizers for generating ideas about changing conditions within a system” (Molloy 2018, Quaden et al 2005). Connection circles can be used for choosing key elements which

clarify the cause-and-effect relationships in any system. This is followed by the use of the one-stock model (Meadows, 2008) to describe feedbacks as the system seeks to achieve new goals of reducing single-use plastic bags getting into the environment in Lagos, Nigeria.

## 4. Results

Data derived from online surveys and interviews are presented in different sections of this chapter using pie charts, tables and open-ended responses have described with thematic analysis. The summary for both online survey and interviews is presented at the end of this chapter with a connection circle.

### 4.1.1. Socio-economic data from the online survey

A total of 147 responses have been received from the online survey from the 20 Local Government Areas (LGAs) in Lagos. Responses were collected from February 23 till March 1st, 2021. Table 2 below shows the socioeconomic data on gender, age, education and occupation from the online survey.

Table 2: socio-economic data from the online survey (Author's online survey 2021)

Item	Number of respondents	Percentage (%)
<b>Gender</b>		
Male	94	63.9
Female	46	31.3
Prefer not to say	7	4.8
<b>Age</b>		
Less than 20 Years	2	1.4
20-30 years	51	34.7
31-40 years	70	47.6
41-50 years	20	13.6
Over 50 years	4	2.7
<b>Educational Level</b>		
Primary	0	-
Secondary	1	0.7
Vocational	1	0.7
Undergraduate Degree/National Diploma/Higher National Diploma	47	32
Post Graduate Degree	98	66.7
<b>Occupation</b>		
Student	11	7.5
Employed	84	57.1
Self-Employed	43	29.3
Unemployed	9	6.1

The results also show more male respondents with 63.9% compared to the female gender making up 31.3% from the surveys. 47.6% of respondents from the online survey were within the age range of 31-40 years which was the highest, followed by 20-30 years with 34.7% and 41-50 years with 13.6%. This resonates with figures from the Statista 2020 survey showing that 18-35 years old makeup almost

40% of active users on Facebook, Instagram and Twitter. Postgraduate<sup>3</sup> degree holders have the highest percentage among respondents with 66.7% and 32% have an undergraduate degree showing that over 50% of respondents have the level of education required for responding to the online survey. In terms of employment 57.1% makes up the largest number, while students had the lowest representation with 7.5%.

Table 3: Respondents LGA distribution from the online survey (Author's online survey 2021)

Local Government Area (LGA)	Number of respondents	Percentage (%)
Agege	5	3.4
Alimosho	24	16.3
Amunwo Odofin	7	4.8
Apapa	2	1.4
Badagry	6	4.1
Epe	2	1.4
Eti Osa	12	8.2
Ibeju-Lekki	7	4.8
Ifako Ijaiye	4	2.7
Ikeja	9	6.1
Ikorodu	12	8.2
Kosofe	15	10.2
Lagos Mainland	7	4.8
Mushin	5	3.4
Oshodi	10	6.8
Shomolu	9	6.1
Surulere	8	5.4
Others <sup>4</sup>	3	2.1

The online survey had at least one respondent from each of the 20 LGAs as shown in the table above. Alimosho LGA has the highest representation with 24 respondents (See table 3 above), while other LGAs 1 respondent each labelled as others on the table. Online survey data of respondents according to LGA has been illustrated using a pie chart below (Figure 2) for a summary.

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<sup>3</sup> Postgraduate Degree holders are people who have at least one postgraduate degree in addition to an undergraduate degree or a Higher National Diploma (HND).

<sup>4</sup> Others on the table refers to Ajeronmi Ifelodun, Lagos Island and Ojo LGAs which had 1 respondent

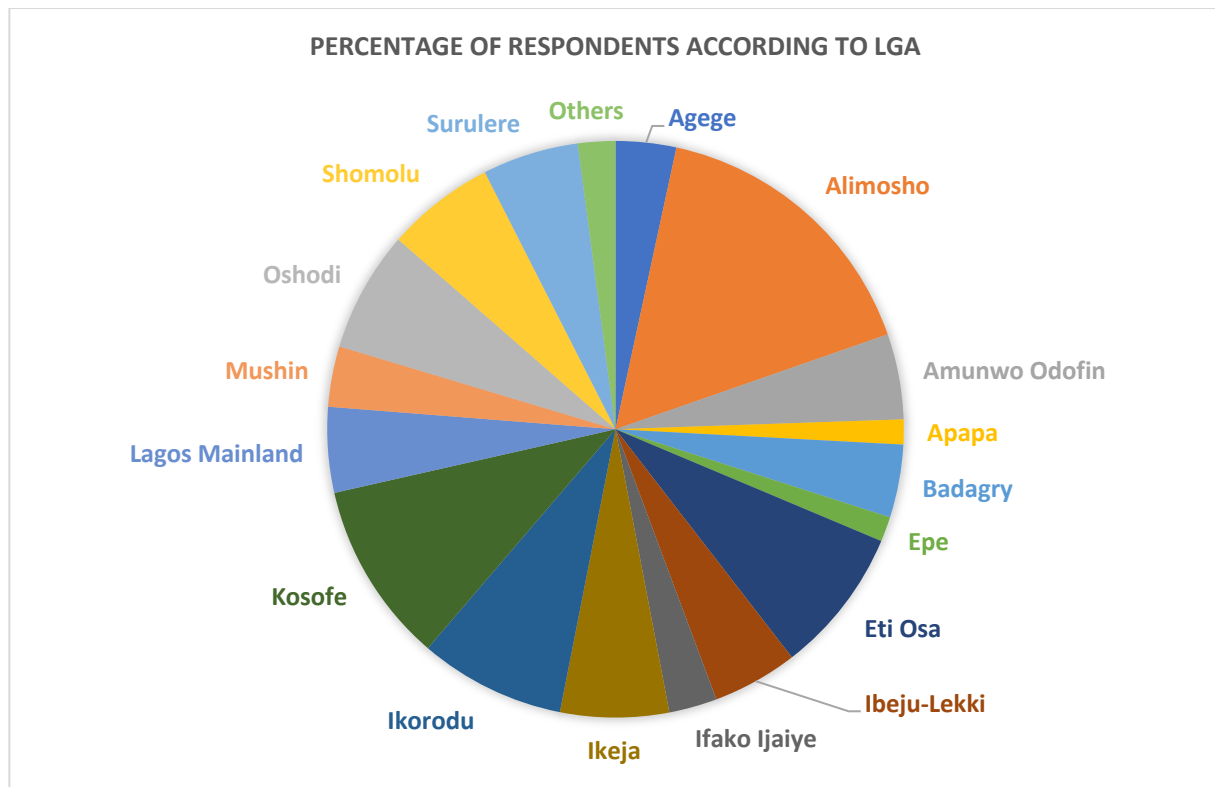


Figure 2: Percentage of respondents in each of the 20 LGA of Lagos State (Author's online survey 2021)

#### 4.1.2. Use of Plastic Bags (147 respondents)

Table 4 below reveals data from the online survey indicating sources, the number of bags used and disposal of plastic bags which is central to the use of plastic bags.

Table 4: the use of bags and disposal (Author's online survey 2021)

Bags per day	Number of respondents	Percentage (%)
1-5	93	63.3
More than 5	17	11.6
None	30	20.4
Unsure	7	4.8
<b>Requesting a bag after every purchase</b>		
Yes, I request	65	44.2
I get without asking	56	38.1
No, I carry my bag	26	17.1
<b>Source of bags</b>		
Supermarkets, local open markets, corner shops	136	92.5

Restaurants/Mama Put <sup>5</sup>	6	4.1
Offices, Tailor shops, other sources	5	3.4
<b>Disposal and method of disposal after use</b>		
Keep for re-use	124	84.4
Single-use	23	15.6
Dustbin (burn, discard)	140	95.23
Drainage/gutters with no dustbin close-by	7	4.8
<b>Return for purchase if a plastic bag is not given</b>		
Yes		55
No		45

The results show that many residents of Lagos use at least one bag per day. 63.3% of respondents say they use between 1-5 bags daily while 11.6% admitted to using more than 5 bags per day. 20.4% said they had not used any bag at the time of responding to this survey, even though this would depend on the time of the day, they had responded to the survey. On request for a bag, survey data reveal that 44.2% request for a bag when they shop, 38.1% say they get without asking and 17.1% say they carry their bag. The major sources of carrier plastic bags are supermarkets, local open markets and street corner shops as revealed by 92.5% of respondents.

#### 4.1.3. Would a Plastic bag determine return purchase?

Figures from the survey also show that being given a plastic bag may not determine return purchase as 45% admitted to not returning while 55% said they would still return even if they were not given a bag.

#### 4.1.4. Reasons for use and awareness of alternatives

Table 5 below shows responses given for common use of plastic bags, the level of awareness amongst residents on available alternatives and the willingness to embrace alternatives (if it is readily available).

Table 5: figures on reasons for use and alternatives (Author's online survey 2021)

Reasons for using a plastic bag	Number of respondents	Percentage (%)
Convenience	53	36.1
Lack of Alternatives	70	47.6
Everyone uses it	22	15
I do not know	2	1.4

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<sup>5</sup> Mama Put are local restaurants across cities in Nigeria which offer cheaper meals compared to high-end restaurants.

<b>Awareness of Alternatives like Jute bags, Paper bags</b>		
Yes	114	77.6
No	23	15.6
Unsure	10	6.8
<b>Willingness to Use Alternatives</b>		
Paper bags	71	48.3
Jute Bags	28	19
Woollen Bags	34	23.1
I still prefer plastic bags	12	8.2
Alternatives are unreliable	2	1.4

Convenience and lack of alternatives are the biggest reason why Lagos residents use plastic bags. Over 83% of respondents fall in these two major categories and similar to the other option of “everyone uses it” from 15% of respondents (table 5 above). The level of awareness of alternatives is high at 77.6% even though they are not a readily available option like plastic bags and the results show more favourable responses on willingness to embrace alternatives like paper or jute bags when compared to respondents who still prefer plastic bags or alternatives being unreliable.

#### 4.1.5. Awareness of the environmental impact of plastic bags

There is a high level of awareness of the negative environmental impact of plastic bags like drainage blockage, flooding, suffocation of animals, pets. Survey data show that 97% admitted to being aware of environmental impacts compared to 3% who said no.

#### 4.1.6. Responses for public awareness of Plastic Prohibition bill, ban of plastic bags and paying for a bag.

Table 6 below shows how much the public knows about the plastic prohibition bill being signed passed by the lower legislative house and if they support it considering the penalties listed in the bill.

Table 6: figures on public awareness on plastic prohibition bill and paying for a bag (Author’s online survey 2021)

<b>Awareness of Plastic Prohibition Bill</b>	<b>Number of respondents</b>	<b>Percentage (%)</b>
Yes	10	6.8
No	137	93.2
<b>Support of Ban of Plastic bags</b>		
Yes	52	35.4
No	51	34.7
Undecided	44	29.9
<b>Paying for a bag</b>		
Yes	19	12.9
No	54	36.7
Why should anyone pay extra for a bag after shopping	74	50.3

Public awareness of the new plastic prohibition bill is low, considering how it would impact the environment and the public if signed into the law. Only 6.8% of respondents say they are aware, the remaining 93.2 % say they have never heard of the bill. Despite the bill being adopted by the Federal House of Representatives after passing through 3 different readings at different times in 2018 and



2019, many residents of Lagos are not aware of its existence. 35.4% supported the ban and 34.7% say they are not in support of the ban. On paying for a bag, 50.3% wondered why anyone would pay extra for a plastic bag after shopping, 36.7% said they will not pay leaving only 12.9% who said they would pay for a bag (See table 6 below). The details of the bill (see appendix A1) contradict the public views on the plastic bag ban as a large percentage from the survey have responded to either not be interested in paying for a bag or wonder why they would pay for a bag after spending money on groceries.

## 4.2. Results from Interviews

The period for the interview is February 22nd to March 27th, 2021. The responses to the interview back up the results of the anonymous online survey, reaffirming the numbers on specifics like the lack of alternatives, awareness on the environmental impact of plastic bags, social norms on the use of plastic bags, weak waste management structures and poor public knowledge of the plastic bag prohibition bill.

### 4.2.1. Interviewees Categories

Interviewees for this study have been categorized into two groups as shown in table 7 below. The interviews period ranged between 15 -30 minutes and respondents were in Idumota, Oshodi, Iyana-Ipaja, Bariga, Jakande, Mile 12, Ojota, Ikeja Computer Village, Yaba and Trade Fair/Mile 2 Axis. These areas have been chosen because of high human traffic at major bus stops.

Table 7: Categories of interviewees (Author's Interview, 2021)

Categories	Description	Number of Respondents
Givers	Retailers, store owners including open markets who give plastic bags	15
Receivers	Consumers who normally get for the bags with or without asking	15

### 4.2.2. Categories of reasons for using plastic bags

The reasons for using plastic bags have been classified under 6 themes based on interview responses from the givers and the receivers which has been coded using the Nvivo software in response to the research questions (See figure 3 and table 8 below)

Table 8: the classification of responses into 6 themes (Author's Interview, 2021)

Classification of responses	Description
Alternatives	Availability and reliability of alternatives. These are carrier bags made from wool, paper or any other environmentally friendly source other than plastic bags available for use in Lagos.
Demand for Plastic bags	The central question to this theme is what drives the demand and supply of plastic bags from the givers and receivers' perspective.
Social Norms	What role does society play in enabling more use of plastic bags?

Policies on Ban	Existing policies on plastic bags, penalties and incentives for behavioural change.
Disposal	Uses and disposal of plastic bags after use
Awareness	Level of public awareness on the negative environmental impact of plastic bags, government institutions and mode of governance in raising awareness.



Figure 3: Factors that determine the use of bags and disposal between receivers and givers (Author’s Interview, 2021)

#### 4.2.3. Lack of Alternatives

The lack of alternatives, availability and cost has been given as reasons for reliance on plastic bags from responses from the interviews. Several participants stated how it is not reasonable to give up using plastic bags in the absence of alternatives with the same qualities of durability, affordability and versatility that plastic bag offers. One participant said *“It’s possible if these bags have alternatives that are way cheaper, durable and attractive. The biggest concern is having the traders promote these alternatives. Customers are mostly never bothered about what is given as far as it is free and durable”*. Another respondent said, *“The alternatives are not readily available”*. Plastic

bags are cheaper for businesses and individual use making them an easy choice in the absence of any other environmentally sustainable alternatives for users. Alternatives are very expensive as one respondent stated “*Jute bags are so expensive; you only find that as souvenirs from big people weddings in this Lagos and paper bags common these days are so unreliable. If Lagos rain meets on you the road, your paper bag will be useless*”. (see interview transcripts Appendix A5).

#### 4.2.4. Demand for Plastic Bags

Shop owners and store managers interviewed have stated that it is a simple case of demand and supply between *givers* and *receivers*. One store owner said in pidgin English “*If you no give them that poly bag, you no go see them again for your shop*”. A customer reaffirmed this saying “*ha, I expect a plastic bag every time I shop, even if I go that shop ten times a day*”. Similar to the online survey, many *receivers* expect a plastic bag when they shop and this creates the demand for plastic bags by *givers*. Though it cannot be concluded from this study that a plastic bag determines return purchase in Lagos, Nigeria, *givers* always make provision for poly bags in business expenses and as one shop owner said “*i dey calculate poly bag for my budget because even though no be ever customer go collect bag, the bag no dey waste, sometimes, I need to buy extra join*”. This demand from *receivers* creates a market for manufacturing more plastic bags and importing the primary form of polyethylene used for producing plastic bags. (see interview transcripts Appendix A5).

#### 4.2.5. Social Norms

The norm is that customers are used to being given a bag for free without asking and some will ask when they are not given. A customer said, “*It is a normal thing to be given a polybag and even children know that when you go and buy plenty biscuits or caprisonne, you ask for a bag*”. It is generally believed that what you buy should be hidden from the public, this contributes to the need to use a plastic bag with every purchase. The unavailability of reliable alternatives contributes to the social norm of demand for plastic bag. One interviewee responded, “*even when I get a paper bag, I will put that bag inside a polybag because paper bags are not strong and water-resistant like the black polybag*”. (see interview transcripts Appendix A5).

Branded plastic bags are in high demand and business do it to expose their brands and products. Branded plastic bags can be a form of “word of mouth” marketing strategy similar to giving out an official complimentary card and the branded bags will travel to places these brand owners cannot reach themselves. A big retail chain manager said “*our bags are popular all over Lagos. Since we came to Nigeria with stores across the country, our bags have become some kind of prestige..... even when people buy something as little as 300 Naira<sup>6</sup> bread, or a bottle of coke, they carry that bag with some sense of satisfaction, so we make space in our budget specially for different sizes carrier plastic bag*”. A store owner in Idumota said in pidgin English “*Madam, this my bag, na him dey bring me customers even from outside Lagos, why I no go use polybag abeg oh hmmm, why you no give customer bag sef*” translated as my bags bring me clients within and outside Lagos, why would I give it up and why would you not give your customer a bag after purchase? This kind of response reveals a pattern of social norm in business advertising that could mean a ban on plastic bags may be resisted if a form of reliable alternatives is not provided. (see interview transcripts Appendix A5).

