
PLASTIC POLLUTION: A GROWING THREAT TO ENVIRONMENTAL SUSTAINABILITY

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ABSTRACT

Plastic pollution has become a major environmental challenge globally, posing significant threats to human health, wildlife, aquatic ecosystems, and the general environment. The widespread use of plastic products, particularly single-use plastics, coupled with inadequate waste management systems and poor enforcement of environmental laws, has contributed to the increasing accumulation of plastic waste in Nigeria. This study examines the legal response to plastic pollution in Nigeria, with particular emphasis on the adequacy of existing environmental legislation, the effectiveness of sanctions for violations, and the enforcement mechanisms established to control plastic waste. The study adopts the doctrinal research methodology, relying on primary sources, including relevant legislation, and secondary sources such as textbooks, journal articles, and other scholarly materials. It examines key Nigerian environmental laws, including the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007, the Environmental Impact Assessment Act, the Harmful Waste (Special Criminal Provisions) Act, and the Water Resources Act, alongside relevant state environmental laws. The study also undertakes a comparative analysis of plastic pollution control measures in Egypt, Kenya, Canada, and France to identify lessons applicable to Nigeria. The findings reveal that although Nigeria has an existing legal framework capable of addressing aspects of plastic pollution, the absence of a comprehensive and specific legal regime for plastic waste management, inadequate waste collection and recycling infrastructure, low public awareness, and weak enforcement mechanisms undermine the effectiveness of these laws. The comparative analysis demonstrates the importance of clear regulatory measures, effective enforcement, public participation, and the promotion of sustainable alternatives to single-use plastics. The study recommends strengthening existing environmental legislation, introducing more specific provisions for plastic pollution control, reviewing applicable sanctions, expanding recycling infrastructure, promoting biodegradable alternatives, and encouraging community participation through the polluter-pays principle. It concludes that an effective legal

response, supported by institutional commitment and public cooperation, is essential for reducing plastic pollution and achieving sustainable environmental protection in Nigeria.

Keywords: Plastic pollution, environmental law, waste management, legal enforcement, recycling, Nigeria.

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Environmental pollution became a prominent issue worldwide and in Africa continent generally after the 1972 United Nations Conference on Human Environment at Stockholm where it not only confirmed the emergence of environmental protection as a new focus on legislation, so as to avoid crisis but equally emphasized the close inter relation between the environment and development.

According to Hornsby¹, Pollution is the process of making air, water, soil, land etc dirty; the state of being dirty; what is annoying or harmful levels of noise or artificial light at night.

According to Hodge, pollution is the introduction of substances or energy liable to cause hazard to human health, living resources and ecological system, damage to structure or amenities or interference with legitimate use of the environment.²

Pollution is an act of polluting or the state of being polluted especially the contamination of environment by harmful substances. Pollution is the addition of some unwanted and harmful product into the environment.³

Pollution is the introduction of contaminants into the natural environment which causes adverse changes (Merriam-Webster dictionary). Pollution can be in any form either solid, liquid, or gas or even energy (such as heat, sound, or even light). Pollution is generally created by humans because in every activity that is done by a human somehow produces pollution one way or the other. We have some major forms of pollution such Air pollution, Light pollution, Litter, Noise pollution, Plastic pollution, Soil contamination, radioactive, contamination, thermal pollution, Visual pollution and Water pollution.³

Pollution started from pre-historic period times, when men created the first fires. According to a 1983 article in the journal science ‘soot’ found on ceilings of prehistoric caves provide ample evidence of the high levels of pollution that was associated with inadequate ventilation of open fires.⁴

¹ A.S. Hornsby, *Oxford Advanced Learners Dictionary* (4th Edition) 1984.

² National Open University School of Law, ‘Environmental Law 1’ accessed 10 December 2021.

³ The English Dictionary; English 4.4.1 <<https://www.wiktionary.org>> 11 December 2021.

³ UNdata | glossary. <<https://www.data.un.org>> accessed 16 May 2022.

⁴ Spengler, John D; Sexton, K.A (1983). ‘Indoor Air pollution: A Public Health Perspective’ <<https://www.sciencedirect.com/doi/10.1126/science.6857273>> accessed 16 May 2022.

THE HISTORICAL BACKGROUND OF PLASTIC POLLUTION

The history of plastic pollution correlates to different years having each activity that had taken place that year, all of these events can be summed up to form the history of plastic pollution.

In 1862, Alexander Parkes showed the first man made plastic at the Great International exhibition in London. Parkesine, as he dubbed it, was made from cellulose. In 1907, Leo Baekeland developed Bakelite, the first synthetic, fossil-fuel based plastic made from PHENOL also known as a coal waste-product and formaldehyde.

In 1946, they had the first National Plastics Exhibition which had opened in New York City to showcase all the new consumer uses for the plastics developed to aid in World War II of which during the war, plastic production had tremendously increased in fourfold. In 1970s, reports had been published in science about the widespread of plastic pellets in the North Atlantic lead to more research into the widespread of plastic on the seafloor and its impact on marine animals.

In 1979, plastic grocery bags are introduced in the U.S. In 1980, the first U.S. city that had adopted the curbside recycling program was Woodbury, New Jersey, in which they had litter awareness campaigns in the 1960s and 1970s. In 1990s there was also a widespread use of plastic micro beads in cosmetics began. In 1997, it was discovered in Los Angeles the Great Pacific Garbage Patch, which is also known as the world's largest collection of floating garbage which was discovered by Charles Moore.

In 2002, Bangladesh had become the first country to banned plastic bags, which was after the discovery that they blocked drains during a severe flood. In 2007, San Francisco had become the first U.S. city to institute a plastic bag ban. In 2008, it was confirmed that Bisphenol A, that is a chemical that was used to manufacture hard plastic bottles and the lining of baby-formula cans, may increase risks of early puberty, breast cancer, prostate issues and behavioral problems.

In 2014, the Netherlands had become the first country to ban micro bead in cosmetics. In 2017, the BBCs Blue Planet II, had increased global concern towards ocean plastic with striking view of how they impact ocean animals. In 2018, the Earth Day Network focused on the Earth Day on ending plastic pollution by 2020.⁵

History of plastic pollution started in 1907, Leo Baekeland invented Bakelite. The first fully synthetic plastic, it basically had no molecules found in nature. Baekeland has been searching for a synthetic substitute for shellac, a natural electrical insulator, in order to meet the needs of the rapidly electrifying U.S, Bakelite was not only a good insulator, it was durable, heat resistant and unlike celluloid, ideally suited for mechanical mass production. Bakelite could be shaped or mould into almost anything, providing endless possibilities.

Hyatt and Baekeland had been searching for materials with specific properties; the new research programs sought new plastics for their own sake and worried about finding uses for them later. World War II resulted in the great expansion of the plastics industry in the U.S. the need to preserve scarce natural resources made the production of synthetic alternatives a

⁵ Olivia Rosane, 'plastics:The History of an Ecological crisis' (2018) <<https://www.ecowatch.com/plastics-history-ecologicalcrisis-2560978473>> accessed 11 December 2021.

priority. Plastic provided those substitutes. There was now an increase in plastic production even after World War II had ended. After the experience of the Great Depression and then World War II, Americans were ready to speed again and much of what they bought was made of plastic.⁶

There are different forms of pollution in our world today which are stated below;

Air Pollution: Air pollution is “The contamination of the atmosphere by noxious gases and particulates”.⁷ This is the artificial introduction of substance or contaminant into the atmosphere or the emission of impurities into the air⁸. That is the release of chemicals and particles into the atmosphere such as carbon monoxide, sulfur dioxide, chlorofluorocarbons and nitrogen oxides which mostly come from industries, motor vehicles, gas related companies which has adverse effect (e.g Respiratory infections, heart diseases, stroke and lung cancer etc) on human health.⁹

Air pollution can also have effects on living organisms and natural environment. Individual reaction to air pollution is dependent on the kind, degree, health status and genetics of individual.¹⁰ Some effects of air pollution include Ozone depletion, acid rain, global warming etc.

Electromagnetic Pollution: This type of pollution is caused by electric and magnetic fields generated by power lines, electric equipment, and mobile and cordless phone, electric household appliance, computers, electric clocks and so on.¹¹ This is also termed electromagnetic radiation which can happen in two forms in their non-ionizing form and ionizing form (like radio waves etc) of which people are constantly exposed at especially large cities.¹² One common health effect radiation is sunburn which lead to skin cancers.¹³

Light Pollution: Light pollution is caused by inappropriate or excessive use of artificial light which cause diverse effect on the environment, human health, wildlife and the climate.¹⁴ It can also be define as the alteration of night natural lighting levels caused by anthropogenic sources of light.¹⁵

⁶ Science History Institution, Science Matters, ‘The Case of Plastic: History and Future of plastic’
<<https://www.sciencehistory.org>> accessed 19 November 2021.

⁷ English Dictionary

⁸ Bryan Garner, Black’s Law Dictionary, 10TH Edition

⁹Abcde ‘7 million premature deaths annually linked air pollution’ WHO. accessed 30 March 2022.

¹⁰A b c d Daniel A. Vallero, “Fundamentals of Air Pollution”. Elsevier Academic Press. accessed 30 March 2022

¹¹ <https://www.informea.org/en/terms/electro-magnetic-pollution> accessed 30 March 2022.

¹² Cleveland Jr RF and Ulcek JL, ‘Questions and Answers about Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields(PDF)’ (1999) (4th edn), Washington D.C; OET (Office of Engineering and Technology) Federal Communications Commission. Accessed 30 March 2022.

¹³ Siegel RL and Miller KD and Jemal A “Cancer statistics”, (2020) A Cancer Journal for Clinicians. Accessed 30 March 2022.

¹⁴ Light pollution, ‘International Dark-Sky Association. <<https://www.darksky.org/light-pollution/>> accessed 30 March 2022.

¹⁵ The New World Atlas of Artificial Night Sky Brightness.

<<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4928945/#lpo=7.35294>> accessed 30 march 2022 ¹⁷

Light pollution and Palomar Observatory. Palomar Observatory: Caltech Astronomy.

<<https://sites.astro.caltech.edu/palmoar/community/lightpollution.html>>

Light pollution is a side effect of industrial civilization which interferes with astronomical observation¹⁷ and effect the ecosystem like any other type of pollution and it sources include streetlights, offices, factories, illuminated sporting venues etc.¹⁶

There are types of Light pollution which include; Light trespass: this occurs when unwanted light “enters someone property”. Over illumination; This has to do with excessive light. Then we have the Light cutter which has to do with when looping light is excessive.¹⁹

Light polluting agents are photons of corresponding energy, or electromagnetic waves of corresponding frequency, artificially added to the environment.²⁰

Light pollution can be classified into two broad categorizes; ¹⁷Outdoor Light pollution is the alteration of light levels in the outdoor environment (from those present naturally) due to man-made sources of light while Indoor light pollution is such alteration of light levels in the indoor environment due to sources of light, which compromises human health.¹⁸

Littering:An unorganized collection or mixture of various things.¹⁹ This deals with the inappropriate throwing of wastes, unrecycled products around which can be intentional or unintentional, either ways it have environmental consequences.²⁰

In Keep America Beautiful research most found litter items were identified and they include: food wrappers, plastic bottles, disposable cups, straws, cigarette butts etc. this same research identified the reasons behind littering which are laziness, presence of litter already in the area, lack of access to trash receptacles.²¹

The effect of this pollution cannot be sidelined as it cause serious consequences on the environment which include poison when the litter decompose by releasing chemical and gas, killing of wildlife by ingesting or entrapment, facilitating the spread of disease etc.²⁵

Noise Pollution: This is also known as environmental noise or sound pollution. Noise pollution can be defined as any unwanted disturbance that interferes or harms human life and wildlife. This pollution is an unwanted excessive sound that has deteriorating effect on human health.

Noise pollution is usually generated from industries and other work places such as roadway noise, aircraft noise, industrial noise, music noise, as well as construction site, house hold chores, social events, animal sound etc.

However the effect of noise pollution include hearing problem, psychological problems, sleeping disorder, cardiovascular issues(increased heart beat), ability to focus etc.

¹⁶ The future looks bright light pollution rises on a global scale. Reuters. 22 November 2017.
<<https://www.reuters.com/article/us-scienc-light-idUKBN1DM2Ok>> accessed 30 March 2022

¹⁹ Supra note14.

¹⁷ Jan H. ‘What is light pollution, and how do we quantify it?’(2009) <[http://amper.ped.muni.cz/light/lp what is.pdf](http://amper.ped.muni.cz/light/lp%20what%20is.pdf)>
accessed 30 March 2022.

¹⁸ ibid

¹⁹ Merriam Webster Dictionary ©2022.

²⁰ ‘How does littering affect environment’ <<https://texasdisposal.com>> accessed 16 May 2022.

²¹ ‘Breakdown: why littering can lead to pollution’ <<https://actionnews5.com/2021/06/30/breakdown-why-littering-canlead-pollution>>accessed16 May 2022. ²⁵ Ibid 22.

Soil Pollution: this is the disposal of solid and liquid wastes on the surface of the land or underground which contaminate water and pose a threat to human life.²² Some of the chemicals that cause soil pollution include but not limited to petroleum, lead, solvents etc.

Soil pollution became a matter of major concern as a result of the health issues arising from the contamination of water sources. Soil contamination is when chemicals are released by spill or underground leakage. Among the most significant soil contaminants are hydrocarbon, heavy metals, herbicides, pesticides, and chlorinated hydrocarbons.

Radioactive: this pollution occurs when there is the presence of depositions of radioactive substances in the environment.²³ This contamination comes as a result of atomic physics such as nuclear weapons research, manufacture and deployment. This pollution is naturally released by the environment and it's generated from uranium mining, nuclear power plant, and production and testing of military weapons as well as university and hospital using radioactive for research and medicine.²⁸

The amount of harm done to the environment is influenced by the concentration of radioactive materials, the energy emitted by the radiation, the proximity of the radioactive materials to individuals who are exposed and the kind of radiation.²⁹ Types of radioactive pollution are; continuous pollution (that comes from uranium mines, nuclear reactors), occasional pollution (from nuclear tests or experimental tests)^{24,25} and accidental pollution (from experiment involving dangerous substance that fail or get out of control).

Thermal Pollution: Freshwater Ecology³¹ define thermal pollution as any deviation from the natural temperature in a habitat that range from elevated temperature associated with industrial cooling activities to discharges of cold water into streams below large impoundments.²⁶ That is a temperature change in natural water bodies caused by human influence, such as use of water as coolant in a power plant.

Effect of thermal pollution are: decrease in dissolved oxygen levels, increase in toxins, loss of biodiversity, ecological impact (mass killing of fish, plants and insects), migration of organisms to suitable environment.²⁷

Visual Pollution: Visual pollution refers to the effect of pollution on one's ability to appreciate a vista or perspective.²⁸ This has to do to the presence of overhead power lines, motorway billboards, and scarred landforms, open storage of trash, municipal solid waste or space debris that intrude on the beautiful scenes or graffiti .

²² Bryan Garner, Black's Law Dictionary, 10th edition.

²³ 'Radioactive pollution: Causes, Effect and Solutions to Nuclear Radiation', <<https://www.conserve-energyfuture.com/radioactive-pollution-causes-effects-solutions.php>> accessed 16 May 2022. ²⁸

Environmental law lecture note. ²⁹ Ibid 26.

²⁴ Radiation and pollution | Environmental pollution centers <<https://environmentalpollutioncenters.org/radiation/>> accessed 16 May 2022.

²⁵ nd edition 2010.

²⁶ Thermal pollution-an overview <<https://www.sciencedirect.com/topics/earth-and-planetary-science/thermal-pollution#:~:text=thermal%20pollution%20is%20any%20deviation,into%20streams%20below%20large%20impoundments>> . > accessed 16 May 2022.

²⁷ Causes, Effects and Solution to Thermal pollution <<https://www.conserve-energy-future.com/causes-and-effects-of-thermal-pollution.php>> accessed may 16 2022.

²⁸ Visual pollution | Encyclopedia.com. <<https://www.encyclopedia.com/environment/educational-magazines/visual-pollution>> accessed may 16 2022.

Water Pollution: Water Resource Act of 1993 define “water pollution as a direct or indirect alternation of the physical ,thermal, chemical, biological or radioactive properties of water, which makes it less fit for any beneficial purpose or causes a condition, that is hazardous to public health and safety and also the welfare of animals, birds or plant.”

This is the discharge of industrial wastewater from commercial and industrial waste into surface waters, discharge of untreated sewage and chemical contaminants, such as chlorine from sewage; release of waste and contaminants into surface runoff which flows to the surface waters. Water pollution can be categorized into water pollution; ground water, surface water, ocean water and trans-boundary water pollution. The key major sources of water pollution are oil spills, industrial refuse/toxic waste and agricultural fertilizers.²⁹

WHAT IS PLASTIC?

There isn't a single definition of plastic because plastic can mean so many different things. The word plastic is derived from the word “plastikos” meaning to mould in Greek.³⁰

Plastic can be defined as a material that contains as an essential ingredient an organic substance of large molecular weight. It is also define as polymers of long carbon chains.³¹

Plastic can be defined as a synthetic solid, hydrocarbon-based polymer, whether thermoplastic or thermosetting.³²

Plastic Pollution: This is the accumulation of plastic products and micro plastic products in the environment that adversely affects wildlife, wildlife habitat or even humans.³³

WHEN DOES PLASTIC BECOME A POLLUTANT?

Plastic does not become a pollutant by merely throwing a single it on the floor, it becomes a pollutant when there is cluster of it in a particular place ad when it start to degrade.

Plastic pollution has had various countries that made efforts in curbing pollution, which emphasis will be made on three countries;

CANADA

Canada has made various efforts in curbing pollution majorly in the country. In May 2021, Canada had declared plastic a toxic substance, which led to the ban that was created on most single use plastic by the end of the year. They had also made an effort in taking control over there climate pollutants, they had to reduce short-lived climate pollutants, like Black carbon, methane, ground level ozone etc.

²⁹ National open university of Nigeria, school of law, environmental law1.

³⁰ What is plastic?- types, Examples, Properties & Recycling <<https://www.byjus.com/chemistry/plastic/>> accessed may 17 2022.

³¹ Ibid.

³² The English dictionary; English 4.4.1.

³³ Plastic Pollution in Oceans and on land <<https://www.britannica.com/science/plastic-pollution/plastic-pollution-in-oceans-and-on-land>> accessed 10 December 2021.

In a bid to address climate change, Canada decided to take holistic approach by addressing the short-lived climate pollutants in (SLCPs) so as to address climate change and air quality. Canada had taken an action by creating a range of air pollution regulation in order to reduce emissions of short-lived climate pollutants.

These regulations had been announced December 2020 as Canada's plan to address climate change as well as building a sustainable economy. The climate plan had continuing work with provinces and territories through Pan-Canadian Framework on Clean Growth and Climate Change (PCF).³⁴

Canada's government had created regulations that had been implemented to be specific they had Air pollution regulations that were targeting ozone precursors. Canada had continued to implement on nation-wide Air Quality Management System in other to reduce emissions of air pollutants from industrial sources, as well as suite of air pollution for the transportation sector.

