

**INSTITUTIONAL AND COMPLIANCE FRAMEWORKS AND THE
CHALLENGES OF ENVIRONMENTAL AWARENESS AND
MANAGEMENT IN LAGOS STATE, NIGERIA**

BY

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ABSTRACT

Most urban cities have established laws and frameworks for addressing environmental problems. However, few have actually succeeded in alleviating such problems. Lagos State is the most populous city in Nigeria and has been grappling with competing demands for development and maintenance of sustainable environment. While scholars have examined the domestication of federal environmental laws, there is scanty research on environmental frameworks at the State and local government levels. Therefore, specific environmental challenges in Lagos State, policies and legislations adopted for their management, the structures for creating awareness and ensuring compliance, and the inhibitors of the process were investigated.

McNair and Leibfried's Benchmarking Theory served as framework, while a case study research design was utilised. Key informant interviews were conducted with 25 purposively selected stakeholder groups, including the Federal Ministry of Environment (2), National Environmental Standards and Regulations Enforcement Agency (2), Lagos State Ministry of the Environment (2), Lagos State Environmental Protection Agency (LASEPA, 2), Lagos State Parks and Gardens (LASPARK, 2), Lagos State Safety Commission (LSSC, 2) and Lagos State Signage and Advertisement Agency (LASAA, 2). Others included the Lagos State Waste Management Agency (LAWMA-2), Lagos State Waste Water Management Office (LSWMO, 2), Environmental Rights Action (1) and Environmental Health Officers in Alimosho (2), Lagos Mainland (2), and Kosofe (2), local government areas. Data were content analysed.

The environmental challenges included rapid urbanisation and demographic pressures, illegal settlement, defacement of public spaces, poor public attitude towards environmental management, heat waves and air pollution. In response, the State government, over time, adopted hybridised environmental best practices which culminated in the 2017 Harmonised Environmental Law of Lagos State. Though segments of the law were being enforced by different agencies including LAWMA, LASPARK, LASAA, LASEPA and LSWMO prior to enactment of the 2017 law, the task of creating environmental awareness remained unassigned to any of the State's environmental agencies even after it was enacted. Multiple agencies were tasked with creating awareness but each mostly focused on enforcement. Thus, awareness creation was not coordinated to ensure mass enlightenment. Compliance with environmental legislations was hampered largely by judicial bottlenecks as well as politics and culture-sensitive enforcement. Role conflicts among regulatory agencies, lack of environmental bye-laws at the local government level, population density, inadequate manpower among others constituted the main inhibitors of the frameworks for environmental awareness and management in the state.

Lagos State has potentially appropriate institutional frameworks for environmental management. Therefore, environmental awareness needs to be mainstreamed and the incessant role conflicts among regulatory agencies addressed.

Keywords: Environmental awareness and management, Institutional and compliance frameworks, Sustainable environment.

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DEDICATION

This work is dedicated to my late father, Alhaji Ahmed Yoosuf, who preached peace wherever he sojourned during his lifetime.

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This work is a product of diverse collaborative efforts. Several personalities have directly or indirectly collaborated in making this thesis a reality. Their immense contributions and sacrifices cannot be adequately described by mere words. Yet, it is of grave importance to recognise and note their contributions.

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CERTIFICATION

I certify that this work was carried out by Olanrewaju Lateef Yusuf in Peace and Conflict Studies Programme, in the Institute for Peace and Strategic Studies, University of Ibadan, under my supervision.

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CHAPTER ONE INTRODUCTION

1.1 Background to the Study

The world today is in the grip of globalization. The notion of globalisation can be as much a vehicle for conflict and it can spur living amicably together on an encircled globe (Martello and Jasanoff, 2004). Taking the argument on globalisation further, Martello and Jasanoff, contend that it is essential for man's survival. It can advance conflict or encourage peace. Keohane and Nye (2001), put forward that globalisation has to do with a world that is interdependent and having sets of connection that are tied to information flow, financial services, business evolutions and other biological and environmental phenomena.

The discourse of globalization, with focus on inter-connectivity, has been patterned principally along the framing and dynamics of environmental actions since the early 1970s. Such actions focus on the physical environmental issues such as famines, droughts, floods, scarcity of fuel, firewood and fodder, depletion of natural resources, pollution, problems of hazardous chemicals, extinction of wildlife as well as dangers to flora and fauna. These environmental issues have made a case for environmental protection and management. Furthermore, Takacs (1996) noted that the increase of mutual pacts on environmental safety, security and administration in the latter part of the twentieth century is a proof to the fact that comprehensive taking on of shared environmental challenges among the nations across the globe gives credibility to the argument for interconnectivity and proof that the challenging environmental pressure are beyond political borders.

In line with the concept of politically borderless environment, it is tacit that a lot of environmental issues are universal in character (Camenzuli, 2008). The increasingly

politically borderless world produced by environmental coercion raises a pointer to the fact that individualism by states would most likely fail and backfire. Martello (2004) opined that the increasing interconnectedness and worldwide flows generally overwhelm individuals, except when individuals or groups effectively oppose them as forces to be dealt with or embrace them as opportunities to be taken. This interconnectedness is exemplified in the flooding effects of the opening of Lagdo dam in Cameroon and its effects on Delta, Bayelsa, Rivers and Adamawa States of Nigeria. Globalisation can thus offer novel and constructive opportunities for people and government to understand and relate with one another or, it can establish and perpetuate impasses between opposing viewpoints. It can therefore be employed to positively tackle environmental threats or, it can be used to escalate environmental threats.

The planet as an autonomous sphere of limited resources puts pressure on mankind to look for how life and living can have sustainability either in the present or in the future (WCED, 1987). Failure to find common global ground for environmental sustainability would result in environmental problems. Environmental problems have thus become a subject of serious international discourse (Al Gore, 2006). These problems include atmospheric effluence, floods, cyclones, hurricanes, droughts, marine pollution, global warming, ozone diminution, ice sheet meltdown as well as the danger of nuclear and other notable harmful substances that largely threaten flora and fauna as well as human existence. Such environmental issues have assumed a global character as the environment is said to be beyond people's immediate surroundings, sometimes (or perhaps, most times) assuming international dimensions (Amokaye, 2012).

Today, environmental challenges can be related to other societal phenomenon that border on technology, socio-economic dynamics and the attendant solution is expressed in the context of some strategic domains like science and technological expertise, road infrastructure, traffic and agricultural endeavours. The tendency for environmental issues to promote conflict has also come into focus; hence the responsibility for their solution was no longer solely in the hands of environmental policy departments and agencies. In this vein, Leroy & Arts (2006) noted that from the 1990s on, environmental guidelines has

progressively become a multi-sector field, engaging shared responsibilities across different policy spheres, and equally, raising issues about policy synchronisation and integration. Suffice to say that environmental policies, which have become a multi-actor field, have experienced qualitative changes in the roles and interrelations of the agencies involved. It is worth mentioning that currently, there are more than 500 multilateral environmental agreements (MEAs) and a sizable number of international organizations that are responding to environmental challenges; ranging from climate change to continual organic contaminants (Kanie and Haas, 2004).

The Declaration of the United Nations Conference on Human Environment in Stockholm in 1972 acknowledged the call to implement measures for the safeguard of the environment and implored all countries to adopt same. Consequently, developed countries, as well as developing countries, in efforts to address the problems attendant of economic growth, have adopted diverse legal strategies that as much as possible attempt to bridge the gap between meeting the competing demands of urbanization and the overall protection of the environment. These laws are put in place to either mitigate or prevent the threatening environmental challenges which stem from human activities in the constant quest for economic growth and development. These laws, which are formulated to address perceived crisis and environmental problems, often involve many stakeholders with diverse interest and power.

Shared characteristics of environmental problems globally result in legal and regulatory solutions that also share important characteristics in their design and effect. It is believed that the human behaviour, or inactivities, which leads to environmental challenges can be controlled, disallowed, or even tailored and enhanced. Moreover, such activities will cause severe problems to the environment which will in turn affect the occupants (both humans and animals alike), thereby necessitating the laws. This is in line with best practices thus, legal strategies are adopted, 'copied', created or remodelled in a bid to tackle environmental issues globally. This has given birth to the use of technology such as green technology, which is used to describe the application of electronic devices to monitor and conserve the natural environment and, to generally curb the negative impact

of human interaction and involvement in the environment. These are encapsulated in what is referred to in the environmental study and practice parlance as institutional framework for environmental management.

Institutional framework is the systems of prescribed organisational structures, set of laws, policies, measures as well as informal rules, traditions and norms that shape socio-economic performances (GWP, 2008). It involves all laws that preside over socio-economic actions. The human environment is governed by a system of rules and policies to achieve sustainable development. These rules are referred to as environmental laws and policies. Such a framework i.e. rules and policies, is the precondition for the successful implementation of environmental management. Environmental laws are endorsements embodying environmental problems as they broadly impinge on land, water and air. These legislations enforce penalties like paying a fine or ensuring that defaulters serve prison sentence. Such laws are the principal means that have been engaged to support natural resources preservation, effluence control, and other forms of environmental safeguard.

Environmental policy is an effort to convince people to revolutionise their conduct and to fill the society with fresh and more ecologically sound social activities (Glasbergen, 1998). These questions in general include air and water pollution, managing of solid waste and the bionetwork. It also includes the safeguarding of natural resources, wildlife and species in danger of extinction. Environmental law and policies basically consist of federal and state legislation in the form of statutes, local authority by-laws, ordinances, regulations as well as court rulings. In a Yale law school 2014 publication, environmental law includes regulation of noxious wastes, natural resource preservation and allotment. In addition, it can relate to energy, agriculture in general, land usage and real estate development. However, it can also be argued that it has extended to consist of worldwide environmental control, global trade, green justice and climate change.

The focal points of environmental policy focus arose as a consequence of human actions and deeds. It is also important to identify that many of these actions by human beings can have both negative and positive results on the human society. Policies relating to guideline

for lethal substances such as pesticides as well as industrial wastes have also been branded as part of the issues environmental policy seeks to address. Environmental policies can be intentionally engaged to express fully and in part, to watch over human actions and conducts with the aim of foiling the destructive effects on the environment's natural resources and equally ensure that sudden transformation in the environment do not have damaging consequences on human beings (MC Cormick, 2001). Environmental challenges that environmental policy seeks to address generally is all inclusive of air and water contamination, diversity of the bio-system management, the administration of the ecosystem, the fortification of natural resources, wildlife conservation and preserving natural resources for unborn generation. In recent times, environmental policy has dovetailed in communicating issues of environmental concerns through awareness campaigns.

Law, in general, largely shapes societal norms and serves as an instrument for social mobilisation, social engineering, and social justice. According to Afolabi (2005), laws can provide a number of tasks aimed at enhancing the sustainability and management of the environment. Laws can be used to determine possession and admittance to partake from natural resources. Also, laws can be used to preserve resources and laws can be used to prohibit the exploitation of resources and diverse kinds of exploitation. Putting it succinctly, laws can be distributive, conservatory and proscriptive (Afolabi, 2005). Legal rules concerning certain prearranged activities may be achieved through a blend of statutory laws, judicial pronouncements, executive regulations and orders (Afolabi, 2005).

Legal control, however, is dependent on compliance. Non-compliance with promulgated law and policies renders legal controls redundant. Compliance generally refers to conformation to a rule, such as a specification, policy, standard or law (Tattam, 2015). Tattam opined that compliance equals conformation. This means that a rule, policy or standard would have been in existence before the talk of compliance comes up. Similarly, Dole (2007) views environmental compliance as the adherence to environmental laws, regulations, and standards. He sees compliance as the complete carrying out of environmental laws without any deviation whatsoever. Regulatory compliance explains

the goals that organisations desire to attain in their resolve to certify that they are conscious of and have taken steps to act in accordance with appropriate laws, which can have civil and criminal implications (Tattam, 2015).

Environmental laws and policies were intended in response to the awareness that the well-being of mankind and the environment have received poor protection (Aniyie 2010). Environmental law is devoted to the strengthening of the natural environment and by implication, form the bedrock on which humanity's existence is premised. It transcends national boundaries (Ajomo, 1994). Therefore, environmental law is the international, as well as regional, response to environmental problems (Thornton & Beckwith, 2004)

In the same vein, the subsisting laws of environment in Nigeria are an aspect of public law containing regulations and guidelines that can guarantee environmental protection (Osinbajo, 1990). Nigeria has abundance of agriculture, mineral and many natural resources. Also, Nigeria is a big country, but facing the challenges of environmental degradation (Olekesusi 1998). Environmental policies and laws in Nigeria date back to as far back as 1916. It was in the year 1916 that criminal code was established to prohibit air and water pollution (Act 8, 1916 Criminal Code). In the early evolution of institutionalised guidelines for the management of the environment, there were no proper criteria from a scientific view point regarding the extent of wastes and pollution. Taking into consideration the early progression of institutionalised guidelines for environmental activities in Nigeria, there were no scientific benchmarks and criteria for the management of toxic wastes and pollutions. Consequently, the Federal Environment Protection Agency (FEPA) was created as part of its strategy for the coordination of issues that border on the environment. FEPA was established on the heels of the Koko waste saga in the old Bendel State of Nigeria in 1988 (Adelekan, 2009)

There are roughly fifty Federal legislations directly linked to environmental concerns in Nigeria (Eneh, 2011) and the most recent of this legislation is the Act that established the Standards and Regulations Enforcement Agency which was established in 2007. The powers to promulgate environmental laws are also vested in the federating states of

Nigeria, including Lagos State, because environmental issues are not restricted to the Executive Legislative List. Hence, the institutional frameworks for environmental protection are grounded in the Nigerian constitution as well as various State constitutions but, the level of awareness and compliance of the citizens with regards to these laws and the environmental impact of degradation is yet to be ascertained.

This study therefore, examined the institutional and compliance frameworks for environmental awareness and management in Lagos state by juxtaposing global best practices with the environmental laws and policies. This was achieved by examining the impact of environmental institutions, laws and policies governing environmental issues in Lagos state in correlation with best practices as obtainable in the world as well as interrogating the level of environmental awareness of the State citizens.

1.2 Statement of Problem

Largely, developing countries have established laws and instituted governmental structures targeted at addressing their environmental issues. All the same, not many have addressed how the problems can be eradicated or alleviated (Bell, 2002). Even though committed to the objectives of preserving and enhancing the quality of the environment and passing of laws and policies to realise this objective, Nigeria is yet to overcome the challenges associated with the compelling demands of urban development, as well as helping to conserve the environment. Experience from Nigerian environmental policies and implementation shows that the traditional *command-and-control* system to pollution abatement has not produced the desired result both environmentally and economically wise. Part of these lapses could however be due to the difficulty in predicting, with some level of precision, the environmental impacts in different areas.

There is a plethora of literature on environmental management in Nigeria. Scholars such as Integra (2008), Olekekusi (1998) and Oyefera (2013) drew attention to the need to domesticate federal environmental laws at State and Local government levels. However, their scope of study did not cover the need to interrogate the capacity of the state and local governments to formulate environmental policies given the uniqueness of their immediate

environment. Thus, little attention is given to the capacity of the state and local government authorities to implement environmental laws or, its capacity to formulate environmental policy in literature and practice. An examination of the environmental policy cycle in Lagos state with particular emphasis on multi-sectoral and multi-governmental input is therefore imperative. Similarly, there is also the need to beam the flashlight on effectiveness and coordination among relevant institutions saddled with environmental management in the state in line with global practices of establishing enduring institutional processes within government, from national to local levels, and within the wide stakeholder community.

Oyefara (2013) in his study on *Good Governance and Environmental Sustainability in Lagos State* observed that extant studies have scarcely asked why the available environmental laws and policies have failed to mitigate environmental challenges in Nigeria, especially in Lagos state. Somanathan (2010), from a global perspective, attributes some of these reasons to issues of poor institutional and compliance environmental frameworks. He further argues that the low levels of institutional frameworks are often created by low-levels of public awareness about depleting the environment and environmental laws. There is a need to test the veracity of these claims using the Lagos State experience.

Although Ifeanyi (2002) and Amokaye (2012) in their study attempted to give an answer to the issues raised above, their focus was more on general environmental laws in Nigeria and not specifically Lagos state which has peculiar environmental problems. Attempts at a detailed examination of institutional and compliance frameworks and the challenges of environmental awareness and management in Lagos state have been relatively rare. This study therefore aimed to carry out an in-depth analysis of environmental laws and policies in Lagos state with the view of examining factors which facilitates either positively or negatively the process and mechanisms for environmental awareness and management in the State. Furthermore, the study would examine various laws and policies formulated by the Lagos state government and juxtapose it with the national laws and global best practices on the environment.

1.3 Research Questions

These research questions guided the study:

1. What are the specific environmental challenges existing in Lagos State?
2. Which policies and legislations were adopted in response to these challenges?
3. What are the existing frameworks for environmental awareness in Lagos State?
4. In what way has the process and mechanisms for environmental awareness and management in Lagos state been inhibited?

1.4 Aim and Objectives

The aim of this study was to examine the institutional and compliance frameworks and the challenges of environmental awareness and management in Lagos State, Nigeria. The objectives were to:

1. Investigate the specific environmental challenges in Lagos State
2. Examine the policies and legislations which had been adopted in response to these challenges in the state
3. Identify and examine existing frameworks for environmental awareness in Lagos State
4. Identify the inhibitors to the process and mechanisms for environmental awareness and management in the state.

1.5 Scope of Study

The study spans 16 years in scope, which is between 1988 and 2017. Environmental management in Nigeria can be classified into two epochs: before 1988 and after 1988. The pre-1988 era of has to do with law that the colonial administration promulgated (Ebomhe, 2006). Environmental laws became formalised and environmental awareness over such laws started around 1988, when wastes discovered to be toxic where dumped in Koko, old Bendel State. The laws and policies have evolved over the years hence the study aims to track the changes in environmental management from 1988-2017. The choice of Lagos State became significant due to the geographical situation of the State as well as the population strength.