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<sup>6</sup> Naira is the currency of Nigeria, a legal tender issued by the Central Bank of Nigeria

#### 4.2.6. Policies on Plastic Ban

The plastic prohibition bill which has been adopted by the Federal House of Representatives in 2019 is largely unknown to the public. The Bill contains only penalties which interviewees found to be extreme with punitive measure and would likely not succeed. One interviewee said, *“How can you charge someone that much for ordinary plastic bag? Infact, aunty, me I have not even heard about it till this interview”*. A shop owner in mile 12 said *“you see this government, they want us to just punish us on top poly bag....poly bag oh, poly bag that they have not given us any other option, else, it is wickedness, what will I now give to my customers when they enter my shop?”*. The overall responses to the interview show the lack of public awareness on such a measure by the lawmakers without making provision or alternatives and focused more on punishing people for an item as cheap and common like a plastic bag. (see interview transcripts Appendix A5).

#### 4.2.7. Disposal

The manner of disposal of the used plastic bag determines how it ends up in the environment. The responses from the interviews showed 3 specific areas. *The efficiency of waste management systems, the public behaviour of indiscriminate littering* due to unavailability public dustbin within walking distance in many parts of Lagos and the choice of the user to either re-use or discard after a single-use. An interviewee noted that *“Even when you want to throw used bags in dustbin, you can’t find any within walkable distance, so I just throw it inside the gutter nearby or put it in my bag if it is still clean”*. Another respondent said, *“I put the bag in my trash but because my dustbin eventually overflows, the bags will still end up inside the gutter in front of my house, these people, I mean the dustbin people, they will not come to this our area sometimes”*. On discriminate littering, an interviewee said in pidgin *“no be say we no sabi throway dirty inside dustbin oh, you see my sister, you no even see dustbin throw way am.....you see how we dey clean gutter every week leave am make LAWMA<sup>7</sup> people come pack am but dem fit no come and breeze go blow am back inside the gutter”*. This translated as “we are not ignorant about proper waste disposal, the mechanism that exists by LAWMA counters every effort made because the system is not consistent. The choice of reusing a plastic bag depends on the quality of bag and what it was earlier used for. A respondent said *“I will re-use a high quality and nicely branded shopping bag but I don’t re-use bags from mama put or the small poly bags, you cannot even re-use those ones because it will just tear after you use it once”*. Another respondent said, *“those polybags are so cheap.....they are not strong, so i get a new one when I buy something whether on my street or the market”*. (see interview transcripts Appendix A5).

#### 4.2.8. Awareness

The interview proved that many residents of Lagos are aware of the negative impact of plastic bags as all 30 of the interviewees indicated this. One response is *“You see how we suffer during raining season in Lagos, you need Okada (commercial motorcycle) to go to places because the roads are flooded, I even drop my car when it rains, plastic bags are everywhere”*. Another respondent has said, *“there are no other choices, so I will continue to use plastic bags even though I know say it will block my gutter”*. The governance structure with the bill focused on penalties without incentives and proper waste management setting only accelerate the use of plastic bags. Aside public dustbins not being readily available within walking distance, environment protection laws are also focused on penalties, citizens are not compelled to stop indiscriminate waste littering as a respondent puts it

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<sup>7</sup> LAWMA is the abbreviation for Lagos Waste Management Authority

*“The government laws are not even helping us do better, they just want to punish us and they will not improve waste management structures in this Lagos, I am always paying levies and fine in this my shop to Local Government but If you go to the central market dumping site for this market, the smell is awful and when it rains those plastic bags will just scatter, breeze will even carry some dirty far away”.* The government has not done enough on public enlightenment like the case of the bill, one response sums it all *“you think all these people walking around don’t know that plastic bag is bad for the environment, how can a bill pass through 3 readings and many of us are not aware....but since everything is punishment, people will deliberately break the law and use money to bail themselves...those laws are for ordinary people on the streets, those house of rep (representative) people don’t know what they are doing, it is copy and paste.....”*(see interview transcripts Appendix A5).

#### 4.2.9. Summary of key finding from surveys and interviews

##### **Interviews:**

- Lack of alternatives as a major cause of the use of more plastic bags
- A poor waste management system negates the efforts of individuals to properly dispose of plastic bags.
- The quality of bags determines if they will be re-used
- The factors of demand and supply on both sides of the *givers* and *receivers* are linked to manufacturing. This reinforces the social norm of plastic bag use in business models and budgeting.
- The plastic bag probation bill is unknown to many members of the public and is focused on only punitive measures which may suffer a major setback if implemented.

##### **Online survey findings:**

- The highest number of respondents are from Alimosho LGA. The high number of respondents from Alimosho LGA corresponds with 2006 population data by the Lagos State Bureau of Statistics showing Alimosho LGA with the highest number of residents at 2,047,026 and a population density of 14,855.05 per 137.80 square miles (Lagos State Bureau of Statistics, 2016). The population density figures were projected to rise to 20,355 in 2016.
- The biggest source of plastic bags is supermarkets, open markets and street corner stores.
- Over 60% of respondents with representation across the 20 LGAs in Lagos indicated that they use between 1-5 plastic bags daily.
- The result of data collected from the online survey shows that the lack of reliable alternatives and convenience is the major reasons for the continued use of plastic bags amongst Lagos residents.
- Lagos residents would embrace alternatives if they were available and reliable Many Lagos residents re-use their plastic bags.
- Despite 97% of respondents being aware of negative environmental impact and properly disposing of plastic bags in the dustbins.
- Being given a plastic bag (or not) does not determine whether a person will shop.
- Public knowledge of the plastic prohibition bag bill is poor.
- The respondents have shown little interest in paying extra for plastic bags after shopping and would prefer to be given one for free as many shop owners presently do or carry their bags.

#### 4.2.10. Connection Circle describing the interactions between key variables of plastic bag use in Lagos

The variables listed around the circle in figure P4 below are based on key responses from data

collected from survey and interview on reasons for the continued use of plastic bags. The 6 key variables describe the “*cause and effect*” connections within the system of plastic bag use involving *givers* and *receivers* in Lagos. These 6 variables are environmental impact, demand for plastic bags, manufacturing, waste disposal and management, re-use and recycling and lack of alternatives to plastic bags.

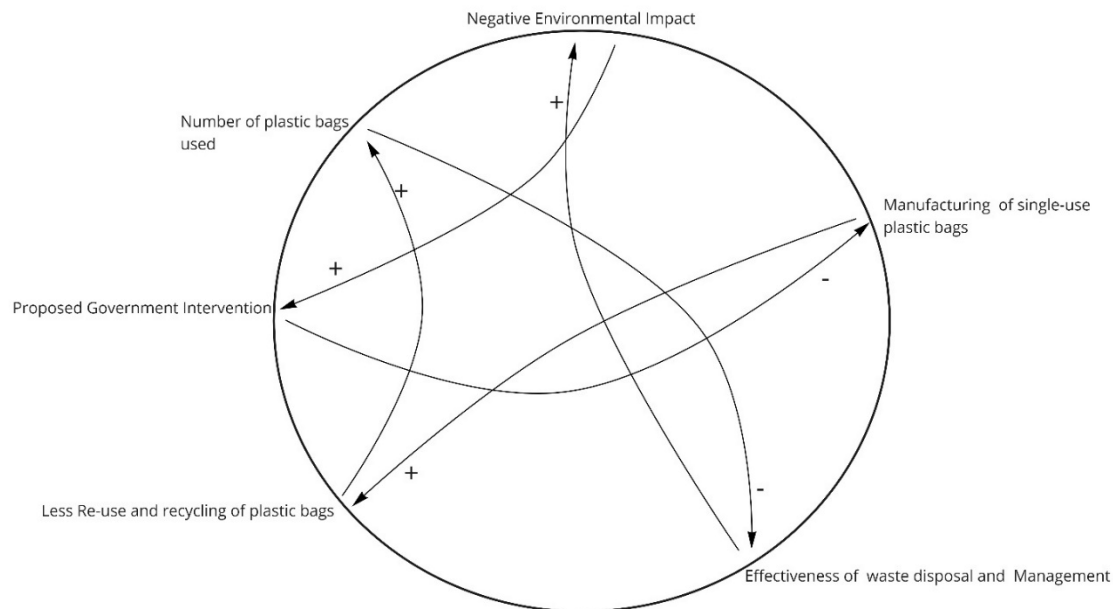


Figure4: key variables and outcome of the interactions between these variables for better understanding the system involving the use of plastic bags in Lagos.

#### Summary of interactions:

- As manufacturing and demand for single-use plastic bags increase the number of bags that can be recycled or re-used decreases.
- Less reuse, recycling of plastic bags including the lack of alternatives to plastic bags leads to an increase in the number of bags used.
- As the use of plastic bag increase, there is more plastic waste decreasing the effectiveness of the already existing waste disposal and management system.
- As the effectiveness of the waste management system decreases, a negative environmental impact like increased flooding, malaria and displacing people increases.
- As the negative impact of plastic bags on the environment increases, the need for government intervention in the use and manufacture of plastic bag increases.

Government intervention increases as plastic pollution increases could mean a new goal for the system to reduce the use of plastic bags. which can be achieved by the introduction of different type of interventions that combine policies focused on investments in alternatives to plastic bags with government monitoring systems to evaluate new changes. These also include enforcement of these policies, effective allocations of resources for improved waste management, recycling or adequate punishment for defaulting retailers and manufacturers.

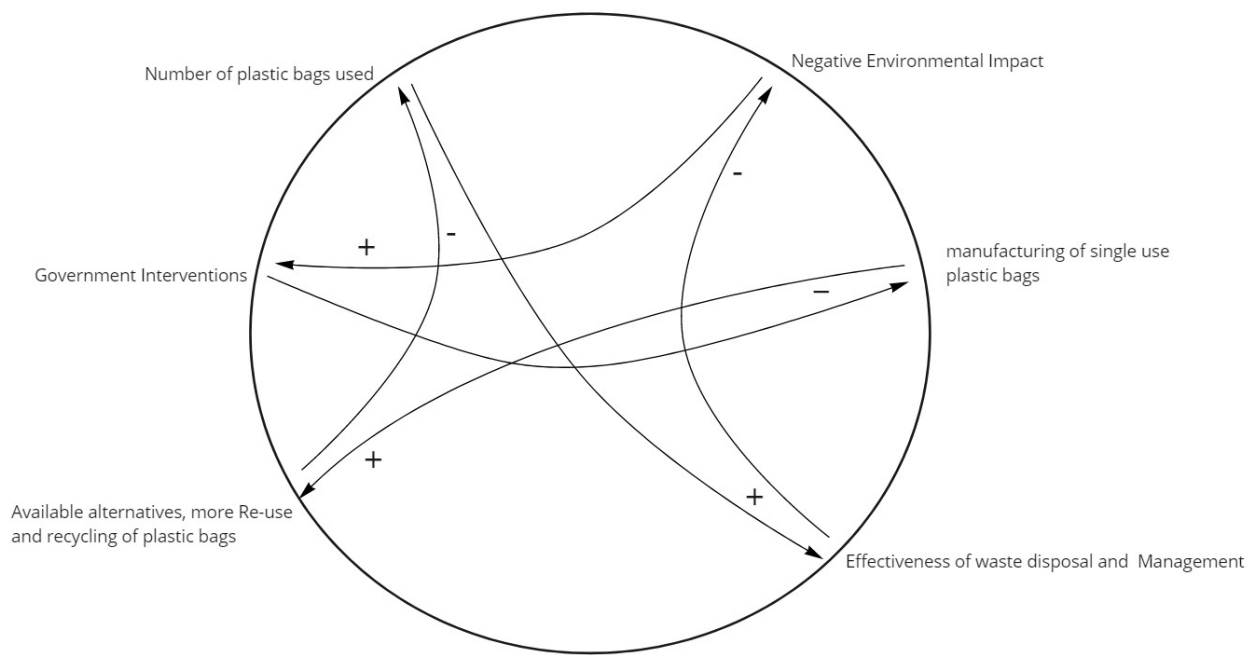


Figure5: key variables and outcome of the interactions between these variables to achieve the new goal of the system.

- Government Interventions<sup>8</sup> like incentives to manufacture alternatives to plastic bags and recyclable plastic bags increases as the negative environmental impact of plastic increases.
- As the manufacture of single-use plastic bags decreases, available alternatives and recyclable plastic bags increases, resulting in more recycling and re-use.
- As more plastic bags are being recycled and reused, the number of plastic bags used decreases.
- As the number of plastic bags used decreases, there is less plastic waste increasing the effectiveness of the existing waste disposal and management.
- As the effectiveness of waste management increases, negative environmental impact reduces.

#### 4.2.11. Balancing Feedbacks with new system goals

Government Interventions in policies, incentives aimed at cutting down the supply of single-use plastic bags entering into the system and eventually the environment could result in the system having two different goals and two balancing feedbacks. These interventions are the action needed to move the system from its present state of more single-use plastic ending up in the environment to less of it, balancing any discrepancies. They are termed “balancing feedbacks” (Meadows, 2008) because each of the goals is determined to stabilize the number of single-use plastic bags that end up in the

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<sup>8</sup> Government incentives in this case does not only include incentives targeted at manufacturers, there are provisions for nudges to encourage public willingness to fully participate in reuse of plastic bags and available alternatives to reduce waste from plastic bags.

environment, reducing negative environmental impact. These two balancing feedbacks are:

1. **B1:** Reduction in the manufacturing of plastic bags through giving incentives to manufacturers of plastic bags to produce alternatives to plastic bags and recyclable plastic bags for more recycling and reuse.
2. **B2:** Reduction in the number of single-use plastic bags being dumped on the streets through the provision of the right nudges for behavioural change that allows the public to actively switch from the use of plastic bags to more available alternatives.

Figure P5 below describes feedback loops with a one stock model (Meadows, 2008)

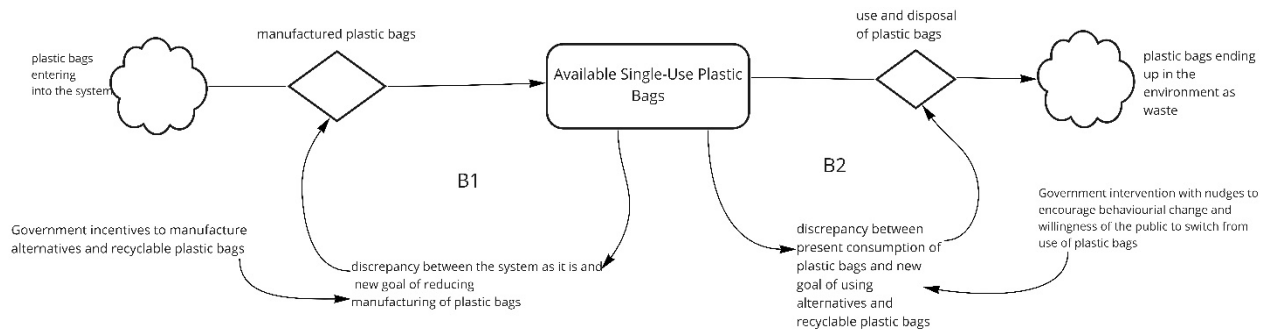


Figure 6: available plastic bags in regulated manufacturing and consumption (use and disposal of plastic bags)

## 5. Discussion

Results from online survey and interviews presented in the previous chapter show that lack of alternatives and convenience as the biggest reasons for the continued use of plastic bags. Despite alternatives being an obvious solution (See sections 4.1.4 and 4.2.3) to the use of plastic bags and willingness to embrace environmentally friendly options from the study, more information is needed to ascertain the demand and cost of alternatives to plastic bags. The results prove very little public knowledge of the proposed plastic bag prohibition bill (see sections 4.1.6, 4.2.6 and 4.2.8) aimed at banning the use of plastic bags which makes a case for more public engagement in policymaking processes and choosing other approaches to behavioural change than the use of force (Nwafor & Walker 2020). The study shows a high level of awareness on the dangers of plastic bags to the environment, follows research by Ihuekwumere et al (2020) showing residents of Nnewi, a city in south-eastern Nigeria are aware of the “potential problems” with the excessive use of plastic bags (section 4.1.5). Residents have shown willingness to embrace alternatives (See section 4.1.4 and section 4.2.3), this is based on the availability of these alternatives and results show poor waste management (See section 4.2.7) as a contributing factor to plastic pollution.