Canada is one of the countries that have made tremendous efforts in curbing pollution. They had made efforts in dealing with every form of pollution, they had established regulations, organization that all serve as a guide towards maintaining a good environment without pollution in the country as a whole.³⁵

FRANCE

France is also one of the countries that have made efforts in controlling pollution in their country. The main environmental law principle in France can be found in the 2004 Environmental Charter (that is part of the Constitution). This regulation was influenced by

European Union law as legislative consists, to a extent, of transposed European Union Directives and directly effective European Union Regulations.³⁶³⁷

In fact as at 2016, France was the first country in the world to ban the manufacture and sale of single-use plastic cups, plates and also takeaway food box, this law requires all the disposable tableware to be made from a 50% bio-sourced materials which could be composted at home. The law had been passed after a thorough statistics had been done by the French Association of Health and Environment concerning recycling the plastic cups thrown each year. France had also banned shops from distributing plastic bags but instead, they distributed paper bags or reusable plastic and encourage their customers to reuse their bags.³⁸

The French Environment code has acts and decrees that has to do with our environment. Rules like maintaining or preservation of natural resources, monitoring of hazardous activities, France had decrees environmental decrees to be more précised and each form of pollution had something to do with such problem.

³⁴What's in Canada's Climate plan<<https://www.canada.ca>> accessed4th December 2021

³⁵ Canada I Climate and Clean Air Coalition <<https://www.ccacoalition.org/canada/climate/cleanaircoalition>> accessed 4 December 2021.

³⁶ Jean-Pierre Boivin and Anthony Emorine, ' Environmetal law and practice in France:overview', (2020) <<https://www.uk.prcaticallaw.thomsonreuters.com/w-010->

³⁷?transitionType=Definitio&contextData=(sc.Default)&firstpage=true> accessed 19 June 2022.

³⁸Lori Campbell, 'Top 10 Countries Doing The Most to Tackle Plastic Pollution' (2021) <<https://www.good-withmoney.com>>accessed 4December 2021.

In aspect of the water pollution, they made certain legislations which helped to fight against water pollution, making a law that had to deal with the management of the water resource system specifically the three types of water that is territorial water, ground water, surface water, and concrete water, they had legal provision for preserving the water quality and reserves, which provides for a general crime of water pollution triggered by throwing, spilling or flowing into surface, underground or marine water directly or indirectly, one or more substances with harmful effects on health or damage, they had a penalty of two years imprisonment and 75,000 euros as fines. And these sanctions were applicable to throwing of waste or disposing of waste products in sea no matter the category.

In the aspect of Air pollution, they had a discipline that was provided in the law that stood as a fight against air pollution e.g. bad odour. The main aim is to stand against any kind of air that is that is harmful to the human system or health. They had authorities that were always on deck to ensure that there is no air pollution and that it is being managed, preserving the air quality and to save and use energy at a rational manner.

In order to keep the public aware of this law an inventory was publish every year stating the importance of having a good air quality and also the effect of a bad air. As a result of this regulation which was derived from the European Union, it created a limit to the emissions from vehicles and to this end the National Air Pollutant Emission Reduction Plan was adopted to be put into practice covering all categories that had to do with air pollution. So in this regard France had other measures which had been adopted even up till our present.³⁹

NIGERIA

Nigeria is one of many countries that had also made an effort in controlling pollution; government had a role to play in curbing pollution in Nigeria. Pollution is majorly caused by companies in the oil and gas sector and their contribution to pollution is estimated to be 55%. The government of Nigeria have formulated, law and regulations for the management of pollution and waste management as a whole, the first National policy was formulated in 1991. In addition to this National policy on plastic lifecycle management was promulgated to back up the provision for the improvement and protection of the air, land, water, forest and wildlife of Nigeria.⁴⁰ Nigeria is also a party to various international treaties and multilateral Environmental agreements and the constitution provide for the implementation of these treaties in Nigeria after being ratified by the National Assembly.⁴⁶

Some efforts made by Nigeria government to curb plastic pollution include;

1. Establishment of plastic waste recycling facilities in 26 cities;
2. The installation of pure water sachet recycling plant in Ilorin, Kwara State;
3. Action plan drafted for phasing out non- biodegradable plastics;

³⁹ Alonge Ivano, 'Environmental Law of France' (2018), <<https://www.researchgate.net/publication/328391897>> accessed 4 December 2021.

⁴⁰ S 20 CFRN 1999 {AA}.

⁴⁶ S 12 CFRN 1999 (AA).

4. The development of National Policy on Plastic Life Cycle Management (Draft).⁴¹

Nigeria laws on pollution control and environmental protection includes:

1. National Environment standards Regulation Enforcement Agency Act (NESREA).⁴⁸
2. Environmental Impact Assessment (EIA) Act.⁴²
3. Harmful Waste (Special Criminal Provisions) Act.⁴³
4. Oil in Navigable Waters Act.⁴⁴
5. Associated Gas re-injection Act.⁴⁵
6. 1999 Constitution of the Federal Republic of Nigeria.

The aim of these laws is to protect the environment and to ensure the maintenance of a sustainable government and development, the Nigerian constitution made provision for such objectives that would ensure that the environment is protected. These laws and agencies were created to ensure that the environment is kept safe from pollution. Thus, Nigeria also made effort of which in subsequent discussions more ideas will be shared generally.⁴⁶

WASTE

Waste is part of life and it can only be controlled, it is the end product of all human activity.

The more industrial activities the more waste, therefore where there is life there is waste. Scientific discovery and technological advancement led to increase in waste. The ability to manage and dispose waste has identified to be the most challenging issue in our world today.

Waste according to Atsegbua et al⁵⁴ is any substance or object whose owner or producer intends or is required to discard because it is useless or lacks market value. Waste according to WHO could be something which the owner no longer wants at a given place and time and which has no current or perceived market value.

Waste management according to Atsegbua et al⁵⁵ is the collection, keeping, treatment and disposal of waste in such a way as to render them harmless to human life, animal life, the ecology and the environment in general.

Plastic waste or Plastic pollution is the gathering of plastic objects (e.g plastic bottles and much more) in the Earth's environment that adversely affects wildlife, wildlife habitat and

⁴¹ Usman Abdullahi Bokani, 'Current Status of Management and Plastic Management in Nigeria, Policy & Industry Aspects' (Federal Ministry of Environment, Abuja, Nigeria) (2019) accessed ⁴⁸ 2007.

⁴² Cap E12, LFN 2004.

⁴³ Cap H1, LFN 2004.

⁴⁴ Cap O6 LFN 2004.

⁴⁵ Cap 20, LFN 2004

⁴⁶ <<https://www.pollution in Nigeria The Role of the Government>> accessed 6 December 2021. ⁵⁴

Atsegbua et al (2003) Environmental law in Nigeria Theory and practice' (Ababa Press Ltd 2003)

⁵⁵ Ibid.

humans. Plastic waste can also be identified as the significant amount of plastic that isn't recycled and they usually end up in landfill or in a developing world, which is mostly thrown into unregulated dump sites.

Majority of what we consume within our daily lives is mostly made of plastic due to the fact that it is not expensive and it is also durable and affordable. Although many light weight single- use plastic products and packaging materials, are 50% of all plastics produced of which are later thrown into landfills, recycling centers, or incinerators. Plastic are not recycled because most plastics are thrown out of car windows, heaped onto an already full rubbish bin.⁴⁷

1.2 STATEMENT OF PROBLEM

This study has to do with recycling of Plastic. The essence of this study is to examine the ability of government and individual to work on the manner and way in which Plastic is being recycled and managed. In 2010 it was estimated that 4.4million tones of solid waste had being mismanaged within the continent.

It should be noted that waste management involves diverse stages like generation and storage, collection and transfer, sorting, treatment, material recovering and disposal. In Nigeria, the infrastructure trained labor, and willpower for these stages are poor, insufficient, or lacking. There are not enough functional waste collection and recycling facilities for plastic and non plastic waste in Nigeria.

This is evident in Lagos especially where more than half of the waste in Lagos is left uncollected from the streets and the various locations due to the inadequacy and inefficiency of the waste management system.

The lack of awareness of the harm posed by unsanitary waste habits may engender poor waste management behaviors among different groups. In the study that examined students' attitudes to solid waste management in a Southwestern Nigerian University, it was reported that some of the environmental problems on the campus included, like the indiscriminate littering, open dumping of debris, and uncollected waste. It was argued that although this problem is common on campus only few students expressed serious concern for waste management practice.

Briefing people about the importance and benefits of Plastic in our society, Including the general method and ways in which plastic pollution could be curbed in total is essential.

1.3 AIM AND OBJECTIVES

The aim of this study is to evaluate legal response of pollution in Nigeria. It is the basic analysis of plastic pollution in Nigeria.

Objective includes;

1. To determine the implication of pollution in an environment.

⁴⁷'Plastic Pollution in Oceans and on land' <<https://www.britannica.com/science/plastic-pollution/plastic-pollution-in-oceans-and-on-land>> accessed 10 December 2021.

2. To examine the environmental laws in place in Nigeria.
3. To evaluate the effectiveness of pollution sanctions in Nigeria.
4. To determine the effectiveness or otherwise of plastic pollution laws.
5. Comparison of our plastic pollution laws with other jurisdiction.
6. To encourage the use of alternatives to plastic such as paper and fabric.

1.4 RESEARCH METHODOLOGY

In carrying out this research the doctrinal research method will be adopted which is going to be desk based whereby primary sources like National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007, Environmental protection law and secondary sources like text books, journals, articles and periodical sourced from the internet will be examined which will help in providing practical method of making people obey pollution laws and reducing problems associated with plastic pollution.

1.6 LITERATURE REVIEW

Environmental pollution has being a case of study which has resulted in the interest of various scholars concerning this study. Each form of pollution has its own, cause/source, problem, and even benefit to our own environment which has drawn the interest of many scholars, which leads to the review of some materials written and done by various scholars in subsequent discussions.

J. Healey (2019)⁴⁸, “stated that, plastic is finding it way into our food chain,” “research as show that whenmarineorganismsingest plastic, it stays in their system- which means that when humans eat fish, we’re eating plastic too.” This study also emphasis the negative effects of using plastic to prepare ad store food. May chemicals used to make plastic have been show to seep in to the food and frisk stored which is harmful.

The author emphasizes that we not in appropriately dispose of plastic, but we also swallow it, which can have negative health effects.

In an article written by T. Omilana (2019)⁴⁹, the problem of plastic pollution was ot a major concern 30 years ago, but the uptrend is giving environmentalists nightmares and overpowering waste management agencies in Nigeria due to the evolutionary changes I the average human’s lifestyle coupled with ignorant, abnormal, and reckless mismanagement of plastic waste.

According to M. Jones (2018),⁵⁰ Port Harcourt, was once known as the **Garden City of Nigeria but is now know as the** Garbage City. According to reports, the State has suffered

⁴⁸ J. Healey, **Plastic Pollution**, (Spinney Press, 2019).

⁴⁹ T. Omilana, ‘Nigeria: Drowning in Plastic’, *The Guardian* (15 April 2019) <<https://m.guardian.ng/features/nigeria-drowningin-plastic/>> accessed 28 May2022.

⁵⁰ M. Jones ‘Plastic Pollution Blights Nigerian City Port Harcourt’, *BBC News* (27 November 2018)

unimaginable consequences as a result of oil pollution, uncontrolled plastic pollution has become anthropogenic, blocking the city's waterways and endangering both aquatic and human life. Plastic pollution has hampered the local's primary source of income, which is fishing.

The above writers do not seek to propose answer to Nigeria's plastic mismanagement; they do not provide alternatives to plastics, despite the country's high reliance on it, instead, they focus on sending a pretty alarming apocalypse warning about the impacts of plastic on our environment.

Major campaigns, media, attention and international action on plastic pollution have all focused on marine pollution by plastic wastes. In 2017, the United Nations declared war on ocean plastic, initiating a global campaign called '#CleanSeas' to eliminate key sources of marine waste by 2022.

J.R. Jambeck et al.⁵¹ calculated the amount of plastic debris that enters the ocean from land. Estimates of 8 million metric tons of plastic enter our waters each year with the equivalent of five plastic shopping bags for every foot of shoreline or 10 bags of plastic per foot of coastline on the planet. The annual inflow is expected to be approximately twice as much in 2025.

By 2025, the total inflow would be over 20 times the estimated 8 million metric tons or 100 bags of plastic every foot of coastline around the planet, the findings of scientist's investigation point to the dire repercussions of human reliance on plastic, it shows how much plastic pollution there is in the ecosystem.

The amount of plastic polluting the ecosystem is sufficient to cover every foot of coastline the earth, and that number is anticipated to more than double in the next ten years.

All these scholars who researched on plastic pollution merely delivered an ominous warning about plastic pollution in our environment, but they did not make recommendations on reducing the threat of plastic contamination.

Plastic is adaptable, lightweight, flexible, moisture-resistant, durable, and reasonably priced. These alluring attributes have led to an insatiable hunger for excessive consumption of plastic goods all over the world.

Our insatiable proclivity for progressively over-consumption, discarding, littering, and hence polluting, has become a toxic mix. This gave rise to the urgent need for awareness and laws to address the threats of plastic pollution leading to environmental deterioration.

<<https://www.bbc.com/news/av/world-africa-46346889/plastic-pollution-blights-nigerian-city-port-harcourt>> accessed 30 May 2022.

⁵¹ J.R Jambeck, R. Geyer *et.al.* 'Plastic Waste inputs from Land into the Ocean', (2015); 347(6223); *Science* <<https://science.sciencemag.org/content/347/6223/768.full>> accessed 22 May 2022.

2. THE CONCEPT OF PLASTIC POLLUTION.

2.1 INTRODUCTION.

This section discusses the terms, the causes/sources and the effects of plastic pollution on the environment which describes plastic pollution to an extent.

2.2 DEFINITION OF TERMS

EFFECTIVE: something that has the power to produce a required effect or effects.⁵²

LEGAL: This relates to the law, also deriving from a firm authority from or founded on the law.⁵³ According to the Black's Law Dictionary, "The term Legal means of relating to or involving law generally; falling within the province of law".⁶³

RESPONSE: This is an argument or brief presented in an answer to that of a movant, appellant, or petitioner.⁶⁴

JURISDICTION: the limits or territory within which authority may be exercised.⁵⁴

POLLUTION: The word pollution is derived from the word pollute which means "*to corrupt or to defile*".⁵⁵ Pollution has many definitions; it has been defined as follows.

"Pollution" means man-made or man-aided alteration of chemical, physical, or biological quality of the environment beyond acceptable limits and "*pollutants*" shall be construed accordingly.⁶⁷

"⁵⁶Pollution" means any direct or indirect alteration of the physical, thermal, chemical, biological, or radio-active properties of any part of the environment by discharging, emitting, or depositing wastes so as to adversely affect any beneficial use, to cause a condition which is hazardous to public health, safety or welfare, or to animals, birds, wildlife, fish or aquatic life, or to plants or to cause contravention of any condition, limitation, or restriction which is the subject to a licence under this Part.⁵⁷

According to the Black's Law Dictionary, "pollution is defined as the harmful addition of a substance or thing into an environment; especially, the introduction of man-made product, especially waste product, into a natural area".⁵⁸

⁵²The English Dictionary; English 4.4.1<<http://wiktionary.org>>accessed 12 June 2022.

⁵³The English Dictionary; English 4.4.1<<http://wiktionary.org>> accessed 6December 2022.

⁶³Bryan Garner Black's Law Dictionary, 10th Edition. ⁶⁴Ibid.

⁵⁴The English Dictionary; English 4.4.1<<http://wiktionary.org>>accessed 12 June 2022.

⁵⁵Roget's 21st Century Thesaurus, (3rd Edition) 2013

⁵⁶Section 37 National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007.

⁵⁷Section 155 Lagos State Environmental Protection Agency, part IV. Environmental Management Protection Law 2017; <<https://laws.lagosstate.gov.ng>> accessed 5 March, 2022.

⁵⁸Bryan Garner Black's Law Dictionary, 10th Edition.

Pollution can therefore be described as an unwanted form of any substance that is dangerous to our health causes adverse change in our environment.

PLASTIC: This synthetic, thermoplastic, solid, hydrocarbon-based polymer. It's has to do with any similar synthetic material, not necessarily thermoplastic.⁵⁹

PLASTIC POLLUTION: Plastic pollution is the buildup of plastic objects and particles in the environment (for example bags, plastic containers and microbeads) that are harmful to wildlife, natural and wildlife habitats, and mankind. Plastic that pollute the environment are mostly classified as micro, meso, or macro debris depending on their size.⁶⁰

DEBRIS: the remains of something that has been destroyed or broken up.

2.3 TYPES OF PLASTIC POLLUTANTS

There are three main types of plastics that results into plastic pollution, and they are Microplastic, Mega plastic, and Macro plastic. The highest concentration of mega and micro plastics is normally found within the Northern hemisphere, which is being concentrated across urban centers and water fronts.

Plastic can be detected in various areas as a result of the current passing them. Household items are usually detected ashore or dumped in landfills of which they contain mega plastics and macro plastics. In most remote islands they are more prone to aspects that relate to fishing.⁶¹ There are types of plastics which all based on their type of material and also their constituents, which include;

1. POLYETHYLENE TEREPHTHALATE (PET)⁶²

This is a type of plastic are smooth, transparent and mostly thin, and it is also known as stomach plastics, this type of plastic is mostly used during disposable salad dressing, juice, mouthwash, vegetable oil, cosmetics, soft drinks, margarine and water bottles production due its anti-inflammatory and fully liquid. PET is also an anti-air that prevents oxygen from coming in.

In the production of PET, antimony trioxide is an inorganic compound which is used as catalyst for producing PET and also rubber vulcanization. Antimony trioxide is a possible human carcinogen. Most plastics made from PET has to be prevented from high temperatures in other to prevent the leaching of some toxic additives such as acetaldehyde, antimony and phthalates, and PET is usually manufactured for single use only.⁷⁴

2. HIGH-DENSITY POLYETHYLENE (HDPE)⁷⁵

In our world today, most of the plastics that are been used are polyethylene. This type of plastic is known as a heat-resistant plastic which is being generated from petroleum. HDPE is known as a major constituent of refrigerators, detergent bottles, toys, milk containers, varieties of plastic grocery bags, etc. in high density

⁵⁹The English Dictionary; English 4.4.1<<http://wiktionary.org>>

⁶⁰Plastic pollution: introduction to plastic explanation <<https://www.vedantu.com/chemistry/plastic-pollution>>accessed 13 December 2021.

⁶¹ibid.

⁶²See appendix 1 for sample of PET plastic.

polyethylene container is regarded to be safe for drink and food because studies have not proven it to be harmful although a long exposure of such plastics to sunlight tends to make it harmful. In this type of plastic, there are no phthalates or BPA present.⁷⁶

3. POLYVINYL CHLORIDE (PVC)⁷⁷

This is a type of heat-resistant polymer which is used in packaging fruit juice, cooking oil, etc. PVC is seen as a highly toxic due to the presence of chemical constituents which are like heavy metals, dioxins, BPA and phthalates. As a result of plasticization, PVC is flexible due to the presence of phthalates. Phthalates are usually very harmful to the humans, the whole PVC life span which involves the production, usage and disposal are all capable of causing severe environmental and public health risks which is why its usage has been entirely reduced. However due to its effectiveness, PVC has remained very popular in the production of consumer goods.