The activities of institutions, for instance, Federal Ministry of the Environment, Lagos Environment Ministry, Local environment committees and National Environmental Standards and Regulations Enforcement Agency (NESREA) in environmental management would be examined. Likewise, activities of Civil Society Organisations (CSOs) on environmental awareness and management was examined. Environmentally contiguous areas outside the State were cited. The study drew extensive data from such State to enhance the understanding of the subject matter.

1.6 Significance of Study

There is a renewed emphasis on understanding environmental disorder the world over. This follows the increasing change in global environmental issues ranging from climate change to global warming to environmental degradation. A plethora of literature exists on environmental disorder and environmental management in Nigeria but there is scanty literature, if any, that interrogates the influence, or otherwise, of environmental global best practices on Lagos State. Extant studies have not attempted to interrogate why existing institutional and compliance strategies for managing environmental awareness and management are deficient. Consequently, by examining the institutional and compliance framework for safeguarding of the environment and juxtaposing it with global best practices, the findings of this study would help identify gaps which exist between awareness and management framework for compliance, enforcement and prosecution. the finding of the study will further suggest how best to strengthen these laws and this would ultimately enhance and sustain environmental sustainability in Lagos state and Nigeria. Thus, this study is an object of academic investigation and with great policy, social, economic and academic relevance.

1.7 Operational Definition of terms

1.7.1 Environmental Awareness

Environmental awareness has to do with the interpretation of languages that are technical within the discipline of natural science or other associated areas of study into terminologies that can aid the understanding of the layman (Minkova, 2002). This is

achievable majorly through environmental education. Importantly, environmental awareness includes synthesising knowledge pertaining to modern-day issues distressing nature both at the local vicinities and outside, uncovering actions that can create distinctions in ones setting, and awareness of themes that border on individual environmental thinking (Bocher, 2005). In the light of this study, environmental awareness would be used generally in terms of environmental consciousness and education. Environmental awareness would be referred to in this work as a way of awakening the consciousness of a healthy environment in all and sundry.

1.7.2 Environmental Management

Environmental management means management of all activities or interaction and the impact of humans on the environment, both natural and otherwise. Environmental management as a term would be specifically used to encompass environmental research, planning, protection, education, monitoring, assessment, conservation and sustainable use of resources.

1.7.3 Environmental policy

The problems with the environment are closely associated with other field of endeavours bordering on technology, social and economic issues. Equally, answers that have proffered are connected to domains of policy making like infrastructure, agriculture, technology, traffic and finance. Environmental policy implies the devotion of governments or organisations with regards to guidelines, regulations; policy approaches regarding issues that border on environmental sustainability. Many of these issues revolve around plant/animal species that are endangered, the pollution of water/air, management of solid wastes, biodiversity maintenance, management of the ecosystem, wild life conservation and the natural resources protection (McCormick, 2001). These policies can influence or regulate the activities of people and equally reduce to the barest minimum human practices that are harmful to the environment. In this study, environmental policy refers to an action course proposed by a government that focuses on preventing, mitigating or management of challenges emanating as a result of the impact of humans on the

environment which has in turn brought about negative effect on the society and the human value system.

1.7.4 Policy Cycle

A cycle splits the policy guidelines procedure into succession of phases, beginning with a hypothesis, where administrators who design policies embark on reflecting policy problems, culminating into a theoretical endpoint, which has to do with policy implementation. The successful outcome of the implementation will determine further steps to be taken by the policy makers. The policy process in this work would encompass identifying policy gap, designing and legitimising a policy, implementation of such policies and evaluation of the policy. Policy cycle would therefore be referred to in this work as the total processes involved in policy making from the aims identification stage to the evaluation stage.

CHAPTER TWO

Literature Review

2.1 Conceptual Framework

2.1.1 Legal Framework for environmental awareness and management

There is a strong recognition in the world today that environmental protection requires a collaborative and concerted effort from all and sundry. A number of laws, policies and statues have therefore been raised to govern environment awareness and management worldwide. Top of this legal framework border international law that contains procedures, rules and guidelines that are binding and obligatory among nations (Triggers, 2006). However, are these international laws really international laws? Without ratification, can such a law be binding on nations which refuse to ratify such laws? Some states re-define such international law to fit their foreign policy but implement and handle such laws differently when it related to domestic issues. If international law is the law between nations, it means such laws would be binding on both nations without favouring one nation above the other. To this end, scholars such as Romm (2002) posit that probability of balance of implementation may be a far-fetched possibility if it involves nations which are from different sides of the international divide, that is, between the nations in the global north and, the nations in the global south.

The essential foundation or rationalisation with regards to international law takes respite on autonomy and comity McGraw (2010). Autonomy has to do with the freedom of a state to conduct its affairs without external interference. In international terms, a “state” or “statehood” can be defined as an effectual coordination of government and having power over of a specific territory and having the capability of entering into international relations. Comity can be interpreted to mean the reciprocal reverence and acknowledgment of national good, laws and traditions by states (Mcgraw, 2010). International law must therefore respect state sovereignty above global best practice

hence, McGraw (2010) observation perhaps lays a foundation, or excuse as it were, for states to ignore international law, ratified or otherwise, and lay such at the doorstep of sovereignty.

Nevertheless, Fisher (1999) observes that the on-going obligations of countries to international environmental development have four recognisable phases. In practice states have more responsibilities in the area of protecting their environments, more ensuring the protection of freedom in the territory. These phases include: the 'permission' stage where states are not restricted because of the doctrine which allows states to have enduring influence and control over their natural resources and environment: the second phase is known as 'restriction' which has to do with asking states to stop activities that are capable of hurting marine or aquatic life (depositing solid wastes in the ocean): the third phase are harmful activities on the environments beyond the natural boundaries of states are also restricted: the fourth phase has to do with the restriction of activities that are harmful to within states and their boundaries (for instance the protection designated heritage sites of the world). The identified phases alternatively are known as "themes" because of some overlapping paradigms and the lack of lucid transition involving them. The obvious fact is the dominant tendency of enforcing tough commitments on states leading to a restriction on the principle of total sovereignty of the state. In the context therefore of localising laws, the concept of the greater good therefore comes into play if we go by Fisher (1999) analogy. Hence, sovereignty is purposely downplayed for the greater good. Nevertheless, it is yet to be defined if sovereignty would come into play as against greater good when it involves a nation which is not a signatory to an international law.

The field of law termed International laws is wide and an aspect of it is global environmental laws. The call for international environmental guideline for addressing environmental, economic and social related issues matters that are causing global environmental catastrophe has given rise to a global environmental governance (Paradell-Trius, 2000). It is imperative from the above to see environmental law as an aspect of international law which intends to tackle environmental crisis in an interdependent manner. However, the case of sovereignty and greater good still exists. Wiener (2001)

posits that the idea of global environmental law evolved from individual states. He engaged the initiative of global environmental law in describing the progression of environmental law commencing from a distinctly national endeavour into an international schema. The success of a law in a nation-state grows over time to be accepted as the norm and standard globally. One can go further to argue that such laws would respect the sovereignty of the state where it evolved above other states who adopted the law after it has taken on an international standard given it an origin-biased view.

Global environmental law can therefore be examined through three schools of thought. This is through conscious attempts at integrating, harmonising, converging and transplantation (Yang and Percival, 2009). According to Watson (1993), transplantation focuses on duplicating and adjusting of important aspects of specific doctrines of law from one country to another. Transplantation is hardly done if the law had been proven a failure in the originating country hence, an important feature of transplantation is the success or degree of success ascribed to a particular environmental law from the originating country.

According to Hansmann & Kraakman, (2001) the term convergence describes the way distinct legal structures, such as biological classes of species, can develop into becoming more alike not for the reason of purposeful action of copying, rather it is in response to analogous exterior demands that are basically environmental. Integration and harmonization imply the efforts of many countries at standardising their legal environmental legal approaches from the angle of cooperation. Formal institutions such as the World Trade Organisations (WTO) exemplify multi-country cooperation for formal international treaties and institutions (Yang and Percival, 2009). However, of the three concepts, countries in the global south focus more on transplantation without recourse to indigenous environmental situations or peculiarities. Through multi-lateral agreements, countries on both sides of the divide have come in contact and international agreements are ratified based on the integration and harmonisation principle. However, the extent of harmonisation is still being contested by scholars such as Hansmann & Kraakman, (2001). This is based on evaluating the degree at which harmonisation would go in balancing such environmental laws among parties.

The following mechanisms illustrate the development global environmental laws: the virtual widespread acceptance of environmental impact evaluation procedures in nationwide regulatory administration; the involvement of civil society in the improvement and execution of environmental principles; the rising global and multinational regime central to global climate alteration. (Yang and Percival, 2009)

Addressing the consequences of global inter-dependence in relation to transnational regulations in the field of finance, environmental protection and social integration are predicted on outcomes that cannot be managed effectively through separate national regulatory and administrative methods. Responding to these challenges, expansive varieties of global regimes of regulation have been established by international organisations, multinational businesses and Non- Governmental Organisations in the context of transnational regulations or regulatory cooperation (Stewart, 2005). Conventionally, international law considered relevant and obligatory for state actors alone instead of depending on private persons and their perceived activities (Hunter, 2007). However, like Stewart (2005) pointed out, in contemporary times, non-state actors are now directly affected by international laws and such laws can impose requirements on governmental and non-governmental stakeholders which they must comply with.

Consequently, international legal instruments geared towards dealing primarily with environmental issues or having very important clauses related to them are close to nine hundred. This proliferation of legal instruments is likely to continue (Weiss, 1993). This proliferation was borne of the facts that large environmental improvements cannot be reached without costs to society (Elofsson, 2008). These improvements are therefore checked and monitored through legal frameworks which include environmental laws and policies. Thus, environmental laws and policies aim to mitigate the cost of environmental improvements in order to promote environmental security. Environmental Law can therefore, be viewed as a set of rules and conventions focused on the protection of the environment from pollution and the wasteful depletion of natural resources while at the same time ensuring sustainable development. Gradual evolution is one of the important characteristics that is associated with the laws and policies of environmental protection.

Therefore, recently, environmental issues have achieved some measure of importance and have witnessed a season of consummate change.

There are many approaches to gaining insight into activities that concerns regulation. Environmental measures are basically borne out of real or perceived damages caused by the social attitudes of people, culminating in pollution and degradation. These measures tend to attract some significant costs on the sources that promote the activities that are causing pollution. This is done through the polluter pays principle. Polluter pays principle in specific terms states that individuals who generate hazards ought to integrate the expenses of managing such hazards into their cost of operation; executing an operating stewardship programme is an example. The principle is embedded in the 1992 Rio declaration which categorically states that those who pollute the environment must shoulder the cost of managing such pollutions (principle 16).

Spirited effort to provide a theory of regulation started with Stigler (1971) and was further developed through Peltzman (1976). This method perceives regulation as a form of transfer of wealth and not as an avenue to encourage the overall of the environment by reducing efficiency losses as a result of market failure. In Stigler's observation, regulation is a product of the industry and the design as well as operations is principally for its benefit (Stigler, 1971). The "capture theory" of regulation explains that regulated industries as primary beneficiaries and not as the victims. Hence, the approach of 'captured' agencies takes a pattern of straight financial support/subsidies or less direct support like building barriers of entering into the regulated industry.

A striking representation of environmental regulatory option is one that allows various interest groups contend with each other through a political procedure in order to justify the depth and pattern of environmental policies. This strategy is multi-sectoral through which environmental regulations are allowed to be solely under government control but is rather based on a consensus regime. The challenge with this system borders on the position that a regulatory outcome seems to defy rational justification because it is predicated on a constant and unpredictable combination of forces that are distinct in nature (Stigler, 1971).

A multi-sectoral approach although desirable has a tendency to lead to an undesirable outcome; however, this work would explore this approach in relation to the state, Lagos, where the research is carried out.

Executing environmental legislation by environmental regulatory bodies' gives additional opportunities for differing interests to fit into the real design, management, and ensuring environmental policy are enforced. Environmental regulatory authorities can take weak environmental actions or enlarge the extent and success of such actions by ensuring that the precise environmental actions are enforced selectively. Some of these environmental measures have provisions that give room for regulator(s) to bargain with the legislators on the possibility of determining the probable structure and scope of compliance. The interpretation of the intent of the environmental legislation and the level of execution by administrative bodies is often left at the mercies of the courts hence, key decisions with regards environmental legislations often terminate in the domain of the judiciary. This institutional framework interplays with some of interest groups which must then be the focal point of the examination of the political economy of environmental guidelines.

This broad mechanism has is established through some early conditions that seeks to describe the factors responsible for environmental policies and why it is seen as inferior, inefficient rather than embarking on actions that economic analysts suggest (Peltzman, 1976). Take for instance the theory of interest groups and environmental outcomes that posit that real choice of regulatory mechanism is fundamentally the result of an interactive a process between the makers of policies and different groups of interest which helps to exact pressure on the decisions of makers of policies, though not limited to state-actors. Structures that are institutional are of focal importance when it comes to environmental decision-making processes. An important aspect of this structure has to do with the vertical dissection of policy-making tasks at varying levels of government based on applicability to different countries.

The processes that are connected with management of environmental policy are intricate. The actors involved range from individual to organizational, governmental and non-

governmental. Issues such as the effects of water, air and land pollutions are addressed by environmental policy processes. Such concerns also involve saving of the habitat and species, including resources sustainability, climate, economic growth which are necessary for the survival of humans. Additionally, the policy instruments and institutional actions that govern the issues that have been identified vary and these ranges from regulatory activities, motivation, user education promotion, mutual concurrence, administrative diplomacy as well as voluntary programs. These measures are designed and executed by actors within the local environment and state level. It also extends to the national, regional and international stage.

There is an increased awareness in the international community on the importance of observing and studying how to reduce environmental risks. Consequently, countries have advanced from international accords which basically address in depth study, exchange of information, monitoring to agreements that are contemporary and which entails reducing emissions that can pollute the environment and effect a change in technological control. Developing a fresh definition that integrates the nuances of equity within environmental security is crucial. In the first instance, there are no political boundaries when it comes to global environmental challenges because the various parts are interdependent both temporarily and spatially. As a result, countries have been stripped of their capacity to offer protection of their environment and their independent drives have suffered isolation. Accordingly, nations have been given incentives to reach an agreeable accord on the equitable and efficient parameter of distributing the tasks of keeping the planet well maintained (Weiss, 1993). This has given rise to global interdependency on environmental based issues hence, environmental laws.

All over the world, the objective for environmental regulation are generally the same. The protections of the health of human beings as well as making sure that the environment is secured are cardinal goals. According to Brinson (2006), because humans have a propensity to dwell in conditions that are similar and coupled with the fact that industrialisation has motivated societies to deploy resources in related ways, effluence and diverse patterns of environmental dilapidation are impacting negatively on the

environment. Thus, environmental degradation has become a global phenomenon. Although scholars such as Bradley (2003) question the globalisation of environmental problems, evidence from recent events have reinforced Brinson (2006) position that environmental issues have shifted from a local menace and taken on an international dimension. To this end, the need for environmental laws that has a global outlook is imperative. The current universal environmental arrangement overlooks political limitations, therefore, it is imperative that nations having the capacity to affect the international environment do so within the standard structure in order not to circumvent the rationale(s) of the agreement. Presently, many countries have refused to implement the agreements at a national stage. Similarly, some countries that are developing are budding progressively and are also concerned with the outcome from the economic and social point of view. It is also wont to affect the agreements on their development. In essence, enforcement of environmental legislation is a critical challenge (Valentine and Smith, 2011).

International environmental law has its critics (Bradley, 2003), and this often times is based on the perception of international environmental laws to be big enough to regulate environmental issues in developing countries yet not big enough to regulate developed nations. China is reputed to be the world's second biggest dispenser of greenhouse gases, yet it was excluded from the Kyoto Protocol the world's immediate response to global warming and chlorofluorocarbon (CFC) emission (Valentine and Smith, 2011). The faultiness of Bradley (2003) argument however lies in the rejection of some protocols by developing countries also. India, for example, was also exempt from the Kyoto protocol hence, the weakness of the global environmental laws may be in its inherent non-binding nature. Some countries like the United States of America believe that complying with some mandates set by global environmental laws have the capacity to negatively affect her economy with the dismissal of employees and increase in price for the consumers.

President George W. Bush while addressing the Congress in 2005 posited that the decision of the United States not to embrace some international treaties, Kyoto protocol precisely should not be read by other countries as an abdication of responsibility. He strongly

believed the treaty was flawed. It however remains unclear if the alleged flawed treaty would still be considered flawed when applied to developing nations.

In the same vein, Bradley (2003) affirms that one of major source of concern border on the transfers of authority to international institutions. He opines that giving power to an international body to decide how to regulate the environment of a sovereign state should cause some raised eyebrows since such transfer of responsibilities was not accounted for in many states' constitution. He however did not specify if his view was particular to developed countries or if it was a general observation. Of a truth, global international laws does superimpose environmental governance on countries that ratify the diverse treaties and sometimes, the requirements may override the country's constitution, most especially when no provision for such was made in the constitution. Anderson and Grewell (2001) believe that growing international environmental guidelines/regulation decreases answerability which emanates from a country's domestic structure of check and balances. It also increases the chances for generating international tension.

It must be noted that the global initiatives are not superior to local procedures when it comes to environmental issues. This is why Leroy and Arts (2006) conclude that the term internationalisation has nothing to with local participation in the area of policy making and the mounting significance for participation at the global dimension. It does however translate to the multi-level character of environmental policies. In other words, policies are increasingly intended, examined and put into operation at diverse stages of government concurrently. In these phases, different types of definition, as used to tackle the problem, permit dissimilar groups to take part, and function alongside diverse regulatory mechanisms. It is likely that they uncover new approaches coupled with the probability of having strategies that are conflicting. In addition, there is likelihood to discover fresh opportunities for some interest groups with to interventions at varied levels (Leroy and Arts 2006). This approach however creates a gap for conflict hence, the need for policy coordination. The efficacy of the policy is dependent on the awareness given to such policy. Policy co-ordination without a corresponding awareness of such resultant policy would lead to policy fail hence the need for environmental awareness.