Socio-economic data from the online survey indicate more male participation than females. The reason for a greater number of males could be the presence of more males online than females in Nigeria between the ages of 18-54 years (Statista, 2021). There are also more men with higher educational qualification online compared to women (Anunobi & Mbagwu, 2009) which may have contributed to the reluctance in responding to educational surveys like the one used for this study. The rising unemployment affects more women than men, hence, fewer women have the means to afford data required for surfing long hours on the internet. Figures by the Nigeria Bureau of Statistics (NBS) in 2020 states that “The report showed that unemployment hit 12.2 million females, as against 9.5 million men” (Christian, 2021). The female unemployment rate in Nigeria also rose to 35.2% in the 4th quarter of 2020 according to NBS data in February 2021. Considering the survey was anonymous with no form of gender affiliation (Smith 2018), specific social issues which could trigger emotional responses (Rattel et al., 2020), may have contributed to lower number of women



respondents to the study.

The main sources of plastic bags are shops (Section 4.1.2) which mainly deal with daily groceries and household items like food and toiletries. Aside from giving consumers mostly cheap, poor quality single-use plastic bags after shopping, many household items are wrapped in plastic found on supermarket shelves. The high percentage from grocery shopping from this study supports findings that “grocery stores are packed with plastic” (Borunda, 2019) and are guilty of being “unflinching plastic polluters” (GRAIN, 2019). Other sources like local restaurants, offices are negligible sources of plastic bags as shown from the results of the survey.

Despite the high demand for plastic bags, most users in Lagos according to this study (see section 4.1.2 and 4.2.7), keep their bags for re-use before disposal. The high percentage of respondents admitting to disposing of plastic bags in the dustbin after makes it clear that disposal mechanisms are not efficient (Ihuekuwumere et al 2020), leaving the used plastic bags to litter back into the environment. The results on re-use are contrary to the notion that Nigerians have a poor attitude to plastic bag re-use as this is dependent on the quality of the plastic bags and for disposal mechanisms across the state. Waste collection in Lagos involves both formal and informal actors; many streets end up sorting their waste collection involving informal actors where informal waste collectors fail to show up. (Nzeadibe, et al., 2021)

Below are recommendations based on results to implement a switch from constant use of plastic bags:

## 5.1. Online Public Engagement as a Tool for Research

The coronavirus pandemic has reinforced the need to include distance learning and maximize online tools to achieve results. *“The emergence of digital networked technologies has led to the convergence of channels of distribution and communication formats including social media. The profound impact of networked technologies on societies economically, socially and politically has led some to claim that we have entered a new era of the Information, Network or Knowledge Society”* (Cammaerts, 2015). Results from both online surveys and interviews shown in the previous chapter reveal an opportunity for engaging the public at different levels with social media for research purposes. The study was able to reach respondents in different parts of Lagos through online survey and interviews without any need to meet them personally. This aided me in getting relevant information for my research and this can be used on a larger scale with more resources even with limited manpower.

Online platforms like Facebook, Instagram, Twitter, and LinkedIn can become an important cost-effective tool for carrying out a specific survey at different levels level on issues, start conversations with useful feedbacks with millions of Nigerians as active daily users (Statista, 2020). Older Nigerians who may not be able to catch up with using social media platforms are accustomed to WhatsApp, where they can respond to these surveys as some of the respondents to the online survey got a link forwarded to them by someone who saw the link on social media platforms. The goal of this study in finding out reasons why Lagos residents use plastic bags is an important step towards managing the use of plastic bags is not just in Lagos State but also in Nigeria on a bigger scale. This study has involved anonymous public feedback making a case for the importance of public engagement (Stewart et al 2016) in the age of sustainable development for getting insight into issues with broader societal impact like plastic bags.

## 5.2. Online Public Engagement as a Tool for Social Change

An online anonymous survey with straightforward questions can encourage citizens to engage without submitting personal data and allow them to express their opinions “freely”. The anonymous online survey and interviews show the importance of not making assumptions about the level of public enlightenment as in the case where the assumptions have always been that Nigerians are

unaware of the negative environmental impact of plastic bags and the unwillingness to fully embrace re-use or recycling. Ambiguous exaggeration of issues like the use of plastic bags based on anecdotal evidence laced with emotions with no real research data for backup skips much of the substance (Stigler, 1964) (Hagan 2001). The poor data-backed approach in understanding the use of plastic bags eventually plays into policymaking amounting to waste of resources with no positive impact. The culture of constant use of plastic bags to covering every single item bought contributing to more use of plastic bags (See section 4.2.5) can also be tackled with public engagement useful for driving social change. Even though the reasons behind the behaviour of hiding purchases are beyond the scope of this study, people would normally avoid situations where others can scrutinize the worth of their purchase because the price of goods, perceived quality (brands) and quantity bought tend to be related to economic class in the society (Lee et al, 2018, Maxwell, 2001, Oh, 2000)

Results from online surveys can become an important input in adaptable waste management design (Agbesola, 2013) regarding plastic bag re-use and recycling by the Lagos Waste Management Board (LAWMA). To effect behavioural change in any society it is important to understand why such behaviour persists in the first instance, this can be achieved using online public engagement tools like social media. Psychology and the societal influence within a particular environment in decision making as in this case the use of plastic bags will aid designing and implementation interventions (Avis, 2016). In understanding the ‘why’ of a societal problem, public feedback can also be seen as a form of democracy (Bonbright et al., 2015) useful for making effective policies.

With more Nigerians being active online, the government can capitalize on social media platforms to engage citizens. This approach has proven to be useful in voting for contestants on entertainment shows like Big brother Nigeria, The Voice Nigeria, MTN Project Fame and the likes with millions of Nigerians voting, actively engaging in online banter, analyzing the shows, and even predicting outcomes. Some Nigerian political figures use online platforms like Twitter to engage constituents notably Akin Alabi of the Federal House of Representatives and Governor Seyi Makinde both of Oyo state in southwestern Nigeria. Many Nigerian politicians and government parastatal have verified social media accounts but do not regularly engage with citizens in a way that is could be beneficial for policymaking or governance. Social media has seen rapid growth over the passing decade is being used as a vehicle for political online activism (Duggan &Smith, 2016, Anderson, 2016) as in the recent #ENDSARS public outrage on police brutality in Nigeria which gained public in 2020, the case of the Chibok girls’ ordeal with Boko Haram insurgents using #BringBackOurGirls and Twitter platform actively driving the #MeToo feminist movement (Li et al., 2020). Like social media activism, online public engagement and enlightenment can be harnessed more strategically to drive behavioural change from plastic bags with the right incentives.

### 5.3. Investment in Alternatives to plastic bags

The lack of alternatives and convenience are the most common reasons for the continued use of plastic bags according to results from this study. Results from the online survey showing that 47.6% use plastic bags because there are no reliable alternatives and 36.1% due to convenience. Alternatives to plastic bags like high-quality paper bags, jute bags, woven bags, cotton bags, re-usable tote bags for grocery, silicon Ziploc bags are not available for residents of Lagos, Nigeria despite the willingness of respondents to give up plastic bags (See section 4.1.4 and section 4.2.3). With technological advancements in “eco-friendly” options (Ashiq, et al., 2021) in many parts of the world, megacities in Nigeria like Lagos require targeted huge long-term investments in environmentally friendly carrier bags to encourage the public to switch from plastic bags. Without provision for alternative options that offer the same ease, convenience, and reliability as a plastic bag, phasing it out may end as a futile endeavour. As mentioned in the results, it is like results from research in India where lack of alternatives causes people to use more plastic bags. *“Lack of manufacturing facilities to meet the demand of biodegradable single-use products”, ‘Lack of financial support for developing alternatives of single-use of plastics’, ‘Lack of government initiatives to promote biodegradable*

*single-use products*’ and *‘High cost for technologies for alternative of single-use of plastics’* according to Vimal et al (2020) are some barriers for that can slow down the phase-out of single-use plastic and switch to alternatives in developing countries. The results are similar to research by Velocity MR<sup>9</sup> in major cities of India, “including Mumbai, Delhi, Bengaluru, Kolkata, Hyderabad, Chennai, Ahmedabad and Pune” showing the lack of alternatives as a major driver for more use of plastic bags (Asian Age, 2018, Basu, 2018)

Many of the polybags given to consumers after shopping are poor quality bags, designed for single-use creating a need for constant demand for a new plastic bag. Respondents have indicated their willingness to embrace environmentally friendly alternatives like Jute, Paper and woollen bags (See table in Section 4.1.4) which creates an opportunity that could be maximized to invest in alternatives and initiatives that promote recycling. Despite more than \$30 trillion investments in areas related to sustainable development (Global Sustainable Investment Alliance) and investments in biodegradable plastic innovations is expected to reach \$6.73 billion by 2025 (Grand View Research, 2020), millions still depend on plastic bags made from polyethylene. In 2020, the Lagos state ministry of environment issued a public statement on the state’s plan to implement a new plastic waste management policy backed by a legal framework. “Styrofoam and nylon commonly being used for Water & beverages, take away plates & cups, Carrier bags” (MOE Lagos State, 2020) were listed as plastic materials that make up a large proportion of the solid waste generated in the state. Despite such a laudable approach to tackling plastic waste, details of goals and timeline for implementation remain vague without specific mentions on provisions for alternatives as Lagos continues to battle with flooding and other negative environmental impacts of plastic waste.

Demand and supply of cheap poly bags in Nigeria also play into the lack of alternatives and use of more plastic bags. As the results have shown from the interviews, vendors use plastic bags as a form of business branding because of the availability, reliability, and versatility of plastic bags. Investing in alternatives that offer the same qualities as durability, affordability and versatility as plastic bags would cut down the demand for plastic bags, creating opportunities to give up plastic bags and making enforcement of the proposed ban on plastic bags easier (this would depend however on rethinking the plastic bag prohibition bill to focus less on punishment and fines). Phasing out cheap polybags can be achieved by giving profit-based incentives (like tax cuts) like what is practised in Rwanda (Danielsson, 2017) to manufacturers even though, the implementation approach must be context-specific in Nigeria (Behuria, 2021). These tax incentives help manufacturers to import the type of machines needed for recycling, producing better quality bags and environmentally friendly options from locally sourced materials like Jute fibres known locally as *Ewedu* or cotton instead of importing polyethene in primary forms (Ihekhuemere et al, 2020) (Henrich Boll foundation 2019). Investment in production alternatives will encourage the production of bags that can be re-used as respondents of the interview have said the quality and size of the bag is a major determinant of re-use (See figure 6 in section 4.2.11).

A decision to invest in alternatives to plastic bags could allow for more cooperation with many small-scale PET bottles “down-cycling” initiatives across Lagos who have created a model of exchanging empty plastic bottles for money. Some of these initiatives have gone further to convert these PET bottles to bricks for building, crushing bottles to pellets used in the manufacturing of new plastics.

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<sup>9</sup> Velocity MR is a market research, branding and communications company located in India which carried out the research mentioned in this study.

Some of these initiatives have converted empty sachet water packs into fibres for making bags and shoes like Planet3R Initiative (See pictures of items below Images 9 -12). Through collaborations and large-scale investment, this can be scaled to include more type of plastic waste including plastic bags.



*Image 8: Shoes made from sachet water packs by planet3R ([Credit: Planet3R/Twitter](#))*



*Image 9; bags made from sachet water packs by Planet3R. ([Credit: Planet3R/Twitter](#))*



*Images 10: school bag from plastic sachets by planet3R (Credit: Planet3R/Twitter)*

## 5.4. Rethinking The Plastic Bag Prohibition Bill

The Plastic bag probation bill is unfamiliar to many residents of Lagos as this study confirms (See table 7). The bill sponsored by Ogun Sergius Oseasochie (Edo state PDP) had first reading 19th April 2018, second reading 4th of July 2018 and third reading 22nd May 2005 after which it was adopted by the Federal House of Representatives. The bill is lacking in “adequate notice, public consultations, jurisprudence and practicability” (Nwafor & Smith, 2020) relevant to citizen sciences used to study marine debris on the shorelines in the Bahamas (Ambrose et al., 2019). This poor public awareness would mean if the bill were eventually signed into law, many Nigerians may become defaulters since they have not been part of drafting the bill. Nigerians are known to be dissatisfied with government policies’ planning and implementation around elites leading to protest and outright rejection (Fakolade et al., 1981) (Sulaimon & Sagie, 2017).

The plastic bag prohibition bill like other plastic bag ban bills passed across 34 countries in Africa hoping to enforce plastic ban without much provision for alternatives, viable enforcement and monitoring framework. The scanty details of the bill lack contextual foundation, specified goals, seem like a “lone-wolf” approach and do not fit within any of the already waste management policies at national and state levels like the 2017 Lagos State Environment Management and Protection Law which could have served as a foundation for evaluating the effectiveness of the bill. The Lagos State Environmental Management Protection Law, 2017 (EMPL 2017) compliments the Federal National Environmental Standards and Regulations Enforcement Agency Establishment Act, 2007 (NESREA) and consolidates all regulations applicable to the environmental management and protection in Lagos State (Oserogho & Associates, 2017). There is no provision in the Nigerian bill for tested Market-Based Instruments (MBIs) like “taxes, charges, fees, fines, liability and compensation schemes, subsidies and incentives and tradable permit schemes to change consumer behaviour of plastic use” (Nwafor & Walker 2020) (Adam et al., 2020). Likewise, the mentioned MBIs can be useful for incentivizing behavioural change along with making alternatives to polybags available. The lack of consideration for the use of MBIs shows a missed opportunity of maximizing revenues from instruments like plastic tax with accountability and transparency. Ghana, Nigeria’s West African neighbour has accumulated over USD 163 million from the Environmental Excise Tax of 10% on plastic waste, even though the funds are yet to be utilized for the goal of plastic recycling (Linnenkoper, 2019) (Nwafor & Walker, 2020). Also, the complex cultural and economic difference (Vimal et al., 2020) in Lagos, Nigeria’s biggest economic hub could affect the full adoption of the



plastic prohibition bill which would feel like “it came out of nowhere” due to poor public participation in the whole process.

*“The Bill should provide performance indicators against which effectiveness can be measured. The Nigerian Plastic bags prohibition Bill can be strengthened by incorporating components like interpretation section, glossary section, enforcement procedure, waste management techniques section, permissible alternatives section, market base instrument section (e.g., taxation) and monitoring, assessment and continuous public waste management education section. All these will help to identify and define targeted problem plastics, exempted materials and fine-tune the general jurisprudence and policy efficacy of the Bill” (Nwafor and Walker, 2020).*

An intervention that focuses on a comprehensive approach to better manage manufacturing, use and disposal of plastic bags as shown in the connection circles and balancing loops could become an effective tool to solving the present issues with plastic bags stated in the bill (See figures 5 and 6 in section 4.2.11). The limitations of punitive approach have been documented in countries like Kenya with “the strictest plastic ban in the world” (Nicholls n.d) mirroring the approach by the Nigeria Legislature and like Rwanda, a country challenged by plastic smuggling across borders and more paper waste proving policies must be context-specific (Green Peace, 2020, Clavel, 2014). The punitive model has proven to be less effective in dealing with plastic bags despite being hailed as a step forward. The plastic ban has been unsuccessfully opposed by the Kenyan Manufacturing Association in court, stating over 10,000 job losses in the plastic manufacturing industry (Parker, 2019). The bill could mean sudden shock of paying 500,000 Naira for defaulting or up to 3 years imprisonment in Nigeria, a country with over 3,000 plastic companies, many of which are in Lagos state employs thousands of Nigerians. The outright ban stated in the bill without provision for investing in alternatives to incentivize gradual transition from plastic bags or public awareness campaigns like what was done in Morocco (Alami, 2016) would aggravate the plastic pollution in Lagos and Nigeria. Using the right nudges can be effective as shown in one of the balancing feedbacks (See figure 6 in section 4.2.11) a case where one of the goals of the system is using government interventions that thrive on public willingness to actively participate in the use of manufactured alternatives to plastic bags and proper disposal of used bags. Nudges to encourage the willingness of the public to commit can be very effective (Santukiene et al., 2020) and has been used in many countries like Sweden with an organized system to encourage plastic recycling. Using the nudging approach to behavioural change gives a clear foundation for observing what strongly influences behavioural patterns (Vlaev et al., 2016) and effecting gradual targeted change.

## 5.5. Better Plastic Waste Management

As shown from the results of this study, residents have mentioned that they often dispose of used plastic bags but when the dustbins are not properly emptied in good time, the same plastic bags end up in the gutters. Lagos state has made efforts in the past like “Cleaner Lagos Initiative” launched in 2018 was focused on improving solid waste management facility which cost over \$20 million and investments in public-private joint investments costing over \$20million (Nzeadibe et al. 2021, Onumiya and Nze, 2017) waste management hierarchy has also been suggested in better managing Lagos municipal waste (Agbesola, 2013, Onwughara et al., 2010, Adejobi and Olurunimbe, 2012) and turning waste to wealth (Sridhae and Hameed, 2014). Despite passing the Lagos State Environmental Management Protection Law in 2017 (“EMPL 2017”), Lagos continues to drown in heaps of waste. In December 2020, The “Lagos Recycle Initiative” was launched to achieve robust recycling within Lagos using LAWMA accredited recyclers with an “attractive reward system to encourage waste segregation and timely pick-up of recyclables” (Lagos State Government, 2020). An application named Pakam Application (Pakam App) was launched to support this new initiative with plastic waste collection. LAWMA has set up recycling centres at different locations across the state, “with the vision to have a recycling centre per local government, which would serve as collation centres for recyclables, thus ensuring the minimization of wastes that end up at the dumpsites” (Lagos

State Government, 2020). The state government could focus on using its powers to compel manufacturers of consumer goods using plastic and manufacturers of plastic bags to commit to environmentally friendly alternatives back by the right incentives. This would balance efforts by existing initiatives already working with consumers at the end point of used plastics with the type of plastic being produced in the first place. The State Government can offer incentives to encourage the production of recyclable grade forms of plastic and alternatives to plastic bags.