⁷⁴ Okunola A Akabi and Kehinde I Ologbonjaye and Oluwaseun Awosolu and Olufiropo E Alalade 'Public Environmental Health Effects of Plastic Wastes Disposal: A Review', <<https://www.clinmedjournals.org/articles/jtral/international-journal-of-toxicology-and-risk-assessmnet-ijtra5-021.php?ijtra>> accessed 6 December 2021.

⁷⁵ See appendix 2 for sample of HDPE plastic.

⁷⁶ Okunola A Akabi and Kehinde I Ologbonjaye and Oluwaseun Awosolu and Olufiropo E Alalade 'Public Environmental Health Effects of Plastic Wastes Disposal: A Review', <<https://www.clinmedjournals.org/articles/jtral/international-journal-of-toxicology-and-risk-assessmnet-ijtra5-021.php?ijtra>> accessed 6 December 2021.

⁷⁷ See appendix 3 for sample of plastic.

PVC has been said to cause cancer, birth defects, genetic changes, deafness, vision failure, ulcers, and indigestion.⁶³

4. LOW-DENSITY POLYETHYLENE(LDPE)⁶⁴

In this type of plastic, it is heat resistant, fragile, flexible and rigid. LDPE is mostly used in the packaging of milk, frozen foods and juices. Though this plastic does not have any component that is highly harmful to human body, it's used in terms of beverages and food.⁶⁵

5. POLYPROPYLENE(PP)⁶⁶

Polypropylene is mainly a type of petroleum-based, which also contains benzene which is carcinogenic to the humans. PP is mostly used in producing insulators and packaging materials. Products gotten from styrene are very hazardous to the health. According to Report of Dowty, et al, showed that a long-term exposure to small

⁶³ Okunola A Akabi and Kehinde I Ologbonjaye and Oluwaseun Awosolu and Olufiropo E Alalade 'Public Environmental Health Effects of Plastic Wastes Disposal: A Review', <<https://www.clinmedjournals.org/articles/jtral/international-journal-of-toxicology-and-risk-assessmnet-ijtra5-021.php?ijtra>> accessed 6 December 2021.

⁶⁴ See appendix 4 for sample of plastic.

⁶⁵ Okunola A Akabi and Kehinde I Ologbonjaye and Oluwaseun Awosolu and Olufiropo E Alalade 'Public Environmental Health Effects of Plastic Wastes Disposal: A Review', <<https://www.clinmedjournals.org/articles/jtral/international-journal-of-toxicology-and-risk-assessmnet-ijtra5-021.php?ijtra>> accessed 6 December 2021.

⁶⁶ See appendix 5 for sample of plastic.

quantity of styrene can be neurotoxic and causing cytogenetic, carcinogenic and hematological effects. The International Agency for Research on Cancer (IARC) has categorized styrene as a human carcinogen.⁶⁷

6. POLYCARBONATE⁸³

This has to do with packaging consumer goods like reusable bottles, which contains

BPA (bisphenol A). As a result of the exposure to high temperature BPA can be leached from polycarbonated container into drinks and food stored in them. Due to BPAs health risk has been reported in several studies, though the usage of polycarbonated plastic has greatly decreased.⁶⁸

2.4 CAUSES/ SOURCES OF PLASTIC POLLUTION

The mass production of plastics can be said to have begin six decades ago. Plastic production accelerated quickly that over 8.3 billion tones of plastic has been created and over 90% of it has not been recycled.⁶⁹ In 2018, the sum total of plastic produced worldwide each year is 380 million tons approximately, our planet cannot cope with this amount of plastic polluting the environment, hence, the call to reduce plastic consumption and pollution in recent years.⁷⁰

United Nations Environmental Assembly passed a resolution titled ‘Addressing single-use plastic products pollution’ in the year 2019. This resolution encouraged governments and the private sector to promote a more resource-efficient design, production, use and sound management of plastic across life cycle. Through this resolution, government across the world set out target to help them effectively cut down on single- use plastics- enacting stringent punitive measure for defaulters of laws prohibiting indiscriminate plastic usage, while also educating the populace on the gains in massively cutting down on their dependence on plastic product.

According the United Nations, 77 countries have passed full or partial ban on plastic bags. Since African nation are most affected by the mismanagement of plastic waste, thus, are more likely to ban certain type of plastic bags.⁷¹

China is one country believed to produce the largest amount of plastic waste followed closely by Indonesia, Philippines, Vietnam and Sir Lanka making up the top five countries. However,

⁶⁷Okunola A Akabi and Kehinde I Ologbonjaye and Oluwaseun Awosolu and Olufiropo E Alalade ‘Public Environmental Health Effects of Plastic Wastes Disposal: A Review’,
<<https://www.clinmedjournals.org/articles/jtral/international-journal-of-toxicology-and-risk-assessmnet-ijtra5-021.php?ijtra>> accessed 6 December 2021. ⁸³ See appendix 6 for sample of plastic.

⁶⁸Okunola A Akabi and Kehinde I Ologbonjaye and Oluwaseun Awosolu and Olufiropo E Alalade ‘Public Environmental Health Effects of Plastic Wastes Disposal: A Review’,
<<https://www.clinmedjournals.org/articles/jtral/international-journal-of-toxicology-and-risk-assessmnet-ijtra5-021.php?ijtra>> accessed 6 December 2021.

⁶⁹Plastic Waste and Pollution. <<https://www.cleanstreets.westminister.gov.uk/plastic-waste-completeguide/:~:text=1.-,what%20is%20plastic%20waste%3F>,’ > accessed 6 December 2021.

⁷⁰Ibid.

⁷¹<<https://www.google.com/amp/s/punchng.com/annual-5-96-million-tonnes-of-plastic-waste-worsenenivronmental-pollution-thret=aten-citizens-health/%3famp>> accessed 11 April 2022.

this list not surprising, since many product manufactured globally are made of plastic or contain plastic components which cannot be recycled most of the time.⁷²

In the year 2021, 'plastic pollution by country' report by the World population Review, Nigeria was identified as the seventh-largest country in the world generating plastic waste amounting to about 5.96 millions tones of plastic waste every year. However, these plastics wastes ends up in landfills, sewers and water body that eventually leads to massive damage of flora and fauna.

It has discovered that 70% of Nigerians consume at least one bag of sachet water daily and this amounts to a sum total of 60 million plastic sachets used and disposed off each day as plastic sachets are made of non-biodegradable elements which does not decompose⁷³

Before examine the effect that plastic waste have on the environment and human health in general, the sources of plastic waste would be examined. The sources include:

FISHING NETS:

Fishing is a common agricultural activity that is practiced all over the world. Commercial fishing has an impact on the economy and it severs an economic necessity in which people consume fish for their daily survival and maintenance of good balanced diet. Commercial fishing in the ocean has caused different problems of plastics pollution, because the nets used for large scale fishing activities are usually made of plastic.

Fishing nets are usually submerged in water, on spending much time it releases toxin at will, it later get broken up which kills and harms the local wildlife, as pollutants enter the water and fish of the area.

An ocean cleanup spokesperson said most ocean plastic pollution comes from Chinese cargo ships. The largest ocean-based source of plastic pollution is discarded fishing gear which includes traps and nets, and it is estimated to be up to 90% of plastic debris in some areas. Other plastic litter gets into the ocean through storm-water runoff, flowing into watercourses or directly discharged into the coastal waters. As established above the ropes and nets used for fishing activities are often made of synthetic materials such as nylon, which makes fishing equipment more durable and buoyant. These organisms can also become caught in circular plastic packaging materials, and as the animals continue to grow in size, the plastic can cut into their flash.⁷⁴

PLAIN OLD TRASH:

Plastics are found everywhere along the streets and roads of every cities and towns in Nigeria making the streets dirty. Plastics can also be found in things we least expected like cartons of

⁷²Okunola A Akabi and Kehinde I Ologbonjaye and Oluwaseun Awosolu and Olufiropo E Alalade 'Public Environmental Health Effects of Plastic Wastes Disposal: A Review', <https://www.clinmedjournals.org/articles/jtrai/international-journal-of-toxicology-and-risk-assessmnet-ijtra5-021.php?ijtra> accessed 6 December 2021.

⁷³ibid.

⁷⁴Obebe S.B and Adamu A.A, 'Plastic Pollution: Cauese, Effects and Preventions' (2020) 4(12) International Journal of Engineering Applied Sciences and Technology, 2020. <<https://www.ijeast.com>> accessed 10 March,2022.

products such as can-milk, can-beverages, can-tomatoes, paper cups are lined with plastics so as to allow proper packaging.

Plastic water bottles, straws and stirrers used for soft drinks in hotels, restaurants and events centre's for entertainment during conferences, seminars, wedding receptions, General Meetings etc are disposed littering everywhere by the participants and invited guests ignoring the environmental consequence. Some products may contain tiny plastic beads made up of toxic pollutants which are a threat to the environment whenever it is washed down the drains affecting the wildlife and groundwater.

Plastic pollution on the land poses a threat to the plants and animals including humans occupying the land. The estimated amount of plastic concentration on land is between four and twenty three times that of the ocean.⁷⁵

Over-utilisation of Plastics:

Plastic is less expensive and durable which enables both the privileged and less privileged people in the society to afford patronizing plastic items. Rapid urbanization and population growth have also increased the demand for plastic. Plastic is one of the widely available and over – used item in the world.

Plastic does not decompose easily when disposed off thereby polluting the land and air when burnt. Plastics not properly disposed off will eventually end up in the oceans.⁷⁶

PLASTIC SHOPPING BAGS

The use of plastic bags and other single-use plastic products including takeaway food packs, straws, cups, and spoons, among others is widespread in Nigeria, but the packaging of drinking water in plastic sachet bags has become an increasingly important peculiar feature of the country. These plastic sachet bags are used by the water industry to pack drinking water in Nigeria.

Although the use of polyethylene (cellophane) to wrap and sell different consumables is also popular in Nigeria, plastic sachet water bags are a ubiquitous sight and widely accepted.

Sachet water is called pure water in Nigeria.

Following the invention of sachet water in 1990 by Mrs. Victoria Bolanle Oginni, sachet water became a major source of potable water in Nigeria as diverse brands of sachet water are sold on the streets, and in kiosks, markets, parks, and stadia, among other places, and are in high demand because of affordability⁶ and also the perceived “purity” of the product. Estimates of 70% of Nigerians consume at least one bag of sachet water daily. This amounts to about 60 million plastic sachets that are being used and disposed of each day. Plastic sachets are made of non-biodegradable elements; therefore, they do not decompose, and this affects the physical environment in many ways. it was found that some of the environmental

⁷⁵Ibid.

⁷⁶<<https://www.conserve-energy-future.com/causes-effects-solutions-of-plastic-pollution.php>>accessed 14 December 2021.

risks of sachet water disposal are drainage obstruction/blockage, water pollution, and air pollution (from burnt plastic sachet which is a common practice in Nigeria).⁷⁷

COCA-COLA COMPANY, PEPSI COMPANY AND NESTLE COMPANY.

Coca-cola, the most popular branded drink in the world. This company concentrates on the manufacture of carbonated beverage that is a culture institution the United State and a great symbol of American tastes. The company also produces and sells other soft drinks and citrus beverages. Coca-Cola is the world's largest beverage manufacturer and distributor of bottled drinks and one of America's largest enterprises.⁷⁸

In more than 200 countries and territories in the world, PepsiCo products are consumed more than one billion times per-day. PepsiCo's complementary beverages and convenience foods portfolio include Doritos, Cheetos, Pepsi-Cola, Mountain Dew etc which generates \$79 billion in net revenue in 2021.⁹⁵

Nestle SA, multinational manufacturer of food products ranging from powered milk, baby foods, chocolate, cheese, instant coffee and tea. The history of Nestle dates back to 1866 when two Swiss firms were established, these two companies merged and became Nestles ad Anglo-Swiss Condensed Milk Co⁷⁹. Nestle have reached an impressive global audience through their efforts and joint ventures with companies like Coca-Cola.⁸⁰

Coca-Cola, PepsiCo and Nestle' have been accused of "zero progress" on the reduction of plastic waste, after they have been made the Words top plastics polluters three years in a row.

Coca-cola has been ranked the worlds No 1 plastic polluter by Break Free From Plastic in its annual audit, after its beverage bottles were the most frequently found discarded on the beaches, river, parks and all other litters on site. In 2019, it was the most frequently littered bottle in 37 countries out of the 51 surveyed.

Coca-cola was found to be worse than PepsiCo and Nestle combined: coco-cola branding was found on 13,834 pieces of plastic, which PepsiCo branding on 5,155 and Nestle branding on 8,633. However, coca-cola has passed through the fire of environmental campaigners, when it came out to announce that it would not abandon plastic bottles as it is popular with customers.

According to the survey carried out by the Non- Governmental Organization Tearfund. By March, these three companies and Unilever were found to be responsible for half a tone of plastic pollution in six developing countries each year.

⁷⁷Emeka Dumbili and Lesley Henderson, 'The challenge of plastic pollution

in Nigeria: Plastic Waste Recycling-Environmental Impact, Societal Issues, Prevention, and Solution (2020) accessed 6 December 2021.

⁷⁸The Editors of Encyclopedia Britannica, 'The Coca-Cola Company: American company', <<https://www.britannica.com/topic/The-Coca-Cola-Company>> accessed 16 May 2022.

⁹⁵<<https://www.pepsico.com/who-we-are/about-pepsico>> accessed 19 June 2022.

⁷⁹The Editors of Encyclopedia Britannica, 'Nestle SA Swiss Manufacturer', <<https://www.britaica.com/topic/chocolate>> accessed 18 June 2022.

⁸⁰Martin Luenendonk, 'The History of Nestle'(2019), <<https://www.cleverism.com/the-history-of-nestle/>> accessed 18 June 2022.

2.5 IMPACTS OF PLASTIC POLLUTION.

Plastic have inextricably influenced man's daily life, and their continuous use and manufacturing, particularly in low-income countries, is becoming a source of concern, as they may not be able to keep up with the sophisticated waste management procedures.

Furthermore, the features that distinguish plastics, such as light weight and durability, have created a disposal issue. For example, when used plastic objects are tossed into the environment and they last a long time because they are resilient, yet those placed into water bodies float on the surface due to their low density.

As a result, the harm that these waste cause to life and the ecosystem is growing, posing serious environmental risks such as water pollution, soil pollution and air pollution.⁸¹ Therefore, to understand why plastic pollution is dangerous its effect will be examined.

IMPACT OF PLASTIC POLLUTION ON LAND.

Plastic items can be found in huge quantities in both the human workplace and the home. Plastic pollution can harm and pollute the terrestrial environment, which can be transmitted to the aquatic environment. Despite the fact that over 80% of the plastic waste found at sea comes from land-based sources, there is a scarcity of data on the volume of plastic waste on land compared to the vast amount of data available on plastic debris in marine habitat.⁸²

The volume of data available on plastic waste on land is very low compared to the volume of data available on plastic waste in the sea, despite the fact that about 80% of plastic waste in the sea comes from land.⁸³ Landfill as a means of disposing plastic waste leads to abiotic and biotic degradation of plastic, where plastic additives can leach and eventually percolate into various aspects of the environment, therefore resulting in soil and water contamination.⁸⁴

Plastic pollution on land poses a great threat to the plants and animals including humans who inhabit the land and making them uncomfortable with the environment.⁸⁵ According to research it has been established that synthetic polymer fibers and micro-plastics can still be found in sewage sludge and soils after they have been used for close to 5 years. Also, chlorinated plastics are capable of leaching out toxic chemicals into the soil and later seep into underground water thereby polluting the ecosystem.⁸⁶ Methane a very dangerous green

⁸¹Plastic wastes: environmental hazard and instrument for wealth creation in Nigeria.

<<https://www.ncbi.nlm.gov/pmc/articles/PMC7530290> > accessed 24 April 2022.

⁸²'Public and Environmental health Effects of plastic waste disposal: a review'

<<https://www.clinmedjournals.org/articles/ijtra/international-journal-of-toxicology-and-risk-assessment-intra5-021.php>> accessed 24 April 2022.

⁸³Sheavly SB(2005) 'Marine debris- An overview of a critical issues for our Oceans'.

⁸⁴Supra note2.

⁸⁵ Obebe S.B and Adamu A.A. 'PLASTIC POLLUTION: CAUSES, EFFECTS AND PREVENTIONS' (2020) 4(12) International Journal of Engineering Applied Sciences and Technology, <<http://www.ijeast.com>> accessed 12 April 2022.

⁸⁶ Ibid.

house gas that aids global warming will also be released during microbial biodegradation of plastics which in turn effect the atmosphere.⁸⁷

IMPACT OF PLASTIC POLLUTION ON WATER.

In 2012, it was projected that about 165 million tonnes of plastic garbage were percent in the world's oceans, with an average of 8 million tonnes of plastic dumped into the ocean each year and roughly 5 trillion plastic fragments floating around. Plastic in the water often disintegrate within a year, but not fully.¹⁰⁵

Toxic compound like polystyrene and BPA can be released into the water during the plastid degradation process, producing pollution. Plastic makes up approximately 80% of the waste found in the oceans. Plastic garbage floating in the ocean can be quickly colonized by sea animals and because of its long-term persistence on the surface of the ocean. It may promote the spread of alien or non- species.

Micro-plastics found in benthic and pelagic habitat are tiny they are bio-available to a wide range or marine life. Plastics have been reported to concentrate and absorb pollutants existing in saltwater from several other sources within the marine ecosystem.

Persistent organic pollutants such as nonylphenol, PCBs, and phenanthrene are examples of contaminants, which have the potential to accumulate many times more on plastic trash than in the surrounding ocean.

Plastic contaminates the water bodies and oceans by storm-water runoff, flowing into watercourses or directly discharged into coastal waters. This pollution enters the food chain thereby causing hazardous long term carcinogenic effect to fishes, animals and human beings due to the release of diethylhexyl phthalate, lead, mercury and cadmium. Oceans are generally contaminated from micro-plastic debris which floats on the sea surface⁸⁸

IMPACT OF PLASTIC POLLUTION ON THE AIR.

This is the presence of chemicals in the atmosphere at levels high enough to harm species, ecosystem, human, and change the climate. Today, air pollution is a worldwide issue; region distant from the polluting source may be harmed, as atmospheric circulation transports contaminates freely over political boundaries. Toxic compounds are generated when plastics are burnt in the open air, landfills or incinerators, resulting in environmental degradation. The polluted air when inhaled by animals and humans affect their health thereby causing endocrine and respiratory problems among other things.⁸⁹

When plastic wastes that are disposed by landfill finally decompose it releases carbon dioxide and methane into the air. According to a decomposition of solid waste in landfill research carried out in 2008, it was established that approximately CO₂ equivalent (eqCO₂) volume

⁸⁷ Biello d(2003) are biodegradable plastics doing more harm than good? ¹⁰⁵ Public and Environmental health Effects of plastic waste disposal :a review;<<https://www.clinmedjournals.org/articles/ijtra/international-journal-of-toxicology-and-riskassessment-intra-5-021.php>> accessed April 24 2022

⁸⁸ Subha Ganguly and Sunita Choudhary,'Plastic Pollution: an Environmental Concern'(2018) 8(8) International Journal of Emerging Technology and Advanced Engineering,<<https://www.ijetae.com>> accessed 16 December 2022.