The persistent degradation of the environment today calls for serious attention particularly in the Third world countries (Shofoluwe and Sam, 2012). The survival of man is endangered in the advent of environmental degradation. This has triggered debates on methods and ways of stemming degradation. A typical example of such debates was the UN sustainable development global meeting where the outcome emphasised education that will ensure environmental security. The conference outcome also provided ways in which education contributes to enhancing people's ability to overcome challenges relating to the environment. In addition, the conference concluded that education is indispensable when it comes to creating and achieving safe environmental and ethical alertness, attitudes, values and developing behaviour that is in tandem with sustainable development as well the public taking part in decision –making (Chapter 36, UNEP, 2007). Education is being propagated as a mechanism for dealing with the degradation of the environment.

According to Potter (2010), environmental education can be used to stir the interest of the public on environmental awareness. In the same vein, the State of the Environment Report on North Carolina mentioned that there is need for adults and children to get acquainted with the workings of the ecological system. This assertion is borne out the fact that people are no longer in tune with resources that guarantees their survival. These resources include food and drinking water. The life and health of every human being is closely tied to the healthy state of the environment and how humans have been able to successfully manage the problems that are associated with the environment (North Carolina State of the Environment Report, 2011)

The report made case for environmental education and awareness to every stratum of humans. Furthermore, the report opines that the well-being of the human race is dependent on a healthy environment and the consciousness of maintaining such an environment has been lost. Hence, environmental awareness is a way of awakening the consciousness of a healthy environment in all and sundry.

Somanathan (2010) observation shows that bad environmental practices in countries that are developing is linked to little or no environmental institutional framework. He reasoned

further that the little levels of institutional framework are products of political machinations and it is also connected to the lack of awareness on the part of the public in respect to their countries environment. Furthermore, Somanathan (2010) posits that in order to address some of the critical problems facing the environments in the global south, it will be critical to deploy the tools of education and other awareness initiatives. This is a strategy that will conform to agenda 21 and championing the need for environmental awareness. Similarly, Ogunleye (2004) stated that consumer's environmental consciousness is low and opined that it would take more than regulations and rules to awaken such consciousness through environmental education.

An understanding of the operations of the natural structures, coupled with their interaction with the social systems of humans can be referred to as environmental awareness (Mancl, 2003). Madsen (1996) explicates it is important to have strong environmental education and awareness in order to guarantee the protection and restoration of the environment. He further stress that the public ought to have fundamental understanding of the problems facing the environmental. Environmental awareness basically implies knowledge about environment hence providing information about environmental issues to the public. It however goes further and covers mind-set, ideals and essential skilfulness to resolve problems that are related to the environment (Sengupta and Das, 2010). Environmental awareness is aimed at understanding and appreciating the relationship (symbiotic or otherwise) existing between mankind and also taking into consideration the bio-physical environment; therefore, it ought to form an important aspect of education for the society. Developing and societies that are already developed need the formal and informal aspects of environmental awareness. It is important to incorporate the knowledge of the environment, how it can be conserved and being aware of all threats, coupled with the advancement of sensitivity to the natural environment, as well as the development of appropriate approach towards the environment (Desa, Abd Kadir and Yusooff, 2012)

Environmental awareness, according to Minkova (2002), is hinged on decoding language of technicalities in the natural sciences and in fields that are closely linked into notions that can be easily understood by people who are within the science discipline. It must be

mentioned that considering other factors, awareness covers current conditions that are impacting on nature, but at the local and international level, ascertaining measure that are capable of making a difference in the environment, and awareness of the self with regards philosophies that personally specific to the environment (Bocher, 2005). A vast area of study interest being covered by being environmentally conscious includes instituting the way individual qualities or way of life can affect an individual's attitude to the environment coupled with other attendant behaviour (Schmidt, 2007). Therefore, attitude can be explained in the context of individual perception as it relates to some important situations or conditions that can be platform to appraise the reaction to such conditions (Prislin & Ouellette, 1996). Schmidt (2007) posits that the commencement of better awareness of the environment is expected to reinforce the bond involving pro-environmental position and behaviours. In the thoughts of Geok et al (1998), attitudes towards the environment is situated within three concepts; environmental commitment, concern for the environment and attitudes towards the environment (Geok et al, 1998).

The casual model of environmentally relevant behaviour was put forward by Stern (2000). Firstly, behaviour that are relevant to the environment is anchored on a fundamental trajectory that involves both contextual and personal factors; Secondly, an inclination geared toward pro-environmental actions lay midpoint of the sequence; Thirdly, settings that are natural, the commencement of attitudes that are pro-environmental is classically impacted through numerous interrelating concerns of the environment, beliefs, abilities, information and some outside influences that foster or obstruct scrupulous activities; fourthly, when the external conditions are weak, it has the capacity initiate a strong attitude-behaviour matchup. Furthermore, Kollmuss and Agyeman (2002) defined responsible behaviour towards the environment in the context of conscious pursuit to reduce the negative results of people's activities on their natural habitat. Hence, when people are exposed to issues that affect the environment and the attendant positive outcomes that will be visible to all when human attitudes towards the environment is responsible (Hungerford and Volk, 2005). Their assertions point to the fact that it is only when people are fully aware of the problems of the environment that they will act in responsible ways towards it. Until lately, the awareness of people was never taken into

consideration in the bid to propagate good environmental policy. Nevertheless, this instrument is in fact imperative, with the becoming prospect strong tool within in environmental domain (United Nations, 1992).

Environmental awareness traditionally does not involve the bio-physical environment and resources that have been tagged as heritage resources. They are not isolated from the political, economic, cultural social and economic facets. Emphasis is also laid on the approaches that is beyond increasing awareness by making use of messages, snowballing into establishing the ability of learners to advance from present actions into more functional actions that will enhance practices that are sustainable environmentally. It flows from environmental consciousness to environmental action to promote a healthy environment. This is majorly done through communication. Consequently, environmental awareness entails communication drives that can reach several persons, inventing messages and choosing selecting or generating the suitable resources and avenue that will enable the audience to be reached. It has been mentioned earlier that the objective of being aware of the environment is for individuals from all life endeavours to be conversant with issues on environmental awareness that are linked with domains not excluding the elements that are non – living. It includes plants, air, water, land, animals, soil, as well as humans. Furthermore, it has the goal of helping people to have the awareness of the surroundings whether it is built, or affects the activities of human beings in the environment. Therefore, though awareness is important, it is not enough to engender social change (Sasekapa and Kaapstad, 2011)

Environmental awareness is increasingly local and international, especially with regards to the degrading and pollution of the environment which is as a result of the economic and developmental activities of human beings. These activities are threats to animal, fauna and flora lives. They impact on biodiversity and greatly affects the general sustainability of the environment (Ifeanyi, 2002). In 1988, a ship from Germany deposited toxic wastes in Koko Port (old Bendel state). It was after this discovery that Nigeria became environmentally conscious. Prior to the discovery of the toxic wastes in Koko, many lives had been lost. One can therefore say that the beginning of environmental awareness in

Nigeria was 1988. Ogunleye (2004) opined that the increase in environmental awareness is yet to be integrated into developing nations' consciousness. It was his submission that many countries have not been able to develop and aggressive promote strategy that will bring about environmental awareness and education. Therefore, environmental stewardship is lacking because the attitude of citizens shows that they are not conscious of the challenges confronting their environment. To buttress his point, he further stated that statistics have shown that many Nigerians fail to use the officially recognised dumpsites for their wastes and a way to tackle this trend is through environmental education (Ogunleye, 2004). Although the consciousness of the environment rose in 1988, environmental degradation still persists in Nigeria.

For this study therefore, legal framework for environmental awareness and management is conceived as raising the consciousness, harmonising the laws and implementing the said laws for proper and acceptable environmental condition.

2.1.2 Institutional Framework for Environmental Awareness and Management

Managing the environment and driving environmental awareness is made possible by situating both in a framework. The framework helps in defining what to manage, how to manage and how to drive environmental awareness. This is made possible by a framework which includes the institutions saddled with the responsibility to manage the environment. Institutional framework is a framework detailing institutions saddled with responsibilities to make, implement and manage environmental laws and policies. This is achieved through environmental mainstreaming. Dalal-Clayton (2009) defined mainstreaming as the informed and deliberate addition of appropriate environmental concerns into institutional decisions. Such decisions have impact on investment drive, national plans for development, policy design and execution. Hence, environmental mainstreaming is driven by the aim to minimise, as much as possible, environmental risks and problems on one hand and, enabling stakeholders to discuss and pioneer activities that tackle foreseeable environmental problems and potentials on the other.

Environmental mainstreaming is interpreted by the UNDP-UNEP Poverty-Environment Initiative particularly as incorporating poverty and environmental connectivity into the development strategies of a nation. This will also include the processes and resultant effects which can be in the context of poverty reduction strategy (PRSPs) or MDGs framework for execution (PEI 2007). Thus, UNDP-UNEP view of mainstreaming of the environment as ensuring that countries input poverty and environment into their developmental plans. However, the aim of mainstreaming seems to be caged into a plan meant only for developing countries while developed countries are left out of the loop. The focus on poverty-environment inter-linkages makes assumptions that poverty is absent from developed countries and this limit mainstreaming and perhaps creates apathy on the part of developing nations. According to Reed (2008), developing countries have often argued that the environment is an expensive luxury which diverts resources from more productive uses.

However, some scholars see environmental mainstreaming as building the capacity of environment authorities and environment interest groups to engage with the 'mainstream' while at the same time creating a system of environmental safeguards such as EIA (Brown and Tomerini, 2009). This definition tends to focus on establishments that are dedicated to issues that border on the environment and it shifts focus from just developing countries to both developing and developed countries. Although Brown and Tomerini, (2009) definition differed from the viewpoint of UNEP-UNDP, environmental mainstreaming from the definition beams its searchlight more on problems and as a result fails to manage effectively and deal with the challenges confronting the environment positively.

According to Bass (2008), environmental mainstreaming is an unclear terminology which is used for different and changing (or sometimes unspecified) intents by many people. Bass (2008) believes the term is vague and perhaps not specific in approach. A constant definition would suffice in his opinion and such definition should be specific in its intentions. According to PEI (2008), embracing such a definition gives the impression that environmental mainstreaming is a thing that is optional. It can also be interpreted to mean the environment is perceived in the context of policy procedure. There is a general

weakness in the definition because it fails to take into consideration the processes that are involved in the development of environmental policies. It is the belief of some scholars that environmental mainstreaming should shift attention from mainstreaming being optional to being mandatory. A paradigm shift from reactive environmental safeguarding to pro-active environmental safeguarding would therefore be needed.

The Global Environment Facility (GEF, 2014) is of the view that the rationale behind the mainstreaming of the environment is germane because of the socio-economic dimension. In addition, there is a synergy between the environment and development. This synergy is further sustained through political institutions. It must also be mentioned that environmental sustainability and environmental quality are important if an economy will function optimally. Therefore, it is important to policy development and development planning should integrate environmental mainstreaming.

Dalal-Clayton (2009) stresses that the environment is increasingly gaining attention because they are important for formulating security, sustainability and stability policies and further emphasized that the putting the need of the environment in the spotlight would require incorporating opportunities that incorporates sustainable engagement of the resources of the environment. It will take into consideration challenges that border on the degradation of the environment. Therefore, environmental mainstreaming aims to integrate environment and development. This integration is important in recent times most especially with the daily growing pressure on natural resources.

Scholars such as Dale & English (1999) have highlighted the negative impact of unimpeded pressure on natural resources and its attendant effect on the environment and development. Thus, ways must be found to mitigate environmental degradation which occurs owing to pressure on natural resources. As opined by Dalal-Clayton (2009), environmental institutions need to synergise with other institutions due to the fact that other institutions treat the environment as an externality. Since all strata of human endeavour are somehow tied to the environment, environmental institutions must therefore

mainstream with other sector of the society with the aim of mitigating environmental degradation and maximising environmental assets.

Environmental mainstreaming has a tendency to enhance decisions, as long as there is a framework for such decision making which is institutional and systematic. Hence, a viable environmental framework, will be instituting laws, policies and institutions, environmental mainstreaming that will help to strengthen environmental based decision making. Therefore, environmental mainstreaming is essential for the any developmental process, including organisation and individuals who make the policies. It is also germane to all levels of national development.

The climate change phenomenon has assumed the driver seat in environmental discuss around the world and this in turn has rubbed off on environmental mainstreaming. In the work carried out by PEI (2008), respondents saw mainstreaming as a climate change issue. Hence, Dala-Clayton (2009) suggests that climate change has taken the shine of environmental mainstreaming. He posits that a lot of attention is been given to climate change which eventually crowds out most of the other environmental dimensions and invariably limits environmental mainstreaming to climate change. Climate change is a subset of environmental mainstreaming and not the arrowhead. Issues which naturally tops environmental discuss abound and the seriousness of the issues such as waste management, resource depletion and pollution are issues other than climate change which makes environmental mainstreaming key to national development. The UNEP-UNDP (2007) definition of environmental mainstreaming keys into the goals of this study partly in the aspect of catering for environmental related problems in the constitution, development of relevant agencies and bodies with managing the environment and development plans of all countries as against developing countries suggested by UNEP-UNDP.

2.1.3 Compliance Framework for Environmental Awareness and Management

Environmental safety poses a major challenge of the times (Amokaye, 1998) and nations have tried to tackle this challenge due to its far-ranging consequences on the sustenance of

life on the planet. The awareness of the safety and protection of the environment no longer border on luxury is getting stronger among the citizens of developing countries. Also, such luxuries are no longer the exclusive preserve of affluent nations. Though there are varying degrees among nations, many developing countries are making concerted efforts at fixing the huge environmental deficits that have evolved over the years and also develop measures of control to address the present and future (Widegren, 1998). Balancing sustainable development and safety of the environment has become top in the agenda of nations of the world. In finding a balance between protecting the environment and meeting society's social and economic needs, legal frameworks have been shaped on principles guiding the sustainable development of the ecology. Consequently, a lot of countries that are developing concluded with the development of their environmental legal structure. In the same vein, countries have gone a step further by introducing market mechanisms to improve the quality of the environment.

Consequently, the use of diverse laws as tools for sustainable development and environmental safety cannot be over-emphasised. According to Amokaye (1998), the continuous relevance of these laws in the sustainable development paradigm must be grounded in a strategic environmental protection legal framework, while projecting the intrinsic nature of the rules which is the legally binding feature. He further opined that the rules must be communicated to the stakeholders and the rules must be able to address all aspects of the environmental issues under its purview. Suffice to say that the enforceability of the rules would basically lie in the design of the said rule most especially with the inclusion of a compliance framework.

Although the scope of environmental law is not universally agreed upon (Amokaye, 1998), there is a consensus that environmental compliance relates to public health, conservation of natural resources, pollution control and land use control (Dole, 2007). Addressing environmental problems has motivated the emergence of various international environmental laws and protocols which requires execution between countries that are the signatories to the laws and protocols. It is a pattern that inspires the notion of sustainable development vis- a -vis environmental compliance with an overall goal of making sure

that there are resources available for the utilisation and conservation of the environment for the future purpose.

From a general point of view, when organisations conform to certain defined standards, decrees or policies, it is referred to as compliance (Tattam, 2015). Tattam opined that compliance equals conformation. This means that a rule, policy or standard would have been in existence before the talk of compliance comes up. Similarly, Dole (2007) views environmental compliance as the adherence to environmental laws, regulations and standards. He sees compliance as the complete carrying out of environmental laws without any deviation whatsoever.

When organisations and institutions embark on activities that will enable them to achieve compliance with the statutory laws, which in turn will prevent them from becoming victims of civil penalties, such actions are often referred to as Regulatory compliance (Tattam, 2015). This definition is however not clear. Dole (2007) explains Compliance data in the context of using data for the main purpose of executing or validating compliance. It has to do with combining relevant data that will assist officers in charge of regulation to validate compliance or consistency.

In terms of effectiveness and efficiency with regards to the implementation of environmental policies and management, it is still a far cry. This is against the backdrop of observation made by OECD (2006) that policies that border on the safety of the environment are impracticable. The little effectiveness is caused by a lack of consistency in the regulation of environmental policies, conflict of interest from diverse phases of administrating the environment, deficiency in technical competence and availability of resources to the institutions saddled with carrying out their duties. According to OECD (2006), the broad policy agenda gives better advantage to developmental effort above the needed compromises for enforcing environmental laws by the bodies saddled with such tasks at various implementing levels. These problems get further magnified by slow progress in engaging sectoral agencies and the public at large in addressing environmental problems.

This shows that compliance does not automatically lead to the strengthening of environmental performance and improvement of environmental safety, rather, it is achieved through regulations and norms that are grounded in a country's legal and administrative history and capabilities and through targeted efforts that encourage behavioural changes by all and sundry (Keene, 1999). Some scholars however believe non-compliance and low enforcement is peculiar to developing countries mostly. According to Keene (1999), enforcement capabilities in developing countries are weak, levels of compliance are poor, and few actual improvements in environmental quality have been noted. Similarly, Nwufor (2010) states that enforcing the laws pertaining to the environment in developing countries lacks the government's political will and the resultant effect is failure of the government to explain to her citizens the environmental laws that are existing, and rigorously put into effect same.

An environmental regulatory regime is not an end in itself but implementation and compliance with environmental regulations are very important. Hence, successful environmental regulations does depend on an overall attitude toward compliance, the outcome of the legal framework of a nation, the extent of maturity of the institutions handling such matters, the availability of resources and support given to citizens in the public and private sector (Keener, 1999). Suffice to say that compliance do not happen mechanically especially when it attached to some requirements. What can make it achievable are behavioural changes from the citizens.

In most developed countries, environmental legislation is the outcome of a unique local process of informed debate and the participation of the public in making decision thus, when certain laws are agreed on and regulations are issued, a consensus on carrying out and implementing the requirements will emerge. This process of consensus building is essential to creating the culture of compliance that underpins the successful implementation of environmental regulations in most industrial countries. Similarly, allocating adequate resources to realistic and well-articulated priorities is essential for implementing regulations. Information and consensus are therefore key to successful environmental compliance and, improved environmental performance depends on a host

of complex factors, including institutional constraints, political realities, and industry capabilities.