Being focused on collecting empty plastic bottles alone is no longer enough to help Lagos state overcome the challenges of plastic waste that are a contributor to yearly flooding in the state. The type of plastic polymer to be recycled must be specified and considered in manufacturing since not all types of plastic collected can be recycled (Hopewell et al., 2009). The model is applied by many NGOs now of crushing PET bottles to make new plastic bottles will not be environmentally sustainable in the long run if polymers are not broken down or biodegradable plastics are not considered, the quality of plastics (Pivnenko et al., 2015) needs to be factored in. Factoring the existing challenges of plastic recycling into waste management will be useful for effective waste sorting at all levels. The result will be better recycling involving not just consumers but manufacturers and retailers as it is being practised in many countries across Europe and North America.

## 5.6. Maximizing the Right Nudges for Behavioural Change

Behavioural change is a very difficult terrain to climb and sustain (Panter-Bricka, et al., 2005) especially dealing with big cities like Lagos. The study reveals opportunities for approaching behavioural change with the use of nudges within specific contexts. This could be a form of national orientation program using mass media or placing of coloured dustbin across key locations in Lagos. Nigeria already has unresolved social change issues tied to cultural issues, social and utilitarian structures (Solaja, 2020) which makes implementing community initiatives in culturally diverse cities like Lagos almost impossible. The culture of plastic bag uses in a country where millions of people wallow in abject poverty may become something difficult to confront because citizens need real incentives, suitable alternatives to give up the convenience that comes with using a plastic bag. Beliefs and values make up the complexity of different society and are an important vehicle for societal change (Uzorka & Deekor, 2013). These beliefs and values make up an integral part of cultural, unspoken society rules prevalent in the culture of plastic bag use and the institutions that exist within the Nigerian society. Values also influence behaviours and it determines what is held up and practised, making it easily becoming a norm. Investigating the reasons behind “behavioural differences” between different societies is a crucial area for research in this age of sustainable development (Raworth, 2017). As Donella Meadows puts it “The shared idea in the minds of society, the great unstated assumptions-unstated because unnecessary to state; everyone already knows them-constitute that society’s paradigm or deepest set of beliefs about how the world works” (Meadows, 1999). To be able to leverage any change in behaviour in the use of plastic bags, there must be a focus on the social construct of society. This paradigm dictates the way institutions are set up, policies are made and even intended solutions that may not be effective in implementing the behavioural change or even changing the goal of the system as it exists.

## 5.7. Limitations of Study

Data sourcing with social media and interviews was useful for this study in analyzing reasons for use of plastic bags in Lagos, Nigeria. However, the process has some limitations. First social media excludes some parts of the population who may not have access to data for browsing online or being active on social media. This has may have been reflected in the lesser number of female participants online compared to males in the online survey. The assumption for this study was that there were enough Lagos residents from the 20 Local Government online who would be able to participate in

the survey. To include people who did not participate in the online survey, interviews included 30 respondents across Lagos, some of which included the use of Pidgin English to accommodate people with useful responses for this study and therefore this limitation may not have affected the goal of this study. Secondly, superstitions with the anonymous survey because of porous internet security, interviews from strangers and fear of government surveillance in Nigeria. This would require additional proofs to show that the studies are anonymous for the public to respond. The author of this thesis had to show respondents ID card as a student at Uppsala University to enable them to trust the process enough to respond to interviews and make sure personal information from the online surveys was not stored even though legitimate email addresses were required to access the online forms.

Combining qualitative and quantitative methods balanced the limitation of a close-ended online survey with the use of interviews allowing interviewees to respond fully to questions related to this research. The author would have preferred the interview period to be longer but with many people in Lagos (hurrying to beat the traffic congestion or be ahead of the queue), time is such a valuable thing that they would prefer to be doing something else than responding to an interview. Another limitation of this study has been time constraint requiring that the scheduled timeline must be complied with for completion of this degree program. The sample size is small to be able to effectively code and analyze as a single student working on this research within the scope of the available resources. The intriguing query, therefore, is if the outcome would be different in a study with a larger sample size for both online surveys and interviews to include more women.

## **5.8. Future Research**

This study contributes to a new aspect of studying plastic bags use in Nigeria. Nevertheless, more extensive research into the use of plastic bags, the implementation of the plastic prohibition bill and effective plastic waste management across Lagos state involving a larger sample size and resources are needed to corroborate and broaden the findings from this study. In addition, the use of social media platforms and other online research tools is recommended for public engagement in policy making on issues related to the Sustainable Development Goals (SDGs). The challenges for research in the future is determining the specific alternatives to plastic bags fitting within the complexity of the big cities like Lagos in Nigeria, associated cost, and effectiveness of alternatives to plastic bags.

## **6. Conclusion**

The lack of alternatives and convenience are the top reasons from this study for the continued use of plastic bags in Lagos. The quality of manufactured bags also contributes to poor re-use and recycling of plastic bags worsening the negative environmental impact like flooding, displacement of thousand every year and spread of disease like typhoid and malaria. The proposed plastic bag prohibition bill by Nigeria's legislature to reduce the use and manufacture of plastic bags is Nigeria's first attempt to back the elimination of plastic bags waste with a law. However, the bill remains largely unknown to the public which is reflected by poor public participation in the drafting process, leaving out key points like the provision of alternatives to plastic bags and incentives for manufacturers of plastic bags. Aside reasons for continued of plastic bags, this study has shown some level of willingness from the public to embrace different types of alternatives if it is made available. Therefore, this thesis recommends that more focus be placed on investing appropriate alternatives to plastic bags, incentives for manufacturers of plastic bags to produce more environmentally friendly options to plastic bags from locally sourced materials. Furthermore, more public participation using social media platforms, as well as other means outside social media in drafting legislation of this nature, is required to get extensive feedbacks and use of the right nudges to encourage behavioural change instead of reliance on punitive measures to curb plastic bags use.



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## 9. APPENDIX

A1 Copies of Proposed Plastic Bag (Prohibition) Bill, 2018. ([abcnig.com](http://abcnig.com))



*Hon. Deacon Sergius Ose Ogun*

ESAN NORTH EAST/ESAN SOUTH EAST FEDERAL CONSTITUENCY, EDO STATE

Deputy Chairman House Committee on FCT

HOUSE OF REPRESENTATIVES

### LEGISLATIVE BRIEF

IN SUPPORT OF A BILL FOR AN ACT TO PROHIBIT THE USE, MANUFACTURE AND IMPORTATION OF ALL PLASTIC BAGS USED FOR COMMERCIAL AND HOUSEHOLD PACKAGING IN ORDER TO ADDRESS ITS HARMFUL IMPACTS TO OCEANS, RIVERS, LAKES, FORESTS, ENVIRONMENT, WILDLIFE AS WELL AS HUMAN BEINGS AND ALSO TO RELIEVE PRESSURE ON LANDFILLS AND WASTE MANAGEMENT AND FOR OTHER RELATED MATTERS (HB. 1437)



Dear Colleagues, kindly consider the following submissions in support of the above named Bill which I humbly propose for passage into law.

#### LONG TITLE:

An Act to prohibit the use, manufacture and importation of all plastic bags used for commercial and household packaging in order to address its harmful impacts to oceans, rivers, lakes, forests, environment, wildlife as well as human beings and also to relieve pressure on landfills and waste management and for other related matters.

#### SHORT TITLE:

Plastic Bags (Prohibition) Bill, 2018

#### INTRODUCTION

The collection and disposal of waste plastic/polythene bags is a growing problem in Nigeria. The use of plastic/polythene bags made of thin plastic film has increased significantly in recent years. The discarding of a large number of these bags results in the degradation of the environment. These non-reusable bags are indiscriminately dumped and not collected for recycling or disposal because the thin plastic films are made of little commercial value. This makes it necessary to have a law prohibiting its continued use, manufacture and importation into the country.

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## BACKGROUND:

The uncontrolled use of plastic materials (polythene bags) and the arbitrary disposal of same, poses great danger to humanity and even to our environment. These non-degradable materials that litter the country stay for decades without decaying and eventually obstruct our drainages and water channels, thereby causing flooding in certain flood prone communities, thus endangering the ecosystem and contaminating agricultural soil.

Over time, these plastic/polythene bags find their way into the marine environment and are ingested by marine animals thereby choking them. According to statistics, about 94% of all birds have plastic in their stomachs, which is also found in the stomachs of many endangered species. At least 267 different species of animals have suffered as a result of ingestion of plastic. In fact, these results caused Australia to ban bags locally in 2003, in an effort to protect the migrating whales in Tasmania. In Ireland, there is what is known as 'bag tax'. This resulted in a 90% drop in bag usage and a great reduction in spread. The main driver behind bag bans is to reduce how much plastic finds its way into the marine world, so as not to endanger the animals.

The Ministry of Environment reported last year that an estimated 50 billion plastic bags are used annually and that these plastic/polythene bags account for a staggering 20 per cent of municipal solid waste in the country. These plastic bags gravely disrupt the ecological balance, polluting our water and emitting dioxins into food when left in a humid environment or exposed to heat.

In several African countries like Kenya, Rwanda, Cameroon, Guinea-Bissau, Mali, Tanzania, Uganda, Ethiopia, Mauritania and Malawi measures have been adopted to reduce the production and use of plastic bags particularly single use shopping bags through an outright ban or imposition of tax as a means to crackdown on carbon emissions. In Democratic Republic of Congo, the government introduced a Decree to ban the use of plastic bags in the country in 2011.

There are other reasons to ban bags as well. In Kenya, for instance, it is done to stop the spread of Malaria. In Bangladesh, the Philippines and Cameroon, it is done to protect the sewage systems and avoid flooding. In Texas and Indian communities, it is done to protect cows. In Mauritania, 70% of sheep and cattle deaths have been attributed to plastic ingestion. The same concern exists for camels in the United Arab Emirates.

In Rwanda, the ban on plastic bags started in 2008, and airline passengers often have to hand over all their plastic bags. South Africa banned certain plastic bags in 2003 and taxed thicker ones. Botswana put up a fee in 2007 and retailers have reported a 50% drop in bag usage.

#### **OBJECTIVES OF THE BILL:**

The Bill has the following as its objectives:

- (a) To prohibit the use, manufacture and importation of all plastic bags used for commercial and household packaging in order to address its harmful impacts to oceans, rivers, lakes, forests, environment, wildlife as well as human life and also to relieve pressure on landfills and waste management;
- (b) To give the National Environmental Standards and Regulations Enforcement Agency (NESREA) and other relevant environmental protection agencies, the statutory foundation to clampdown on those who pollute our environment with the use of plastic bags;
- (c) To sanction anyone who engages in the use, manufacture and importation of plastic bags.

#### **STRUCTURE OF BILL:**

The Bill has three Clauses;

Clause one: prohibits the use, manufacture and importation of plastic bags;

Clause two: spells out the penalty to be imposed on any one found guilty of the offence of using, manufacturing and importing plastic bags and

Clause three: gives the citation (short title) of the bill.

#### **NECESSITY OF THE BILL:**

Presently, there is no legislation in Nigeria, which prohibits the use, manufacture and importation of plastic/polythene bags in the country. Therefore, the National Environmental Standards and Regulations Enforcement Agency (NESREA), which by law, is amongst other things, saddled with the responsibility of enforcing compliance with regulations on the importation, exportation, production, distribution, storage, sale, use, handling and disposal of hazardous chemicals and waste other than those in the oil and gas sector; (pursuant to Section 8 of NESREA Establishment Act, 2007) becomes handicapped in enforcing international best practices in relation to the use, manufacture and importation plastic bags.

Furthermore, the Environmental Impact Assessment Act, Cap E12 Laws of the Federation of Nigeria, 2004, which takes into account, the impact of any activity(ies) taken or to be taken by any person(s) or authority on the environment, before such activity is taken, has no specific provision prohibiting the use, manufacture, sale and importation of plastic bags.

The absence of legislation in this area, will make it difficult if not impossible, for NESREA's officials to clamp down on those who use, manufacture and import plastic/polythene bags in the country and thus cause harm to our oceans, rivers, lakes, forests, environment, wildlife as well as human life. It is this lacuna that this Bill seeks to fill.

It is no news that plastic bags cost our world a lot and that we are still paying for the many years of plastic bags usage. Therefore, a legislation prohibiting and/or controlling its use, production, importation and disposal is a step in the right direction.

#### **CONCLUSION:**

Mr. Speaker, this Bill when passed into Law, will reduce the public health risk posed by the indiscriminate use and disposal of these plastic bags because most are destroyed by burning and they end up releasing harmful toxic gases such as methane, carbon dioxide into the atmosphere, thereby increasing the level of VOCs (Volatile Organic Compounds).

I therefore urge my colleagues to support the passage of this Bill.

Thank you Mr. Speaker and my esteemed colleagues.



## *Hon. Deacon Sergius Ose Ogun*

ESAN NORTH EAST/ESAN SOUTH EAST FEDERAL CONSTITUENCY, EDO STATE

Deputy Chairman House Committee on FCT

### HOUSE OF REPRESENTATIVES

#### PLASTIC BAGS (PROHIBITION) BILL, 2018

##### EXPLANATORY MEMORANDUM

This bill seeks to among other things prohibit the use, manufacture and importation of all plastic bags used for commercial and household packaging in order to address its harmful impacts to oceans, rivers, lakes, forests, environment, wildlife as well as human beings and also to relieve pressure on landfills and waste management.







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#### ARRANGEMENT OF CLAUSES



##### Clauses:

1. Prohibition of Plastic bags.
2. Penalties.
3. Citation.

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Deputy Chairman House Committee on FCT

### HOUSE OF REPRESENTATIVES

#### PLASTIC BAGS (PROHIBITION) BILL, 2018

A Bill

for



An Act to among other things prohibit the use, manufacture and importation of all plastic bags used for commercial and household packaging in order to address its harmful impacts to oceans, rivers, lakes, forests, environment, wildlife as well as human beings and also to relieve pressure on landfills and waste management and for other related matters.

( ) Commencement

ENACTED by the National Assembly of the Federal Republic of Nigeria –

- 1(1) The use, manufacturing, importation or sale of plastic bag is prohibited. Prohibition of  
A Retailer shall offer a paper bag to the customer at a point of sale. Plastic bag.
- (2) Any –
- (3) a. retailer who provides customer with the plastic bag at a point of sale is guilty of an offence;  
b. person who manufacture plastic bag for the purpose of selling is guilty of an offence;  
c. person who import plastic bag whether as a carryout bag or for sale is guilty of an offence.
- 2 (1) Any person found guilty of the offences under clause1 shall be liable on Penalties  
conviction to a fine not exceeding Five Hundred Thousand naira (₦ 500,000) or to imprisonment for a term not exceeding Three years or to both such fine and imprisonment.  
(2) Any company or organization found guilty of the offence provided in clause 1 shall on conviction be liable to a fine not exceeding Five Million naira.
- 3 This Bill may be cited as Plastic Bags (Prohibition) Bill, 2018. Citation

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## A2 Questionnaire for shop owners

1. Do you give your customers plastic bags after every purchase?
2. Why do you give a plastic bag?
3. How many do give per day? (I was thinking This question is to give an idea of how many bags are given per day to show it contributes to problem)
4. Does every customer who buys an item request a bag? Or it depends on the item? (how do they give a bag even without a customer asking or not?)
5. Do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal? Yes or no?
6. If yes, tell me about it
7. Do you know any alternatives to plastic bags?
8. Would you give alternatives to your customers instead of plastic bags?
9. Would charge your customers for a plastic bag? Yes or no?
10. If yes, why? and if no why?
11. Did you hear about the proposed plastic bag prohibition bill (proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Yes or No (I will also show them the bill)
12. If yes what do you think of it? Do you think it is feasible?