⁸⁹ ibid.

released into the atmosphere was 20 million tonnes. CO₂ is also released into the atmosphere during the burning of plastic and plastic products, this CO₂ is so powerful that it has the capacity to trap radiant heat and hinder it from escaping from the earth causing global warming.⁹⁰

Air pollution is said to be one of the major threats to public health and it is said to be responsible for more than 6 million deaths that can be linked to environmental pollution. The effects of plastic on air pollution in this present age can be overemphasized, however, the major fear is that its effect on the coming generation may be more than the present.

IMPACT OF PLASTIC POLLUTION ON ANIMALS.

The constant presence of discarded plastic wastes (plastic bags and containers, six-ring plastic can holders etc) in the crannies and nooks of the environment each day has resulted in the death of some animals (e.g. duck, dolphins, fish, fowl, turkey, tortoises, sharks etc) in the environment. When they become trapped in them or poisoned from the toxins released by plastics wastes.⁹¹

The report of threat to the survival of large, marine mammals has been documented due to large amount of plastic wastes entering the world oceans.¹¹⁰

Many marine species such as fish, turtles, birds etc have become entangled in plastic garbage and have died as a result. These animals become entangled in the debris and suffocate or drown as they mistake the plastic waste dumped as food.

Due to their inability to untangle themselves when entangled with plastic wastes, they die from starvation or from their inability to escape predators. Entanglement frequently causes severe lacerations and ulcers.

It was estimated that at least 267 different animal species have suffered from entanglement and ingestion of plastic debris in the 2006 report known as plastic debris in the World's Oceans.⁹²

Uwaegbulam et al⁹³, said that plastic trash has a significant economic impact. According to studies, the global economic damage to the marine ecosystem is at least 3 billion dollars every year. It has also affect tourism, fishing and shipping industries.

IMPACT OF PLASTIC POLLUTION ON THE FOOD CHAIN.

In an ecosystem, a food chain is a linear series of who eats whom. An ecosystem consists of one or more communities of organisms interacting with one another and with the physical environment through a flow of energy and a cycling of materials.

A key factor in how any ecosystem functions is the transfer of energy from one of its feeding level to another. The food chain consists of producers, consumers and decomposers. Plastic wastes are consumed by the majority of organisms in the food chain.

⁹⁰ *ibid.*

⁹¹ Obebe S.B and Adamu A.A. 'PLASTIC POLLUTION: CAUSES, EFFECTS AND PREVENTIONS' (2020) 4(12) International Journal of Engineering Applied Sciences and Technology, <<http://www.ijeast.com>> accessed 12 April 2022. ¹¹⁰ *Ibid.*

⁹² *Ibid.*

⁹³ Uwaegbulam, C and Nwannekanma, B. and Gbonegun, V, 'Producers' Responsibility and Plastic Pollution Crisis,' The Guardian Newspaper, (08, October 2018) <https://www.guardian.ng/property/producersresponsibility-and-plastic-pollution- crisis/>> accessed 19 June,2022.

Plastic wastes come in various sizes be it large or small. Plastic pollution has an impact on even the tiniest organisms on the planet such as plankton. When these organisms, as producers, feed on plastics, they become ingested and poisoned, thereby causing problem for the higher animals, being consumers that rely on them for food in the food chain. This obstructs the food chain and the environment as a whole. Also, through the food chain, highly harmful carcinogens and chemicals can be ingested by plankton, fish, and most importantly humans.⁹⁴

PLASTIC POLLUTION POISONOUS ABILITY.

Plastic pollution has the potential to poison animals, putting human food supplies at risk. To make plastic, man uses a variety of harmful chemicals artificially. Plastic use and exposure have been connected to a slew of health problems that are hurting individuals all over the world.

Large marine creatures are severely harmed by plastic contamination. It is their single greatest threat. Large amount of plastic have been found in the stomachs of some marine species, such as sea turtles. When this happens the animals dies of hunger.

This is because the plastic obstructs the animal's digestive tract. Marine animals can be entangled in plastic items such as nets, which can cause them harm or death. Producing, storing, using, disposing of, and even begin in the presence of plastics can be extremely hazardous to living creatures. Toxics released by emissions, fly ash, and slag in the burn pile can travel great distances and deposit in soil and water, eventually reaching human bodies after accumulating in animal and plant tissues.¹¹⁴

2.6 PROBLEM OF PLASTIC POLLUTION

The growing rate of plastic production has raised problems in various societies. Plastic pollution contributes to waste and pollution issues, its impact on our health and its threat to our own oceans and wildlife cannot be sidelined.⁹⁵

Generally one major problem of plastic is that most of it is not biodegradable, it does not rot or decay, it's just there without any waste process. Technically each year, 400 million tons of plastic is being produced and of which 40% is single-use plastic such as carrier bags, drinks and bottles and also crisp packets.

Another problem which relates to the first problem stated is that plastic is not recycled, it may be as result of the fact that it is expensive or because it is difficult to do⁹⁶

Also as relates to our health, Plastic tends to also scatter the food chain process; polluting plastics sometimes affect the worlds tiniest organisms of which this organism becomes poisoned which causes issue for variety of other kinds of people.

⁹⁴ Obebe S.B and Adamu A.A. 'PLASTIC POLLUTION: CAUSES, EFFECTS AND PREVENTIONS' (2020) 4(12) International Journal of Engineering Applied Sciences and Technology, <<http://www.ijeast.com>> accessed 12 April 2022. ¹¹⁴ Ibid.

⁹⁵ 'The problems: The Plastic Pollution Issues' <https://www.plasticfreejuly.org/the-plastic-pollution-issues/> accessed 14 December 2021.

⁹⁶ <<https://www.conserve-energy-future.com/causes-effects-solution-of-plastic-pollution.php>> accessed 14 December, 2021.

Plastic pollution also leads to other types of pollution which also affects the human race. For example, Air pollution when plastic is burnt releasing poisonous chemicals and Land pollution where plastic interacts or mingles with water, which result to hazardous chemicals that reduce the quality of water, when plastic is used as landfills.

Additionally, there is the problem of a lack of awareness of the existence of waste management services, which leads to lack of use in the few areas where such services may be available.⁹⁷

The rising effects and consequences of plastic pollution on the environment necessitate the need to curb plastic production and use.

3. REVOLUTIONARY FRAMEWORK AND ENVIRONMENTAL LAWS IN NIGERIA.

3.1 REGULATORY FRAMEWORK.

The environment can be described as beautiful place but it is faced with two major problems which is population and development. These problems have led to the degradation of the environment at an alarming rate. Human day to day activities have led to the pollution of the environment and the world becoming a global village did not help matter either, as it has contributed to the recklessness and I do not care attitude of individual to the environment.⁹⁸

Dharmendra S. Sengar opined it is important to strike a balance environment and the technological development of the world so as to achieve sustainable development. He went further by saying that environmental problems are global and many nation are given it the attention it needed.⁹⁹

The first major effort to diagnose the unsatisfactory state of global environment was the United Nations Conference on Human Environment in 1972. Despite this effort most nations still has no policy to protect the environment from the threat posed.¹²⁰

This conference was tagged the Stockholm Declaration on the Human Environment 1972, and this was first time in the history of the world, where a communiqué on a legal regime for environmental protection was presented, the communiqué highlighted the problems and recommends measures to make the system of regulatory environmental management more effective and proactive.¹⁰⁰

Nigeria has been dormant for a long period of time and is one of the nations no concern about the preservation or protection of the environment. Although 1999 Constitution of The Federal Republic of Nigeria¹⁰¹ made provision for this, it was not until the Koko Saga Incidence that

⁹⁷ 'What is the problem with plastic', (2020) <<https://www.bbc.co.uk/newround/142810179>> accessed 15 December 2021.

⁹⁸ National Open University, School of Science and Technology, 'Environmental Laws and Policies' 1(2), 12. Accessed 11 April, 2022.

⁹⁹ Ibid. ¹²⁰

Ibid.

¹⁰⁰ National Open University Nigeria, School of Law, Environmental Law 1; 'Historical Background To Environmental Law', Unit 4, 15-16. Accessed 12 April, 2022.

¹⁰¹ Section 20 CFRN 1999.

Nigeria woke up from her sleep.¹⁰² The environment is one of the crucial elements needed for the survival of man, so it is man's duty to maintain, preserve and protect the environment for the present and the coming generation.

However, just like every individual has a turning point in life, it can be said that same applies to Nigeria as a nation. Nigeria woke from its long sleep to preserve and protect the environment at large as a result of the Koko Saga incident that happened in the year 1988. The Koko Saga Dumping incident helped Nigeria to realize that the country has been turned into a dumping site of all types of waste which later have adverse effect on the environment and the individual.

From the beginning of the British rule in the year 1900s, Nigeria has made tremendous effort on environmental protection through colonial bye-laws. The colonial economic development policy and the Public Health Act 1958 was made to conserve natural resources, control pollution, the spread of diseases, disposal of soil and refuse which if improperly disposed attracted fines which are liberally imposed.

In 1964, a committee was established from diverse Federal Ministry to examine the problem of environmental pollution/ degradation and also to create a working policy for the protection of the environment. Even with all these laws in place there was tremendous increase in pollution generally with little or no solution in place.

The review of the proposal by the expert committee on environmental health of the National Council of Health in the year 1976 on pollution resulted in very little change or no improvement at all. It can therefore be said that the incubation period of environmental protection law in Nigeria is fussed with the lack of précised scientific criteria and standard on toxic waste and pollution on all levels.

However, the enforcement of environmental law and household hygiene depends majorly on qualitative legal rules. It should be noted that urbanization and industrialization contributed greatly to the increment of pollution, as wastes are being disposed off indiscriminately with no regulation to discourage such act. More attention should be given refuse clearance and management of liquid and solid wastes in abattoir that the local governments are empowered to deal with.

As stated above the Koko Saga Dumping of toxic wastes in Nigeria served as the turning point in Nigeria history as it paved way for the enactment of environmental law. The adverse effect that resulted from the dumping was the quick formation of the Federal Environmental Protection Agency {(FEPA) now National Environmental Standards Regulation Enforcement Agency (NESREA)} as Nigeria was lacking in institutional and legal framework to tackle the issue. The Agency was created in December 1988 by a decree which marked a milestone in the environmental management efforts in Nigeria.¹⁰³

This agency was given power to initiate policy in line to environmental research and also enact laws in relation to environmental management. They were also given power to inspect

¹⁰² National Open University Nigeria, School of Law, Environmental Law 1; 'Historical Background To Environmental Law', Unit 4,15-16. Accessed 12 April, 2022.

¹⁰³ Joseph Akinkugbe. 'The History Of Environmental Policy And Pollution Of Water Sources In Nigeria (1960-2004): The Way Forward'. Accessed 12 April 2022.

facilities and premises, search location, seize items and arrest violators of environmental law among others.

NESREA is now the highest reference point in matter of environmental degradation in Nigeria. However, the State and Local government environmental law department established prior to the establishment of FEPA retained their original role enforcing environmental laws in other to achieve vital environmental goals.

It is noteworthy, that in the year 1980s and 1990s experience the most extreme and systematic evolution of environmental law in Nigeria and some legislation developed within this time are still in operation till date.¹⁰⁴

The call to protect and preserve the environment led to the promulgation of environmental protection laws in the in the Federal level and in the State level. Some of these laws will be examined and they include:

In the Federal Level:

- National Environmental Standards and Regulations Enforcement Agency (Establishment) Act (NESREA).¹⁰⁵
- Environmental Impact Assessment Act 1992.¹⁰⁶
- Harmful Waste (Special Criminal Provision) Act 1988.¹⁰⁷
- Waters Resources Act Cap W2, LFN 2004.
- National Park Service

In the State Level:

- Lagos State Environmental Protection Agency.
- Kwara State Environmental Protection Agency.
- Bauchi State Environmental Protection Agency.

3.2 NATIONAL ENVIRONMENTAL STANDARDS AND REGULATIONS ENFORCEMENT AGENCY (ESTABLISHMENT) ACT (NESREA) 2007.

The NESREA Act is one of the environmental protection laws in Nigeria, and it contains rules and regulations made by the Minister of Environment.¹²⁹ This enactment was made under the provision of the Constitution of Nigeria¹⁰⁸ and it repealed the Federal Environmental Protection Act of 1988.¹⁰⁹

The NESREA Act became the major law regulating and guiding environmental matters in Nigeria after the repeal of the Federal Environment Protection Act of 1988 and it also enforce the environmental treaties, convention and protocols that Nigeria is a signatory.¹¹⁰¹¹¹ The

¹⁰⁴ Hakeem Ijaiya ,& others, 'Rethinking Environmental Law Enforcement in Nigeria'(2014) 5 Beijing Law Review <<https://dx.doi.org/10.4236/blr.2014.54029>> accessed 24 December 2020.

¹⁰⁵ NESREA Act 2007.

¹⁰⁶ EIA Act, Cap E12 LFN 2004.

¹⁰⁷ Harmful waste (Special Criminal Provisions) Act Cap E12 LFN 2004.

¹²⁹ S34 NESREA Act 2007.

¹⁰⁸ S20 CFRN 1999.

¹⁰⁹ Environment Go, '25 Environmental Laws in Nigeria'(2021) <<https://www.environmentalngo.com/environmental-laws-in-nigeria/>> accessed 11 April 2022.

¹¹⁰ Ejide Sodipo and Onome Omofuma and Vivan Nwachi, 'Environmental law and practice in Nigeria: Overview' (2017)

Act contains provision on solid waste management, its administration and it stipulated sanctions for offences done contrary to the provision of the Act.¹¹² The provisions of the act are enforced by the body called National Environmental Standards and Regulations Enforcement Agency which shall be called the “Agency”.¹³⁴

The Act make use of pre-emptive measures to get compliance with it legislation, however, the agency will use it enforcement power where the offender refuse to comply voluntarily.¹¹³ The agency’s enforcement strategies are; inspection through its officers¹¹⁴, compliance monitoring, negotiation, legal action etc. Legal action as a means of compliance may not be investment friendly as no one will want to invest in a business that may be liable to the government all the time for fear of losing investment made if legal action persists. The following sections are worth noting in the Act;

Section 7¹³⁷ provides the agency the authority needed to ensure compliance with international and local environmental laws, on environmental sanitation, pollution prevention and control. S8¹³⁸ provides for the power of the Agency to make review regulations on air and water quality, effluent limitation, control of harmful substances and every other forms of pollution. Attention should be paid to the provision of sub¹¹⁵-section (k) paragraph (xiii) which provides thus;

(k)submit for the approval of the Minister, proposals for the evolution and review of existing guidelines, regulations and standards on environment other than in the oil and gas sector including-
(xiii) Other forms of pollution and sanitation

Interpreting this provision literarily it appears that the act covers all forms of environmental degradation including plastic pollution as the term pollution is the umbrella that covers all types of pollution. However, it can be seen that the act centralizes on other environmental degradation especially land and water pollution which are closely linked to plastic pollution. The sanction for the pollution of air quality by a person on conviction is a fine not exceeding #200, 000 or imprisonment not exceeding one year or both coupled with an additional fine of #20,000 for each day the offence subsists.¹¹⁶ While that of a corporate body is a fine not exceeding #2, 000,000 coupled with an additional fine of #50,000 for each day the offence subsists.¹¹⁷ This fines although enforceable, it may not be sustainable.

The funds and fines collected by the agency is used for establishing and maintaining the Head Office of the Agency at the Federal Capital Territory, Abuja and its offices located in other places in Nigeria; pay allowances and other benefits of members of the Council and of its Committees; pay the salaries and entitlements of the Director-General and other members of staff of the Agency; pay the personnel, overhead, allowances, pensions, gratuities, benefits

<<https://www.uk.practicallaw.thomsonreuters.com/w-006->

¹¹¹[?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://www.uk.practicallaw.thomsonreuters.com/w-006-?transitionType=Default&contextData=(sc.Default)&firstPage=true)> accessed 11 April 2022.

¹¹²Environmental Law Research Institution, ‘COMPILATION OF INSTITUTIONS AND WASTE MANAGEMNT REGULATION IN NIGERIA’, ELRI <https://www.elri-ng.org/newsandrelease2_waste.html>accessed 11 April 2022. ¹³⁴ S1 NESREA Act 2007.

¹¹³ Ibid.

¹¹⁴ S 30 of NESREA Act 2007. ¹³⁷

NESREA Act 2007.

¹¹⁵ NESREA Act 2007.

¹¹⁶ S 20(3) NESERA Act 2007.

¹¹⁷ S 20(4) NESREA Act 2007.

¹⁴¹ S 14 NESREA Act 2007.

and other administrative costs of the Agency; pay for attendance at local and international conferences related to its functions; build capacity of members of staff of the Agency; publicize and promote the activities of the Agency¹⁴¹; and make investments¹⁴².

¹¹⁸A fine not exceeding #2, 000,000 and an additional fine of #50, 000 for every day the offence subsists is the sanction stipulated for the contamination of the ozone by a corporate body upon conviction.¹¹⁹ There is no provision for the sanction of a person who violate the law on Ozone layer.

The Act did not provide a specific collection mechanism, however, in section 28¹²⁰ the Minister is empowered to prescribe any removal method he thinks fit and also impose financial responsibility on offenders.

The Act contain regulation made pursuant to the control of noise pollution ¹²¹ shall be observed by all, any person who violates the regulation shall on conviction be liable to a fine a #50,000 or to imprisonment for a term not exceeding one year or to both such fine and imprisonment and an additional fine of #5,000 for every day the offence subsists¹²² while that of a corporate body is to a fine not exceeding #500, 000 and an additional fine of #10,000 for every day the offence subsists.¹²³

A person violates the regulations of water quality shall be on conviction liable to a fine not exceeding #50, 000 or a term imprisonment not exceeding one year or both coupled with the fine of #5,000 for each day the offence continue,¹²⁴ while that of a corporate body, is a fine not exceeding #500, 000 and an additional fine of #10,000 for every day the offence subsists.¹²⁵

For the violation of effluent limitation a person shall be liable on conviction for a fine not exceeding #200,000 or imprisonment not exceeding two years or both and the fine and imprisonment shall be coupled with additional #5,000 for every day the offence subsists,¹²⁶ while that of corporate body is a fine not exceeding #1, 000,000 with and additional fine of #50, 000 for each day the offence subsists.¹²⁷

Section 27¹²⁸ prohibits the unlawful discharge of hazardous substances into the environment.