Complying with environmental laws and making sure that the programmes are enforced involves an all-encompassing cycle of environmental management. It entails the recognition of specific problems facing the environment by the community or state. It also involves accepting the challenge of making sure the problems are well addressed. This has influenced the drive by governments to come up with specific objectives for the environment and the management approaches in meeting the set objectives. The objectives would require a legal framework that will necessitate compliance from the citizens (INECE, 2010).

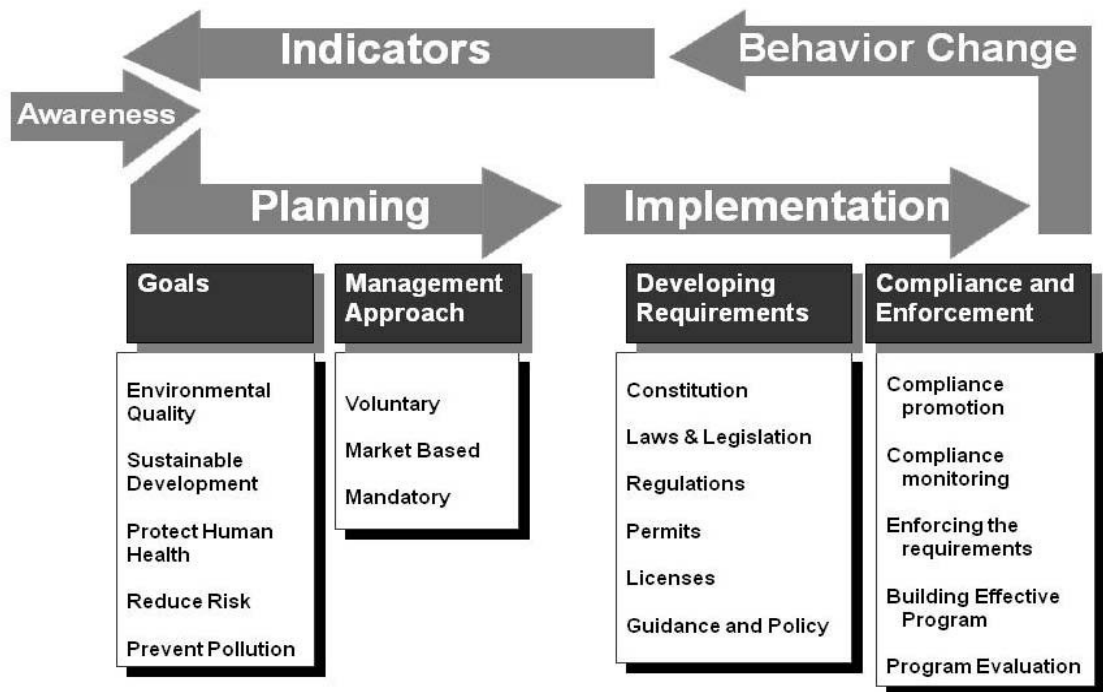


FIGURE1: THE ENVIRONMENTAL MANAGEMENT CYCLE

Source: INECE (2010)

According to INECE (2010), Compliance produces “public value” as long as the rule of law and good governance are promoted. It further guarantees and tightens the integrity of what the environment needs. In addition, it protects goods and services through the proper function of the ecosystem as well as public health protection. Compliance stimulates ‘private value’ by promoting the confidence of investors, reduce the risk of doing business, encourage innovation, increase competition and create new jobs opportunities. A number of studies (OECD, 2000; Amokaye, 1998) show that sufficient attention has not in any way been given to the enforcement of environmental laws by those who make decisions. This has led the poor performance of environmental laws and violations of the environment. The sluggish motion of economic and governance reform is also responsible for the promotion of non- compliance. Similarly, the complex legal framework, economic instability, the inability of the citizens to have faith in the environmental laws and the attrition of the rule of law has also contributed to non-compliance. OECD (2000) examined the consequences of meagre finances, little human capital and the ineptitude of agencies that are saddled with enforcement as responsible for little or no compliance. They zeroed in on limited powers as well as meagre financial and human capital of enforcement agencies as major causes of low effectiveness in ensuring compliance.

However, countries have their contending political and socio-cultural problems; therefore, generalisation may hit a brick wall. General principles that constitute an effective compliance and enforcement program were identified by OECD (2000). These include, environmental outcomes and responsibilities commonly shared; strategies and objectives; compliance, adhering to the rule of law, good quality governance; robust resources and strong framework; consistent and progressive appraisal and upgrading.

These would aid effective compliance with environmental laws in any clime with focus majorly on the environmental circle. Having an understanding of the reality in the world, this is important in the intended execution of the regulation of the environment (Shimshack and ward, 2007?)

Compliance verification has to do with the auditing of activities, carrying out inspections and monitoring of programmes that are used to ascertain whether the regulatory requirements are met by parties. The use of active compliance may be one of the tools that can be used for enforcement. Administrative responses and responses to prosecution are used for enforcement. Verifications can uncover whether stakeholders are keeping up with environmental laws and penalties will be instituted where there is failure to comply. Regulatory penalty for pollution breach is a bastion of the environmental policy of many countries.

Environmental compliance determinants can be grouped into two. Compliance factors, the first determinant, include the conventional monitoring of regulations and engaging in enforcement, possessing the capacity to sway futuristic actions on regulation, pollution abatement costs, investor pressure, community characteristics and components of consumer demand (Kirchoff, 2000; Cavaliere, 2000). The second determinant transcend conventional laws' economic prototype to include managerial attitudes, management knowledge, and organizational structure (Shimshack, 2007). Hence, compliance is a combination of laws, enforcement as well as organisational structure and management capabilities of institutions. This means all stakeholders are germane to compliance including the community.

Scholars have detected a momentous weight of community features with regards to environmental behaviour. Earnhart (2004) put forward that the earnings of a community, the size of the population, level of unemployment and the extent of political connections have the potentials of influencing the performance of the environment with respect to water treatment plant in Kansas. Becker (2004) on his own part uncovers some philosophical, social and economic conditions that have led to the reduction of expenses on air pollution and reduction in the expenses of manufacturing plants. However, there are other conditions like the turnout of voters, identifying with one's ethnic group, education have not induced any significant implications on the environment (Kagan *et al.*, 2003). Strafford (2007) through qualitative and qualitative proof affirmed that an increase in the competition of local markets has brought about increase in compliance in respect to

legislative acts of waste management. In New Zealand, USA, Australia and Canada, there are submissions that the environmental gains recorded in the pulp and paper industry is linked to compliance with extant regulations (Kagan *et al.* 2003). Hence, literature has identified the import of various parties, especially the community with regards to the effectiveness of environmental compliance and environmental safety.

Access to a detailed and current environmental compliance support plan on a consistent basis is one of the requirements that will enable compliance with sustainability standards and environmental laws (Fiore, 2011). Similarly, finding the laws that are applicable to an organization, institution or individual and coming up with procedures and necessary tools that will aid compliance to legislations that affect the environment, regulations and procedures are important (Fiore, 2011). In an attempt to develop regulations for environmental compliance, channels of communication are very crucial because they will assist the organisation to be compliant with the environmental regulations, laws and conforming to international sustainability benchmarks and this is noteworthy to this study.

2.1.4 Environmental Best Practice

Globalisation has become a source of public debate in contemporary times. Debates on globalisation have increased significantly and it is becoming very challenging to extract feasible definition of the notion (Poppi, 1997). Shenkar and Luo (2004) argue that globalisation is the increase in the level of economic interdependence among nations, robust cross border business engagements, flow of international capital and an expansive information/technological diffusion.

Globalisation comprises diffusion (through trade and industry incorporation), transmittance of guidelines athwart national boundaries, knowledge conduction, cultural permanence, relations, and power equation. Additionally, the process is global, an impression and institution of a global market that is not restricted by socio-political influences. Generally, it has assisted in relaxing national economics through establishing of a global market that will enable countries around the world to partake or participate (it

could indirect or direct participation). It has no doubt led to an increased activity and has also empowered the multi-national businesses (Jaja, 2010).

Schirato and Webb (2003) observe that globalisation is a chain that integrates technology, economy, governance and culture. To Schirato and Webb (2003), it involves not just the economy but rather covers other facets of diffusion. Scholte (1997) however looks behind what it integrates but goes further by pointing out that globalization make possible the elimination of hurdles amid nations, in so doing give social relations unhindered admittance. The exceptional characteristics of globalization frequently consist of the movement of capital, decrease in transportation costs, exchanges and computing. Other purpose of globalization comprise (a) production internationalization which follows alteration in the formation of production, (b) spreading out of global trade and (c) widen and deepen of intercontinental flow of capital (Mrak, 2000). The main purpose of Globalization is the blending of diverse cultures and trade at a global level in order to establish homogenization. It makes known how actions of people can have extensive effects on others in terms of negativity or positivity (Adjibolosoo, 2007). Additionally, Giddens (1990) believes that globalisation has to do with how distant localities and global social relations are bridged.

Largely, the effect of globalisation is seen in the context of the liberalisation of trade across the world. Furthermore, multinational corporations are growing to the extent that they one of the driving forces of globalisation. According to Stiglitz (2002), the growth of these multinational companies has helped global market expansion and equally promotes the integration of national economies. Their activities have also stimulated global competition and they are also assisting countries that have poor economies to grow.

It is important to mention that the advent of trade liberalisation and expansion of multinational businesses has no doubt influenced the degradation of the environment (Acosta and Gonzalez, 2010). Businesses through globalisation have been able to take advantage environmental benchmarks that are perceived as weak, along with regulatory systems that are corrupt in some countries and this often times results in environmental

degradation. It must be noted that low environmental standards coupled with weak implementation and enforcement lead to externalisation of the cost of production of globally trade. That is, the associated negative consequences of pollution would be externalised. The pervading argument is that the liberalisation of trade is perceived as a threat when it comes to the application of strict measures for the domestic control of the environment. There are assertions that globalisation can also have the capacity to affect the environment positively in the sense that international connections helps the self-regulation of the environment (Christmann & Taylor, 2001).

Thus, globalisation exacerbates environmental degradation yet, globalisation is still needed to tackle environmental degradation. Globalisation is not therefore all negative but like Christmann & Taylor (2001) pointed out, the positives of globalisation does outstrip the negatives. Globalisation has helped to stimulate the general awareness of the challenges confronting the environment across the globe. This has impacted positively on how the public observes the state of the environment, the norms and how the challenges confronting the environment can be handled adequately. Countries with environmental provisions in their constitutions are 130 (May, 2006). Therefore, beyond influencing economies and businesses, globalisation has also influenced ideas that are connected with the environment.

Globalisation has raised valid concerns with regards to the condition of both the physically developed environment and the condition of the environment; this has birthed diverse International environmental agreements. However, environmental agreements with international status are seen as impossible to enforce because they lack the necessary international approaches for enforcement. Some scholars have concluded that international environmental laws cannot be enforced and their conclusions align with the thinking of the public. Also, scholars agree with the general public that environmental laws are equally ineffective (Yang 2006). There is also an overriding misconception that issues bordering on environmental governance are not connected with the global systems.

Therefore, fears that have been expressed about the deficiency in the mechanisms for enforcement in the various pacts can be misinterpreted if there is an over reliance on national processes with regards to the implementation of the objectives (Yang 2006). To this end, Hayward (2005) recommended the recognition of constitutional environmental rights at the national level or their integration within the framework of sustainable development (Giorgetta, 2002). Subsequently, several countries across the globe have now inculcated universal environmental regimes in the constitution of their various states with diverse integration techniques.

Across the globe, nations such as Brazil, Turkey, India and South Africa have instituted in their constitutions the clean environment rights (May, 2006), and by so doing have shifted from abstract laws and policies to enforceable laws on the environment which are well documented and enshrined in the constitution of the land. Since these laws are international and widely accepted globally, can we therefore say international environmental laws can be regarded as environmental best practices? If so, what then are environmental best practices? Other fields of study also make use of the term, however “best practice” as a concept is scarcely used in the context of environmental laws or within legal frameworks. In general, the term best practice has to do with using the best assessable technological expertise or management method not minding the traditional practice in the industry (May, 2006).

Managing the environment through best practice is connected with using some management tactics to minimise the harm that is done to the environment through means that are not too expensive beyond what is the norm at the national and international standpoint (Preston, 1987). He believes that the following elements can be instrumental to having effective laws that border on the environment which includes: seeing the environment from an ecological point of view; inputs that will benefit the environment socially and should be incorporated in the early stages of planning; promoting the involvement of citizens making decisions and render assistance when it gets to the phase of monitoring; encourage public participation in protecting the environment; making use of both traditional and modern approaches in the protection of the environment.

Environmental issues however, cross borders therefore; we might argue that environmental issues need to be handled at an international level or at least, a regional scale. This means an integrated interstate collaboration is necessary to tackle environmental degradation hence the need for environmental global best practices.

The phrase ‘the built environment’ has been used to address some recent environmental issues (SESE (2006)). These include planning, regeneration, developing the rural areas, disparities in the environment and helping to sustain communities. Also, it relates tensions and partnership affecting different aspects of law policy. It also explains the important responses to policies at both national and international platform. Although environmental issues have been internationalised, there seems yet a lacuna in the global environmental regime. the inadequacy of an institutional work frame to help tackle the threats facing the natural environment is a serious concern in the international community as pointed out by SESE (2006). This is coupled by legitimacy concerns and the conflicting demands of nation-states.

This observation is particularly interesting given the disregard for global environmental laws by nations. Contemporary practices show that what developing nations need in terms of environmental protection, sharply contrast the needs and demands of developed nations. More often, developing countries make use of their natural resources in order to canvass for funds and promote social justice (SESC, 2006). Thus, Environmental protection is pitched against wealth generation and resource exploitation and often times, the latter wins. A new paradigm has however emerged with an aim to beam attention on the question of environmental protection and national personality. Notably, SESC (2006) points to lack of a central body for environmental management, this study would focus on specific countries which have been able to mitigate environmental degradation to an extent as a source of best practices rather than a central body for environmental management.

2.2 Human-Environment Relationship

The United Nations Environment Programme (UNEP) is the focal point for environmental actions and coordination within the United Nations system. It is the body that is saddled with environmental authority globally. It will however, take some time to arrive at an environmental system of global relevance capable of addressing the challenges facing environmental conservation. Reaching a global coordination of environmental governance with regards to properly addressing the problems confronting the environment is still a far cry. In 1972, there was a United Nations conference on Human Environment that established a call to design and espouse multifaceted channels for the protection of the environment. In the aforementioned conference, an appeal was made to all countries to take on similar measures. Responding to the initiative of the United Nations, several countries embarked on developing actions that integrated environmental issues like climate change into their legal, legislative and governance framework. It is worth mentioning that Nigeria is a signatory to many of these international rules, policies and guidelines that are meant to protect the environment. The overriding objectives with reference to policies and laws guarding the environment have received a boost through bilateral and multilateral resolutions in many international programmes.

Weiner (2001) discusses the challenges confronting the environment from the perspective of legal education. He argues that the dynamics of globalisation are currently affecting the dichotomy between public and domestic laws. However, the flow of global information has made it much easier for nations across the globe to borrow legal ideas, policies and innovations. They have also established connections across national and international legal structures. He also argues the domestic environmental laws of some countries have been adopted to fit into international legal ethos.

From the perspectives of Reed (2008), the challenges confronting the environment are complex and the impacts are uncertain. The challenges are also caused by different layers of actors. Countries that have been tagged as ‘developing’ have put forward that the environment is imbued with so much luxury and one of the consequences is the diversion of natural resources from productive engagements. The argument from the point of view

of the developing nations establishes fresh reasons for the neglect of the environment that can lead to the imposition of huge financial costs, when as a matter of fact the attendant benefits can be achieved through minimal costs (World Bank, 1998). According to Morag-Levine (2003) the capacity to ensure adequate protection of the environment and by implication public health, ecological integrity is a principal goal for environmental laws.

Using the word 'environment' is to a large extent vague because it is tough to establish or restrict its scope. The term is vague with regards to its usage because it be used with respect to things that are associated with the biosphere, habitat of micro-organism as well as fauna and flora. The term is also loosely used to refer in general to the ecosystem.

The activities of mankind revolve within the environment. Therefore, the environment is sacrosanct and indispensable to mankind. The environment is responsible for the supply of water, oxygen, food and materials that are used for the provision of shelter for man. Without the life mankind and other elements cannot survive (Atolagbe, 2002). This therefore means that without the environment, the survival of man is in question. Atolagbe (2002) viewpoint puts the environment as integral for man's survival and refers to it as an 'indispensable medium'. The interactive nature of the environment as pointed out by him lays the foundation by which man utilise the resources as also interact with the environment

There are two very important laws with regard to the environment that agrees with the above definition by Atolagbe (2002). These include Section 38 of the Federal Environmental Protection Agency Act which outlines the environment to "include water, air, land and all plants and animals or human beings living therein and the interrelationships which exist among these or any of them". Similarly, the Environmental Impact Assessment (EIA) Decree of Nigeria defines the term 'environment' to include: -

Land, water and air, including all layers of the atmosphere; all organic and inorganic matter and living organisms and, the interacting natural systems that include components referred to in paragraphs (a) and (b). (EIA, 1999:15)

From a global understanding, the environment is perceived from a wide scope of challenges that international laws are addressing. These challenges include the conservation of the environment, how resources can be used sustainably, management of biodiversity, dealing with species that are endangered, management of deforestation and desertification, ensuring that the oceans are well protected, the ozone layer depletion due to pollution and protecting the quality of life and health of humans. Nevertheless, defining the term environment is still largely avoided by diverse international conventions as Caldwell (1980) observed, environment is an expression frequently used by people, yet difficult to define. The definition of environment till date still remains elusive.