## A3 Questionnaire for Individuals (in depth interview)

1. How many bags do you use on the average daily? (the idea is to show how often plastic bags are used, to prove at least this is true)
2. What do you do with the plastic bag after use when you get home?  
(A question follows why the choice to throw in the dustbin or on the street?)
3. Do you always request a plastic bag, carry your own bag or it is given to you automatically?
4. Would you use another option or alternatives instead of a plastic bag? (Do you ever consider not ever using a plastic bag at all?) (in case I must rephrase it for clarity)
5. Are you aware of the impact of plastic bags to the environment like Flooding (slowing car and human traffic, displacement, Drainage blockage, Malaria?
6. Would you pay for a plastic bag when next you go shopping?
7. Would you be willing to reuse a plastic bag you already have at home?
8. Did you hear about the proposed plastic bag prohibition bill (proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Yes or No (I will also show them the bill)
9. Would you support the ban of plastic bags? Or a fine? you think that is extreme?

## A4 Online Survey Questions

1. Which Local Government Area in Lagos State, do you live?
2. Gender
3. Age
  - Less than 20 years
  - 20 - 30 years
  - 31-40 years
  - 41-50 years
  - Over 50 years

4. Education Level \*  
 Primary School  
 Secondary School  
 Undergraduate/National Diploma/Higher National Diploma Post-Graduate  
 Vocational Training
5. Occupation  
 Student  
 Employed  
 Unemployed  
 Self-employed  
 Apprentice
6. How many poly bags have you used today?  
 1-5  
 more than 5  
 I have not used any plastic bags today I am not sure
7. Do you always request a new polybag when you buy something in a shop or at the market?  
 Yes  
 No, I always carry my own polybag from home  
 Yes, I always get a new one without asking
8. Where do you normally request a polybag? (**The purpose of this is because Nigerians use plastic bags for everything, even entrepreneurs' brand it for their customers**)  
 Supermarkets,  
 Local Open markets,  
 Street corner shops  
 Tailor  
 Restaurant  
 Hospital  
 Office  
 Other
9. Would you avoid retailers or shops that do not give customers poly bags? \*  
 Yes  
 No  
 Maybe
10. What happens to the polybag when you remove the item bought with it? \*  
 I keep it for re-use  
 I throw it away  
 I don't throw it away and i don't re-use it  
 Other
11. How do you discard your polybags? \*  
 Inside the nearest dustbin or dumpster

I drop it on the floor or gutter because i can't find any dustbin close by  
Other:

12. What do you relate the negative environmental impact of plastic bags with?

Flooding  
Drainage blockage  
Malaria  
Other  
I don't know

13. I use a polybag because \*

It is convenient  
lack of reliable alternatives  
That is what everyone uses  
Other

14. Do you know about the proposed 2019 plastic bag prohibition bill?

Yes  
No  
What is that?

15. Would you support a total ban on plastic?

Yes  
No

16. Would you pay for a plastic bag when next you go shopping?

Yes  
No  
Why should I pay for a bag?

17. Do You Know about alternatives to plastic bags like Jute, paper bags, woolen bags, bioplastic bags?

Yes  
No  
I am not aware

18. Which of these alternatives would you use if they were available?

Jute  
Paper bags  
Bioplastic bags  
Woollen bags  
I still prefer a plastic bag

## **A5 Interview Transcripts**

### **Individual Interview 1 – 30:19 minutes**

Interviewer: Good afternoon X. Thank you for accepting to do this interview on phone.

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X

had already told you, I sent you an email my ID card. Also you will be kept anonymous. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags. And I would be brief. So, let me begin. Let me know if you are not clear with any of the questions.

Interviewee: Hello X, Your topic is very interesting especially for Lagos with every year flooding. This is interesting. Let's begin immediately.

Interviewer: Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: No I did not, I am not active on social media.

Interviewer: yes, I see and that is good really. Let me ask my first question

Interviewer: How many bags do you use on the average daily?

Interviewee: I am not sure, say maybe 3 or more this depends on what I need it for.

Interviewer: What do you do with the plastic bag after use when you get home? And what determines if you would re-use or throw away?

Interviewee: I keep for re-use but this is determined by the quality. You notice bags from shop x are very good, I keep them for re-use but those five Naira bags are almost useless. You cannot use again and so I end up with many and I fling them, there are no dustbin to for say around where I work, like to throw them away.

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: Automatically given after shopping. That is the normal levels here or you ask but naturally, you expect to be given.

Interviewer: Would you use another option or alternatives instead of a plastic bag? Let me rephrase, Do you ever consider not ever using a plastic bag at all?

Interviewee: No, what option are there? It is polybag everyday everywhere except in that your abroad where you people are serious like that. But if I see a good one that will work like plastic bag I will take it, even paper bag here is not good.

Interviewer: Are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: Yes, this is very basic especially during Lagos flooding, you know how it is in this Lagos, traffic Everywhere over flooded and you see plastic bags and all these X bottles everywhere.

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: No, at all after spending money to shop, please I want a bag free you are doing Oyinbo

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: Yes, this depends on the quality as I said of shop x

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic

totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? I sent you bill in your email but x can show you. Do you think it is feasible?

Interviewee: I have never heard anything like that. It cannot work. Even me that read a lot of newspaper, I did not see anything like that. They have even adopted it. This is funny

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: Can I say what is in my mind? So they will not sanction you

Interviewer: Yes you can ha

Interviewee: yes the ban is good but I will say plainly...you see It is wickedness, pardon me but seriously it will not work and like people fought that ENDSARS protest, it will be like that.

Interviewer: Thank you so much X

Interviewee: you are welcome and good luck with your project.

## **Individual Interview 2 – 20:09 minutes**

Interviewer: Hello X. Thank you for accepting to do this interview on phone.

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you, I sent you an email my ID card. Also you will be kept anonymous. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags. And I would be brief. So, let me begin. Let me know if you are not clear with any of the questions.

Interviewee: hello x It is nice to e-meet you

Interviewer: Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: No.

Interviewer: okay. Let me ask my first question

Interviewer: How many bags do you use on the average daily?

Interviewee: I am not sure, make I no lie. E fit pass 5

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: Throw them away in a dustbin but this depends on where I dey. If the quality good, I go keep am because some bags fine like that you can use it for tailor or even go market again. Their size, colour or design... attractiveness.

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: Most times it's given automatically many times. Sometimes I ask, sometimes I am given

without asking. All these big shops will give polybags even na X you buy

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: Maybe Brown paper bag but plastic bags is the best

Interviewer: Are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: Of course yes.

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: No

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: Yes

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? I sent you bill in your email but x can show you. Do you think it is feasible?

Interviewee: I haven't heard of it, like they or say but this is the hill they want to die on?! Not feasible as a Nigerian, you already know this thing is another waste of time.

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: No

Interviewer: Thank you so much X

Interviewee: thank you and bye bye

### **Individual Interview 3– 25:15 minutes**

Interviewer: Hello X. Thank you for accepting to do this interview on phone.

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you, x can show you my ID so you can be sure. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags. And I would be brief. So, let me begin. Let me know if you are not clear with any of the questions. This will be brief

Interviewee: hello x

Interviewer: Thank you so much X. Let me know if you cannot hear me well but Let me also confirm you did not respond to the online survey

Interviewee: Okay, No I did not do any of the online surveys

Interviewer: okay. First question

Interviewer: How many bags do you use on average daily?

Interviewee: 2

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: Burn or discard in the bin. The size of the plastic bag

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: Given to me when i shop

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: No mostly but Yes, Manila paper bags, but I don't see it commonly

Interviewer: Are you aware of the impact of plastic bags on the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: Yes but I do not bother

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: No

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: Yes, this depend on the size and quality

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? I sent you bill in your email but x can show you. Do you think it is feasible?

Interviewee: No, I'm amazed. But why the prohibition without an alternative. It will be difficult, but may be possible.

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: No

Interviewer: Thank you so much X

Interviewee: thank you

#### **Individual Interview 4– 25:11 minutes**

Interviewer: Hello X. Thank you for accepting to do this interview.

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are



not clear with any of the questions. This will be brief

Interviewee: hello x how are you today and studying in Sweden especially with the coronavirus?

Interviewer: Everything is good, this why I opted to use online for gathering data on my study.

Interviewee: that is interesting. Let us begin

Interviewer: Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: no

Interviewer: All right, My First question

Interviewer: How many bags do you use on average daily?

Interviewee: 4 or 5

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: nothing

Interviewer: what do you mean nothing? Like do you reuse or throw away?

Interviewee: okay I understand now, I throw away but I keep if I like the bag especially bags from super markets and boutiques If it's still clean after use I re-use

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: Automatically given when shopping

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: It's possible if these bags have alternatives that are way cheaper, durable and attractive. The biggest concern is having the traders promote these alternatives. Customers are mostly never bothered about what is given as far as it is free and durable.

Interviewer: Are you aware of the impact of plastic bags on the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: Yes Am aware of the damage posed by the excessive usage of plastics bags but plastic bag is useful during rain .....you can use plastic bags to cover your shoe especially this my office area x on the island, we practically swim to work. You remember that time one oyinbo man used Canoe in front x?

Interviewer: yes... I do, the pictures on x blog, all over Twitter and x showed it in their evening news.

Interviewee: so when you are passing through that kind of flood you will still need polybag to pack your bags, shoes if not it will spoil....so you know ....you like see that plastic bag is still useful even when it causes blockage. Even danfo drivers use polybags to block windows...the matter is both ways.

Interviewer: yes I agree, Lagos rain is different

Interviewee: na so nah....plastic bag good and bad join.

Interviewer: true....moving on to my next question...would you pay for a plastic bag when next you go shopping?

Interviewee: Not at all

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: Yes, this depend on the type of bag

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? I sent you bill in your email but x can show you. Do you think it is feasible?

Interviewee: no, but Implementation of that Bill should begin immediately even though the fines are outrageous which may not work

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: I am not sure what to say now because as I said before there is good and bad side...maybe if there is something better and like will they fix these drainage?... everything is joined together and you know...see...I don't know. Thank you.

Interviewer: Thank you so much X

Interviewee: thank you

#### **Individual Interview 5– 19:09 minutes**

Interviewer: Hello X. Thank you for accepting to do this interview. Let me introduce myself

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are not clear with any of the questions. This will be brief

Interviewee: hello x, how is Sweden?

Interviewer: Sweden is good. Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: no

Interviewer: okay yes My First question

Interviewer: How many bags do you use on the average daily?

Interviewee: 3 more or less

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: Keep them... in a nylon. The size and quality of the bag matters like thickness of the plastic bag

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: Automatically given when I am shopping

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: I know but I have not seen any, I will use if I see

Interviewer: Are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: I am acutely aware of the dangers it poses to the environment.

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: no

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: Depends on the bag

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? but x can show you. Do you think it is feasible?

Interviewee: yes but I would say maybe most people are either ignorant or don't really care about plastic bags or this bill.. but it's feasible so long as there are cheaper and affordable alternatives.

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: yes, it is actually a good thing....Lagos rain go soon start, this good but maybe I don't know...you know how everything can be with laws in this country but it is good.

Interviewer: Thank you so much X

Interviewee: thank you

### **Individual Interview 6– 20:09 minutes**

Interviewer: Hello X. Thank you for accepting to do this interview. Let me introduce myself

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are not clear with any of the questions. This will be brief

Interviewee: Hi

Interviewer: Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: no

Interviewer: okay here is My First question

Interviewer: How many bags do you use on the average daily?

Interviewee: God knows, I can't give any specific estimate. Make I no lie

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: Trash or save to re-use, My location at the time I use bag and that is if I see any dustbin. Na big people area dey get dustbin for this Lagos.

Interviewer: Do you always request a plastic bag, carry your bag or it is given to you automatically?

Interviewee: Mostly automatically otherwise I would request if I wasn't given.

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: Heard of only, but in the abroad. Alternatives are scarce, I mean something I can use instead of plastic bag, even these party souvenir no make sense.

Interviewer: Are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: yes.

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: no with my money, after shopping, no

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: Depends on the type bag

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? but x can show you. Do you think it is feasible?

Interviewee: no I don't know if it is feasible or not

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: It's possible if these bags have alternatives that are way cheaper, durable and attractive. The biggest concern is having the traders promote these alternatives. Customers are mostly never bothered about what is given as far as it is free and durable.

Interviewer: Thank you so much X

Interviewee: thank you

**Individual Interview 7– 20:29 minutes**

Interviewer: hello, good evening X. Thank you for accepting to do this interview. Let me introduce myself

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are not clear with any of the questions. This will be fast as I see it is already evening

Interviewee: hello x It is nice to be part of this study

Interviewer: Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: no. I hear that Sweden is very popular with recycling. This your topic is good.

Interviewer: Yes, very true about Sweden. Thank you so much X. okay here is My First question

Interviewer: How many bags do you use on the average daily?

Interviewee: 1 or 2

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: Dispose at the waste bin or kept for future use and the item I got in it determines after use.

Interviewer: Okay, Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: Automatically given.

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: I know about these alternatives but I have not seen any.

Interviewer: Are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: yes as someone living in Lagos, you cannot ignore the impact of plastic bags and bottles. Heavy rain washed away those toilets for those slums at.....x,.... you know the place.... and they started poopooing inside polybags and flinging it inside water...that thing was now floating my area.....see....anyways...everything join this matter.

Interviewer: yes, I know the slum.....I know they have no toilets

Interviewee: you see.....anytime it rains plenty na wahala, very irritating everywhere.

Interviewer: that is really bad

Interviewee: very very bad.... What is your next question

Interviewer: okay my next question is would you pay for a plastic bag when next you go shopping?

Interviewee: no I am not ready now

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: Depends on many factors and other things, like .....i don't know, it depends.

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? but x can show you. Do you think it is feasible?

Interviewee: no, me I am just hearing about it now. You see these people. It won't work, not in our generation. Will take a while.

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: No, I don't support the ban

Interviewer: Thank you so much X for responding

Interviewee: thank you and send me a copy of your thesis when you are done

Interviewer: Okay X.

#### **Individual Interview 8– 19:15 minutes**

Interviewer: hello, good day X. Thank you for accepting to do this interview. Let me introduce myself My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are not clear with any of the questions. This will be fast as I see it is your lunch break

Interviewee: hello x

Interviewer: Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: no even though I saw the link on Facebook. Let us begin, this is my break time

Interviewer: okay then My First question

Interviewer: How many bags do you use on the average daily?

Interviewee: maybe like 2 When I am coming the office and when I am going back home

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: Dispose in the dustbin

Interviewer: Okay, Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: I don't request, I am automatically given It is complimentary.

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: Of course if it is available.

Interviewer: Are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: Yes its negative impact on the environment is massive

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: well I pay when I travel abroad, so I would pay if it doesn't cost so much

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: Yes I would

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? but x can show you. Do you think it is feasible?

Interviewee: no. wait, so there is really something like that in Nigeria? I am seeing the picture with x here, this is serious.

Interviewer: Yes, it is but this is part of research to know how much of the public is aware.

Interviewee: this is good and goodluck with that.

Interviewer: Thank you. So my next question is would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: maybe yes...but I don't support the ban because it is someone's source of income. you know But government should get systems that collects those materials and make them ready to be recycled. That way the environment will be clean. It is total negligence on the part of government and unconcerned attitude of citizens that's making the whole streets to be littered with polybags, pure water sachets etc. I feel the proposed bill should be against individual who knows it is not right to throw polybags on the streets and still do it. It is not suppose to be against those producing the polybag itself.

Interviewer: Thank you so much X for responding

Interviewee: thank you and send me a copy of your thesis when you are done

Interviewer: Okay X.

### **Individual Interview 9 – 26:15 minutes**

Interviewer: hello X. Thank you for accepting to do this interview. Let me introduce myself My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are not clear with any of the questions. This will be fast as I see it is already evening

Interviewee: Hello X, how is Sweden?

Interviewer: Sweden is good. Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: No

Interviewer: How many bags do you use on the average daily?

Interviewee: I would say between 1 to maybe 4

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: I throw it away and sometimes where there is no dustbin I put back inside my bag or my car and drop it in the dustbin. You know plastic bags vary and me using a bag again or throwing it away depends on the quality but you know those yellow bags from shop x, the quality is good. I can reuse that of the ones from x Lagos they are good.

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: In this Lagos, they give you bag even when I don't request. At first when I came here to Lagos from abroad, I am not used to getting bag free but now I am so used to automatically getting a polybag.

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: yes but you know alternatives are expensive like jute bags and I never knew you can get jute bags from ewedu.....

Interviewer: Yes, I discovered this too here in Sweden, there is so much ewedu leaf in Nigeria.

Interviewee: I agree, that is some business idea

Interviewer: Yes I agree. Okay my next question is are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: It is a no brainer. The Harm it does to the environment and ecological habitats cannot be quantified. They should be banned totally, same as plastic bottles or cans.

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: Yes I will but I am weary of the cost, too many under table charges in Nigeria especially Lagos but I would pay.

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: Of course

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? but x can show you. Do you think it is feasible?



Interviewee: I heard about it on social media once following one of ....plastic recycling NGO and you know LAWMA boss did an interview recently on that

Interviewer: really?

Interviewee: yes but like many things in Nigeria, the public has other basic survival stuffs to worry about. A plastic bag is the least of their worries. Person never chop, you dey say polybag, wetin be polybag?