Any person that violates this provision is liable on conviction, to a fine, not exceeding #1,000,000 or to imprisonment for a term not exceeding 5 years.¹²⁹ For corporate body that violates this provision shall be liable to a fine, not exceeding #1,000,000 and an additional fine of #50,000 for every day the offence subsists on conviction.¹³⁰

¹¹⁸ S 19 NESREA Act 2007.

¹¹⁹ S 21(3) NESREA Act 2007.

¹²⁰ NESREA Act 2007.

¹²¹ S 22 NESREA Act 2007.

¹²² S 22(3) NESREA Act 2007.

¹²³ S 22(4) NESREA Act 2007.

¹²⁴ S 23(3) NESREA Act 2007.

¹²⁵ S 23(4) NESREA Act 2007.

¹²⁶ S 24(4) NESREA Act 2007.

¹²⁷ S 24(5) NESREA Act 2007.

¹²⁸ NESREA Act 2007

¹²⁹ S 27(2) NESREA Act 2007.

¹³⁰ S 27(3) NESREA Act 2007.

Although, plastic cannot be said to be harmful on firsthand disposal (by throwing it on the floor) it will become hazardous in the course of its degeneration as it tends to emit the chemical product used in its production.

Section 13¹³¹ provides that the agency can establish a fund (gotten from the budget and grant) from which all its expenses are to be paid. The Federal government is to pay to this account adequate take off grant, annual subventions and budgetary allocation, loans and grant in aid from national, bilateral and multilateral agencies; counterpart funding given at anytime, sum accruing to the agency in form of rents, fees and internal generated revenue from services rendered and gifts, endowments, bequeaths given by persons and organizations voluntarily.¹³²

From the above provision, it can be deduced that the agency is not limited in funds by depending solely on the Federal Government. This fund can be used for the agency's expenditures.¹³⁷

The agency also carries out field visitations through its officer, which are given the power to enter premises at any reasonable time in the course of their duty subject to the production of certificate of designation when required.¹³³ The agency also conducts field follow-up.¹³⁴ The function of the agency is stated in section 7(a)-(m) ¹³⁵ it includes enforcing the compliance with the laws, guidelines and policies on environmental matters; coordinating and cooperating with stakeholders within and outside Nigeria on environmental regulations and enforcement; ensure compliance with the international treaties which Nigeria is signatory to on environmental matters (climate change, biodiversity, conservation, desertification, forestry, oil and gas, chemicals, hazardous wastes, ozone depletion, marine and wild life, pollution.) and other agreements to be made from time to time; ensure compliance with policies and regulations made regarding water quality, sanitation, pollution abatement, ecosystem and conservation of biodiversity, chemical management etc; they are also to monitor environmental projects funded by internal and external support agencies; ensure environmental control measure through registration and licensing; conduct environmental audit and establish data bank on regulatory and enforcement mechanisms of environmental standards; create public awareness and provide environmental education on sustainable environmental management, promote private sector compliance with environmental regulations; lastly, carry out such activities as are necessary or expedient for the performance of its functions.

The agency comprises of personnel who are versed with working knowledge for a minimum period of 15 years experience of environmental management generally.¹³⁶ Other personnel of the agency include one representative from each of the following ministries;

- (i) Federal Ministry of Solid Minerals Development,
- (ii) Federal Ministry of Agriculture and Natural Resources,
- (iii) Federal Ministry of Water Resources,

¹³¹ NESREA Act 2007.

¹³² S13(2)(a)-(f) NESREA Act 2007.

¹³⁷ S 14 NESREA Act 2007.

¹³³ S 30(1) (a)-(g) of NESREA Act 2007.

¹³⁴ S 8(1)(e) NESREA Act 2007.

¹³⁵ NESREA Act 2007.

¹³⁶ S 11(2) (c) NESREA Act 2007.

- (iv) Federal Ministry of Science and Technology,
- (v) A representative of the Standards Organization of Nigeria,
- (vi) A representative of the Manufacturers' Association of Nigeria.¹³⁷

And the permanent secretary of Federal Ministry of Environment or his representative.¹³⁸

From the above provision it is seen that the Act make no provision for the appointment of an expert in pollution control.

The agency is expected to prepare and submit annual report though the Minister to the Federal Executive council. The report shall cover all activities carried out by the agency in the preceding year and it shall also include a copy of the audited account of the agency for that year with the auditor's report. However, this report must be submitted at the date stipulated in the Act (NESREA).¹³⁹

The National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, can be described as an encompassing act, it a law that can applied to the prevention of plastic pollution. Although the act did not expressly mention plastic pollution, since it provided for all forms of pollution in section 8(1)(k)(xii)¹⁶⁵, it can be deemed to apply to plastic pollution.

3.3 ENVIRONMENTAL IMPACT ASSESSMENT (EIA) ACT.

The environmental Impact Assessment Act. Cap E12, LFN 2004 is another

Environmental Laws in Nigeria which set out the principles and methods of environmental impact assessment in various sectors in order to help reduce the environmental impact of projects carried out in the society.¹⁴⁰

EIA makes it mandatory for public and private sectors to measure the significant impact that their intended project will have on the society in order to reduce or curb it.¹⁴¹

The EIA Act Decree No.85 of 1992 makes it a compulsory requirement for any proponent of a project to carry out the impact such project will have on the environment and come up with a working method to mitigate it. The assessment should be in written and submitted to the agency before embarking on the project.¹⁴²

The Act also stops the commencement of any project until the mitigation methods provided for the impact satisfy NESREA.¹⁴³ Situations where EIA is needed the approval of

¹³⁷ S 3(1) (c) NESREA Act 2007.

¹³⁸ S 3(1) (b) NESREA Act 2007.

¹³⁹ S 18 NESREA Act 2007.

¹⁶⁵ NESREA Act 2007.

¹⁴⁰ S 1(a) EIA Act, Cap E12, LFN 2004

¹⁴¹ S 2(1) EIA Act, Cap E12, LFN 2004

¹⁴² S 2(4) EIA Act, Cap E12, LFN 2004

¹⁴³ Environment Go, '25 Environmental Laws in Nigeria' (2021) <<https://www.environmentalngo.com/environmental-laws-in-nigeria/>> accessed 11 April 2022.

the Government is needed,¹⁴⁴ however, EIA is not needed in situations where the project is likely to have minimal environmental effect in the opinion of the president or the council; the project is carried out during national emergency that government have taken temporary measures for; where the project is in the interest of the public health.¹⁴⁵

If the Federal, State or Local government has exercised some power or performed some duties in other for the project to be carried out.¹⁴⁶

The EIA Act in its schedule stated when EIA would be mandatory, some of the cases include¹⁷³:

Agricultural: Land development schemes covering an area of 500 hectares or more to bring forest land into agricultural production; agricultural programmes necessitating the resettlement of 100 families or more; development of agricultural estates covering an area of 500 hectares or more involving changes in type of agricultural use.

Airport: Construction of airports (having an airstrip of 2,500 meters or longer); airstrip development in state and national parks.

Drainage and irrigation: Construction of dams and man-made lakes and artificial enlargement of lakes with surface areas of 200 hectares or more; drainage of wetland, wildlife habitat or of virgin forest covering an area of 100 hectares or more; irrigation schemes covering an area of 5,000 hectares or more.

Land reclamation: Coastal reclamation involving an area of 50 hectares or more. **Fisheries:** Construction of fishing harbours; harbour expansions involving an increase of 50 percent or more in fish landing capacity per annum; land based aquaculture projects accompanied by clearing of mangrove swamp forests covering an area of 50 hectares or more.

Forestry: Conservation of hill forest land to other land use covering an area of 50 hectares or more; logging or conversion of forest land to other land use within the catchment area of reservoirs used for municipal water supply, irrigation or hydro-power generation or in areas adjacent to state and national parks and national marine parks; logging covering an area of 500 hectares or more; conservation of mangrove swamps for industrial housing or agricultural use covering an area of 50 hectares or more; clearing of mangrove swamps on islands adjacent to national marine parks.

Housing: Development covering an area of 50 hectares or more. Industries where chemical, petrol-chemicals, Non-ferrous, Iron and Steel, Non-metallic, Shipyards, Pulp and paper production activities are carried out etc. The act makes no provision for EIA on household wastes.

The council also carries out field supervision when deemed it fit and appropriate on activity which has been subject to environmental impact assessment.¹⁴⁷ The agency is required to make it report available to any group or person that is interested, if no one shows up the

¹⁴⁴ S13 EIA Act, Cap E12, LFN 2004.

¹⁴⁵ S 14(1)(a)-(c) EIA Act, Cap E12, LFN 2004.

¹⁴⁶ S 14(2) EIA Act, Cap E12, LFN 2004.

¹⁷³ Sch EIA ACT2004.

¹⁴⁷ S 10 EIA Act, Cap E12, LFN 2004.

agency has the duty to publish it in a manner that the public will be notified.¹⁴⁸ The manner in which publication is to be made will be determined by the council.¹⁴⁹

Any person who fails to comply with the provision of EIA will be deemed to have committed an offence and will be liable on conviction to a fine or term of imprisonment or to both.¹⁷⁷

The Environmental Impact Assessment Act is a practicable law that can be applicable to the prevention of plastic pollution. However, the sanction provided by the Act should be reviewed.

There is no specific law in Nigeria that makes the throwing of plastic products either on land or in the sea. However, the Federal Republic of Nigeria Official Gazette¹⁷⁸ on National Environmental (Sanitation and Wastes Control) Regulations 2009¹⁵⁰ contains provisions that can be viewed as making the throwing of plastics product illegal.

3.4 WATERS RESOURCES ACT, CAP W2, LFN 2004.

The rising amount of plastic on the ocean's surface has caused significant issues. Because most of the plastic that reaches the ocean floats for years as it does not degrade easily, thereby affecting the oxygen level in water and threatening the survival of marine organisms.

When oceanic creatures and even birds consume plastic inadvertently, they choke on it which causes a steady decline in their population. The harmful effects of plastic on aquatic life are devastating, and accelerating.¹⁵¹

This Environmental law deals majorly with developing and improving the quantity and quality of water resources.¹⁵²¹⁵³ The Act provides the authority needed to make laws preventing pollution as well as make regulation for the protection of fisheries, flora and fauna.¹⁵⁴

Offenders of this act are liable and are to be punished with a fine not exceeding #2000 or imprisonment term of six months with an additional fine of #100 for each day the offence continues on conviction.¹⁵⁵ The Minister to draw up plan for the development, use protection and management of all water resources¹⁸⁴

¹⁴⁸ S 9(2)-(3) EIA Act, Cap E12, LFN 2004.

¹⁴⁹ S 9(4) EIA Act, Cap E12, LFN 2004.

¹⁷⁷ S 60 EIA Act, Cap E12, LFN 2004

¹⁷⁸ NO.60 Vol.96.

¹⁵⁰ Federal Republic of Nigeria Official Gazette, 'National Environmental (Sanitation and Wastes Control) Regulations 2009' (2009) The Federal Government Printer, Lagos, Nigeria FGP 112/102009/1,000 (OL 54) accessed

¹⁵¹ Swachh Bharat Mission (Urban), 'Plastic Waste management Issues, Solution and Case Studies' (Ministry of Housing and Urban Affairs) (2019) <<https://www.mohua.gov.in>> accessed 12 April 2022.

¹⁵² Ejide Sodipo and Onome Omofuma and Vivan Nwachi, 'Environmental law and practice in Nigeria: Overview' (2017) <[https://www.uk.practicallaw.thomsonreuters.com/w-006-transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://www.uk.practicallaw.thomsonreuters.com/w-006-transitionType=Default&contextData=(sc.Default)&firstPage=true)> accessed 11 April 2022.

¹⁵³ <[https://www.uk.practicallaw.thomsonreuters.com/w-006-transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://www.uk.practicallaw.thomsonreuters.com/w-006-transitionType=Default&contextData=(sc.Default)&firstPage=true)> accessed 11 April 2022.

¹⁵⁴ Ss 5 and 6 Water Resources Act, Cap W2, LFN 2004.

¹⁵⁵ S 18 Water Resources Act, Cap W2, LFN 2004.

¹⁸⁴ S 6 Water Resources Act. ¹⁸⁵ S 8 Water Resources Act ¹⁸⁶ Supra note 63.

The Minister have the power to prohibit the storage, diversion or pumping or any other usage of water, obtain authority needed for the investigation of the use, control and protection of water project, prohibit or regulate the carrying out of activities on land or water that will interfere with the quality or quantity of the water etc.¹⁸⁵

The water resources act made no specific provision for plastic that does not move from land to sea. However, there are few figures on the level of plastic waste on land and there is a need for more information on sources and possible pathways into the environment.¹⁸⁶ Although, the function of the Agency is not specially provided for in a separate section, their function can be seen in the exercise of their powers. Plastic pollution can be said to be very prominent on water and this lead to the death of fish and aquatic life. The Water Resources Act should be reviewed to cover plastic pollution on water in order to protect special species of marine wildlife from going into extinction.

3.5 HARMFUL WASTE (SPECIAL CRIMINAL PROVISIONS) ACT.

The dumping of harmful waste in Nigeria has been prohibited ever since the Koko Saga Dumping incident. Harmful waste Act prohibits the unlawful dumping of harmful waste into the air, land and water of Nigeria.¹⁵⁶

The act makes the carrying and dumping of harmful waste unlawfully an offence punishable by life imprisonment as well as the forfeiture of anything use in committing the offence.¹⁸⁸ Offenders will also be liable to persons that suffer any injury or damage from their act.¹⁵⁷

Section 7¹⁹⁰ provided for the punishment to be given to any conniving, consenting or negligent officer in instances where the offence is committed by a company.

Some provision in this act can applied to the prevention and management of plastic pollution like the sealing of the dumping site¹⁵⁸; civil liability¹⁵⁹; power to seize¹⁶⁰.

Despite the fact that plastic is designed to last indefinitely, 33% of all plastics (water bottles, bags, straws etc) is used once and then discarded. Plastic does biodegrade; instead, it degrades into smaller and smaller fragments.¹⁶¹

Plastics wastes are not harmful waste but become harmful consequently. When plastic degrade toxic chemicals(organic species (VOCs), such as benzene, toluene, xylenes, ethylbenzene and trimethylbenzene isomers, either as gaseous components, or *via* leachate with various other substances, including BPA) used in the manufacture of plastics leach out of the plastic and effect human health and animals. Toxic chemicals that leach out of plastic can also accumulate on other plastics to release more toxic chemicals.¹⁶²

¹⁵⁶ S 6 Harmful Waste (Special Criminal Provisions) Act, CapH1 LFN 2004

¹⁸⁸ S 6, Harmful Waste (Special Criminal Provisions) Act, Cap H1, LFN 2004.

¹⁵⁷ S 12 Harmful Waste (Special Criminal Provisions) Act, Cap H1, LFN 2004.

¹⁹⁰ Harmful Waste (Special Criminal Provisions) Act, Cap H1, LFN 2004.

¹⁵⁸ S 11 Harmful Waste (Special Criminal Provisions) Act, Cap H1, LFN 2004.

¹⁵⁹ S 12 Harmful Waste (Special Criminal Provisions) Act, Cap H1, LFN 2004.

¹⁶⁰ S 10(d) Harmful Waste (Special Criminal Provisions) Act, Cap H1, LFN 2004.

¹⁶¹ 'Why is plastic harmful?' <<https://www.plasticpollutioncoalitio.zendesk.com/hc/e-us/artilces/222813127-why-is-plasticharmful>> accessed 19 June 2022.

¹⁶² Ibid.

3.6 NATIONAL PARK SERVICES ACT (Cap N65 LFN 2004.)

The National Park Services Act makes provision for the preservation and protection of natural resources and plants in the National park.¹⁶³ The Act focuses on protected areas used for the conservation of wildlife and the maintenance of national eco-system balance.¹⁶⁴ This provision for the protection of the National parks was enacted because of the effects of plastic on the environment and wildlife's. Animals are poisoned by toxic elements from discarded plastics which have negative impact on food sources for human use. There have been reports of huge mammals facing extinction as result of large amount of plastic debris they ingest which they are most exposed to.¹⁶⁵

The function of this service includes:

- (a) Preserve, enhance, protect, and manage vegetation and wild animals in the National Parks;
- (b) Advise the Federal Government on the development and preservation policy of the National Parks, including the financial requirements for the implementation of such policy; (c) Advise the Federal Government on the declaration of areas which, for the purpose of protecting wildlife species, biotic communities, sites of special interest or of aesthetic value, the Service considers may be declared as National Parks under this Act;
- (d) Keep under review all activities relating to the National Parks;
- (e) Ensure the implementation of the National Parks Policy of the Federal Government;
- (f) Prepare surveys and maintain up-to-date records of all the existing facilities for the growth and protection of the *fauna* and *flora* in the National Parks, for zoological or botanical species, and for wild or domesticated animals and advise the Federal Government and State Governments on their adequacy and efficient utilisation in the interest of the national economy;
- (g) Promote, develop and carry out research on the wildlife resources of Nigeria, with a view to promoting optimum utilization and management of the wildlife;
- (h) Encourage general education in the knowledge of wild and domestic animals, *fauna* and *flora* and vegetation by publishing or sponsoring the publication of the results of research, particularly in relation to problems affecting Nigeria;
- (i) Encourage the general public to visit the National Parks and the study of nature afforded in the National Parks, thereby popularizing them as tourist attractions;
- (j) Co-operate with other agencies to promote and develop alternatives to wildlife as a source of protein and income for the rural population;
- (k) Implement relevant international conventions and obligations;
- (l) co-ordinate the activities of the various National Parks Management Committees;
- (m) Administer and enforce this Act to attain its purpose; and

¹⁶³ Environmental Go, '25 Environmental Laws in Nigeria' (2021) <<https://www.environmentalgo.com/environmentallaws-in-nigeria/>> accessed 11 April 2022.

¹⁶⁴ Ibid.

¹⁶⁵ Okunola A Alabi et al, 'public and Environmental Health Effects of Plastic Wastes Disposal: A Review', clinMed International Library Journals. (<https://www.clinmedjournals.org/articles/ijtra/international-journal-of-toxicology-and-riskassessment-ijtra-5-021.php>)> accessed 19 June 2022.

(n) Carry out such other activities which, in the opinion of the Service, will facilitate the performance of its functions under this Act.¹⁶⁶

The personnel responsible for carrying out function of the service are Conservator-General of the National Park Service who has at least 10 years experience in protected and wildlife management,¹⁶⁷ the secretary who will keep records of the service performance amongst others and shall be a legal practitioner¹⁶⁸. The service have the power to appoint either directly or on secondment from any public or civil service of the Federation such number of employees as may, in the opinion of the Board, be required to assist the Service in the discharge of any of its functions.¹⁶⁹

The fund needed to carry out its function is gotten from the Federal Government, National Park Service Act, moneys accruing to the Service by any means, including grants-in-aid, endowments and donations, all charges, dues, fees or other amounts collected by the Service; all interests on moneys invested by the Service, such other moneys as may, from time to time, accrue to the Service.¹⁷⁰

The Service is expected to prepare and submit to the Minister, not later than six months after the end of the year a report, in the manner prescribed by the Minister, on the activities of the Service during the immediate preceding year and shall include in the report a copy of the audited accounts of the Service for that year and the auditor's report. The Minister is to present the report before the president.¹⁷¹ The penalty stipulated for the violation of provision of this act is provided for in section 37¹⁷² in proportion to the provision violated. The National Park Service Act is applicable to plastic pollution as it is not a harmful waste that can cause damage to the vegetation, flora, fauna and the wildlife if injected.