According to Dokun (1995), the environment can be described as the unit from which resources needed for human sustenance and development are gotten and into which human development is directed. Furthermore, the environment can also be seen within the purview of the material ecosystems. It can also be seen or discussed within social and economic terms. These include quality of life, good health, resource management and biodiversity (Buhrs, et al, 1991). In its own view, World Bank (1998) believe environment can be as the social conditions at both local and national domain encompassing human existence with the inclusion of the coming generation as a critical emphasis. Hence World Bank (1998) and Buhrs, et al, (1991) looks beyond the surroundings in its definition but takes it a step further by including national and social conditions as determinants of the term environment.

The material and socio-cultural conditions that people live in is referred to as the environment. Also, natural elements such as the land that accommodates human beings, animals, plants water can be called the environment. It corroborates Jain (1977) who reasons that what make up the environment are natural (air, water, plants) socio-economic and biophysical elements. Fadamiro (1995) believes that the environment is the sum total of both internal and external order impacting on the development of organisms and life in general. These organisms, according to Ero (1997), consist of living organisms relating and interacting with non-living organisms. The dominance of some class of organisms over others also constitutes such interactions (Enahoro & Ehi-Ebewele, 2007). Hence the

interaction of man with his environment is germane to defining the environment and this relationship is viewed by Afolabi (2005) as a gift which needs to be nurtured as well as preserved. He further submits that the environment is a global inheritance that is on lease to mankind for careful tendering so as to enable it cater for the needs (Afolabi, 2005)

Following this line of thoughts, Nobel laureate, Wangari Maathai, explained further that man should see resources in the environment as their personal property and treat it as such with deference. Maathai (2004) opines that people can only protect the environment when they are empowered to. Through adequate information, their understanding the need to protect the environment increases.

Measures can be put in place for the proper safeguarding of the environment if people are abreast with the parameters that are helping to maintain balance within the ecosystem. It will enhance cooperation and caution human activities that are injurious to the environment. It is therefore to put in place adequate frameworks that help to monitor the environment effectively (Atilola, 2012)

2.3 Settlement Patterns in Urban Areas

Human beings have fully adapted to the material/physical environment and the spate of urbanisation expresses an important transition in the habitation of humans (Hassan, 1981). Studies by scholars such as Hassan (1981) revealed that there has been a rapid expansion of human habitation spanning 40,000 years. The expansion has also intensified agricultural and industrial activities and development of great cities in the last 4000 years. There is also an accelerated rate of growth with regards to large cities; human population distribution changes and growth have led to the development of peri-urban and urban areas (UN, 1999; HPG, 2009).

With respect to human beings moving from the rural places to urban environment, there appears to be a progressive increase with regards to countries that are developing (Sarukhán and Whyte, 2005). This movement is characterised by settlements which define people's existence. The Vancouver Declaration on Human settlement (1976) espouses

that human settlement is a combination of the human communities encompassing the elements such as culture, organisation, spiritual and other cultural elements. Newman et al., (1996) is of the view that constituents of the human settlement include rural, remote communities, and big cities centres. It therefore translates to places where human beings are accommodated and carry out activities that affect their economic, social and cultural livelihood. Hence, it does not just about inhabited place but it takes into account the social interactions which occur in the inhabited space as well as the economic activities that define and sustain that space. Settlements are oftentimes factored by education and employment opportunities, including unhindered right to use of health facilities. According to Sarukhán and Whyte (2005), Settlements frequently affect the right to use to the resources of the environment. IPCC (1990) further highlighted the link between human settlements and environmental resources. According to IPCC (1990), human settlement encompasses shelter, neighbourhoods, infrastructure, and other socio-cultural services.

Human settlements are considered from two perspectives. The first involves the environmental right with respect to the habitat of human. The second perspective has to with the pressures that human activities exact on the environment through the use of its resources and the disposal of wastes emanating from the utilisation of the earth's resources (Newman *et al.*, 1998). Similarly, Pretorius, Gibson and Henderson (2005) posit that the activities such as production, consumption and waste generation that are carried out in the environment have contributed in changing the biosphere significantly. These activities have contributed significantly to the pollution of the environment. A deteriorating biophysical environment poses potential threats to human settlements. A framework was developed in 1989 to explain how the deteriorating biophysical environment poses potential threats called the Natural Step.

Karl-Henrik Robert in 1989 developed the Natural Step is a framework to address the sustainability of the environment and uses the resource theory to explain the framework. puts Ashworth (1998:23) puts the Natural Step framework in the context of the following summary: that nature and the earth crust is affected negatively when resources are mined uncontrollably; the gases generated as a result of human activities can adversely affect the

course of nature; the earth and nature will find it challenging to replenish its deteriorating condition as a result of negative human activities; for life to continue seamlessly, there must be an equitable utilisation of the earth's resources. The trend of deterioration however is yet to be stemmed rather it's exacerbating with advancement in human settlements. Hence, advancement in human settlement comes with a corresponding deterioration in the advancement in lieu of the natural step framework.

Advancement in human settlement however is often pushed by population growth. According to UNEP (1995), there is a complex connection between environment degradation and population growth. Also, Newman *et al.*, (1998) affirmed that world population has exploded from to 6 billion from its initial 3.3 billion within the last 30 years. This forecast would most definitely advance arguments on environmental degradation and pollution through human settlements across the globe. Pretorius, Gibson and Henderson (2005) are of the opinion that human settlements are noted with diverse topography, management structures, size and location. As a result, it is challenging to establish differences between various types of human settlements. The settlements of humans can be explained from the angle of economy, relativity of location, urban fringe, cities that can be tagged as peripheries (Pretorius, Gibson and Henderson, 2005). Additionally, the spatial locations and settlements of humans can be explained in the context of formal and informal planning, culminating into different types of housing. Land tenure legal frameworks is associated with the organised condition of services and development of infrastructure. Settlements that are accorded informal status are located within informal housing framework and characterised by community living.

Settlements have been discovered in diverse geographical areas; some are in close proximity to core urban settlements. The explosion of population has increased the spate of change, thereby causing pressure in urban settlements (Kotze and van Ransburg, 2002). Many parts of the world have fast growing settlements that are of informal status (Eduardo, 2002). Berry (1990) while differentiating between formal and informal settlements posits that there is huge difference between rural environmental setting and the environment of a large city in terms of material, natural, social and cultural conditions.

In contrast, scholars such as Newton et al (1998) argue that human settlements can be viewed from two perspectives which differ slightly from the formal and informal settlements. The two views are the concentration of population in one location and the dispersal of a settlement over a specific area which could be positive and negative. Also, the diffusion of population across the rural area can constitute threats to the capability and productive capacity of land and at the same time help the concentration of population in locations. This can constitute certain limitations and instigate grave damage to the environment.

Although human settlements have so far taken up a relatively small fraction of the Earth's surface, their specific spatial location can still exert significant environmental and socio-economic consequences. An important source of concern is connected to the challenge associated with earth's land occupation and the emergence of cities with exponential population increase. Based on the spatial patterns of growth, coupled with the future inn view, the likelihood of urban expansion with attendant consequences cannot be ruled out (Neuman, 2005). Compared to 1972 when people living in urban areas are 27%, year 2000, witnessed over 40% of the global population living lived in urban centres. UNEP (2003) has projected the possibility of 50% or 60% increase by 2030.

In countries that are developing, the population of urban residents is put at an annual growth rate of 2.4% while Sub-Saharan African is estimated to have 3.5 annual urbanisation growth rate, coupled with noticeable rural urban migration rural-urban. UNEP (2003) report that 300 million Africans are living in urban areas and it is possible for the figure to increase to 1405 million by year 2030. Hence, settlements are experienced shift from the rural dispersed settlements to urban specific settlements.

These trends would exert pressure on urban area's environmental capacity to accommodate and regenerate hence, degradation is not far-fetched. For instance, the devastation of natural habitats is associated with people settling around the coastal urban areas. This has affected biodiversity and there are significant alterations in regional and local hydrology. The coastline has been destabilised as a result of mangroves invasion.

Other consequences include siltation, erosion, infrastructural wreckage, increased vulnerability to natural disasters, reduced resilience to climatic change and sea levels increase. It also has the potential of affecting the capacity of fish stocks to breed because of the disturbance of their nursery (UN-Habitat, 2006). This view is reinforced by Chimeli *et al* (2002), Sarukhán and Whyte (2005) and Neuman (2005) views that the rise in sea level with an attendant impact on the degrading of soil and fresh water is associated with the effects of human settlements along the coastal lines. In addition, it can lead to landslides, affect the patterns of cultivation, provoke storm surges and facilitate the destruction of prime farmlands. Hence, settlements were arbitrary without recourse to environmental impact. The need therefore to protect the environment was awakened in the guise of sustainable development that is, man controlling settlement pattern to the advantage of both humans and the environment.

Nations that are currently experiencing problems with regard to biodiversity loss, global warming and population related issues have adopted the goals attached to sustainable development in a bid to address these contending issues. Policymakers and policy strategists are confronted with the challenges of executing growth plans that are smart and measurable. These challenges include designing the use of land, organising the planning of projects in urban setting, applying these plans to tackle socio-economic and environmental objectives. Settlements can also be designed in order to address social objectives such as increased contact between families and entrance to markets and services. These are the attendant fallouts of environmental objectives (Caviglia-Harris and Harris, 2011). Human settlements pattern is at core of global endeavour to deal with the array of problems confronting sustainability of development with strong reference to guiding principles outlined in Agenda 21 and the Habitat Agenda that was instituted during the 1996 Second United Nations Conference on Human Settlement (Habitat II) that took place in Istanbul, Turkey.

2.4 Environmental Challenges and Management for Sustainability

In environmental literature, the terms problem, challenge, risk, catastrophe and tragedy are from time to time exchanged in the context of usage. Challenges often refer to the

subsistence of disaster in the surroundings in a way that can bring about serious destruction or injury to man or his surroundings/environment (Ibimilua and Ibimilua, 2014). Furthermore, Petters (1995) posits that environmental challenge is any form of harm, danger, peril or any risk of loss in the environment. To Petters, anything that is destructive or detrimental to man or the environment becomes a challenge. According to Kwame (2008), one of the major challenges to the environment is degradation due to natural and man-made activities. He further posited that environmental degradation has been going on for centuries due to the communication man has with the environment. Other environmental challenges that humankind currently faces were said by Chen (2005) to include climate change, availability of fresh water, destruction of the ecosystem, erosion of the soil and loss of biodiversity. Ibimilua and Ibimilua (2014) posit that the environmental problems are inter-related and inter-connected hence all problems associated with the environment are linked.

Joseph (2009) opine that issues that can cause damage to the environment and affect human life and property can be minor or major in nature. To him, some challenges pose little risk to humans and this he called minor environmental challenges while those which pose maximum risk to humans are referred to as major environmental challenges. Similarly, Santra (2011) towed the line of reasoning of Joseph (2009) but further classified environmental challenges into a broader framework that he believes can either be artificial or natural depending on the way and manner they manifest. Santra (2011) further stated that occurrences that of natural circumstances suddenly take place causing harsh destruction to the surroundings. Some of these challenges are induced by the errors of man's negligence. In the natural order, humans basically depend on the environment for their physical day-to-day existence, health and general well-being. These artificial challenges are hence as a result of the day-to-day man-environment interaction. This is well articulated by International Development Research Centre (1993) when it posited that development approaches that has contributed to the destruction of human potentials and the environment results in socio-economic crisis. Thus, IDRC (1993) believes the major challenge to the environment is developmental programmes embarked upon by man and this causes artificial environmental problems.

Furthermore, man-environment interaction, as argued by Jimoh (2000), is as a result of man's pursuit in a bid to satisfy basic needs without making allowances to accommodate possible environmental stress either at present or in the future. Environmental stress which comes in the form of hazard, emanate as a result of population increase, technological advancement, deployment of resources, free-market economy emergence and negative attitude of people with respect to the environment (Santra, 2011). Remarkable penalty of challenges that are associated with the environment include the degradation of natural habitats, property loss, global warming, issues bordering on climate change, the loss of biodiversity, and loss of human lives (Ibimilua and Ibimilua, 2014). Others include the disturbance of daily human activities, a vast reduction in ecosystem adaptability, distortion of settlements, impoverishment of communities that rely on specific environmental resources as their means of livelihood and viable threat to Sustainable Development Goals (SDGs).

The challenges that are evident in the environment are influenced by human and natural forces. Wright and Boorse (2011) categorised the causes of disasters into hydrological, geological and meteorological. Coenraads (2009) identifies geological challenges, biological factors, and atmospheric conditions climatic transformation as instigators of environmental challenges. Coenraads maintains that the inbuilt workings of the planet are responsible for geological events and differences in global weather systems are responsible for meteorological events. Also, he states that the actions of living things are responsible for the biological events. Similarly, Petters (1995) reasons that it is possible to attribute natural disasters like earthquake, hurricane or volcanic eruptions to natural causes, others such as mudflow, landslides and flood clearly occur as a result of mass displacement of earth's materials. This displacement according to Miller and Spolman (2009) can be linked to the growth in human population, the unsustainable usage of resources, poor living conditions, and inadequate knowledge of how nature works as primary reasons of problems that are affecting the environment. Additionally, poor application of environmental management principles in addition to various human activities such as agriculture, livestock rearing, fishing and hunting have been postulated as a major cause of environmental challenges by Ofomata and Phil-Eze (2007).

However, scholars such as Madu (2007) slightly differ on causes of environmental challenges. Although Madu agrees that the causes can be broadly divided into two, he, however, posited that environmental challenges are caused by the increase and rapid world population growth while other man-made reasons can be subsumed under rapid growth. Population increase will therefore result in increased exploitation of natural resources and this will ultimately exert pressure on the environment. Accordingly, the capacity of the environment to fulfil basic needs such as water, food, and energy become threatened. Hence, all anthropogenic causes of environmental challenges can be mitigated if properly monitored and controlled.

The activities of humans on the earth are causing negative and complex damages across the globe (Mahatma 2009). Cunningham and Cunningham (2006) contend that the environmental perils across the world are on the increase and other living elements are not exempted from the menace. Damaging human activities such as bulldozing the forest, as a result of city expansion, has increased on a larger scale in the last decade (Rahman, 2007). The outbreak of diseases, climate change, depletion of the ozone layer, degrading of the coastlines biodiversity and deforestation are some of the outcome of environmental challenges (Ibimilua and Ibimilua, 2014). It is germane to mention that across the globe deaths occurring from natural disasters are on the increase and the growth of human settlements has been identified as a principal factor. The degradation of the environment has reduced the powers of the ecosystem as a stop-gap against climatic extremes. Accordingly, the possibility of landslides occurring as a result of heavy rains on deforested lands cannot be ruled out. Extreme weather conditions can also have negative impact of the land available for poor communities to settle. One of such impact could be flood or natural disasters (Sarukhán and Whyte, 2005)

The problems of the environment are not limited to one sector of a nation. For instance, both rural and urban settlements have experienced the harmattan wildfire (Okosodo and Omonzejie, 2004). However, the rate of artificial occurrence is based on what some scholars such as Jiboye (2005) call population explosion. The exponential increase in

population is identified as a cause of environmental challenge by scholars such as Madu (2007), often leads to rapid urbanisation and, urbanisation has been acknowledged as one of the key challenges faced by the environment (Oladunjoye, 2005; Jiboye, 2011). The need to reduce the drive for urbanisation, the effects of industrialisation, coupled with population growth are serious issues governments across the world are contending with (Jiboye, 2005; Osasona *et al.*, 2007). It has been established that in the early 1959s the people living in rural areas constitute 66% of the population of the world (World Bank Report, 2000). Currently about 50% of the world population now live in the urban areas (UN Report). The projection is that by 2030, the world will have 61% of its population reside on the cities, especially in the developing nations (UN, 2004; UNCHS, 2007; UNFPA, 2007; Daramola & Ibem, 2011). While it is expected that this may lead into broad development, the reverse is the case because it has triggered adverse environmental, cultural, social and economic problems (Jiboye, 2009). Population congestion and the evolution of city slums are the resultant effects of increased rate of urbanisation (Ravalin, 2007).

Accordingly, focusing on how to cope with the rate of urbanisation and how to develop ways of reducing the resultant effects on the environment is one of the major developmental problems facing many countries (Jiboye, 2011). Khan (1996) has a contrary opinion because he affirms that urbanisation does not affect the environment negatively. He reasons that urbanisation holds many benefits to the population because of massive infrastructural development. Nevertheless, the accruing benefits of urbanisation cannot be fully realised if the physical planning is not robust enough. Hence, Khan (1996) still roots the problem of environmental stress as being a function of man's mismanagement of urbanisation. He, however, identified the interconnectivity between urbanisation and environmental stress.

The absence of a workable and effective mechanism for governance that will help to strike a balance between the urban infrastructures and increasing population is one of the challenges of development. This is one of the contributing factors to poor living conditions in the urban areas (Daramola & Ibem, 2011). The increasing rate of

urbanisation has impacted on the demands for education, housing and health facilities which are vital for the better living condition of people (Ogunleye, 2004). Omisore and Akande, (2003) and NEST, (1992) identifies growing of urban slums, greenhouse gas emissions, biodiversity loss, pollution of water overcrowding, lack of access routes, violence among others as consequences of urban development.

The inability of government to increase the availability of essential social services to her ever-increasing population is one the causes of woes and decay the urban centres are experiencing presently (Ogunleye, 2004). The collapse of indigenous neighbourhood, dilapidating infrastructure and rapid degrading of the environment is confronting nations in the global south. Therefore, the need to stop this nefarious trend for the sustainability of the environment cannot be over emphasised. Meanwhile Khan (1996) opposes the argument for putting a hold on rapid urbanisation and Ajiboye and Ogunshakin (2011) sustains the argument that urban development coupled with its attendant challenges can impact on the sustainability of the environment globally.

Although various social and economic problems linked with urban development in Tropical Africa have received significant attention by social scientists, less attention has been given to the physical problems. Omisore et al.,(2003) posits bad conditions of living should not necessary be associated with the state of environmental collapse, while Olanrewaju, (2003) attest to the fact that the quality of the environment is also determined by the activities of man. Inequity and segregation seem to be common challenges to cities all over the world (Kaarin, 2010) hence, the growth of slums in urban areas.