Interviewer: My research is interested in this.....i see economic status also impact public coopération

Interviewee: very true. well good luck with that but i don't think it is feasible within the system as be now. The thing go hard.

Interviewer: Thank you for saying that. So my next question is would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: as long as it is about plastic bag, it is a commendable idea but the government should provide alternatives first before ban. With alternatives people will be willing, not every time punishment. The offence doesn't warrant such grave punishment. There should be a better alternative and more public awareness should be created and this punishment would target only the poorest population who are the major users and can neither afford such exorbitant fine and unfair to such long term

Interviewer: Thank you so much X for responding

#### **Individual Interview 10 – 21:45 minutes**

Interviewer: hello X. Thank you for accepting to do this interview. Let me introduce myself My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are not clear with any of the questions. This will be fast as I see it is already evening

Interviewee: Hello X, how is Sweden? You are in Uppsala? Abeg I fit speak pidgin join? make e for fast before connection go cut

Interviewer: Uppsala is fine. Thank you so much X. Yes X, you fit blow your pidgin I go understand. Any question you don't understand I can rephrase it in pidgin. Let me also confirm you did not respond to the online survey, as per you fill my survey for online?

Interviewee: okay thank you. No, I no do anything like that.

Interviewer: How many bags do you use on the average daily?

Interviewee: I no fit count am

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it? As per wetin you dey with the bag after you finish to use am?

Interviewee: na quality be the thing. All these polybags no strong. So once you use am na throw way for dustbin.

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you

automatically?

Interviewee: na automatic levels ni o even though sometimes, I dey carry my own bag.

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: yes if I see good option because even when i get a paper bag, i will put that bag inside a polybag because paper bags are not strong and water-resistant like the black polybag.

Interviewer: Okay my next question is are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria? As in you say plastic bags no good for our environment?

Interviewee: yes o, I sabi that one well. no be say we no sabi throway dirty inside dustbin oh, you see x, you no even see dustbin throw way am.....you see how we dey clean gutter every week leave am make LAWMA people come pack am but dem fit no come and breeze go blow am back inside the gutter.

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: no at all. Wetin be pay for a bag? The things I buy never do? I go come pay for bag.

Interviewer: what of Government talk am say it is compulsory?

Interviewee: for this Nigeria, e no possible.

Interviewer: Would you be willing to reuse a plastic bag you already have at home? If you get bag for house? You go re-use am?

Interviewee: yes but the quality is important. If it is fanciful the better for me.

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? but x can show you. Do you think it is feasible? You support am?

Interviewee: na wetin be that? I don't know about it and I don't support the idea of using bans, the whole thing no make sense. I'd rather have the government impose a fine and/or community service like picking thrash for a number of hours. As oyinbo dey do, no be to just introduce idea like that.

Interviewer: Thank you so much X for responding

Interviewee: thank you so much. Oya bye bye

### **Individual Interview 11– 19:34 minutes**

Interviewer: Hello X. Thank you for accepting to do this interview. Let me introduce myself

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are not clear with any of the questions. This will be brief

Interviewee: Hello x, can we make it really fast, I understand from the email that the questions are

about plastic bags and it will be anonymous.

Interviewer: Yes, this will be brief, straight to the point. Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: no

Interviewer: My First question How many bags do you use on the average daily?

Interviewee: I am not sure maybe 4 this depends on the purpose

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: throw it away and again this boils down to the quality of the bag, you know. Bags from X as popular around Lagos, you know if many bags are like that 'more people will reuse not all these black polybags that is of poor quality, you use them only once like you know....

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: I am automatically given. You know it is even a form of business branding, so high end shops on the island have bags that people flaunt....like class or some levels stuffs.....or something like that. It is a normal thing to be given a polybag and even children know that when you go and buy plenty biscuits or caprisonne, you ask for a bag.

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: yes, if it is available. I personally use plastic bags because it is convenient because there are really no other options around but plastic bag is so easy to find.

Interviewer: Are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: yes. You see how we suffer during raining season in Lagos, you need Okada to go to places because the roads are flooded, I even drop my car when it rains, plastic bags are everywhere.

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: maybe....this depends you know...ah well...

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: quality and design is important to me, this will determine me using a bag again...not all these poly bags at all

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? but x can show you. Do you think it is feasible?

Interviewee: I have not heard it and I do not believe it will work. The contents are makes no sense to

me and how is something this important ...like not even popular? This is the first time I am hearing this.

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: Because alternatives are not yet as available and popular as the plastic bag being banned. It is like banning roadside peeing, while not providing public urinals and making it illegal to deny the public the use of toilets in restaurants, bars, fastfoods and the likes. This is a good idea to ban polybags

Interviewer: Thank you so much X

Interviewee: thank you

### **Individual Interview 12– 15:34 minutes**

Interviewer: Hello X. Thank you for accepting to do this interview. Let me introduce myself

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are not clear with any of the questions. This will be brief

Interviewee: Hi x

Interviewer: Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: no

Interviewer: My First question how many bags do you use on the average daily?

Interviewee: 1

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: keep for re-use. I always prefer stronger polybags so I can re-use

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: automatically given even in the markets but those one are so bad quality, you cannot use it again

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: yes, if I see it like polybags why not?

Interviewer: Are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: yes, even my mama for village go tell you say plastic bags no good as animals dey chop am. For Lagos here, it is really bad.

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: no

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: yes, I already do

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? but x can show you. Do you think it is feasible?

Interviewee: No, The purpose of the ban has low awareness. It is not feasible.

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: It's insane to put up such a law now as A Nation considering our literacy/awareness level

Interviewer: Thank you so much X

Interviewee: thank you

### **Individual Interview 13 – 17:47 minutes**

Interviewer: Hello X. Thank you for accepting to do this interview. Let me introduce myself

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are not clear with any of the questions.

Interviewee: Hello x,

Interviewer: Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: no

Interviewer: My First question How many bags do you use on the average daily?

Interviewee: I am not sure though

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: throw it away and again this boils down to the quality of the bag, you know. Bags from X as popular around Lagos, you know if many bags are like that 'more people will reuse not all these black polybags that is of poor quality, you use them only once like you know....

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: I don't request

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: yes but where can we find it? It is not available. The first time I saw a jute bag was as a souvenir in one big Alhaja wedding. Paper bags are not good like plastic, it will disappoint you.

Interviewer: Are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: This is common knowledge. Plastic bag is not good for the environment. Once Lagos rains start now, the bags will be blocking gutter but there is no alternative.

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: .....no

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: yes, I would but the type of bag matters.

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? but x can show you. Do you think it is feasible?

Interviewee: i have not heard about it. Plastic bag is not expensive and can be easily accessible, so this is no feasible you know like at all.

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: I support the ban on plastic bags. Until people are educated and an alternative is provided nationwide, the ban shouldn't be effective.

Interviewer: Thank you so much X

Interviewee: thank you

#### **Individual Interview 14– 24:30 minutes**

Interviewer: Hello X. Thank you for accepting to do this interview. Let me introduce myself

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are not clear with any of the questions. This will be brief

Interviewee: Hello x,

Interviewer: Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: no

Interviewer: My First question How many bags do you use on the average daily?

Interviewee: up to 5 or more, when I go shopping and 1 ordinary days

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: throw it away or re-use

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: I am automatically given.....

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: yes, when I see one that is better than polybag.

Interviewer: Are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: yes, I am aware. This flooding in Lagos is too much and you see plastic is the biggest culprit or I should say contributor.... You know this I noticed that plastic bag contribute to the decay in internal waterway

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: no and no.....

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: this depends on the bag. I like x bag and x bag, I love to shop there just to get their bags and I reuse those bags.

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? but x can show you. Do you think it is feasible?

Interviewee: No, what is even that? X just showed me now and I am shocked. I don't see it working.

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: you think all these people walking around in this Lagos don't know that plastic bag is bad for the environment, how can a bill pass through 3 readings ha, I mean 3 reading and many of us are not aware....but since everything is punishment, people will deliberately break the law and use money to bail themselves...those laws are for ordinary people on the streets, those house of rep (representative) people don't know what they are doing, it is copy and past. Because litter plastic bag contribute in depleting the environment

It blocks drainages I noticed that plastic bag contribute to the decay in internal water way, every street is filled with plastic bags on the road, in the drainage. It's an eye sore and would have supported its ban since it will help the environment but not like it is.

Interviewer: Thank you so much X

Interviewee: thank you bye

## **Individual Interview 15– 28:34 minutes**

Interviewer: Hello X. Thank you for accepting to do this interview. Let me introduce myself

My name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you. Your response to my questions is for my Master thesis at Uppsala University in Sweden. I am asking questions on the use of plastic bags, let me begin. Let me know if you are not clear with any of the questions. This will not take much of your time.

Interviewee: Hello x, how are you doing? can we make it really fast, so I can do some of my errands before the traffic on adeniji starts

Interviewer: Yes this will not take much of your time, this will straight to the point. Thank you so much X. Let me also confirm you did not respond to the online survey

Interviewee: no

Interviewer: My First question is How many bags do you use on the average daily?

Interviewee: at least 1, let me say so

Interviewer: What do you do with the plastic bag after use when you get home? And what determines what you do after it?

Interviewee: straight to the dustbin except it is bag from x shop. Those five naira poly bags cannot hold anything. Even when you want to throw used bags in dustbin, you can't find any within walkable distance, so I just throw it inside the gutter nearby or put it in my bag if it is still clean

Interviewer: Do you always request a plastic bag, carry your own bag or it is given to you automatically?

Interviewee: sometimes I ask, sometimes I do not ask but most times I am given a bag. But ha, I expect a plastic bag every time I shop, even if I go that shop ten times a day".

Interviewer: Would you use another option or alternatives like paper bags, jute from ewedu or woven bags instead of a plastic bag?

Interviewee: well maybe if I can see any. I would recommend those wedding paper bags, you know those ones used as souvenirs with picture of bride and groom. They cannot hold anything. They are cannot be useful like a polybag with the worst quality. I mean no matter how poor the quality of a polybag is, I prefer it to these paper bag, maybe until I find something better.

Interviewer: Are you aware of the impact of plastic bags to the environment like Flooding slowing car and human traffic, displacement, Drainage blockage, Malaria?

Interviewee: In this Lagos, ha I know very well.

Interviewer: Would you pay for a plastic bag when next you go shopping?

Interviewee: maybe....this depends you know...ah well...

Interviewer: Would you be willing to reuse a plastic bag you already have at home?

Interviewee: quality and design is important to me, this will determine me using a bag again...not all



these poly bags at all. The type of bag matters.

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? but x can show you. Do you think it is feasible?

Interviewee: No at all.....you know this is not feasible. Even recycling has not worked yet, thse ones all these NGO x and X are doing everywhere in Lagos, now they want to punish people because of polybag, ha.....

Interviewer: Would you support the ban of plastic bags? Or a fine? You think that is extreme?

Interviewee: I don't support the ban, even in my area with the flooding every year, I believe a ban will help lower the rate of pollution in gutters and other government provided drainage systems but the fine is too much. We never chop finish we wan dey pay 500k for polybag.

Interviewer: Thank you so much X

Interviewee: thank you

## **A5 Shop Owners Interviews**

### **Interview 1 – 30:13 minutes**

Interviewer: Good morning x. Thank you for accepting to do this interview on phone. As a you already know, my name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you and he is standing you so you can be sure this for school, and you have seen my ID card. Also I have agreed not to mention your name and keep you anonymous. Your response would form part of my material for my thesis at Uppsala University in Sweden. I am asking individuals and shop owners in Lagos about use of plastic bags. Also, your store location in x is why I am contacting you, so I will be brief with the questions before your customers start trooping in. So, let me begin. I can repeat any question that is not clear. Is this okay?

Interviewee: Okay, x begin but you no use big English for me oh as I know say na Oyinbo school be that

Interviewer: Okay x. My question is Do you give your customers plastic bags after every purchase?

Interviewee: I normally give every customer but you know it is not everybody that will collect the bag, some people will just hurry to collect wetin they bought and walk away but you see some will wait for nylon bag even if na five Naira biscuit, you must give them oh.

Interviewer: so, Why do you give a plastic bag?

Interviewee: ha x, if you don't give these customers in this x market bag, you will loose customers. Since I sell wholesales and retail as in big and small customers, I dey make provision for plastic bags inside my budget and I make sure that it is available. The reason I give is because na still part of packaging my market, it is what everybody does. I even have different kind of bags for my customers. Those wey (that) buy plenty I give them the fine bag with my logo as compliment because they have spent plenty money. Ha

Interviewer: Okay thank you x but what of how many you give per day?

Interviewee: I can't count it because it is even based on total sales as a single customer fit get 3 bags on one sale, aunty it can be plenty.

Interviewer: x, so you cannot give an estimate? I mean any kind of total abi estimate so?

Interviewee: maybe if na corner shop oh but inside this market, it is hard.

Interviewer: Okay, let me ask the next question.

Interviewer: Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: as I talk before, it depends on the customer sha. Some people will buy small thing collect bag, others will not. It depends on the customer, but we go offer am still.

Interviewee: x, time don dey go, make you hurry, the line wan dey break

Interviewer: okay X, we are almost done with the question, the thing remain small. Do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal? I mean say, if you know say poly bag no good for environment?

Interviewee: you mean say, if I know?

Interviewer: Yes, na what I mean

Interviewee: Which person dey live for Lagos, wey no sabi say na polybag follow dey block gutter? Even small pikin sabi dat one

Interviewer: Okay. Have you heard of the Plastic bag Prohibition Bill? For that bill dem say you can be fined as much as five hundred thousand Naira or you fit enter prison if you give customer plastic bag....

Interviewee: wait first for where? Inside this Nigeria? I dey laugh like this. I never hear that kind thing before. I no give customer plastic bag, wetin I go come dey give? Wetin go replace plastic bag?

Interviewer: This na why I dey do this research about plastic bag and na why I dey ask you as you dey this idumota market. I also wan ask if you know another option aside plastic bag like paper or jute bag. Juste bag na from Ewedu thread dem dey comot am. You sabi am?

Interviewee: I sabi paper bag but I no know which one be jute bag. I no even know say, dem dey use Ewedu do bag oh, see how we dey chop am here with Amala. Oya o, oya o (hurry)

Interviewer: One last question. I see you dey hurry. You go accept these other options to plastic bag and you go agree to charge your customers for polybag?

Interviewee: If another option dey wey good like plastic bag, why I no use am. As government don put eye for plastic bag so, I go accept another choice if I see am. You say make we charge for bag? Madam, you want to make I close shop. People no go agree to pay oh, I no charge anybody for bag. Oya bye bye x, customer don come, collect your phone.

Interviewer: thank you so much x. You don answer all my question.

## **Interview 2 – 20:25 minutes**

Interviewer: Okay, so good morning Person X. Thank you for joining us for this interview. My name

is Margaret Ojochide Aligbe, writing my thesis at Uppsala University. I am conducting a research on the use of plastic bags in Lagos and your response will contribute to the information needed in getting information from the side of the shop owners. This is purely academic purposes and your details will not be mentioned. X would have shown you a copy of my ID and this will be fast because of the internet connection and because of your customers. Thank you again for your time.

Interviewee: Thank you and how are you? I hope the questions are not very complicated?

Interviewer: I am fine thank you and yes, the questions are very simple but you can take your time to respond. No right or wrong answers.

Interviewee: Okay, let me try. Thank you let us begin.

Interviewer: Okay, my first question is, Do you give your customers plastic bags after every purchase?

Interviewee: This depends on the customer but you make provisions for that.

Interviewer: Why do you give a plastic bag?

Interviewee: Na the way na. If you no give them that poly bag, you no go see them again for your shop. i dey calculate poly bag for my budget because even though no be ever customer go collect bag, the bag no dey waste, sometimes, I need to buy extra join. Even small businesses now dey put logo for bag. Maybe I did not understand your question

Interviewer: No X, this is fine. You have answered.

Interviewee: okay

Interviewer: How many do give per day?

Interviewee: This depends on the day, how much I can sell and the how much the customer is buying. Some who drive to my shop with their car, sometimes you know like they will not collect a bag others will....like say it depends on the situation. Some days I have to restock the polybags.

Interviewer: Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: like I said earlier, this depends on the customer. Some items are bigger than the bags I have, so I would say like that depends.....okay?

Interviewer: okay, let us move on. Time is moving fast. Do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: Yes. This is something everybody will tell you. Anyone who lives in this Lagos and has suffered from the flooding will tell you yes. Plastic bag is not good. Polybags is everywhere.

Interviewer: Do you know any alternatives to plastic bags? I mean other options aside plastic bags

Interviewee: yes, I know them but where you see them?

Interviewer: Would you give alternatives to your customers instead of plastic bags?

Interviewee: Yes, if I see alternatives that are cheap like plastic bags and I can use them how I am using these polybags now, why not? These alternatives are expensive oh. Very expensive. Paper bags

are cheap but they can't survive Lagos weather, if you have lived in Lagos you know what I am saying.