Other Federal Laws enacted for the protection of the environment include; Federal Ministry of Environment, National Oil Spill Detection and Response Agency, Federal Ministry of Environment, Housing and urban Development, Urban Development Board etc¹⁷³

3.7 STATE LAWS.

As part of the measures taken by government to preserve the environment and its resources, each 36 States in Nigeria are given the power to set up their own Ministries of Environment and Environmental Protection Authorities.¹⁷⁴ Under the State laws, enforcement is placed in the hands of several bodies which include; Environmental Sanitation Task Force, Waste Management Boards, State Environmental Protection Agencies, Environmental Sanitation Courts and Special Courts that are established to try any person who violates the laws.

¹⁶⁶ S 7 National Park Service Act.

¹⁶⁷ S 9 National Park Service Act.

¹⁶⁸ S 10(1)(a)-(c) National Park Service Act.

¹⁶⁹ S 10(2) National Park Service Act.

¹⁷⁰ S 12 National Park Service Act.

¹⁷¹ S 14 National Park Service Act.

¹⁷² National Park Service Act.

¹⁷³ Environmental Law Research Institute; 'COMPLIATION OF INSTITUTION & WASTE MANGEMENT REGULATIONS IN NIGERIA', ELRI <<https://www.elri-ng.org/>>accesses 11 April 2022.

¹⁷⁴ S 25 FEPA Act.

3.8 LAGOS STATE

Lagos State government enacted the Environmental Sanitation Law and Environmental Pollution Control law on environmental pollution and protection. However, particular attention will be paid to Lagos State Environmental Protection Agency Law¹⁷⁵

Environmental Pollution Control of Lagos State

This law makes it an offence to cause or permit a discharge of raw untreated human waste into any public drain or water course or onto any land or water.¹⁷⁶

Environmental Sanitation Law of Lagos State

This is a Lagos State enactment on environmental sanitation and protection. It prevents street obstruction, improper disposal of wastes, refusal to cover refuse bins and failure to clean sidewalks.²¹⁰

LAGOS STATE ENVIRONMENTAL PROTECTION AGENCY LAW 1996.

According to experts, Lagos produces the biggest volume of plastic waste in Nigeria, which might increase in the future if measures are not made to convert the waste to economic benefits. Lagos is thought to generate between 14 and 15 thousand tons of trash every day. Around 30% of the waste is recyclable with plastic accounting for 50% of the total.¹⁷⁷ In essence, roughly 2,250 tons of plastic waste is generated daily in Lagos, of which 821,250 tons can be recycled annually (almost 1 million tons). If only 500, 00 tons of plastic can be recycled annually at accost of USD500 per ton, the sector may e worth USD250 million. When other sections of Nigeria are takes into account, this number will skyrocket.¹⁷⁸

Therefore Lagos State Environmental Protection Agency was created for the protection of the environment and it resources. The function of this agency includes given advice to the government on environmental matters, directing the agency affairs on environmental matters, monitor and control disposal of solids, gaseous and liquid wastes generated by both government and private facilities in the State, Prepare periodic master plan to enhance capacity building of the Agency and for the environment and natural resources management¹⁷⁹ etc.

However, Lagos state environmental protection law did cover household waste a different law was enacted to deal majorly with household waste. This law is Lagos State Waste Management Authority (LAWMA).

¹⁷⁵ 1996.

¹⁷⁶ S 12 of the Environmental Pollution Control of Lagos State.

²¹⁰ Supra.

¹⁷⁷ Celeb Ojewale, 'Plastic waste chokes Lagos despite potential billion naira recycling industry', (January 3, 2019).

<<https://www.businessday.g/amp/busiessday-investigation/article/plastic-waste-chokes-lagos-despite-potential-billion-naira-recycling-industry/>>accessed 19 June 2022.

¹⁷⁸ Ibid.

¹⁷⁹ S 7 Lagos State Environmental Protection Agency Law.

LAWMA engages, coordinates and evaluates the activities of private sector participants municipal solid waste collection. Collection frequency is either once or twice a week and usually on a door-to-door basis.

LAWMA introduced recycling banks in some areas where households are encouraged to deposit recyclables like plastics, cans, and bottles, while organic waste components are collected from door-to-door. Some of the informal waste collectors (“scavengers”) in Lagos State are employed by LAWMA to be the resource managers of the recycling banks.¹⁸⁰

Powers have been conferred on the agency to carry it duties and obligation under the act and these powers include the power to search premises, apply enforcement measure to fight against environmental degradation, perform tests on samples taken from premises searched¹⁸¹, the agency also have the power to make regulation for the purpose of performing it duties¹⁸² amongst others.

The agency funding for the discharge of it duties is from the State and grants raised by the State for the agency, as well as charges, fees and charges from service rendered¹⁸³ etc. section 23²¹⁸ provided for proper ways to treat waste according to the standard laid down by the agency.

Agency or its duly authorized officer may at all reasonable time enter premises in respect of which the Agency has received application for written permission for purpose of inspection and to ensure that the conditions for permission under this Law are being complied with.¹⁸⁴ Any one that violates the provision of the Act is guilty of an offence and upon conviction pay a fine not exceeding #500,000 or a term of 5 years imprisonment in case of an individual while a corporate body shall pay #1,000,000 upon conviction¹⁸⁵ and the parties involved in the offence are liable to 5 years imprisonment.¹⁸⁶ The owner of the land on which waste is dumped commits an offence and his guilty of an offence and upon conviction be liable to 5 years imprisonment (for individual) while a corporate body shall pay affine not exceeding #2,000,000 and shall also bear the cost of removal of the dumped waste.¹⁸⁷

Any person that fails to obey the provision of the Act regarding waste which has no prescribed penalty, such person shall be deemed to have committed an offence and on conviction shall be liable to a fine of #250,000 or 5 years imprisonment or both for individual, in case of a corporate body, it shall be liable on conviction to fine of #1,000,000.¹⁸⁸

For any subsequent offence committed by an individual or corporate body the penalty is a term of 10 years imprisonment and a fine not exceeding #2,000,000 respectively.¹⁸⁹ In

¹⁸⁰Omenka Helen Uchendu, ‘Household Waste Disposal Laws in the Federal Republic of Nigeria.’ Georgia State University, 2016.

<https://scholarworks.gsu.edu/iph_capstone/38> accessed 29 April 2022.

¹⁸¹ S 8 Lagos State Environmental Protection Agency Law.

¹⁸² S 9 Lagos State Environmental Protection Agency Law.

¹⁸³ S 18 Lagos State Environmental Protection Agency Law. ²¹⁸

Lagos State Environmental Protection Agency Law.

¹⁸⁴ S 27 Lagos State Environmental Protection Agency Law.

¹⁸⁵ S 30(1) Lagos State Environmental Protection Agency Law.

¹⁸⁶ S 30(1)(a) Lagos State Environmental Protection Agency Law.

¹⁸⁷ S 30(1)(b)(i)-(ii) Lagos State Environmental Protection Agency Law.

¹⁸⁸ S 30(1)(c) (i) Lagos State Environmental Protection Agency Law.

¹⁸⁹ S 30(1)(c) (ii) Lagos State Environmental Protection Agency Law.

addition to the above fines the agency may order the temporary closure of such premises.¹⁹⁰ The Lagos Environmental Protection Agency Law can be applied to the control of plastic pollution, however, the sanctions stipulated for individual offender should be reviewed as it seems too high for individuals who could be a minimum wage earner.

3.9 KWARA STATE.

The increment in the population of Kwara State resulted in daily increment of waste generated in the State. Hence, Kwara State Government intervention strategy through the establishment of government agencies backed by sanctions to deal with the environmental issues in the State. In order to create environmental awareness in the state the State Government enacted the Kwara State Environmental Protection Agency Law.

Kwara State Environmental Protection Agency Law²²⁶

Kwara State Environmental Protection Agency Law was enacted in the year 1992 and it created the Kwara State Environmental Protection Agency (KWEPA) to foster a safe and healthy environment for the people of Kwara state and to ensure sustainable development.

The agency is empowered to carry out environmental protection activities; research and development activity for environmental protection and also educates the general public on the types of disposal methods acceptable by the State Government for domestic and industrial wastes among others.¹⁹¹

The law created a governing council which is responsible for the formulation of policies and programs aimed at enhancing and improving the protection of the environment, and coordinating the environmental activities of the agencies in order to achieve its goals. The law also establishes a Local Government Committee on environmental protection for the purpose of maintaining a good environmental quality in their vicinity.¹⁹²

For the effective control and management of wastes in the state, the law authorized the Agency, local government council or private collector to assist in the disposal of refuse waste within the state and any vehicle or container used in transporting or conveying refuse or waste within the state should be covered in such a way that the content thereof does not litter the street.

The law provided that all owner or occupier of a property should make available a receptacle which shall be kept within the property for depositing refuse of any description and only to be brought out of the property for the disposal of refuses. Every owner or occupier of a property shall maintain the receptacle and replace them when it is worn out.¹⁹³

Waste disposed off in bins will eventually be collected by the State or local government waste collector who will be responsible for its proper disposal at the stipulated waste depot provided by the State.

¹⁹⁰S 30(2) Lagos State Environmental Protection Agency Law. ²²⁶Cap

K16 Laws of Kwara State, 1992

¹⁹¹ Hakeem Ijaiya, 'The Legal Framework for Solid Waste Disposal and Management in Kwara State, Nigeria', (2013) 4, Journal of Environmental Protection, <<https://www.dx.doi.org/10.4236/jep.2013.411143>> accessed 19 April 2022.

¹⁹² Ibid.

¹⁹³ <https://www.scrip.org/html/6-6702066_39722.htm#ref1> accessed 11 April 2022.

The financial implication arising from the provision and maintenance of receptacle by property owner and occupiers may be frustrating because not everyone will see to the proper maintenance of the receptacle.

Furthermore, the law makes it an offence for any person to throw or deposit on any street, open space, gutter, drain or drainage system or tenement whether occupied or not obnoxious, toxic or poisonous waste except at such places authorized by the Agency. The law also provided that any person who contravenes any of the offences mentioned above commits nuisance and would be tried by either a Magistrate Special Environmental Court or Area

Court within the jurisdiction and upon conviction shall be liable to a maximum fine of N5000.00 (five thousand naira) or imprisonment for six months.¹⁹⁴

Environmental Sanitation Law 2004 is another law enacted by Kwara State to ensure sanitary conditions in residential and public places, in order to achieve this, every owner or occupier of a property is expected to clean and keep the streets, side-walks at the back, front and sides of the property neat; not to litter, sweep out or throw ashes, refuse, paper, nylon and rubbish into any street, public place or vacant plot; not to use dustbins which may be leaking or permitting litter to escape out which may injure people handling them and to ensure the cleanliness of their premises, particularly the background and the courtyard.¹⁹⁵

Although the above means may seem effective, it will result in waste disposal issues as individuals will eventually get tired of this means and result to indiscriminate disposal of waste.

The law also makes it mandatory for producers, sellers and consumers of pure water, ice cream and related products to ensure that the nylon of the product are properly disposed off after consumption. In order to ensure compliance with these laws owner or occupier of property is to provide dustbin with cover that is to be used for depositing refuse, it's also mandatory for them to remove daily, all refuse from dustbin to a public refuse depot provided by the Kwara State Environmental Protection Agency.¹⁹⁶

However this does not prevent plastic pollution because there is not means to ensure that the wastes are actually disposed off daily. There is also the issue of inadequate manpower to carry out these functions.

As established above, indiscriminate dumping of wastes along the highways, roads, channels, gorges, vacant lands except at designated refuse disposal sites as approved by the Kwara State Environmental Protection Agency is prohibits. Any person who contravenes or fails to comply with the provision of the law shall be guilty of an offence and shall upon conviction be liable to the fines ranging between N500.00 (Five hundred naira) and N10000.00 (Ten thousand naira).²³³

Waste disposal regime employed in Kwara State is the disposal of waste in the public refuse depot provided by the Kwara State Environmental protection Agency. However the issue with

¹⁹⁴ S 27 Lagos State Environmental Protection Agency Law.

¹⁹⁵ Ibid.

¹⁹⁶ Ibid.

²³³ Ibid.

this method is inadequate manpower to reach out to the nooks and crannies of the whole state.¹⁹⁷

There is no doubt, the Environmental Sanitation Law of 2004 complement the Kwara State Environmental Protection Agency Law of 1992 on the management and control of wastes in Kwara State. It a law that is very applicable to plastic pollution has it already recognize nylon as waste which is a form of plastic.

Kwara State disposal regime for plastic waste is the use of the plastic waste recycling plants established by the federal government in conjunction with the State government under the community- based waste management programs in the ministry.¹⁹⁸¹⁹⁹

BAUCHI STATE.

The Bauchi State Environmental protection Agency known by its acronym as BASEPA is the sole agency responsible for all matters relating to environmental protection, sanitation, environmental research and policy in Bauchi State. It was established by edict No. 3 of 1997 and came into existence on 10th June, 1997.

The mandate of BASEPA with respect to Municipal Solid Waste Management (MSWM) in Bauchi State was enshrined in the edict No. 3 of 1997. BASEPA is the sole agency responsible for all matters relating to environmental protection, sanitation and environmental research and policy.²³⁶ Section 9 (5)²⁰⁰²⁰¹ specifically state the function of the agency with respect to MSWM notwithstanding the provision of any law , the agency shall regulate, direct and control the throwing, dumping or disposal of refuse negligently in the whole state.
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Section 10²⁰² deals with the powers of the agency, with respect to MSWM, the agency also have the power to enter into agreement with any public or private organisation and individuals to develop, utilise, coordinate and share environmental monitoring programmes and biological effects of various activities on the environment.²⁰³ Also the edict, grants the agency the power to do anything possible and necessary to carry out its functions²⁰⁴

Statutory Responsibilities of BASEPA

On establishment, the goal of the state policy on environment was to achieve sustainable development in Bauchi state particularly to;

¹⁹⁷ Kwara Communities face threat of epidemics from filthy environment,<<https://www.icirnigeria.org> > accessed 13 June 2022.

¹⁹⁸ 'National policy on plastic waste man-agement underway, says minister' vanguard Newspaper (June 2, 2018)<<https://www.vanguardgr.com/2018/06/natioanl-policy-plastic-waste-management-uderways-says-minister/>> accessed 19 June 2022.

¹⁹⁹ BASEPA Edict.

²⁰⁰ BASEPA Edict

²⁰¹ Bilkisu A. Bappah, 'Perceptual Assessment of Effectiveness of Bauchi State Environmental Protection Agency in Municipal Solid Waste Management in Bauchi Metropolis, Nigeria'(2017), Department Of Geography, Faculty Of Science, Ahmadu Bello University Zaria, Nigeria

²⁰² BASEPA Edict

²⁰³ S10 (5) BASEPA Edict.

²⁰⁴ S 10 (16) BASEPA Edict.

- a) Secure for all residents a quality environment adequate for their health and well being b) Conserve and use the environment and Natural resources thereof for the benefit of present and future generations
- c) Restore, maintain and enhance the ecosystems and ecological processes essential for the functioning of the biosphere to preserve biological diversity and the principle of optimum sustainable yield in the use of renewable natural resources and ecosystems
- d) Raise public awareness and promote understanding of essential linkages between environment and development and to encourage individuals and community participation in environmental efforts
- e) Cooperate with other state and federal organization/agencies to achieve optimal use of Trans-boundary natural resources exploitation and effective prevention or abatement of Trans boundary environmental pollution.²⁰⁵

According to the edict, the functions of BASEPA are;

- i. Implement environmental policies towards protection, sustenance and development of the environment generally.
- ii. Identify, detect and monitor any environmental problems and evolve solutions thereto particularly those related but not limited to desertification, gully erosion, water contamination, wastes of various kinds, soil degradation, vectors, pest rodents, reptiles, noise that constitute nuisance, sewerage, bush burning, indiscriminate felling of trees, stray and wandering animals, mining and other excavations, protection of wild life and their habitat, offensive trades and surface and underground waters.
- iii. Represent the state in any matters pertaining to plans, procedures or negotiations for government arrangement relating to the environment.
- iv. It is also the function of the agency to arrange and co-ordinate planning for the urban and regional process in the state and or to liaise with private or public institution that engage in environmental activities.
- v. Notwithstanding the provision of any law they agency shall regulate, direct and control the throwing, dumping or disposal of refuse negligently in the whole state.
- vi. The agency shall also ensure the removal, destruction and or demolition of any stalls, shop, shed or any un-authorized structures from streets, high way nor other open places.²⁰⁶ The function of the agency is to be carried out by the Bauchi State Environmental

²⁰⁵ Bauchi. (2015). Encyclopedia Britannica, <www.brittanica.com/place/Bauchi-Nigeria> accessed 17 May,2022.

²⁰⁶ Bauchi State Environmental Protection and Conservation Agency Edict No.3 of 1997

protection Agency as the agency is responsible for all matter relating to environmental protection.

Subject to the edict, the agency has the powers of entering into contract with any person for the purpose of executing its responsibilities and functions.

BASEPA can source for funds from among the following sources;

- a. Budgetary grant by the state government;
- b. Money received and collected as gift, assistance, loan or grant from other sources;
- c. Money raised from subscription, fine or any activities of the agency in its day to day management²⁰⁷

section 40 of the edict, “the agency shall have all categories of workers to assist in making it function well..... 2015 records of the agency shows the staff strength to be six hundred and sixty (660), while the health attendants constitute the cadre with the highest number of staff (229), environmental management had six, environmental health technicians and assistants combined had fifty, community health extension and assistant workers (CHEW and CHA) were ten in number, etc.”²⁴⁵

After examining the Federal and State law enacted to curb environmental degradation like pollution. The most practical and applicable out the above the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act (NESREA) 2007 and Kwara State Environmental Protection Agency Law 1992 and Environmental Sanitation Law 2004 as these law are detailed in the types of waste they deals with and in it applicability.

Pollution of all types has eaten its way into our community and has resulted in ridiculous depletion of our environment. The bible records in the book of Isaiah “*The earth dries up and withers, the world languishes and withers... the earth is defiled by its people; they have disobeyed the laws, violated the statutes and broken the everlasting covenant....*”²⁰⁸ the statement recorded in the bible simply interpreted tells of how great the environment has diminished and the reason is simply not obeying the laws put down to ensure environmental protection by consistently polluting the environment through different means such as dumping of toxic wastes, mismanagement of solid waste, greed, corruption and so on.

²⁰⁷ S 11 BASEPA edict.

²⁴⁵ Supra 111.