The poor in urban centre suffer more from the problems that are associated with the environment. This is standing on the fact that many people are disproportionately accommodated, with little or no access to welfare, good healthcare delivery and inadequate portable drinking water. Environmental conditions in urban areas have gradually deteriorated and slums proliferate due to the rapid growth of the cities and the attendant inability of social infrastructures and services to keep pace with growth rate. Inadequate storm drains, dumping of refuse in drainage paths and construction of houses

close to, and in some cases on the natural water channels have been identified as responsible factors for the increasing cases of flood in the urban centres. Likewise, the degradation of the environment is also considered as a security threat. Threat here is contextual to environmental security. Therefore, the environment is under threat when there is significant loss of its biodiversity, depletion of the ozone layer land population and so on (UN, 1997).

Venkataraman (2002) stated that 'modern civilization has brought in its trail, many ill effects caused by our failure to respect and preserve the balance of ecological factors in the human environment'. World Commission on Environment and Development in its report warned that unless mankind changes many of its current lifestyles, the world would face unprecedented environmental degradation that would affect the present and future generation (WCED, 1987). In the same vein, environmental challenges ranging from pollution, excessive carbon emissions and rapid population growth have led to an increased scarcity of natural resources such as water, and food in recent times (Biswas, 2011).

In explaining environmental degradation, Khanna (1982) focused on air pollution when he stated that with increased urbanization and rapid industrialization, the contamination of air poses a big menace. The emission of gasses by the automobile and the burning of coal for fire domestically or in factories for power generation and the use of firewood cow dung have contributed greatly to air pollution which contributes generally to environmental degradation. The increase in demand for bricks, cement, coal, raw materials for industries and other construction works, incessant felling of trees and other construction activities are creating ecological disaster for the global environment. According to Platt and Griffin (1972), modern civilization is already exercising its tremendous potential to alter our environment too frequently in adverse ways, on regional and even global scales. Therefore, to sustain development and ensure the survival of civilization, humans must endeavour to mitigate environmental degradation. However, White (2006) wondered if humans would be ready to mitigate environmental degradation. White (2006) stated that people are less bothered about environmental degradation until

they themselves are affected. According to Bahuguna (1989), the planet is dying and the threats are from man's materialistic 'Civilization', which has defined development as affluence.

The pursuit of economic development in contemporary times far overrides the need for a healthy environment. Although, Diwan (1987) had a contrary view. He believes rather than development being the driver for environmental degradation, poverty he argues, is the chief polluting factor. However, Diwan (1987) posited that man's ambition for limitless enjoyment and comfort has led him towards the exploitation of nature's wealth so indiscriminately as to reduce nature's capacity for self-stabilization. Here, he shifted his attention from poverty being the main cause of environmental degradation while positing that man's ambition to create ultimately leads to environmental problems. According to Diwan (1987), Man's voracious appetite for resources and his desire to conquer nature has put him on collision course with the environment so much so that the demands of man's explosive technological society imposes intense stress on the state of equilibrium with the environment. Notably, scarcity generates more demands for the natural resources. Lack of supply in response to an increasing demand increases environmental risks and brings adversative changes to the world system.

Thus, these changes raise environment-induced tensions or conflicts (Biswas, 2011). Tikkanen (2004) stated that the problem of environmental degradation is now assuming a dangerous proposition throughout the world and global concern is discernible to protecting the environment. Assessment of environmental degradation has, therefore, become a global issue for the long-term management of the earth bountiful natural resources and the sustenance of livelihood that depend on them (William, 1998). It must, however, be noted that a number of environment-related factors such as environmental degradation, depletion, and lack of access to natural resources can lead to the outbreak of violent conflict (Wirkus and Vollmer, 2009).

Resource scarcity and environmental degradation are increasingly understood to play an important role in generating or exacerbating conflicts (Renner, 1996). Exponents of the environmental conflict thesis point mostly to the risk of internal "resource wars" (Homer-

Dixon 1999, Kahl 2006). The depletion of water resources, overexploitation of fisheries, degradation of arable land, decimation of forests as well as the growing interference in ecosystems from forests to wetlands to coral reefs, are among the primary processes of human-induced environmental change which may lead to conflict. Conflict may arise over access to renewable natural resources such as water, arable land, forests, and fisheries. This may be the result of depletion or degradation of natural resources; an unsustainable increase in demand which may be due to population pressures or increased per capita consumption, often related to export-led economic models; distributive inequities; or a combination of these factors (Ohlsson, 2000). Phil-Eze (2009) posited that man tends to modify his environment to satisfy his needs and desires and in the process of doing this implies an encroachment on the constituents of the ecological balance and these in most cases breeds conflict rather than peace. Olufemi and Samson (2012) state that conflict between people and their environment are known as socio-environmental conflicts

However, the environmental conflict thesis remains largely unsubstantiated and appears contested. Barnett (2000), refers to the thesis as a “theoretically rather than empirically-driven” field. Levy (1995) also agreed with this school of thought as he posited that the environmental conflicts postulation largely dwells on speculative predictions of the future rather than extrapolations made on the basis of empirical analysis. However, it must be stated that both the advocates and critics of the environmental conflict thesis have a convergence point which is the fact that conflict is not so much derived from environmental change in itself but from the reaction of the societies, that is, the extent to which societies are pre-equipped to cope with environmental change, as well as their prior degree of stability (Le Gloannec, 2013). To this end, environmental conflict thesis has found a voice in the international security agenda, and the link between environmental degradation and violent conflict is now incorporated in the security policies of several states and international organisations (Kingham 2006).

Through inappropriate production processes and technologies, the Earth’s resources are being exhausted and polluted at an accelerating rate leading to environmental degradation (IDRC, 1992:17). Curbing environmental degradation is, therefore, key to earth

sustainability and this requires the application of the four major elements of disaster management – prevention, mitigation, preparedness and relief (Ibimilua and Ibimilua, 2014). It also entails the management of the environment and this is called environmental management in the environmental security parlance. In itself, environmental management, according to Ofomata and Phil-Eze (2007), means the careful understanding, planning, and use of natural resources in order to ensure sustainable development. Environmental management encompasses institutional preparedness, mitigation, and emergency response. However, environmental management is beyond just being a disaster response mechanism. Madu (2007) submitted that the rapid growth in world population is a major cause of many environmental challenges.

Consequently, the ability of the environment to meet various needs of man has become increasingly threatened. In a different opinion, Enger and Smith (2010) submitted that environmental problems occur as a result of the uncontrolled interaction between humans and the natural world. They believe that a level of control is needed over man's interaction with the environment. This type of control is what is encapsulated in environmental management paradigm. According to Ibimilua and Ibimilua (2014), failure to manage and monitor the environment would aggravate environmental challenges beyond its thresholds. This has led to several debates on sustainable development.

There is no general consensus on a theoretical definition of sustainable development neither is there any consensus on how a sustainable process of development can be achieved (Aluko, 2004). A great deal of both policy and academic literature in the years which immediately followed the Brundtland announcement (World Commission on Environment and Development, 1985) were concerned with understanding in detail and articulating the very core principles of sustainable development (Dresner, 2002). Sustainable development is therefore best captured as:

Development which meets the needs of present generations while not compromising the ability of future generations to also meet their needs. ... in the end, sustainable development is not a fixed state of harmony, but rather a process of change ... At a minimum, sustainable development must not endanger the natural systems that

support life on Earth; the atmosphere, the waters, the soils and the living resources. (WECD, 1987:28)

Sustainable development is, therefore, an implied development without destruction of the environment. It is the shrewd use of non-renewable natural resources for the present and future generations, which are non-renewable resources, which must be used at a judicious rate, neither too fast nor too slow and to ensure that the natural wealth that they represent is converted into long-term wealth as they are used (Dewole, 2009). In the same vein, the Brundtland Report further states that ‘The loss of plant and animal species can greatly limit the options of future generations’. Development done therefore without recourse to the future would not only have a negative impact on the environment and perhaps man but, also on other species living in the ecosystem such as plants and animals. Therefore, sustainable development requires the conservation of plant and animal species’. Thus, there is a need for a balance between levels of development and the stock of natural resources, that is, development must of necessity be at a level that can be sustained without prejudice to the environment or to future generations. Such development would aim to exploit natural resources while ensuring that the exploration would not leave a long-lasting negative effect on the environment.

The United Nations conference on the Human Environment which was held in Stockholm, Sweden, established the link between under-development and environmental integrity. Environmental degradation, therefore, was established has been directly/indirectly caused by under development. This allusion has however brought to the forefront the school of thought that environmental issues are transnational.

Environmental issues persisted despite the various environmental frameworks hence, the 1992 UN conference on Environment and Development, tagged the “Earth Summit”, was held in Rio de Janeiro to re-evaluate the existing frameworks and chart a new course for environmental sustainability. At the end of the conference, an action plan for sustainable development (which is broadly defined as the ability of the present generation to meet its needs without in any way compromising the potentials of the future generations to meet theirs) in the 21st century was generated. This action plan has become the policy

instrument that drives environmental programmes and frameworks in a lot of the developed countries of the world.

A snippet from the summit which in a way shapes current environmental policy is Principle 3 of the Rio Declaration on Environment and Development which provides that “The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations”. Sustainable development is therefore predicated on the articulation and incorporation of daily environmental and human needs in the pursuit of economic growth and development objectives (Aina, 1992). Hence development must be carried out with emphasis on environmental preservation and integrity.

The early debates on sustainable development were on a need to create “green cities” (Leff, 1990). Whereas some definitions linked social and economic development to environmental development, the definition given by the World Commission on Environment and Development (1987) which strongly emphasized meeting the “needs of the present generation without compromising the ability of future generation to meet their own needs” soon became the popularly embraced definition. In addition, the Habitat Conference held at Istanbul in 1996 laid a lot of emphasis on the need for sound environmental management in order to achieve the objectives of sustainable development. Agenda 21 of the Earth Summit’s concern for the sustainability of cities is at two levels. Firstly, at the global level, it involves an array of issues which concerns long-term sustainability of the earth. Secondly, at the local level, it involves the likelihood that urban life may be undermined from within because of congestion, waste generation, pollution and their accompanying social and economic significances. “Issues of development persistently spill over into environmental ones.” (Roberts and Parks 2007: 26)

Two crucial conceptual approaches have been apparent in the debate of sustainable development. A school of thought takes a position which consents that non-ecospheric minerals can be depleted but the ecosphere must be protected absolutely. They believe that there is no substitute for the planet and would rather have a planet over people approach

on sustainability. It is believed here that human-made capital and natural capital are complementary however, not interchangeable. The school of thought is termed the Strong sustainability school of thoughts. The school of thoughts accepts there are certain functions that the environment performs that cannot be replicated by humans or human-made capital. The ozone layer is an example of an ecosystem service that is crucial for human existence, forms part of natural capital, but is difficult for humans to duplicate (Figge, 2005)

On the other hand, another school of thoughts posits that human-made capital such as technology, infrastructure, labour, and knowledge, will and can substitute for natural capital in the long run hence, natural capital can be depleted provided that a critical minimum level is maintained (Cabeza-Gutes, 1996). It means, therefore, that natural resources may wane as long as human capital is increased. This approach is majorly termed the Weak sustainability approach mostly because it aims to substitute natural capital with human-made capital and it was propounded by Robert Solow (1976). Weak sustainability assumes that each following generation has at least as much capital at its disposal as the previous generation and this assumption is seen as inter-generational equity. One, however, wonders how Inter-generational equity is to be achieved and many scholars such as cart (2001) have debated the workability of weak sustainability.

However, Martinez-Allier (1995) believes the debate on weak vs. strong sustainability is unfounded since industrialization, the focus of weak sustainability, cannot and will not necessarily equate to sustainability. He submits that it is the gross negligence of factors other than savings in measuring sustainability that makes weak sustainability an unsuitable concept. In opposing weak sustainability, strong sustainability supporters such as Van den Bergh (2007) contends that a more small-scale decentralized way of life based on greater self-reliance is needed in order to create a social and economic system less damaging towards nature as a whole. Strong sustainability does not in any way create allowances for the substitution of human, and human-made capital for Earth's resources such as land, water, and their biodiversity. Gowdy & O'Hara (1997) believes that products created by mankind cannot replace the natural capital found in ecosystems. In contrast to weak

sustainability, the concept of strong sustainability lays emphasis on ecological scale over economic gains. The implication of this is that nature has a right to exist and that it has been borrowed and therefore should be transferred from one generation to the next while still intact in its original form.

Strong sustainability also has its critics. Beckerman (1994) posits that the concept of strong sustainability is morally repugnant. According to him, the largest part of the world's population lives in acute poverty. Taking that as well as the acute degradation into account, one could justify using up vast resources in an attempt to preserve certain species from extinction. These species, according to him, provide no real benefit for society other than a possible value for the knowledge of their continued existence. He argues that such a task would involve using resources that could have instead been devoted to more pressing world concerns. He, therefore, posits that strong sustainability is untenable. This study, however, finds strong sustainability tenable most especially with current instances of climate change.

According to Dresner (2002), Sustainability is a concept which combines post-modernist pessimism about the domination of nature with almost enlightened optimism about the possibility to reform human institutions. Supporters of the position taken in Brundtland report agree that the report developed the concept as an obligatory political concession between the North's global environmental management and protectionism aims and the South's human health and developmental needs (Dresner, 2002; Bigg, 2004; Purvis and Grainger, 2004). Purvis and Grainger (2004) suggests that, despite its apparent weaknesses, the unique nature of sustainable development as a concept is the overall attempt to incorporate environmental and intergenerational dimensions within neo-classical economic development theory.

Scholars such as Dasgupta (1993) and Pearce (1989) approached the concept of sustainable development from an economics point of view by attempting to price the environment through a framework of fiscal controls and incentives. They contend that the best way to protect the environment is to assign to it an economic value based on people's

readiness to pay. In other words, the aim is to internalise all the external costs to the economy in terms of pollution, resource depletion and human health. However, Aubrey Meyer described the approach as the economics of genocide (quoted in Dresner, 2002). This criticism included issues such as how to price seemingly irreplaceable resources, ensure equitable distribution within and between nations, and reflecting the resource needs of future generations within the current marketplace

Scholars such as Siebert (1982) and Opschoor (1987) however see sustainable development from a different angle. They came up with the environmental utilisation space concept which aims to reflect limits or thresholds to the amount of pressure that the ecosystem can withstand without irreparable damage and to use these to regulate the operational boundaries of the environmental space that can eventually be utilised. The concept, however, had its critics from scholars. Pearce (1989) posits that resource consumption reduction in the global North will not automatically improve the well-being of people in the global South except this leads to a corresponding crash in resource prices in the international market, which would then allow countries in the global south to consume more for the same price. Nonetheless, it could leave the global South in a worst situation if they are the exporters of these resources hence, this could ultimately reduce their opportunity to develop.

It must however be noted that the global North has a sustainability agenda which till date predominantly focuses on environmental protection in the areas of biodiversity, climate change, protection of species and habitats in contrast to the South which still struggles to secure enhancements to human health, advance its enterprise-bases while at the same time achieving needed economic growth for development.

A model for sustainable development has recently being conceptualised, that is the 'Russian Doll' or embedded model of understanding (O'Riordan, 1998). The Russian doll model supports a basic principle which suggests that every economic activity should be tilted towards social progress and that this activity must be achieved within environmental limits. There is, therefore, the suggestion of an ever-slight move away from the model of

‘weak sustainability’ that was originally proposed by Brundtland towards perhaps a more eco-essential approach. The potential to achieve ‘win-win-win’ scenarios is progressively being rejected as over-simplistic and practically unachievable.

Castro (2004) opinion on sustainable development has been termed ‘an environmental Marxism’ perspective. He contends that the current definition in literature of sustainable development is essentially economic growth in capitalist terms. Castor questions the very probability of an environmentally sustainable capitalist economy while arguing that economic growth relies heavily on exploitation of natural and social capital and the avoidance of wealth redistribution (or equity) both at the local, national and international level. Consequently, by its very nature, capitalist development does not promote the goals of environmental sustainability or equitable social development where poverty is eventually eradicated. The global south aligns with this concept simply because they see their hopes for eradication of poverty taking a back seat in the global debates which surrounds sustainable development policy.

Whereas the global North is largely concerned with institutional reorientation, cost savings, policy integration, regulatory and voluntary standards and environmental controls the global South rather places the main emphasis on creating new institutions, more like an organisation as it were, and ‘bankable’ projects. Can sustainability, therefore, be seen as a driver of environmental laws? With so much focus on sustainable development, can we then say the current beam on environmental is as a product of the debate on sustainable development? According to Fisher (2003), sustainability in one form or another is the fulcrum around which environmental law is evolving and it is the nature of sustainability that is forcing environmental law to adopt new approaches and new mechanisms. However, Birnie and Boyle (2002) argue that sustainable development is not the overarching objective of environmental law and environmental legal systems, but merely one of the multiple objectives:

Not all environmental questions necessarily involve sustainable development or vice versa. We may wish to preserve Antarctica, or endangered species such as the great whales or the giant panda, for reasons that have little or nothing to do with sustainable development, or put another

way, we may wish to preserve them from sustainable development. (Birnie and Boyle, 2002:2-3)

McGrath (2010) doesn't agree with this. According to him, suggesting that sustainable development is but one of the multiple objectives of an environmental legal system is a fundamental misconception of the concept. He believes that Sustainable development is not just a concept but rather, it is the over-arching objective and paradigm of the international and national environmental legal systems. As such, it is not merely a factor to be balanced against other considerations such as environmental protection and conservation. He further states that sustainable development involves reducing impacts of human on the environment as well as repairing parts of the environment that have been used unsustainably in time past.

Sustainable development is, therefore, key to the institutional framework for environmental management and not just a subset of environmental laws and policies. However, it is not the focal point of environmental governance because environmental laws cover aspects which ranges from sustainable development to other environmental based issues. It, therefore, helps in setting a clear agenda on environmental need and human need.