Interviewer: Yes, I can understand what you mean

Interviewee: okay. You see like jute, it is too expensive for you to brand and use for business coupled with all the levies. But plastic bags are so cheap. You can easily brand it and use it immediately. You can use Ankara bag as souvenirs or all these fabric bags like you know... but it will be too expensive to replace polybags.

Interviewer: okay, interesting...let me ask would charge your customers for a plastic bag?

Interviewee: No I would not charge, maybe when it is law but now I cannot charge. These customers will not pay o.....these ones, you lose customers because of extra 10 or 20 naira bag.

Interviewer: Did you hear about the proposed plastic bag prohibition bill (proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. What do you think of it? Do you think it is feasible?

Interviewee: I have never heard of it. Imagine the fine. Who will pay that one? They should just say they want to suffer us join what we are already suffering. The government laws are not even helping us do better, they just want to punish us and they will not improve waste management structures in this Lagos, I am always paying levies and fine in this my shop to Local Government but If you go to the central market dumping site for this market, the smell is awful and when it rains those plastic bags will just scatter, breeze will even carry some dirty far away. It is good but maybe I can't say... It is not feasible.

Interviewer: Thank you so much for responding and your time

Interviewee: thank you and bye.

### **Interview 3 – 25:15 minutes**

Interviewer: Okay, so good morning Person X. Thank you for joining us for this interview. My name is Margaret Ojochide Aligbe, writing my thesis at Uppsala University. I am conducting a research on the use of plastic bags in Lagos and your response will contribute to the information needed in getting information from the side of the shop owners. This is purely academic purposes and your details will not be mentioned. X would have shown you a copy of my ID and this will be fast because of the internet connection and because of your customers. Thank you again for your time.

Interviewee: hello. Okay, let me try. Thank you let us begin.

Interviewer: Okay, Question is Do you give your customers plastic bags after every purchase?

Interviewee: Yes, I give without them asking even though some will walk out of your shop and fling it in front of your store but you still give it.

Interviewer: okay, I understand. Why do you give a plastic bag to your customers?

Interviewee: It is complimentary. Since my bags are branded, I always give it because those plastic bags are like free advertisement, they go to places I cannot go, you know, so like you just know as a business person giving a polybag is a trend.

Interviewer: How many do give per day?

Interviewee: This is actually a difficult question because normally you cannot count and because it is so cheap, you can buy so much. I place orders for my branded polybags monthly so maybe...in a month I could use over 500 bags or less, i don't even know.

Interviewer: Okay thank you, Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: This would be a yes and a No because I normally give before they ask.

Interviewer: okay, thank you. Next question is Do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: Yes but I am not bothered because it seems like you know how it is...it will not change. Since I came to Lagos over 20 years ago, it has remained the same. Every year flooding and they mention plastic. Just let us move on but I am not trying to spoil your research....you will see that nothing changes in this Lagos, instead it will get worse with more people, wahala Government

Interviewer: Do you know any alternatives to plastic bags? I mean other options aside plastic bags

Interviewee: Yes, I do. I have special bags from fabric for Christmas gift for my customers. Like when there is sallah, Easter, birthdays, childbirth we give them these branded fabric bags and because it is very expensive, plenty money, I cannot be using it like the other poly bags.

Interviewer: Would you give alternatives to your customers instead of plastic bags?

Interviewee: let me not be a negative person. My answer is no because you cannot find them. My Ankara fabric bags are too expensive to replace plastic bags. Okay you see...so that is the issue

Interviewer: Yes, I can understand what you mean

Interviewer: okay, interesting...let me ask would charge your customers for a plastic bag?

Interviewee: No. My customers will frown at it. Do you know how hard it is retain a customer you now want to charge.....it means I want to kill my business? I am already factoring the cost of bags into my prices then I will now charge extra inside this X economy? (Political comment here, meant Nigeria's president)

Interviewer: Did you hear about the proposed plastic bag prohibition bill (proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. What do you think of it? Do you think it is feasible?

Interviewee: Anything wey go make plastic reduce, I support it but No but let me not even talk. 500,000. I no talk again because e no go work

Interviewer: Thank you so much for your time

Interviewee: thank you.

#### **Interview 4 – 21:15 minutes**

Interviewer: Okay, so good morning Person X. Thank you for joining us for this interview. My name

is Margaret Ojochide Aligbe, writing my thesis at Uppsala University. I am conducting a research on the use of plastic bags in Lagos and your response will contribute to the information needed in getting information from the side of the shop owners. This is purely academic purposes, and your details will not be mentioned. X would have shown you a copy of my ID. Thank you again for your time.

Interviewee: hello. Thank you for having me....

Interviewer: my first question is do you give your customers plastic bags after every purchase?

Interviewee: Yes

Interviewer: okay, I understand. Why do you give a plastic bag to your customers?

Interviewee: it is part of packaging. You what I mean like giving a customer polybag is like you saying thank you for coming. You appreciate the customer to show you have served them well but some customers don't wait

Interviewer: wait for?

Interviewee: wait to collect a bag, I mean. They will just buy and go. Some will start eating something like biscuit and soft drink like x and x .....even like sitting in your shop to eat so those ones will not collect a bag.

Interviewer: How many do give per day?

Interviewee: to tell you the truth i don't even know, you can predict

Interviewer: Okay thank you but Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: the answer to this your question is no. some will ask others are not concerned about bag, this is different with different customer and polybag

Interviewer: Next question is Do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: Yes, even now as I am speaking with you, x with me here can see that we are cleaning gutter before we open shop so local government people will come and lock my shop. I don't have money to bail anything. All the dirty we are removing like this is plastic bags and X bottles.

Interviewer: Thank you for response. Next question ....Do you know any alternatives to plastic bags? I mean other options aside plastic bags

Interviewee: No...if I understand what you asking if I know any other option outside plastic bags or polybag.....no

Interviewer:yes, that is what I was asking and you have answered thank you.

Interviewee: okay so how many questions remain? X is seriously holding phone here.

Interviewer: like 3 or 4 but It will not take much longer. I wany x to hold the phone well...so what you are saying can be recorded well because everything you are saying is important for my research. Is this fine with you?

Interviewee: Yes, I want to be clear, no wahala, okay, I understand

Interviewer: Would you give alternatives to your customers instead of plastic bags?

Interviewee: for now, no

Interviewer: okay, I see you said this firmly, like the No is so strong... interesting...let me ask would charge your customers for a plastic bag?

Interviewee: I will tell you another strong No for this question. My shop will close. Do you know how people like free thing in this Lagos, you want to charge...see big shop like X, they give that their yellow bags free, then you want to charge.

Interviewer: this is not just for you X, I meant if this became like a law that customers have to pay

Interviewee: okay, I understand now but even then things like that are hard in this Nigeria oh, you like how complex thing are even the levy we pay every day in this market, no account and too many agberos.

Interviewer: Did you hear about the proposed plastic bag prohibition bill (proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. What do you think of it? Do you think it is feasible?

Interviewee: No, this is my first time. I cannot say if it will be feasible and me I don't know how someone will be going to prison because of polybag, abi it is another plastic bag? This bill x is showing me like this is like small children wrote it. Is this one bill? Whether it will work or not, I really cannot say much but it is a good idea to ban plastic bags.

Interviewer: no x, I mean the plastic bags used every day, that is the ones the bill is targeting.

Interviewee: okay. Let me enter my shop

Interviewer: Thank you so much for your time

Interviewee: thank you.

### **Interview 5 – 23:15 minutes**

Interviewer: Okay, so good morning Person X. Thank you for joining us for this interview. My name is Margaret Ojochide Aligbe, writing my thesis at Uppsala University. I am conducting a research on the use of plastic bags in Lagos and your response will contribute to the information needed in getting information from the side of the shop owners. This is purely academic purposes, and your details will not be mentioned. X would have shown you a copy of my ID. Thank you again for your time.

Interviewee: hello. Thank you for having me....and I hope this stays anonymous.

Interviewer: Yes, your name and specific details will not be mentioned. As a senior manager with a big store in Lagos like X my first question is do you give your customers plastic bags after every purchase?

Interviewee: Yes, that is a must. It is part of the business model of this brand from other parts of Africa. Our bags go with every sale we make.

Interviewer: okay..... Why do you give a plastic bag? I mean giving polybags to customers who buy things in your shop?

Interviewee: our bags are popular all over Lagos. Since we came to Nigeria with stores across the country, our bags have become some kind of prestige..... even when people buy something as little as 300 Naira bread, or a bottle of coke, they carry that bag with some sense of satisfaction, so we make space in our budget specially for different sizes carrier plastic bag”.

Interviewer: How many do give per day?

Interviewee: Thousands of customers come in here to my branch every day, so I cannot give a specific number.

Interviewer: Okay, so my next question would be yes. My question is Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: Yes, it is part of the brand marketing model. No matter they buy, there is a package for it. I will also add that we have branded bags made from wool but it is for sale. It is imported and we don't offer it for free.

Interviewer: Do you think your brand, I mean the company you work ....will ever give up plastic bags? Or let me say...will the woolen bags be promoted considering how much your brand supports the SDGs, the sustainable development goals?

Interviewee: This is not in my place to say. I personally don't follow the SDGs even though it is a trend now but because these woolen bags are imported from South Africa, I am not sure they can become like plastic bags. Maybe if they are being manufactured here in Nigeria.....maybe then but I can't comment further.

Interviewer: Okay. That is fine. Next question is Do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: Yes, personally I am aware and this has affected me during the flooding and coming to work is difficult. This company, the x brand does elegushi beach clean up twice a year to pick empty bottles with X, that NGO... but I see you are like asking about plastic bags, so this may be close but not exactly.

Interviewer: Thank you for response, it is useful. The next question is Do you know any alternatives to plastic bags? I mean other options aside plastic bags

Interviewee: Yes, like the woolen bags I mention, and I also know of Jute bags. I have seen a few of those around mainly as party give away. That is as much as I know.

Interviewer: okay.... Would you give alternatives to your customers instead of plastic bags? Or charge them for a bag?

Interviewee: for now, I would say as I said earlier, it would not make business sense. The different taxes by the state already eats into our profit, giving these bags from South Africa to Nigerian customers is not exactly going to work. Like the profit is the goal with all the overhead, so maybe....when it is produced in Lagos or another part of Nigeria...then maybe. Nigerians are not ready to pay for bag oh. You be Nigerian so you should understand.

Interviewer: Did you hear about the proposed plastic bag prohibition bill proposing to ban plastic



totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. What do you think of it? Do you think it is feasible?

Interviewee: Yes. We are aware here in X we even discussed it in one of those meetings like here and there..... had some talks and all but that is it ....i would say but I believe it is not feasible. Seems the goal is to punish people like solely on punishment which will not work. People will cut corners, sort all these police people or you see how these levies enter private pocket and all.... and get away with it. Who has 500,000 to pay for a fine even us as a company, we will pay? I also think maybe if they tried other approaches, these things work in south Africa, you know maybe our company can participate if it is well implanted here.

Interviewer: This has been very insightful speaking with you..... Thank you very much for your time.

Interviewee: thank you too and good luck with our study on plastic bags.

Interviewer: Thank you X

### **Interview 6 – 29:03 minutes**

Interviewer: Good morning x. Thank you for accepting to do this interview on phone. As you already know, my name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you and he is standing you so you can be sure this for school, and you have seen my ID card. Your response would form part of my material for my thesis at Uppsala University in Sweden. I am asking individuals and shop owners in Lagos about use of plastic bags. Your information will not be mentioned. Is this okay?

Interviewee: Okay. This is good.

Interviewer: My first question is do you give your customers plastic bags after every purchase?

Interviewee: No, this depends on what the customer is buying but you plan to give them and whatever happens when they buy something, you know like when the item is big or small or if it is something they are eating or let me say it depends.

Interviewer: so, Why do you give a plastic bag to customers coming to your shop?

Interviewee: why? That is normal business thing. You give your customer bag when they buy something in your shop, unless you don't have then you like ask your neighbour or your brother, the person that the shop is closer to you to borrow you if the customer can't wait for you to buy or like that.

Interviewer: Okay thank you, what of how many you give per day?

Interviewee: as I said before when you ask if I give every customer polybag, it is hard to determine like I have never thought of like counting so I don't know or even give any figure.

Interviewer: Okay, let me ask my next question. Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: same with what I said again, you cannot determine these things except you want to be counting from morning till night. E go hard as you can forget like that.

Interviewer: Next question is do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: like blocking gutters, yes apart from that I don't know much.

Interviewer: Okay. Have you heard of the Plastic bag Prohibition Bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. What do you think of it? Do you think it is feasible?

Interviewee: Maybe I have because you know all these talk always on the news when it comes to flooding in Lagos but the 500,000 naira fine is high and prison term is very serious but I have not heard and it is hard to say what will work or not work in Nigeria because everything changes you know, you cannot predict anything.

Interviewer: my last question. Will you accept these other options to plastic bag like paper bags, woolen bags, jute and would you agree to charge your customers for polybag?

Interviewee: if there are other options, yes, I will take it but charging a customer for a bag? I am not sure because people are already used to free bags, me like this, I will not pay for a bag.

Interviewer: thank you so much X for your time

Interviewee: thank you for having me and good bye.

#### **Interview 7 – 20:23 minutes**

Interviewer: Good morning x. Thank you for accepting to do this interview on phone. As a you already know, my name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you and he is standing you so you can be sure this for school, and you have seen my ID card. Your response would form part of my material for my thesis at Uppsala University in Sweden. I am asking individuals and shop owners in Lagos about use of plastic bags. Your information will not be mentioned.

Interviewee: Okay. This is good.

Interviewer: Can we begin?

Interviewee: yes

Interviewer: My first question is do you give your customers plastic bags after every purchase?

Interviewee: I would say yes because those who i don't give polybags or who don't care for a bag are not many.

Interviewer: so, why do you give a plastic bag to your customers?

Interviewee: It is not proper to allow your customer to leave your shop with the thing they bought in their hands, even then that plastic bag was not common when we were small, you still go to shop with your bag, it is normal thing with polybags. It is common now. I even bran my own polybags and I am happy to give my customers bag when they buy from my shop.

Interviewer: Okay thank you, how many you give per day?

Interviewee: x I don't know, I can use 3 or packs in a day and one customers can get upto 5 bags, this one depends. I don't know.

Interviewer: Okay, my next question. Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: this is a difficult kind of question.....i don't have a particular figure. Ask me another question. This one is hard....

Interviewer: Okay x.....Next question is do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: yes, this is something everyone can see. Plastic bag is a big problem.

Interviewer: Okay. Have you heard of the Plastic bag Prohibition Bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. What do you think of it? Do you think it is feasible?

Interviewee: No but this is good except for the fact that implementation will be a big problem, so maybe it can work even though you know....i think it is a good idea

Interviewer: okay thank you. Last question is will you accept these other options to plastic bag like paper bags, woolen bags, jute and would you agree to charge your customers for polybag?

Interviewee: yes, I would support all the way because plastic bag is not good for the environment. Oyinbo people have gone ahead and you see that Sweden you are studying also London and U.S, they charge for bag. Maybe Nigeria can do that because plastic bag is big wahala.

Interviewer: Yes Sweden is good with recycling. thank you so much X for your time

Interviewee: thank you so much and this research is good, and I told x is why I responded. Okay then bye bye

Interviewer: thank you so much x

### **Interview 8 – 25:23 minutes**

Interviewer: hello x, Good afternoon x. Thank you for accepting to do this interview on phone. As a you already know, my name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you and he is standing you so you can be sure this for school, and you have seen my ID card. Your response would form part of my material for my thesis at Uppsala University in Sweden. I am asking individuals and shop owners in Lagos about use of plastic bags. Your information will not be mentioned.

Interviewee: .... Okay. fine.

Interviewer: Let us start now?

Interviewee: okay

Interviewer: so.....first question is do you give your customers plastic bags after every purchase?

Interviewee: no. the person and the item bought differs. One person can get more than 1 bag

Interviewer: next question is why do you give your customers a plastic bag?

Interviewee: I can't think of a reason why I will not give....like I don't know how not consider not giving them a bag and you know this how every shop does....even shop at location x and x, when you buy something you get a yellow bag, so I have to give my customers bags, I am even planning to brand my nylon bags very soon. It is a trend now.

Interviewer: Okay thank you, how many you give per day?

Interviewee: difficult to tell.....something like that you as a shop owner can count maybe the customer can tell you but as a shop owner you want to sell and calculate sales for the day, not polybag...

Interviewer: Okay, next question. Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: same thing like the other question you asked. This depends on the customer and what they want to buy, you see that you can calculate these things.

Interviewer: Okay x. my next question is do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: yes....on my street, x street, we suffered last raining season, the picture was headline news on x newspaper, front page.....and see how plastic bags and bottles were flowing. So I know very well.

Interviewer: Okay thank you. Have you heard of the Plastic bag Prohibition Bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. Do you think it is feasible?