²⁰⁸ Isaiah 24:4-6

4. ANALYSIS OF PLASTIC POLLUTION LAWS IN SELECTED JURISDICTIONS.

4.1 INTRODUCTION.

According to studies plastic pollutes every part of the planet. This work looks at the “wicked problem” of plastic pollution from a multi- jurisdictional perspective. Despite its many useful applications, plastic has evolved into a serious environmental threat. This is because we, including myself, have become overly reliant on single-use plastic, which has serious environmental and health consequences.

Professor Andrew Holmes, a polymer chemist and retired professor at the University of Melbourne, invented unique plastics for flat screen TVs and solar cells and he posited that *“no one in their daily life within a period of 10 minutes isn’t touching something that is not made of plastic. It’s used in everything from the keyboard or pen you are using, to your glasses or contact lenses, the Teflon on your frying pan, and the banknotes in your wallet. It’s in your clothes, phone, car, mattress. Plastic can be flexible or rigid, and its lightness also makes it very appealing. But for all the benefits plastic has given us, disposing of products – particularly those designed to be used only once, such as packaging – has become a major environmental issue. The ocean is full of waste because humans have disposed of it carelessly.”*²⁰⁹

Plastic pollution is a major environmental issue in many African countries because it contributes to climate change and greenhouse gas emissions at the manufacturing and disposal levels. This alarming problem has prompted foreign and some African countries including third world countries to take action by enacting legislation and policies in an attempt to manage the problem, some of which will be examined.

4.2 EGYPT.

The plastic business in Egypt began almost 150 years ago, but it exploded in size during World War II due to a scarcity of other resources. Plastic's rapid expansion began in the 1950s and has since doubled to an incredible amount of more than 381 million tonnes, roughly equivalent to two-thirds of the world's population²¹⁰. According to a report by the World Wildlife Fund (WWF)²¹¹, Egypt is tagged the largest source of plastic pollution in the Mediterranean, regurgitating about 250,000 tons of plastic annually, making it the Arab world's largest producer of plastic and the Middle East's second largest with about 5.4 million tonnes. 95% of plastic waste in the ocean are supplied by only ten (10) rivers in the world. There are eight (8) rivers in Asia and two (2) in Africa. The startling discovery was that one of the two Egypt's Nile River. The Nile River is Africa's and the world's longest river, and it has enormous worldwide significance.

Egypt presently contributes 3%²¹² of worldwide plastic pollution; as a result of this scale and the resulting consequences of plastic, community awareness of the dangers of plastic to

²⁰⁹J. Healey, **Plastic Pollution**, (Spinney Press, 2019).

²¹⁰ H.Ritchie&M. Roser, ‘plastic pollution’, (2018)OWID,<<https://www.ourworldindata.org/plastic-pollution>> accessed 3 May 2022.

²¹¹ Hereinafter referred to as WWF.

²¹² Estimated through EIA.

humans and the environment has grown. This prompted a number of Egyptian localities to take the lead in restricting or outright prohibiting the usage of plastic.

The governor of the Red Sea province, Governor Ahmed Abdullah and the Association for the Protection of the Environment²¹³ spearheaded this initiative (which is a governmental policy), which ban single-use and disposable plastics in the Red Sea governorate with immediate effect from June 2019. "The decision is meant to safeguard animals, marine life, and extinction-threatened species in the Red Sea, where plastics inflict significant injury due to ingestion, poisoning, or suffocation."

Many animals swallow plastic and die as a result. Human health is also endangered by marine plastics. Food stores, restaurants, supermarkets, grocery stores, and pharmacies will no longer accept plastic bags. Furthermore, all single-use plastics, such as plastic knives, forks, straws, and cups, will be absolutely prohibited in restaurants and cruise ships in the Red Sea Governorate.²¹⁴

In July, the governorate of South Sinai announced a ban²¹⁵ on the use of plastic bags throughout the city, similar to the Red Sea governorate. The ban was enacted to protect marine life from the dangers of plastic bags, according to a statement issued by the city council. More garbage and plastic waste found its way into the city's waters as the small city attracted more tourists throughout the year. Furthermore, according to the city council statement, "Plastic pollution harms marine life. Plastic waste is carried from the shore to the deepest parts of the seas and oceans by air currents." Following that, the city council launched a public awareness campaign against the use of plastics in South Sinai's streets.²¹⁶

Egyptian NGOs and enterprises founded Collation Egypt Ban Plastic to support policymakers in the ban of plastic in Egypt, in accordance with the policy issued by the above authorities. Cotton bags were originally launched in Egypt at a number of luxury grocery chains in Cairo.

Meat and fish are now wrapped in paper bags, and some factories began advertising biodegradable carton straws as an alternative to plastic straws.²¹⁷

Wafik Noseir, an environmental engineering consultant and the founder of the Egyptian Modern center that works on environmental issue, said "it is still a long road ahead of Egyptian government to fulfill its environmental goals and make our cities greener, cleaner and healthier".²¹⁸²¹⁹

²¹³ Hurghada Environmental Protection and Conservation Association (HEPCA) an NGO and Non-Profit organization that specialized in marine and land conservation operating in the Egyptian Red Sea since 1992.

²¹⁴ M. Maged, 'Red Sea Governorate Bans Plastics', *Egypt Independent* (Egypt, April 2, 2019), <<https://egyptindependent.com/red-sea-governorate-bans-plastics/>>, accessed 23 May 2022.

²¹⁵ That is a law prohibiting the use of plastic bags in the state. Ban(law)-definition of ban(law) by the free Dictionary.<www.thefreedictionary.com> accessed 13 June 2022.

²¹⁶ Zeinab El-Gundy, 'Egypt In The Process Of Going Plastic-Free: The Little Things That Make A Big Difference', (2019), *Ahramonline*, <<http://english.ahram.org.eg/NewsContent/1/151/351327/Egypt/Features/Egypt-in-the-process-of-going-plastic-free-TheLitt.aspx>> accessed 23 May 2022.

²¹⁷ Ibid.

²¹⁸ With a knock on the door, Egypt aims to turn families greener. <https://www.reuters.com/article/us-egypt-womanclamate-change-idUSKBN1zu2Eb> accessed 14 June 2022.

²¹⁹ M. Jones 'Plastic Pollution Blights Nigerian City Port Harcourt', *BBC News* (27 November 2018) <<https://www.bbc.com/news/av/world-africa-46346889/plastic-pollution-blights-nigerian-city-port-harcourt>> accessed 6 May, 2022.

In Egypt, the laws regulating plastic are only established in some provinces. However, in those provinces there has been some form of compliance and adherence to the regulations, as seen in Cairo where plastic have been replaced with alternatives such as paper and cotton.²⁵⁷

Plastic ban in Egypt has been said to affect tourism, maritime, trade and fisheries sectors that are very vital to the Egyptian economy which in turn affect their economy.²²⁰ Some believe it help the country framed a strategy targeting the plastic industry to create job opportunities to support the circular economy.²²¹

4.3 KENYA.

Plastic pollution is one of the many environmental challenges affecting public health in East African region, which spans a broad geographic area. Kenya's government has attempted four times in fifteen years to undertake plastic reforms, with three failed attempts in 2005, 2007, and 2011. This however did not deter them, and in May 2014, the Nairobi City Country presented a regulation act, The Nairobi City Country Plastic Carry Bags Control Bill, to regulate the use of plastic bags in the country.

Similarly, the Kenyan government introduced the Environmental Management and Coordination (Plastic Bags Control and Management) Regulation in August 2017 to prohibit the use of plastic in the country. Judi W. Wakhungu²²², the Secretary of the Environment and Natural Resources Cabinet, announced a ban on the use, manufacture, and import of all plastic bags used for commercial and domestic packaging. The ban applied to two types of bags which is the transport bag and the shopping bags.²⁶¹

Kenya government went further to impose a four- year prison sentence or a fine of up to USD 40,000 on Kenyans that produce, sell or even use plastic bags²²³ and even using the banned bags is punishable by a fine of more than \$500 or a year in prison²²⁴, making it the country with the harshest penalties for plastic pollution.

This law was seen as the world toughest law aimed at reducing plastic pollution because of the fine it stipulates, even though the law did not stipulate whether it is for individual offender or corporate body.²⁶⁴

In cases where the company is the offender the doctrine of lifting the veil will be applied because a company cannot be imprisoned. Therefore, the veil of the company juristic personality will have to be lifted for the officers behind the act to be punished. There is record of the court lifting the veil of the company in order to fully enforce the provision of the law.

²²⁰ Egypt steps up campaign against sea plastic waste<<https://www.theArabweekly.com/egypt-steps-campaign-against-sea-plastic-waste>> accessed 15 June 2022.

²²¹ How does Egypt get rid of single-use plastic bag? <<https://www.egypttoday.com/Article/1/100156/How-does-Egypt-get-rid-of-single-use-plastic-bag>> accessed 15 June 2022.

²²² Chancia Plaine,'Plastic Waste: An Overview Of Repressive Legislation In African Countries (1/2)', (2019), *Afrik21*, <<https://www.afrik21.africa/en/plastic-waste-an-overview-of-repressive-legislation-in-african-countries-1-2/>>, ²⁶¹ Section 5(1) and (2) Environmental Management and Co-ordination (Plastics Bags Control and Management) Regulations.

²²³ Section 28(2) Environmental Management and Co-ordination (Plastics Bags Control and Management) Regulations.

²²⁴ Section 28(3) Environmental Management and Co-ordination (Plastics Bags Control and Management) Regulations. ²⁶⁴ Kenya Imposes World's Toughest Law Against Plastic Bags.<<https://www.swachhidia.ndtv.com/kenya-imposes-worldstoughest-law-against-plastic-bags-11261/>> accessed 14 June 2022.

In the case of ***Kenya Association of Manufacturers & 3 others v Cabinet secretary, Ministry of Environment and Natural Resources & 3 others***²²⁵ where the matter for contention was whether the punishment prescribed under the plastic bags ban is oppressive and unreasonable on the general public, the Environment and Land Court held “...*that although some ordinary Kenyans may suffer social and economic losses as a result of the ban, the plastic ban is for the common good of the general public and as such lawful.*”

The fact the Kenya government thought it wise to establish a court to hear environmental and land matters should not go unnoticed because the court establishment will help in the laws put in place for the reach of plastic waste disposal.

Also in the recent case of ***Justus Mulandi Munuve & 35 others v Easy Pack Company Limited***²²⁶ The Respondent averred that Gazette Notice No. 2356²²⁷ dated 28th February 2017 banned the manufacture and importation of all plastic bags used in commercial and housing packaging and that the ban took effect on 28th August 2017 entirely frustrating the Respondent's main business. The court then held that, the fact the ban was issued although frustrating the business of the Respondent, did not absolve the Respondent from its obligations under the contracts.

In enforcing the provision of the law has done by the court in the case above, the effect of the law on the offenders business (economically) should be considered, in order to ensure the development of the business and the nation's economy at large.

In Kenya, the plastic regulation has been vehemently upheld by the Court, yielding positive results. Following the ban, the government claims that 80% of the population has complied the law, and fines ranging from \$500 to \$1,500 been handed out to around 300 people. Others have been imprisoned^{228 229}. Based on the Kenyan government's report and the court's position on the plastic ban, it is apparent and without a doubt that the ban in Kenya is here to stay and will persist for a long time.

The plastic regulation in Kenya is vehemently upheld by the court and the government because it was perceived by them to a sure mean of achieving the non-use, manufacture, and import of plastic in the country.

The plastic regulation in Kenya introduced in 2017 has since then recorded eighty percent (80%) compliance.²³⁰ In that regards the government reported that in 2018, eighteen (18) people who pleaded guilty in a court in the Kenyan coastal city of Mombasa were fined \$300 or sentenced to eight months in jail for using the bags²³¹, this may have prompted the government to promise to completely eradicate all single-use plastic in Kenya.²³²

According to Kenya Association of Manufactures, the 170 plastic create a estimated 60,000 jobs directly and another 400,000 indirectly. The association further estimated that Sh5.26

²²⁵ [2018] eKLR

²²⁶ [2019] eKLR

²²⁷ In other words the Environmental Management and Co-ordination (Plastics Bags Control and Management) Regulations

²²⁸ Has Kenya's Plastic Bag Ban Worked? *BBC News*, (London, 28 August, 2019), <[https://www.bbc.com/news/world-africa-](https://www.bbc.com/news/world-africa-5120820)

²²⁹ [#:~:text=Tens%20of%20millions%20of%20plastic,to%20floods%20in%20rainy%20seasons](https://www.bbc.com/news/world-africa-5120820)

²³⁰ V. Burns, 'Plastic Pollution', *The Sun* (12 July, 2019), <<https://www.thesun.co.uk/tech/5120820/plastic-oceans-riverswaste/>> accessed 17 May, 2022.

²³¹ Ibid.

²³² N. Haque, 'Kenya Pollution: President Kenyatta Vows Plastic Ban by 2020', *Aljazeera* (29 October, 2019), <<https://www.aljazeera.com/news/2019/10/kenya-pollution-president-kenyatta-vows-plastic-ban-2020191029101907206.html>>, accessed 14 May, 2022

billion in annual revenues will be wiped of the economy after the ban came into effect. They however believe that small negative impact will be felt in the short term following the ban while the long-term benefits will cancel out the negative impact.

The association advice that in order to counter the economic loss as a result of the ban the government could have employed the following;

- The Rwanda tax breaks for plastic bag recycling company which will open up a new market for manufacture of eco-friendly-bags.
- Making plastic expensive by increasing the cost which will make it difficult for customers who buy the bags to dispose it after single-use thus, encouraging reuse. This will however, make plastic bags into luxury goods used to show status in the society.²³³

However, the Retail Trade Association of Kenya did not agree with Kenya Association of Manufacture and they supported the government implementation of the ban to the latter

4.4 CANADA.

The Canadian government is pushing forward with a comprehensive strategy to reduce plastic pollution, which includes a ban on certain dangerous single-use plastics. The Minister of Environment and Climate Change, Steven Guilbeault and Health Jean-Yves Duclos declared the Proposed Single-use Plastics Prohibition Regulations which limits some single use plastics and has been released for public comment.²³⁴

In the words of Guilbeault, *“we are taking action to get plastic pollution out of Canada’s communities and our waterways. The proposed Single-Use Plastic Prohibition Regulations are a big step forward in our goal to reduce plastic pollution and move to a circular economy from plastics.”* He went further to say that *“smart, clear and collaborative regulations will help drive innovation across the country as reusable and easier-to-recycle items take their place in our economy,”*²³⁵

However, he did not set the criteria to identify these reusable and easier to recycle items.

The draft regulation incorporate feedback from the Government of Canada’s extensive consultations, which began in 2019 and included tens of thousands of Canadians who indicated support for prohibiting certain single-Use plastics. The regulations are expected to prevent more than 23,000 tonnes (estimate) of plastic pollution from entering the environment over a 10 year period the equivalent of one million garbage bags of litter and their passage represents both a necessary and a significant step forward in the regulatory process, bringing Canada closer to fulfilling its commitment to ban certain harmful single-use plastic.

²³³ Plastic bag ban will benefit the economy despite initial losses.<<https://www.businessdailyafrica.com/d/opinionanalysis/columnists/plastic-bag-ban-will-benefit-the-economy-despite-initial-losses-2167496>> accessed 15June 2022.

²³⁴ Canada moving forward with single-use plastic ban –The Environmental Journal,<<https://www.environmentaljournal.ca/canada-moving-forward-with-single-use=plasticban/#:~:text=The%20Government%20of%20Canda%20is,plastics%20the%20short%20term>. > Accessed 9 May 2022.

²³⁵ Ibid.

After examining and analyzing the opinions submitted, the federal government intends to adopt these regulations and implement the prohibition as soon as possible, maybe as early as late 2022. The proposed regulations are based on the findings of the government's Science Assessment of Plastic Pollution (a research carried out the government), which was completed in October 2020 after hundreds of scientific studies and other sources of evidence were reviewed, concluding that plastic pollution is ubiquitous in the environmental and has harmful environmental consequences. The Canadian government will release draft recommendations soon to assist firms (private and public business outfit) in adapting to proposed legislation regulations.²³⁶

The Government of Canada recognizes that easily recyclable plastics play a vital role in the daily lives of many Canadians, but that only 9% of the plastic trash is currently recycled. As a result, these regulators are an important component of a strategy to reduce plastic pollution by addressing the entire lifecycle of plastics. The plan will also include the creation of regulated criteria to increase the usage of recycled content in specific plastic items. By 2030, the Canadian government wants to ensure that all plastic packaging has at least 50% recycled content.²³⁷

In order to combat plastic waste pollution the government of Canada is collaborating with all levels of government, industry, non-governmental organizations, academia and Canadians. Canada championed the formation of the Ocean Plastic Charter (which is a municipal law) during Canada's G7 presidency in 2018 to move toward a more sustainable approach to creating using, and managing plastics. Governments, businesses and organizations that sign the charter join in pledging to take a more resource-efficient and sustainable approach to plastic waste management on land and sea

Some of the partner of Canadian government to Ocean plastic charter include: A&W Food Services of Canada Inc; Clean Foundation; Develop Nova Scotia; Earth Rangers; Ocean Wise; Oceans North; Students on Ice; Stika Foundation; Loop Industries Inc; Great Sea Project; Schad Foundation; Organic Ocean Seafood etc²³⁸. These partners help in implementing the objectives of the Charter.

The federal, provincial, and territory governments endorsed a Canada-wide strategy on zero plastic waste in principle in November 2018 through the Canadian Council of Ministers of the Environment. The strategy takes a circular economy perspective to plastics and provides a framework for action in Canada, based on the Ocean Plastics Charter.²³⁹

To put the Strategy into action, the federal, provincial, and territory governments created a Canada-wide Action Plan on Zero Plastic Waste. This plan lays out specific activities and timetables for reducing, reusing, recovering, capturing, and cleaning up plastic waste and pollution in Canada. These steps will assist Canada in reducing plastic pollution, creating

²³⁶ Government of Canada moving forward with banning harmful single-use of plastics.

<<https://www.canada.ca/en/environnement-climate-change/news/2021/12/government-of-canada-moving-forward-withbanning-harmful-single-use-palsticso.html>>accessed 9 May,2022.

²³⁷ Ibid

²³⁸ Ocean Plastics charter-canada.ca. <https://www.canada.ca/en/environment-climate-change/services/mansgingreducing-waste/international-commitments/ocean-plastics-charter.html> accessed 15 June 2022.

²³⁹ Ibid.

economic possibilities to recover the value of old plastics, and meeting our 2030 target of zero plastic waste.²⁴⁰

Over ten federal statutes, rules, and agreements exist in Canada to combat plastic waste and marine litter. The Micro-beads in Toiletries Regulations, which restrict the manufacture, import, and sale of toiletries containing plastic micro-beads, including non-prescription medications and natural health products, were released in June 2017.²⁸⁰

These statutes, rule and agreement have not being complied with as Canadian government is still seeking out the proper mean to enforce. This therefore makes it difficult to know the rationale behind obedience.