2.5 Institutional and Compliance Framework for Environmental Management in Nigeria

Governmental and non-governmental actors are contributing to a rapid globalisation of environmental policies. In the same vein, Nigeria has acceded to some bilateral and multilateral treaties regulating the environment and has subsequently gone a step further to domesticate a number of the treaties. Some of the international laws/treaties domesticated pre-1990 are:

1. Basel Convention on the Control of Trans-boundary Movement of Hazardous Wastes and their Disposal, 1989.
2. Convention for Co-operation in the Protection and Development of the Marine and Coastal Environments of West and Central Africa.
3. Convention for Long Range Trans-boundary Air Pollution.

4. Protocol to the Framework Convention on Climate Change, Kyoto, Japan.
5. Rio Declaration, 1992.
6. Stockholm Declaration, 1972.
7. The Convention of the High Sea, 1958.
8. Montreal Protocol on Substances that Deplete the Ozone Layer, 1987.
9. International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters (as amended).
10. International Convention on Civil and Political Rights, 1966.

Recent treaties on the environment in which Nigeria is signatory to includes the 1997 Kyoto Protocol to the UN convention on climate change and the 2015 Paris agreement. The Paris agreement gave birth to the Nationally determined contributions (NDC). At the heart of the achieving the long-time goals of the 2015 Paris Agreement, the Nationally determined contributions (NDCs) were set as a way to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement in Article 4, paragraph 2, requires each Party and signatory to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it aims to achieve. Thus, domestic mitigation measures are expected to be diligently pursued by each signatory with the aim of achieving the objectives of her NDCs. Adopted in December 2015, the Nationally Determined Contribution (NDC) became the first greenhouse gas targets under the UNFCCC that applied equally to both developed and developing countries after it was ratified. China and the US jointly contribute 38% of total global emissions with China contribution a total of 20% of world emission. The Paris Agreement requests each country to outline and communicate their post-2020 climate actions, known as their NDCs.

Nigeria faces the inimitable challenge of diversifying its economy away from fossil fuels while responding unequivocally to the energy needs of its growing population. Nevertheless, the country aims to increase its use of renewable energy, reduce its carbon footprint, and totally eliminate gas flaring. Nigeria is committed pending any change, to 20%-30% emission reduction by 2030, with specific focus on the power, oil and gas, agriculture and land use, transport, and industry sectors. Nigeria's Nationally Determined

Contribution's (NDC) focus on these five key areas is based on the country's 2011 adoption of National Adaptation Strategy and Plan of Action on Climate Change as well as the 2010 Nigerian Climate Change Policy Response Strategy. The action plan for the Nationally Determined Contribution (NDC) of Nigeria is referred to as Sectoral Action Plan (SAP).

Nigeria is however, not totally dependent on international laws to regulate its environment. She has promulgated some national environmental laws to check the abuse and deterioration of the environment. It must be noted that laws regulating the Nigerian environment were not given much attention till former Bendel state incident in 1988 when e-waste dumping in Koko elicited a national condemnation. This prompted the enactment of a legislation – The Harmful Waste Act. Sequel to this, several national laws have been enacted to regulate sectoral aspects of the environment, however, it is yet to be ascertained to what extent the laws and policies have been effective in mitigating environmental degradation while ensuring sustainable development.

According to Dibia (2000), environmental policies enacted between the 1930s and 1990s include the below listed:

1. The Forestry Ordinance 1937
2. The Eastern Region Forest Law 1955
3. The Oil Pipeline Act 1958
4. The Wild Animals Preservation Law (Western Region) 1959
5. The Forestry Ordinance with Amendment (Northern Nigeria) 1960
6. The Wild Animals Law (Northern Region) 1963
7. The Wild Animals Law(Eastern Region) 1965
8. The Forestry Amendment Edict (Western State) 1969
9. The Petroleum Drilling and Production Act 1969
10. The Sea Fisheries Decree 1971
11. The Sea Fisheries Regulation 1972
12. The Wild Animals Preservation (Law, Lagos State) 1972
13. The Forestry Amendment Edict (Western State) 1973

14. The Wild Animals Law Amendment Edict(North-Eastern State) 1975
15. The Wild Animals Law Amendment Edict (Kano State) 1978
16. Exclusive Economic Zone Decree 1978
17. The Kanji Lake National Park Decree 1979
18. The Endangered Species Decree 1985
19. National Conservation Strategy for Nigeria 1986
20. The Natural Resources Conservation Council Decree 1989
21. Federal Environmental Protection Decree 1989
22. National Parks Decree 1991

Other national laws enacted are:

- (i) Federal Environmental Protection Agency Act.
- (ii) Environmental Impact Assessment Act.
- (iii) Harmful Waste (Special Criminal Provision) Act.
- (iv) Oil in Navigable Waters Act
- (v) Oil Pipelines Act.
- (vi) Petroleum (Drilling and Production) Regulation, 1969.
- (vii) African Charter on Human and Peoples' Right.
- (viii) Endangered Species (Control of International Trade Traffic) Act.
- (ix) Associated Gas Re-Injection Act.
- (x) Petroleum Act.

The Constitution of the Government of the Federal Republic of Nigeria (FRN, 1999) provides for a three-tiered governmental structure that consists of the Federal Government, the State Governments, and the Local Governments. This Constitution stipulates the roles and jurisdictions of the three tiers of government and further describes the powers vested in the three arms of government: the Executive, the Legislative and the Judiciary arm and at each tier of government. The Environmental Objectives and Directive of the State Policy on the Environment stated in the Constitution states that, “the State shall protect and improve the environment and safeguard the water, air, and land, forest and wildlife of Nigeria” (Constitution, Chapter 2, Article 28).

In developing a framework which can accelerate the attainment of the goals of protecting and ultimately improving the environment, the Constitution of the Nigerian state allocates certain legislative competencies to each of the three tiers of government. The responsibility for interpreting the legislation falls on the judiciary arm of government. The precise competencies of the National Assembly, the State Assemblies, and the Local Government Councils with regards the environment are well articulated.

Part I of the Second Schedule of the FRN Constitution of has, as contained in it, the documentation of the realms of the National Assembly in the Exclusive Legislative List over which it can exclusively make, amend and revoke legislation. These realms, from the lens of environmental management, conservation and protection, includes mines and minerals, fisheries, national parks, water from sources which affect two states or more and general environmental problems.

The Concurrent Legislative List, as contained in the Part II of the Second Schedule of the FRN Constitution, defines the jurisdictions over which the FRN National Assembly (which comprise the Senate and the House of Representative) and State House of Assemblies are empowered to act. From an environmental viewpoint, these realms will include the generation, distribution, and transmission of electricity to areas hitherto not covered by the national grid system; the establishment of research centres for agricultural studies; the regulation and coordination of scientific research; industrial, commercial and agricultural development (Dibie, 2000).

Part I of the Fourth Schedule of the Constitution which details the realms of Local Government describes the specific roles and powers of Local Governments. Environmental management wise, this would cover the consideration and making of recommendations to a state commission on development and planning of the economy; the development of resources other than mineral exploitation; as well as the general maintenance of infrastructure and other issues otherwise stated.

The framework for environmental management, as contained in the constitution, therefore remains highly centralized in which case the obligation to develop and apply the statutory frameworks for environmental management are primarily that of Federal and State governments. However, the principal responsibility for development and economy planning resides with Local Governments (Dibie, 2000). In the current constitutional set-up, the review and oversight of the existing legislations on the environment, the collection and subsequent analysis of relevant information, and the development of draft legislation designed to strengthen the legal framework for environmental management in Nigeria are primarily the responsibility of the House of representative and the Senate Committees on the Environment. Within the current environmental management and protection framework, Local Governments are by and large excluded from participating in the legislative review, revision and redrafting process (Dibie, 2000). This not only limits localised inputs at the Local Government level into the process of legislation but also decreases the level of environmental awareness at local government level thereby limiting environmental management and protection at the local level.

These further lays credence to the highly centralized institutional framework for environmental management and conservation in Nigeria and this has been identified by Dibie (2000) as a root cause for inconsistent policy framework and a lack unified approach at the Federal level of development of policies as well as at the State and Local Government levels of implementation of the policy. Accordingly, institutional overlaps and other associated problems, such as lack of adequate resources (human and capital) and role conflicts occurs (Ogunbiyi et al 2012)

2.6 Nature and Issues of Environmental Insecurity in Lagos State

Environmental security is key to recent developments in the environmental sustainability, conservation and peace world (Akiyode, 2010). The decline of productive resources is rapidly emerging as a major threat to economic prospects in most developing countries whose economies are many times more dependent than those of industrialised countries on their soils, water, fisheries, forests, and minerals (Speth, 1990). The decline has been linked to increased demand for productive resources and rapid urbanisation. Ezcurra

(2005) states that the rapid urbanization globally has of late been given distinctive attention by scholarship and policymakers owing to its ultimate security implications.

Thus, it is not only as a result of conventional state security concerns but mostly environmental security concerns which could, in the long run, undermine state security. Similarly, Kriimer et al (2010) believe that environmental insecurity may affect human security which would in turn bear upon state security eventually. Hence, environmental insecurity if not mitigated, can ultimately lead to state insecurity.

The United Nations report (2008) identified that global population is predicted to rise by 2.5 billion that is, between 6.7 billion and 9.2 billion people between year 2007 and year 2050. This is as a result of rapid urbanisation. Cohen (2006) suggests three features which distinguish the current trend of global urbanization. Firstly, Cohen (2006) opines that urbanisation is peculiar to developing countries; secondly, it is occurring rapidly and thirdly the severance of its occurrence and impact appear unevenly distributed across the globe. An attendant effect of rapid urbanisation is stress on environmental resources which often leads to environmental insecurity as noted by Lundqvist et al (2003). It is can therefore be inferred that urbanization round the world is growing more rapidly than the total global population (United Nations, 2004). Brockerhoff (2000) opined that approximately 90% growth of the whole global population between 2000 and 2025 will likely occur in the urban areas of the global south. The fastest rates of urbanization, therefore, are now taking place in developing countries, where average incomes are the lowest (Weiss, 2001). Subsequently, Akiyode, 2010 pointed out that rapid urbanization in countries in the global south has correspondingly led to the growth of cities and mega-cities such as Lagos.

The word 'mega-city' was coined based on the general increase in population of existing cities of the world. Klein et al (2003) referred to mega-cities as cities with a mean population which ranges between five to ten million inhabitants. Although, Gilbert, in his 1996 work, noted that the world was projected to have produced a minimum of 28 megacities by the millenia, Wikipedia's page as accessed in 2015 states that only 27 exist

as of January 2015. However, Collier (2015) had a contrary view which agreed with Gilbert (1996) projection of 28 megacities in the world today. Collier (2015) arrived at 28 megacities in the world and this is with the inclusion of Lagos state, Nigeria. Its, however, being noted that mega-cities are slowly growing in the world but as asserted by Globescan & Hazel (2007), the fastest of this growth occurs in the developing nations. Demographic experts have asserted that Nigeria has a high rate of urbanization put at 5.3 percent which is among the highest in the world and this has the tendency of spurring up environmental degradation (Goldstein, 1990). It's also being asserted that most urban areas in Nigeria have grown beyond their environmental carrying capacities and existing infrastructure (NPC, 1998). One of the key urban areas in Nigeria is Lagos state with population pegged at 16 million by the state government. This translates to the environment being inadequate to cater for the available population hence, this poses an environmental threat to the state.

Environmental security is the implications accrued from environmental degradation, resource scarcity, stress due to natural and man-made disasters, emigration and conflicts on one hand and avoidance, prevention and resolution of environmental destruction on the other (Kreimer, Arnold & Carlin, 2003). Therefore, it is the resultant effect of environmental mismanagement and natural disasters as well as the mitigation of environmental degradation. Since Environmental security aims to promote the security of humans in relation to their environment, the protection of humans therefore in the context of rapid urbanisation falls under the environmental security paradigm. This would, therefore, involve assurances to residents of adequate protection against any form of threats to physical and mental health as well as social, urban, and sustainable development (Zhao & Yang, 2007).

Current estimates show that by 2030, about 61 percent of the total population of the world will be living in cities and all the world's increase in population in the next three decades will occur in low and middle-income countries (Peters, 2000:2; UNFPA, 2007). Nigerian cities are witnessing a high rate of environmental deterioration and are rated among urban areas with the lowest livability index in the world (Daramola and Ibem, 2010). According to Akunnaya and Adedapo (2014), virtually every Nigerian city is vulnerable to natural or

man-made disasters. Lagos state, being one of the vulnerable cities, faces daunting environmental problems that are compounded by the daily influx of over 6,000 people in search of a better life (Oyefara, 2013). The population of Lagos grew from its 1963 figure of 665,246 to her 1991 figure of 7,800,782 (Bamgbose, Arowolo, Oresanya & Yusuf, 2000). This is largely owing to the fact that the administrative, institutional, economic, and social growth made Lagos areas an eye-catching place for rural migrants to settle (Akiode 2010). The city is presently said to have an estimated population of 17 (seventeen) million people and an estimated growth rate that is about ten times faster than the population of New York and Los Angeles (Lagos State Government, 2009). According to George (2010), it is predicted that the population of Lagos State will be about 24.4 million by 2015, which will make it the third largest city in the world, after Mumbai (India), with 27.4 million people, and Tokyo (Japan), with 28.7 million people.

Mba *et al* (2004) identified several types of environmental problems in Nigeria which he classified as ecological, poaching and habitat loss, increasing desertification and soil erosion. Mba *et al* (2004) further subdivided the environmental problems into pollution, deforestation, global warming and slum development. Lagos being a mega-city is faced with some of these gargantuan environmental challenges. Some of these challenges include water scarcity, flooding, dumping of industrial, toxic and human wastes, increasing use of toxic chemicals and hazardous waste that contaminate food, land and air and sea erosion.

Lagos being surrounded by water naturally suggests an abundance of water for consumption and general usage, however, the reverse is the case as the state experiences potable water shortages due to rapid urbanization. Furthermore, Mink (1993) pointed out that access to safe drinking water is still considered a luxury for many in developing countries, including Nigeria. Similarly, Iwugo *et al.*, (2003) opined that water resources in Lagos for domestic, industries and commercial are becoming scarce as a result of pollution of water bodies by wastewater, which contains heavy metals, bacteria (pathogenic) etc. George (2010) noted that the Lagos State Water Corporation (LWC), which is the sole provider of portable water in Lagos, has an inherent capacity of 150

mg/d (million gallons per day) from all water plants, but actual production capacity stands at 130 mg/d. This means the water body is unable to meet its maximum capacity. Also, the maximum capacity is less than the daily consumption of water in Lagos which George (2010) projects at 651 million gallons of water daily.

The inadequacy of water supply to Lagos homes was reinforced by Moe & Rheingnams (2006) where they mentioned that 65% of Lagos population relies heavily on water from other sources apart from the LWC. Sourcing for water from extra sources by residents can lead to the incurring of additional cost by the people and may also have health implications (Lundqvist et al, 2003). This is a pointer to water insecurity in Lagos state. Water insecurity in the state is not only limited to access to safe drinking water. Due to rapid urbanisation and the terrain of Lagos, the state is also susceptible to flood. The flooding problem of the state is exacerbated by waste the disposal habits of inhabitants which in turn results in the blocking of drainages and flood paths.

One of the main pollutants for water contamination in third world countries is human waste. The UNEP (1995) study estimates 1 billion people with no access to running water while 1.7 billion do not have access to sanitation facilities. Traditionally, human waste was deposited in natural systems but with rapidly increasing population, the bulk of human waste has far exceeded the natural systems absorption and cleansing rate Duraiappah (1996). Therefore, without modern sanitation systems to help relieve the natural systems in Lagos, the natural systems, including water, would become degraded and contaminated. In addition to body waste contaminating the environment, industrial and agricultural pollutants also find their way back to the groundwater systems. Davidson (1992) posits that pollution of the water systems as a result of human waste is one of the major causes of diarrhoea. In the same vein, Leitman (1993) posits that industrial and agricultural waste, which finds their way back to contaminate groundwater, deposits a large quantity of Lead in the water which has been found to be significantly higher than the minimum safety level prescribed by the World Health Organisation (WHO). Lietman (1993) further linked mental retardation in children and lower productivity in adults as a resultant effect of such contamination of the water system. Suffice to say then that the

effect of water contamination on a mega-city like Lagos with her plethora of industries and an estimated population of over 16million would not be quantifiable most especially as the environmental quality of urban areas has a serious effect on the health status of all urban residents (Olajide, 2010).

It is believed that the State is situated in an unsuitable place for a city. This is owing to the fact that the rapid growth of the Lagos city was not in any way foreseen by the colonial master (Satterthwaite, Huqs, Pelling, Reid, & Lankao, 2007). Inadequate city planning for the growing population makes it vulnerable to disasters most especially natural disasters. The Nigerian coastlines has been recognized by the International Panel on Climate Change (IPCC) as one of the low-lying coasts in West Africa hence, making it susceptible to floods (Adelakun 2009) therefore, the abundance of water in Lagos, although positive, also has a negative effect on the Lagos environment. Apart from water security, the topography of Lagos also makes it susceptible to climate change most especially if one takes into account the fact that the rise in sea level is one of the expected effects of climate change on the environment. This can be exemplified by the constant flooding of the coastline often experienced when the Atlantic Ocean overflows the bar beach at Victoria Island Lagos.

The Lagos state government (2009) has identified that climate change threatens the infrastructure and infrastructural development in the state. Rapid urban development has been linked to one of the causal effects of climate change (McGranahan, et al., 2005). It is believed that rapid urbanisation in no small way exacerbates climate change. According to Akiyode (2010), large volumes of environmental goods and services of Mega-cities are consumed owing to their high inhabitants and these have noticeable impacts on climate change most especially through waste generation from individuals and industry, industrialization, housing, transportation and other energy systems which produces greenhouse gases.