Interviewee: yes, kind of. A customer talked about it last week, maybe he saw that your online survey because he mentioned it was something he saw online and he was so surprised many people did not hear pim about it..... but I think this is good and it can work. Plastic bag and flooding don tire person.

Interviewer: okay thank you. My Last question is will you accept these other options to plastic bag like paper bags, woolen bags, jute and would you agree to charge your customers for polybag?

Interviewee: maybe, until I see the other options but if it can deliver like plastic bags...I will take it. we suffered last year on my street, this again it will be the same thing.

Interviewer: ....that is interesting. Flooding in Lagos happens every year same areas you know

Interviewee: yes....i mean every time we will be complaining social media people will be doing island versus mainland people but nothing change....na wah oh X, make I attend to these client. Thank you

Interviewer: thank you so much for your time

Interviewee: goodluck with your studies

### **Interview 9 – 27:12 minutes**

Interviewer: hello x, good day. Thank you for accepting to do this interview on phone. As a you

already know, my name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you and he is standing you so you can be sure this for school, and you have seen my ID card. Your response would form part of my material for my thesis at Uppsala University in Sweden. I am asking individuals and shop owners in Lagos about use of plastic bags. Your information will not be mentioned. This is anonymous and straight to the point. I will not take much of your time.

Interviewee: .... Okay. Fine that is better

Interviewer: so.....first question is do you give your customers plastic bags after every purchase?

Interviewee: no, every customer is different. I only make provisions for the polybags to be available and tell my salespeople how to give customer because the amount of money spent, or size of item bought will determine the kind of bag you will get. Na money I spend o, so I want to be careful you know how things are with business in this Lagos.

Interviewer: next question.....why do you give your customers a plastic bag?

Interviewee: in this Lagos, in this my shop I will not give polybag? That means say I want to close my shop. Even that year when polybags was scarce and cost...you know we hear rumour that border people are fighting with manufacturer so it was difficult to buy so people were planning to sell to customer but it was not good.....even then we still made provision for poly bag. Customers expect it and we give them because they have bought something in my shop.

Interviewer: Okay thank you, like how many you give per day?

Interviewee: let me not lie .....i don't know, my sales person here x, is nodding and said they don't count. It is plastic bag you know.

Interviewer: Okay thank you, my next question. Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: you cannot predict your customers so everybody is different, some will want or some will just not even wait for nylon bag ....

Interviewer: Okay. my next question is do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: they are dirty everywhere. Plastic bag and x bottle you know that 100 naira x, they are the biggest dirty everywhere. When small rain start for eko now, we go dey swim. (Flooding)

Interviewer: Okay thank you. Have you heard of the Plastic bag Prohibition Bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. Do you think it is feasible?

Interviewee: no. wetin be that? X is showing me and reading it but the English is too big. 500,000 for polybag? Nylon bag? It will not work so what will we be using? Abeg next question

Interviewer: okay thank you x. My Last question is will you accept these other options to plastic bag like paper bags, woolen bags, jute and would you agree to charge your customers for polybag?

Interviewee: No.....to see something better than nylon bag is hard. I have one bag like those scak we use to carry maize when we were small.... I think it is from jute or I cannot even remember.

Interviewer: that will be Jute bag...

Interviewee: thank you, it is really fine bag but I am not going to give that to a customer unless I am selling it because that bag is fine and has last really long but it is expensive. So maybe when there is something not cost like polybag, then we can stop poly bag. The question don finish?

Interviewer: yes, thank you so much for your time

Interviewee: thank you for the call. I hope government will read what you are doing in that abroad so water will not carry us?

Interviewer: I hope they will when I finish writing. Thank you so much x

Interviewee: okay bye bye

### **Interview 10 – 28:11 minutes**

Interviewer: hello x, well done x. Thank you for accepting to do this interview. As a you already know, my name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you and he is standing you so you can be sure this for school, and you have seen my ID card. Your response would form part of my material for my thesis at Uppsala University in Sweden. I am asking individuals and shop owners in Lagos about use of plastic bags. Your information will not be mentioned.

Interviewee: hello thank you for having me

Interviewer: can we begin start now?

Interviewee: okay

Interviewer: my first question is do you give your customers plastic bags after every purchase?

Interviewee: yes, because of the type of items we sell here require we give a customer a bag every time they shop. Sometimes we give paper bags that are somehow exclusive but that would like once a week.

Interviewer: next question is why do you give your customers a plastic bag?

Interviewee: aside for it being a trend, our brand x does it across all our branches in Nigeria. The bag is our identity so you know it is like marketing.

Interviewer: Okay thank you, how many you give per day?

Interviewee: .....if it were to be number of customers per day, then I can tell but you cannot calculate number of bags that way. Some customers can have more than one while others will leave with none, so you see like...I cannot quantify the figures.

Interviewer: Okay thank you, next question. Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: customers vary. So this would depend on who walks into the shop at what time then when the leave.... Like that...

Interviewer: Okay thank you. my next question is do you understand the impact of plastic bags to

the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: That would be a yes and a No. flooding I would say yes and No because I don't follow anything about environment talk or all these recycling x do at x.

Interviewer: Okay thank you. Have you heard of the Plastic bag Prohibition Bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. Do you think it is feasible?

Interviewee: No but I think this good since other countries do it and in Sweden we hear about them to like London when I visit.

Interviewer: yes, Sweden is king of recycling and they have a system that works making policies on plastic successful in implementation.

Interviewee: interesting...same thing with London they charge you for a bag and people pay with no complaint...this will be difficult here I think because there are no options even though plastic bottles and bags are not good but I ma not an environment person I watch these on TV.

Interviewer: okay thank you so much. My Last question is will you accept these other options to plastic bag like paper bags, woolen bags, jute and would you agree to charge your customers for polybag?

Interviewee: yes I would. Maybe I can expand my paper bags more, but cost is a big factor. If that can be sorted out.....like I can stop using plastic bags. Thank you

Interviewer: Thank you so much for your time

Interviewee: thank you so much for having me and good luck

Interviewer: thank you.

### **Interview 11 – 20:09 minutes**

Interviewer: hello x, Good afternoon x. Thank you for accepting to do this interview on phone. As a you already know, my name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you and he is standing you so you can be sure this for school, and you have seen my ID card. Your response would form part of my material for my thesis at Uppsala University in Sweden. I am asking individuals and shop owners in Lagos about use of plastic bags. Your information will not be mentioned.

Interviewee: .... Okay. fine. Thank you

Interviewee: okay

Interviewer: so.....first question is do you give your customers plastic bags after every purchase?

Interviewee: no it depends...on what they are buying

Interviewer: next question is why do you give your customers a plastic bag?

Interviewee: it is part of my business. Before I opened my store, I was always getting a bag and where I learnt trade, you know this igbo people set up thing, my master was always giving a bag, so I just know I have to do same.

Interviewer: Okay thank you, how many you give per day?

Interviewee: I don't count so I cannot tell you.

Interviewer: Okay, next question. Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: some customer will ask others will not, see it depends on the person but I am prepared to give a polybag unless they say they don't want then I keep it.

Interviewer: Okay. my next question is do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: yes even in the east where I come from, plastic bag is everywhere and they will be floating when it rains. You will even some places that have erosion, all those big ones that will make you afraid when heavy rain fall where plastic bag in inside the ground.

Interviewer: Okay thank you. Have you heard of the Plastic bag Prohibition Bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. Do you think it is feasible?

Interviewee: No but that money is really big and so they want someone to go to prison because of polybag? Plastic bag like too much of it is not good even though when we were small in the east, these thing was not common. When you go to market you carry basin or bucket but nylon bag is everywhere now. So if they want to ban, it is good but that 500,000 is too much, that is what...will make Nigerians not even take it serious.

Interviewer: okay thank you. My Last question is will you accept these other options to plastic bag like paper bags, woolen bags, jute and would you agree to charge your customers for polybag?

Interviewee: for now, I don't know till I see what they want to give us so we no longer use plastic bag again.

Interviewer: thank you so much for your time.

Interviewee: thank you and bye bye, x collect phone

## **Interview 12 – 29:01 minutes**

Interviewer: hello Good morning x. Thank you for accepting to do this interview on phone. As a you already know, my name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you and he is standing you so you can be sure this for school, and you have seen my ID card. Your response would form part of my material for my thesis at Uppsala University in Sweden. I am asking individuals and shop owners in Lagos about use of plastic bags. Your information will not be mentioned.

Interviewee: Hello.....Okay. fine.

Interviewer: first question is do you give your customers plastic bags after every purchase?

Interviewee: no.

Interviewer: Okay thank you, how many you give per day?



Interviewee: I don't know, this one is hard to say

Interviewer: Okay, my next question. Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: this is customer specific, that would be no to your question

Interviewer: Okay x. my next question is do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: yes....if you live in Lagos for so long you know plastic is ..you know too much of it is bad even considering how much there are many NGOs doing work on plastic recycling all these x bottles and also the government was announcing one recycling scheme like that, I got the flier.

Interviewer: Okay thank you. Have you heard of the Plastic bag Prohibition Bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. Do you think it is feasible?

Interviewee: No....this is my first time. I don't really know if it will be.....

Interviewer: hello.....

Interviewee: the network went bad....

Interviewer: can you hear me?

Interviewee: okay it is clear now...

Interviewer: I was asking about the proposed bill.....the feasibility of it succeeding in Lagos

Interviewee: yes.....i was going to say it will be hard to say, I don't know really...sorry

Interviewer: okay thank you, that is fine. My Last question is will you accept these other options to plastic bag like paper bags, woolen bags, jute and would you agree to charge your customers for polybag?

Interviewee: well...till I see what these other options are and if they can be as cheap like plastic bags, that is fine. But to charge my customers? I doubt I will ....there is so much competition in this market that I am not sure I can charge, it can be bad for my business and how am I even sure customers will pay? You see

Interviewer: that will be all. Thank you for your time.

Interviewee: thank you for having me.

### **Interview 13 – 19:27 minutes**

Interviewer: hello x, Good afternoon x. Thank you for accepting to do this interview on phone. As a you already know, my name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you and he is standing you so you can be sure this for school, and you have seen my ID card. Your response would form part of my material for my thesis at Uppsala University in Sweden. I am asking individuals and shop owners in Lagos about use of plastic bags. Your information will not be mentioned.

Interviewee: .... Okay....good

Interviewer: so.....first question is do you give your customers plastic bags after every purchase?

Interviewee: not exactly. I give most but not all.

Interviewer: next question is why do you give your customers a plastic bag?

Interviewee: but is there is any shop that does not give bag in Lagos or Nigeria? It is part of our business style. When your customer buy something, you give them a bag unless you don't have which may happen but many shops always have.

Interviewer: Okay thank you, how many you give per day?

Interviewee: this is one big question. I don't know unless maybe .....I don't know.

Interviewer: Okay, next question. Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: some customers will insist whole others don't care but that one is depending on what they buy you know.

Interviewer: Okay x, thank you. my next question is do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: yes the best example from what you have listed is flooding. Lagos rain is on another level. Flooding every year and then mosquitoes will be so much in my area. Plastic na headache but we no get choice.

Interviewer: Okay thank you. Have you heard of the Plastic bag Prohibition Bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. Do you think it is feasible?

Interviewee: no I am seeing it now from x. depends on how they implement it, it can work you know but the idea is good, Lagos flooding is plenty.

Interviewer: okay.....thank you....Last question is will you accept these other options to plastic bag like paper bags, woolen bags, jute and would you agree to charge your customers for polybag?

Interviewee: I don't know if I will accept the alternative till...you see like.... I see it because it is one thing to say this is the other option and say no more plastic bag but it will be expensive but let me see it first. If we can say bye bye plastic bag, I support it.

Interviewer: what of charging your customer for a bag?

Interviewee: I forgot that part of the question.....like I said, let me at least see what they are bringing for plastic bag, then I can say if I can at least charge my customers, then how much and they may not pay...all these customers...I don't know till then.

Interviewer: thank you so much for your time. That will be all my questions.

Interviewee: Thank you..., x collect it....bye bye

**Interview 14 – 22:17 minutes**

Interviewer: hello x, Good afternoon x. Thank you for accepting to do this interview on phone. As a you already know, my name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you and he is standing you so you can be sure this for school, and you have seen my ID card. Your response would form part of my material for my thesis at Uppsala University in Sweden. I am asking individuals and shop owners in Lagos about use of plastic bags. Your information will not be mentioned.

Interviewee: .... Okay. fine. Let us start now?

Interviewer: Okay, so.....first question is do you give your customers plastic bags after every purchase?

Interviewee: well, maybe this will be about the customer. Sometimes, I give so it depends. I can't conclude.

Interviewer: next question is why do you give your customers a plastic bag?

Interviewee: You know..... it my business style. A plastic bag with every thing you buy.....i give it free.

Interviewer: Okay, next is how many you give per day?

Interviewee: I don't know.....the truth is I don't know. Let us move on because of time.

Interviewer: Okay, next question. Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: like the other question, customer vary with how they want bag...some will ....like will be angry you get it like because you have no bag to give, some will not be bothered but it is good you make provision.

Interviewer: Okay thank you x. my next question is do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: yes

Interviewer: Okay thank you. Have you heard of the Plastic bag Prohibition Bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. Do you think it is feasible?

Interviewee: yes, read about in the newspaper. Well....it may work since many countries are doing the same now, so Nigeria can push to make it work but the fine is too much and going to prison is too extreme.

Interviewer: okay thank you. My Last question is will you accept these other options to plastic bag like paper bags, woolen bags, jute and would you agree to charge your customers for polybag?

Interviewee: I will not charge my customers if they buy good over certain limits but maybe I can charge those who buy small ...till I see the options with my eyes. That's it.

Interviewer: thank you so much for your time

Interviewee: thank you for having me.

## **Interview 15 – 30:03 minutes**

Interviewer: hello x, Good afternoon x. Thank you for accepting to do this interview on phone. As a you already know, my name is Margaret Aligbe, I am conducting interviews on the use of plastic bags in Lagos as X had already told you and he is standing you so you can be sure this for school, and you have seen my ID card. Your response would form part of my material for my thesis at Uppsala University in Sweden. I am asking individuals and shop owners in Lagos about use of plastic bags. Your information will not be mentioned.

Interviewee: .... Hello.....hello....

Interviewer: I can hear you x-

Interviewee: okay...this is clear now....

Interviewer: Let us start now?

Interviewee: okay

Interviewer: first question is do you give your customers plastic bags after every purchase?

Interviewee: no....not every customer, not everything they buy.

Interviewer: next question is why do you give your customers a plastic bag?

Interviewee: I give them because they bought something in my shop.... I don't like my customers doing with what they bought like that...

Interviewer: so this means you give them even when they don't ask?

Interviewee: it is like..... it is not like I want them to ask...I will give them before the ask....it is what shop owners do even aboki dey give nylon bag ....mama for market wey dey sell ugwu dey give.

Interviewer: Okay thank you, I wanted to be clear. how many you give per day?

Interviewee: how many polybag abi nylon...how many?

Interviewer: yes, do you know how many you give every day?

Interviewee: no, I not even calculate. It hard to tell you.

Interviewer: Okay, thank you...my next question. Does every customer who buys an item request a bag? Or it depends on the item?

Interviewee: depends on the customer because everyone that enters my shop want different thing and people are different...if they ask you give even when they don't ask..you give them

Interviewer: Okay, what of those who don't want or they don't reject it?

Interviewee: see, maybe, these things you don't look it at, you want to sell when you open shop, polybag no be my concern.....they collect it and go like that but sometimes, they will collect that polybag and throw the bag away

Interviewer: Okay x. my next question is do you understand the impact of plastic bags to the environment like Flooding, Drainage blockage, Malaria, health hazard for man and animal?

Interviewee: yes nylon bag dey block gutter. I even use nylon bag cover my leg pass that road before I come to shop today. That area x when small rain fall when small rain fall reach that bridge everywhere will be dirty water and you go see plastic bottles, nylon bags go dey there even enter this bar beach water around this area x.

Interviewer: that is serious....

Interviewee: yes....even x here has nylon for leg because that is how you can pass and that pako bridge don scatter.

Interviewer: Okay thank you for your answer. Let me ask if have you heard of the Plastic bag Prohibition Bill proposing to ban plastic totally, charge up to N500,000 fine and 1 year in prison for anyone giving customers a plastic bag or importation of any kind? Let x show you the details. Do you think it is feasible?

Interviewee: No, na X showing me now. Leave this question the money is plenty, who will pay?

Interviewer: okay ...my Last question is will you accept these other options to plastic bag like paper bags, woolen bags, jute and would you agree to charge your customers for polybag?

Interviewee: the only thing I will say there is that I will not charge my customer for bag because they will not pay.... i am not sure they will pay. The rest I don't know what to say. I hope it is okay?

Interviewer: that is fine...thank you very much for your time.

Interviewee: thank you, don't write my name .....

Interviewer: no x...this is anonymous interview, nobody will know your details. This is why I am using x phone and recoding it separately.

Interviewee: okay thank you bye bye

Interviewer: thank you