Canada announced new federal efforts in June 2019 to assist reaching Ocean Plastics Charter and Canada-wide Strategy on Zero Plastic Waste commitments. This included addressing single-use plastics and collaborating with provinces and territories to hold manufacturers accountable for the plastic trash produced by their goods.²⁴¹

Canada went further to released proposed initiatives to achieve zero plastic waste by 2030 on October 7, 2020. The proposal to ban or restrict the use of particular single-use plastics where there is evidence that they are discovered in the environment, are seldom recycled, and have easily available and viable alternatives is one aspect of the strategy. Single-use plastic checkout bags, silverware, meal service ware made from or containing problematic polymers, ringed carriers, stir sticks, and straws are all examples of this. The strategy also suggests ways to improve plastic recovery and recycling so that it stays in the economy and out of the environment. A discussion paper outlining the suggested strategy was also released for public feedback as part of the announcement.²⁴²

Environment and Climate Change Canada hosted a series of engagement webinars from October to December 2020 to get feedback on its proposed Integrated Management Approach to Plastic Products to Prevent Waste and Pollution discussion paper. These webinars gave an overview of the proposed Integrated Management Approach and went through the proposed Management Framework for Single-use Plastics in greater depth, as well as the need of setting performance requirements for plastic items and ensuring sound end-of-life accountability. A What We Heard report was released in August 2021, summarizing the response on the discussion paper gathered through written submissions, webinars, and stakeholder discussion sessions.²⁴³²⁴⁴

The Canadian Environmental Protection Act, 1999 put "plastic produced objects" to Schedule 1 in May 2021(CEPA). This means that the federal government can take regulatory and other steps to help Canada achieve its zero-waste objective and create the conditions for a plastics circular economy. Feedback was taken into account when formulating proposed regulations

²⁴⁰ Ibid.

²⁸⁰ Ibid.

²⁴¹ Canada continues Single-use plastics ban, England considers similar action.<<https://www.foodpackagingforum.org/news/canada-continues-single-use-plastics-ban-england-considers-similaraction>> accessed 9 May, 2022.

²⁴² Supra20.

²⁴³ Ibid.

²⁸⁴ Ibid.

²⁴⁴ <<https://www.gazette.gc.ca/rp-pr/p1/2021/2021-12-25/html/reg2eng.htm> |> accessed 9 May 2022

to prohibit or restrict the use of certain single-use plastics, and it is still being examined when developing proposed recycled content criteria.²⁸⁴

On December 25, 2021, the Government of Canada published the proposed *Single-Use Plastics Prohibition Regulations*,²⁸⁵ in the *Canada Gazette*, Part I, and *Guidance for Selecting Alternatives to the Single-Use Plastics in the Proposed Single-Use Plastics Prohibition Regulations*.²⁴⁵ Single-use plastic checkout bags, cutlery, foodservice equipment produced from or containing problematic plastics, ring carriers, stir sticks, and straws are all proposed to be prohibited under the regulations. Under some conditions, exceptions to the Regulations will allow single-use plastic flexible straws to be sold in stores, ensuring that persons who need them can get them.²⁴⁶

The Guidance for Selecting Alternatives to Single-Use Plastics in the Proposed Single-Use Plastics Prohibition Regulations is designed to assist businesses in transitioning away from the six single-use plastic types identified in the proposed Regulations. The public consultation is open from December 25, 2021, to March 5, 2022.²⁴⁷

The Government of Canada released a Notice of Intent and a technical issues paper on the creation of proposed regulations that would set minimum recycled content requirements for certain plastic manufactured items in the *Canada Gazette*, Part I, on February 12, 2022. The public consultation on minimum recycled content criteria is already underway and will close on March 14, 2022. As the proposed regulations are being created, feedback submitted during the consultation will be considered.²⁴⁸

In May 2021, Canada had declared plastic a toxic substance, which led to the ban (in furtherance of the provision in the Canadian Environmental Protection Act 1999) that was created on most single use plastic by the end of the year. They had also made an effort in taking control over their climate pollutants; they had to reduce short-lived climate pollutants, like Black carbon, methane, ground level ozone etc. In a bid to address climate change, Canada decided to take holistic approach by addressing the short-lived climate pollutants in (SLCPs) so as to address climate change and air quality.²⁴⁹

Canada had taken an action by creating a range of air pollution regulation in order to reduce emissions of short-lived climate pollutants. These regulations had been announced December 2020 as Canada's plan to address climate change as well as building a sustainable economy.

The climate plan had continuing work with provinces and territories through Pan-Canadian Framework on Clean Growth and Climate Change (PCF).²⁵⁰

Canada's government had created regulations²⁵¹ that had been implemented to be specific they had Air pollution regulations that were targeting ozone precursors. Canada had

²⁴⁵ <<https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/consultations/proposed-single-use-plastics-prohibition-regulations-consultation-document.html>> accessed 9 May 2022.

²⁴⁶ Ibid.

²⁴⁷ Government of Canada moving forward with banning harmful single-use of plastics.

<<https://www.canada.ca/en/environnement-climate-change/news/2021/12/government-of-canada-moving-forward-with-banning-harmful-single-use-plastics.html>> accessed 9 May, 2022.

²⁴⁸ Ibid.

²⁴⁹ What's in Canada's Climate plan <<https://www.canada.ca>> accessed 4 December 2021.

²⁵⁰ Ibid.

continued to implement on nation-wide Air Quality Management System in other to reduce emissions of air pollutants from industrial sources, as well as suite of air pollution for the transportation sector.

Canada is one of the countries that have made tremendous efforts in curbing pollution. They had made efforts in dealing with every form of pollution, they had established regulations, organization that all serve as a guide towards maintaining a good environment without pollution in the country as a whole.²⁵²

Alberta Primer Jason Kenney said that plastic ban could hurt the economy. He believe that classifying plastic waste as toxic is a confusing label for consumers ad it could jeopardize economic output. He went further to a say that as Canada look forward to recover from the economic downturn caused by Covid-19, placing blanket-ban on plastic product could have implication on employment in the future.²⁵³

For instance in 2019, nearly 100,000 Canadians were employed in the plastic industry, thereby generating nearly CAD\$35 billion in taxable sales for the federal government. Thus, with the current ban, the jobs in plastic supply chain are suddenly in jeopardy.²⁵⁴

Therefore, it can be said that the regulations on plastic ban did not factor in the harm the ban will have on numerous Canadian families whose livelihood is at stake.

4.5 FRANCE.

France is one of the European countries that have made a public effort to reevaluate and improve its environmental impact by lowering emissions and plastic waste. The country's current goal to address the emissions and plastic problem are summarized below.

Only a fifth of plastic gets recycles globally, and 40% of plastic packaging is used only once before being thrown. Europe recycles 30% of it plastic garbage. China recycles 25%, and the United States recycles only 9%. Despite being innovative in it approach to pollution reduction; France has the second-lowest plastic recycling rate in Europe, at 25.5 percent.²⁵⁵

As at 2016, France was the first country in the world to ban the manufacture and sale of single-use plastic cups, plates and also takeaway food box, this law requires all the disposable tableware to be made from a 50% bio-sourced material which could be composted at home. The law had been passed after a thorough statistics had been done by the French Association of Health and Environment concerning recycling the plastic cups thrown each year. France

²⁵¹ Canadian Environmental Protection Act, 1999(CEPA1999); Fisheries Act; Canadian Environmental Assessment Act, 2012; Canadian Environment Week Act etc. <https://www.ec.gc.ca/default.asp?lang=En&n=E826924C-1&pedisable=true> accessed 15 June 2022.

²⁵² Canada I Climate and Clean Air Coalition <<https://www.ccacoalition.org/canada/climate/cleanaircoalition>> accessed 4 December 2021.

²⁵³ Stifling Economic Recovery, Canada's Plastic ban will do more Harm than Good<<https://www.energyindepth.org/stifling-economic-recovery-canadas-plastic-ban-will-do-more-harm-thangood>>accessed 15 June 2022.

²⁵⁴ Ibid.

²⁵⁵ How is France Tackling Plastic Pollution and Emissions? <<https://www.azocleantech.com/amp/article.aspx?ArticleID=909>>accessed 17 May 2022.

had also banned shops from distributing plastic bags but instead, they distributed paper bags or reusable plastic and encourage their customers²⁵⁶ to reuse their bags.²⁵⁷

Arash Derambarsh, an environmental activist, discussed the scope of France's plastic problem with Al Jazeera and said.

“Here in France, we have approximately one to five billion [tonnes of plastic]. That’s huge. We passed a law in France in 2015 that supermarkets aren’t allowed to sell plastic bags of a certain size in supermarkets and certain shops. Why? Because we’re trying to generate an ecological revolution”²⁵⁸

Furthermore, France intends to make recycled plastic bottles less expensive than virgin plastic bottles by lowering the value added tax (VAT) rate on recycled bottles, providing purchasers with a financial incentive to acquire recycled plastic items. The government's Climate Plan was unveiled in July 2017 by the Minister for the Ecological and Inclusive Transition.

An official from France's environment ministry said the country wants to adopt a penalty system by 2019 that will raise the costs of packaging made of non-recycled plastic as part of a vow to use only recycled plastic nationally by 2025.

The measure, according to Brune Poirson, secretary of state for ecological transition, is one of several plans for the coming years, including a deposit-refund scheme for plastic bottles.²⁵⁹ According to her in an interview with Journal du Dimanche newspaper.

“Declaring war on plastic is not enough. We need to transform the French economy”.

Products with recycled plastic packaging might cost up to 10% less under the new strategy, while those with non-recycled plastic could cost up to 10% more, according to Poirson.

“when there’s a choice between two bottles, one made of recycled plastic and the other without, the first will be less expensive,” she stated.²⁶⁰

The above statement can be described as a potential economic plan/strategy that France government will later implement in order to boost its economy. This strategy will be achieved by manpower and technology that the government will establish.

The suggestion was met with caution by Emmanuel Guichard of the Elipso organization of plastic packaging manufacturers. "Giving customers a choice is doable with bottles.

“However, we must not overlook other factors: for example, there are now no recycled plastics available for yogurt pots "he remarked.²⁶¹

²⁵⁶ under French Environmental code modified by the law on circular economy. The aim of the circular economy is to promote economic modal design based on eco-design of products, responsible consumption, the extension of shelf-life and the reuse of products and recycling of waste.

²⁵⁷ Lori Campbell:Top 10 Countries Doing The Most to Tackle Plastic Pollution (2021) <<https://www.good-withmoney.com>>accessed 4 December 2021.

²⁵⁸ Ibid.

²⁵⁹ France to set penalties on non-recycled plastic next year.<<https://www.france24.com/en/20180812-france-plasticpenalties-recycling-environment-reduce-reuse-pollution>> accessed 17 May 2022.

²⁶⁰ Ibid.

²⁶¹ Ibid

"We're hoping that businesses play the game so that customers aren't penalized," said Flore Berlingen of the Zero Waste France organization.

The French government also intends to raise charges on burying waste in landfills while lowering taxes on recycling operations, in an effort to combat the rising problem of tons of plastic entering the waterways.

In an indication of growing public awareness of the problem, France has recently been rocked by a wave of "plastic attacks," in which customers dump all of their goods' packaging outside stores. "When non-recycled plastic becomes more expensive, most of the superfluous packaging will be eliminated," Poirson added.²⁶²

According to the magazine 60 Million Consumers, France presently recycles roughly 25% of its plastic. It has already made it illegal in supermarkets to use single-use plastic bags unless they can be composted, in the hopes of encouraging people to bring their own bags.²⁶³

France had environment laws which was greatly influenced the European law. The French Environment code has acts and decrees that has to do with our environment. Rules like maintaining or preservation of natural resources, monitoring of hazardous activities, France had decrees environmental decrees to be more précised and each form of pollution had something to do with such problem.³⁰⁵

France did not only focus on plastic pollution but also make legislation in respect of the water pollution, which contain rules to fight against water pollution, in the aspect of Air pollution; they had a discipline that was provided in the law that stood as a fight against air pollution. In order to keep the public abreast of pollution laws an inventory was publish every year. So in this regard France had other measures which had been adopted even up till our present.²⁶⁴

While all single-use plastic products, including straws, takeaway cups, and other food packaging, as well as balloons, plates, and cotton buds, are under ban consideration by the European Union. France, on the other hand, has already adopted this ban which became operative July 1 2016, setting goals to eliminate single-use plastic entirely by 2020 which they are still yet to achieve completely.²⁶⁵

A Statistic carried out in 2019 I order to access the level of compliance to the plastic ban regulation, 78% of France citizen affirmed to reduction in using plastics.²⁶⁶ With this compliance however, France packaging industries were dismayed by the ban on plastic saying they were never consulted. The head of the fruit and vegetable sectors interfel association said that the loss that will be suffered by small companies who use plastic to protect exports will be great.²⁶⁷

²⁶² Ibid

²⁶³ Plastic bag ban will benefit the economy despite initial losses. <<https://www.businessdailyafrica.com/d/opinionanalysis/columnists/plastic-bag-ban-will-benefit-the-economy-despite-initial-losses-2167496>> accessed 15 June 2022. ³⁰⁵ Lori Campbell: Top 10 Countries Doing The Most to Tackle Plastic Pollution (2021) <<https://www.good-withmoney.com>> accessed 4 December 2021

²⁶⁴ Alonge Ivano, 'Environmental Law of France' (2018). <<https://www.researchgate.net/publication/328391897>> accessed 4 December 2021.

²⁶⁵ France Bans the Plastic Carrier Bag, <<https://www.natracare.com/blog/france-bans-the-plastic-carrier-bag/>> accessed 9 May 2022.

²⁶⁶ <<https://www.statista.com/statistics/1220794/recycling-for-the-evirontment-france/>>

²⁶⁷ France as plastic packaging for most fruits and vegetables. <https://www.aljezeera.com/ews/2022/1/2/france-as-plasticpackaging-for-most-fruits-and-vegetables> accessed 15 June 2022.

It's wonderful news for everyone who doesn't want their landscape to be damaged by plastic; it will minimize waste for waste collection services and its especially good news for marine life, which is living in an increasingly plastic-filled world.²⁶⁸

According to President Emmanuel Macron France's ban on plastic is in favour of eco-friendly food packaging. This demonstrates the country's commitment to eliminating single-use plastic by 2040. The bill prohibiting plastic food wrapping on fruits and vegetables was enacted on New Year's Day (2020), with the exceptions of certain fruits. The law will be phased in until June 2022, giving businesses time to adapt, with the whole laws taking effect in 2026.²⁶⁹ With this all businesses would have adjusted their production in order to fully comply with the plastic ban.

According to some estimates, France's new rule will prevent the production of 1 billion pieces of single-use plastic. Similar regulation was enacted in France in 2016 to combat food waste. Except that at the time, the emphasis was on food rather than plastics wastes.

Supermarkets were prohibited from destroying or discarding unsold food products under the new law, supermarkets and other retailers were instead compelled to give unsold food to food banks and charity. Failure to do so could result in a punishment.²⁷⁰

France's groundbreaking initiatives, when combined with country's recent legislation to eliminate plastics in the food business, provide models for other countries on how societies should work together to minimize these harmful pollutants.

According to the State of Plastics report, only nine per cent of the nine billion tonnes of plastic in the world ever produced has been recycled. Most ends up in landfills, dumps or in the environment. It predicts that if the current consumption patterns and waste management practices continue, by 2050, there would be around 12 billion tonnes of plastic litter in landfills and the environment.²⁷¹ Our earth is in imminent danger of the surmounting increase of plastic pollution. This specific pollution has managed to cross continents leaving a trail of disaster and devastation in its wake that would consume the entire earth and all its inhabitants if more is not done to curtail it.

²⁶⁸ Ibid.

²⁶⁹ V. Burns, 'Plastic Pollution', *The Sun* (12 July, 2019), <<https://www.thesun.co.uk/tech/5120820/plastic-oceans-riverswaste/>> accessed 17 May, 2022.

²⁷⁰ France Bans Plastic For Eco-Friendly Food Packaging <https://www.thewellnessfeed.com/france-eco-friendly-foodpackaging-law-bans-plastic/?utm_source=rss&utm_medium=rss&utm_campaign=france-eco-friendly-food-packaging-lawbans-plastic> accessed 9 May, 2022.

²⁷¹ 'The State Of Plastics', (2018), *World Environment Day Outlook*, <https://wedocs.unep.org/bitstream/handle/20.500.11822/25513/state_plastics_WED.pdf?isAllowed=y&sequence=1>, accessed 30 May 2020.

5. SUMMARY, RECOMMENDATIONS AND CONCLUSION.

5.1 SUMMARY.

This long essay is an exposition in plastic pollution and its consequence on people and the environment, and the specific locations in which the degree of this issue was debated throughout selected jurisdictions such as Egypt, Kenya, Canada, France.

The study's introductory section detailed the study's background, the statement of problem, that highlight the need for plastic pollution awareness and the project's goal and objectives, which stated that the project main goal is to encourage the adequate implementation of plastic pollution law in order to curb the outpacing of plastic pollution. The significance of the study, as well as its breadth and limits, were highlighted.

Environmental pollution was extensively explored in the next chapter. Pollution was defined as the introduction of harmful substance into the environment; especially the introduction of product, especially waste product into the natural area. Plastic was also defined as a synthetic, thermoplastic, solid, hydrocarbon-based polymer. It deals with similar synthetic material, not necessarily thermoplastic. Plastic pollution is defined as the buildup of plastic objects and particles in the environment that are harmful to wildlife, natural and wildlife habitats and mankind. The types of plastic and sources of plastic pollution with its effects were discussed thoroughly. The problem associated with plastic pollution was also examined.

The regulatory framework on plastic pollution was highlighted in detail. This chapter also illustrated to a significant measure how mankind has relied on plastic to the extent that it has become an issue of widespread concern in national and international level. The laws in place to curb plastic pollution in Nigeria were explored extensively here.

Although the threat of plastic pollution has piqued the national interest, it has also prompted several African countries to act quickly to develop legal as well as social measures to reduce plastic pollution in the environment. The legal and social measures of foreign and African countries mentioned above were examined.

5.2 RECOMMENDATIONS.

Possible ways of improving the legislation on plastic pollution:

1. Community involvement is another means of dealing with plastic waste. Each polluter should be made to bear the brunt of their act (polluter pays principle).
2. The government is advice to ban the manufacture of non-recyclable single-use polyethylene bags or carry out research initiated to develop biodegradable bags as an alternative to plastics bags or wraps.
3. The establishment and use of innovative technologies like plastic-to-fuel and waste-to energy must be supported with proper provisions for a buy back can be a means for the government to deal with the disposal of plastic waste.
4. Use of innovative and established technologies like plastic-to-fuel and waste-to energy must be supported with proper provisions for a buy back.
5. Establishment of compensation scheme for households and individuals who obey environmental laws in order to boost household and the nation's economy. Like given

of award of recognition; given financial aid to individuals that obey environmental law either to study or trained as an environmentalist.

5.3 CONCLUSION.

“Sooner or later, we will have to recognize that the earth has rights too, to live without pollution. What mankind must know is that human beings cannot live without Mother Earth, but the planet can live without human”. -Evo Morales. The non-chalancy of the people towards the preservation of the environment as well as that of government towards the enforcement of environmental laws is the main environmental problem in Nigeria. “The only way forward, if we are going to improve the quality of the environment, is to get everybody involved.” – Richard Rogers.