Another consequence of rapid urbanisation is the urban heat island (UHI) effect, which occurs when cities swelter than the surrounding suburbs. Hence, large cities with

population of about 10 million inhabitants will have a mean temperature of 40F (degrees Fahrenheit) which would be higher than the neighbouring rural fringes (Ayodeji, 2009). This perhaps accounts for the extreme heat being experienced in Lagos.

In addition, deforestation has added to the environmental problems faced in Lagos. Forests, according to Anavberokhai (2008), are essential for a healthy environment. Trees, an essential part of the forest, help to stabilize the forest soil, improve soil fertility, reduce the velocity of wind, protect the watershed and diminishes the amount of carbon released into the atmosphere. The use of the forest for man's consumption, however, has negative effects on the environment. Somanathan (1991) points to logging as the principal activity responsible for unsustainable deforestation. However, some scholars such as Goodland (1991), argue that agricultural and pastoral encroachment has been the primary forces behind unsustainable deforestation and logging has only been a catalyst. Westoby (1991) posited that logging activities themselves do not cause unsustainable deforestation but the infrastructure provided by them, for example, roads played a key role in opening up forest lands for agricultural and pastoral activities which were then responsible for unsustainable deforestation activities. Somanathan (1991) noted that excessive deforestation in the highlands will result in an increased potential of flooding in the lowlands and plains. Deforestation can, therefore, be a catalyst for flooding if continued unchecked. World Fact Book (2005) identified Nigeria as one of the countries with the highest rates of forest loss (3.3 percent) in the world. Since 1990, the country has lost some 6.1 million hectares or 35.7 percent of its forest covers.

The Lagos environment has experienced deforestation overtime. Most areas in Lagos have been robbed of any trace of the forest through deforestation, land reclamation, and development. Somanathan (1991) position on flood and deforestation was echoed by Vohra (1987) who also finds a strong correlation between floods and soil erosion. Vohra (1987) unequivocally stated that the best way to prevent flooding is through the prevention of soil loss as a result of deforestation. Deforestation takes along its wake various species of plants and animals that are required to establish and sustain the various food webs and

chains. Natural ecological cycles are systematically being depleted resulting in an ecological imbalance.

Also, Lagos state is currently battling with land degradation. Duraiappah (1996) posits that an estimated that 0.3 to 0.5 percent (5-7 million hectares) of total world arable land is lost annually due to land degradation. In finding an all-encompassing definition of land degradation, Duraiappah (1996) defined land degradation as a process by which the natural productivity and/or the economic productivity has been debilitated due to anthropogenic activities which include both natural and man-made activities. Economic activities in many cases leave the soil exposed to erosion by rain or wind, particularly in the dry areas. Unchecked economic activities will ultimately prompt desertification. Perkins (1993) gave a scenario where excessive grazing by domestic livestock in certain places has led to a complete removal of grass cover which in turn has led to soil erosion by both wind and rain. The resultant impact of this is a barren land, with little use for either grazing or agricultural use and over time these regions acquire desert type conditions. Dumping of pollutants by industries and inhabitants of Lagos has also contributed to land degradation. Similarly, like Perkins (1993) pointed out, excessive flooding also leads to erosion and land degradation.

According to Daramola and Ibem (2010), insufficient housing is also an environmental problem. Similarly, Akunnaya and Adedapo (2014) posit that construction of houses has not kept pace with urban rapidly expanding populations leading to severe overcrowding and congestion in slums. In the face of increasing urban population, there is an inadequate supply of housing and infrastructure for the teeming population, as a result, the existing infrastructure and housing are overstressed and sub-standard houses continue to dominate the urban landscape (Daramola and Ibem, 2010). According to Oshodi (2010) and Ibem (2011), the housing deficit in Lagos is currently estimated to be 5 million housing units representing 31% of the estimated national housing deficit of 18 million. As a result of the above mentioned, a lot of pressure would be put on the land space for the production of food, infrastructure, housing and industrialization and this would ultimately lead to

ecological imbalance. This is further exacerbated by the increase in informal settlements around Lagos which have multiplied over the years (Olajide, 2010).

These settlements are both on the mainland of Lagos and on the islands. In 1984, 42 settlements were identified as blighted by UNCHS and the Lagos State Government. The number, however, rose to 100 in 2004 according to a study conducted by UN-Habitat and the Lagos State Government. However, in 2006, Nubi and Omirin's research revealed that over 70% of the built-up area of the Lagos metropolis is blighted. These informal settlements are located in vulnerable areas of the state such as swamps, canal setbacks, rail line setbacks and marginal lands. These informal settlements are therefore vulnerable to environmental degradation and could also be a driver of environmental insecurity.

A great part of the Lagos coast was traditionally covered by wetlands and mangroves, but quite a lot of these areas have been filled in to support the land requirements of a rapidly growing population. It must be noted that much of the state lies below sea level. Despite this, it has embarked on unprecedented land reclamation. One result of this is enormous environmental damage. The continuous developmental scheme embarked upon by successive state governments and indiscriminate draining has tilted the balance in the ecosystem. In view of this, Adelekan (2009) posited for the need to tighten environmental governance to include the prohibition of any further land reclamation in Lagos state.

Scholars such as Akunnaya and Adedapo (2014) have stated that 40% of the world's population lives within 65km (40 miles) of the sea and Lagos happens to fall within this group. A large part of Lagos state is below sea level. It's therefore not surprising that the state is also environmentally plagued by sea level rise. The topography of Lagos State is generally characterised by slopes from the north to the south, flattening out at its lowest points in Victoria Island, Lagos Island, Ikoyi, and Apapa. Brindal (2007) predicts that there will be 200 million climate refugees by 2050. Cited among the refugees are people crowded into coastal areas, including megacities, who often live in low-lying areas which are becoming vulnerable to sea-level rise. According to Rademacher (2015), eleven percent (11%) of the world's population lives in areas subject to a 5m rise in sea level. A

jolt or sea level can considerably intensify storm surges and increase incidences of flooding. In the same vein, existing environmental issues in coastal zones can be exacerbated by sea level rise thereby increasing environmental vulnerability. This is mainly as a result of what Iwugo et al., (2003) referred to as natural characteristics.

Lagos State is naturally made up of depositional landform, which includes; wetland, barrier island, beaches, low-lying tidal flats and estuaries (Iwugo, D'Arcy and Andoh, 2003:1).

According to Nicholls (1995), the most cited and serious implications of sea level rise on coastal settlements are the increased risk of flooding and impeded drainage, salinization of freshwater, higher water tables (reducing the safety of foundations), and beach erosion. Therefore, sea level rise poses a great environmental risk to Lagosians, and Nigeria as a whole.

Conflict is an expressed struggle between at least two interdependent parties who perceive incompatible goals, scarce resources and interference from one another other in achieving their objective (Wilmot and Hocket, 1998). To them, the cardinal point of conflict is incompatible goals. This, therefore, means that conflict would be between a minimum of two parties. These parties could range from people to the institution and could be caused not only by incompatible goals and scarce resources but also a clash of policies. Francis & Holloway (2007) opines that conflict is an intrinsic and inevitable part of human existence. Similarly, Igwe (2002) sees conflicts as a universal and permanent attribute of nature, life, and society which is necessary and unavoidable. Suffice to say that conflict is not only vital to mankind but also unavoidable.

However, Wilmot and Hocket (1998) opined that not all conflict is destructive as some conflicts are constructive. This stance was further elaborated by Aloysius-Michaels (2009) who posited that conflicts are largely the expressing of opposing interests which can turn out to be either negative or positive. This opposing interest can be as a result of two or more parties striving to acquire the same scarce resources at the same time (Wallenstein, 2002). Conflict can, therefore, be said to be as a result of the interaction between individuals who have partly incompatible needs, in which the ability of one of the actors to gain his needs depend on the choices or decision another actor takes.

To buttress this, Phil-Eze (2009) posits that conflict is as a result of unhealthy competition or rivalry between individuals or groups (institutions). According to Fatile and Adejobi (2012), violent conflicts have erupted in many parts of the world over struggle and control of environmental resources. Environmental resources in this stead refer to both renewable and non-renewable natural resources domiciled in the environment. Conflict, therefore, arises when control of environmental resources arises. The connection between environment and conflict can, therefore, be entrenched in the scarcity or otherwise of natural resources as well as the unequal access to these resources. Thus, the quests for natural resources have increased the rate of occurrence of conflicts.

Every species domiciled in any given habitat (environment) seeks to attain the optimum conditions for all its functions Dansereau (1960). Similarly, man, being an integral specie of any habitat (earth in this case) that he finds himself tends to modify his environment to satisfy his needs, wants and desires. However, in the process of modifying his environment, probable encroachment on the constituents of the ecological balance would in most cases breed conflict rather than peace (Phil-Eze, 2009). In modifying his environment, Hellström (2001) posited that competition for finite environmental resources, divergent attitudes and beliefs as well as institutional factors would likely trigger and exacerbate conflicts. According to Fatile and Adejobi (2012), conflicts between people and their environment are known as socio-environmental conflicts. They further stated that a socio-environmental conflict occurs when two or more interdependent actors disagree as to the distribution of certain material or symbolic elements related to the control, use of, and access to natural resources and act on the basis of these inconsistencies (Fatile and Adejobi, 2012).

Environmental conflicts can be classified as social events due to the impacts they have with respect to social, environmental, economic, cultural and political dimensions of any society. Although Fatile and Adejobi (2012) identified factors contributing to environmental conflict such as the overexploitation of resources, disproportionate of consumption, population explosion and the inequality distribution of natural resources

among others, it's been posited by some scholars such as Phil-Eze (2009) that policy gap could also be a major aggravating factor to environmental conflicts. However, Environmental factors are rarely, if ever, the sole cause of conflict, but can combine with other factors to contribute to instability and violence as opined by Piriz and Couto (2001). Also, Halle (2009) submits that environmental factors are rarely if ever, the sole cause of violent conflict. In the same vein, Ohlsson (2000) posits that empirically, it has been difficult to demonstrate that either environmental factors, in and by themselves, are strong determinants of conflicts. However, she went a step further by noting that scarcity of renewable resources and healthy ecosystems, which form the base of livelihoods has become a recurrent source of conflict. There may be no direct link between environment and conflict but, an indirect link exists mostly if the source of livelihood or health is affected by environmental insecurity.

Furthermore, the human security paradigm clearly views environmental instability or degradation as insecurity. When the environment becomes a source of fear to humanity, it's a likely trigger of widespread conflict. To support this assertion, Halle (2009) states that exploitation of natural resources and related environmental stresses can become significant drivers of violence.

Jaggernath (2010) viewed the link between environment and conflict from a different perspective. To him, economic growth and industrial development, environmental racism and air pollution, which all have an environmental link, can all lead to conflict directly or indirectly. Jaggernath (2010) further postulates that any form of environmental shock, as a result of economic growth and industrial development, environmental racism and air pollution may result in economic instability. Badly-managed economic growth can and does damage the environment both at the local level and globally through air and water pollution, soil contamination and pulverization of natural resources. Similarly, long-term environmental deterioration as a result of development and human activities may lead to scarcity and contribute to population shift which may induce inter-personal conflict, and on a wider scale, inter-state conflict. Suffice to say then that developmental projects can

one way or the other lead to environmental shock which will, in turn, lead to economic instability and ultimately conflict.

Barnett and Adger (2007) state that climate change is increasingly being called a ‘security’ problem because there is a general concern that climate change may likely increase the risk of violent conflict ensuing. Hence, climatic conditions or man-made hazards could also be a driver of environmental conflict. Natural hazards in some instances causes’ population displacement and population displacement could lead to a population shift. Rijsberman (1999) opined that environmental based conflicts are related to the fact that resources and space are finite and subject to ever-increasing demand which may lead to a population shift. In line with Dansereau (1960) submission on optimum conditions for a given specie, population shift would, therefore, lead to conflict when competition for available resources by the shifting population crosses with that of original settlers of a given environment. Thus, the basic premise on which environmental conflict lies is on the optimal conditions of any given specie in relation to whichever environment such specie find itself.

In Nigeria, issues relating to the environment are fast becoming unfriendly, unsustainable, and conflict generating (Phil-Eze, 2009). Environmental conflict in the country is mostly climate-induced most especially through the exploitation of mineral resources and its indirect effects. Most of these conflicts come about over the ownership of land (farming, fishing, oil deposit, solid mineral deposits (Fatile and Adejobi, 2012). One of the predominant problems facing Lagos metropolis, as revealed by Aluko (2011) is that of promoting balanced land use that reduces conflict, environmental degradation and subsequently leads to efficiency and sustainability.

In time past, certain polluting actions were seen as a normal and unavoidable costs of industrialisation and development. In several countries, environmental protection was majorly based on a heavy reliance on non-punitive, conciliatory method of ensuring compliance to environmental laws, policies and regulations. The increase in damage to the natural environment has changed the general perception of pollution acts, particularly in

third world countries. Hence, several countries now treat certain polluting actions as real crimes (Frate and Norberry, 1993). Along with these change in ways in which pollution is being treated globally, pockets of conflicts have ensued. There are reported cases of violence emanating from adjudication for a better deal by inhabitants that suffer losses as a result of cost due to contamination and farmland, landslide pollution of water bodies and degradation of the environment (Obabori et al., 2009). The perceived polluter, pollutee and environmental management authorities in some cases cross part and conflict ensues.

Environmental protection framework operates at quite different levels at the different tiers of government as specified by the constitution of nation states though Heine (1990) remarked that the presence of constitutional guarantees does not in itself enhance or improve environmental protection. There is often considerable tension among the various spheres of government, while the potential for regulatory overlap between the various jurisdictional requirements is immense (Farcheallaigh, et al., 1999). Constitutional separations of power in federations like Nigeria may affect the efficient apportionment of responsibility for environmental concerns and may be an inhibition to harmonized and cooperative approaches to environmental conservation and protection among the three tiers of government (Frate and Norberry, 1993).

In Nigeria, the States have residual power over matters which are not specifically included in the FRN Constitution and this may generate conflict. Frate and Norberry (1993) opines that different National governments round the world have passed environmental laws incidental to other heads of constitutional power (States and Local councils) such as laws on commerce, territorial seas, and foreign affairs. These laws exist, notwithstanding the State legislation on the environment. Consequently, conflict may occur as a result of the national government attempting, as it were, to take the lead in matters of environmental protection which traditionally are regarded as under the realm of State governments.

The possible source(s) of conflict include lack of coordination between various environmental agencies, insufficient description and delineation of duties and responsibilities, as well as the conflict, or potential for such, among agencies which operate at national, State and local levels. Likewise, lack of clarity about the divergent roles of the federal and state ministries and the State Environmental Protection Agency as

well as Local Governments in monitoring and enforcement of Federal and State environmental laws and regulations can also be a source of conflict (Ijaiya and Joseph, 2014). The interplay of environmental agencies at all tiers of government is quite important to the successful promulgation, implementation, and enforcement of environmental regime and a conflict situation would go a long way in hampering environmental protection. It must be stated, as observed by Frate and Norberry (1993) that efforts to synchronise the activities of the diverse environmental agencies have been made in Nigeria with the creation of the ministry of environment on which governmental departments with environmentally-related functions are represented. However, the extent to which the possible conflict has been mitigated is yet to be assessed.

Heine (1990) identified another possible cause of environmental conflict. According to him, conflict may likely arise between agencies in charge of administrative environmental protection and agencies with prosecutorial power in respect to the enforcement of environmental laws. It is a belief of statutory construction that the legislature is supreme (assuming constitutionality) while creating law and that the court is merely saddled with the duty of interpreting the law. Nonetheless, in practice, by performing the construction the court can make sweeping changes in the operations of the law. Adeniyani (2012) postulates that in circumstances where legislation and case law are in direct conflict, there is a presumption that legislation takes precedence as long as there is no inconsistency.

Frate and Norbell (1993) also identified situations where local governments prefer to prosecute environmental offenders while state governments and federal in most cases prefer conciliation. In such cases, jurisdiction may also be a source of conflict. Apart from citizens and corporations or industries, government agencies may also be directly or indirectly responsible for the degradation of the environmental. In this case, prosecuting or sanction such corporation may become near impossible. Heine (1990) posits that traditions of many nations decree that criminal liability should not be attached to governmental agencies. It was believed bizarre for the executive arm of the government to penalise itself and it was considered more appropriate that a measure of control could be placed on the activities of government agencies effectively through political or perhaps, bureaucratic

means (Fisse, 1987). However, it's being noted that such views on internal control contrasted with practice

Governmental instrumentalities have ... [an unenviable record] ... for inducing severe forms of unjustifiable harm. (Fisse, 1987:13).

Eneh (2011) further stated that the various levels of Governments are often the worst culprit, as they routinely fail to observe the very same laws they enact. While Fisse (1987) saw the failure of observance of such laws from the angle of the environmental agencies, Eneh (2011) rather focused on the breaking of such laws by the various arms and tiers of government. Faure (2010) however noted that there is some debate about the practicality and effectiveness of decentralization and subsidiarity as a workable process of environmental management in developing countries, not least because of the weakness of unit governments to manage environmental responsibilities.

Frate and Norbell (1993) however noted that such dilemma of environmental law enforcement has been overcome in Nigeria where prosecutions of government agencies for environmental misdemeanour have occurred. Frate and Norbell (1993) further posited that in some countries such as India, the government agencies heads may be liable for offences committed by the agencies the lead under section 17 of the India Environment (Protection) Act of 1986. This means that the head of agencies who commit environmental offence would be held liable for such offence. However, it was not specified if such law worked in practice.

As stated earlier, the three tiers of government, Federal, State and Local, have exclusive legislative powers as well as concurrent responsibility for environmental matters. Oduwaye (2009) posits that there is an overlap of functions and activities by all levels of governments, and this consequently leads to friction and conflicts. An example of environmental conflict between tiers of government in Lagos is the state law on environmental sanitation. Sections 41 of the Nigerian Constitution stipulates that: *“Every citizen of Nigeria is entitled to move freely throughout Nigeria and to reside in any part thereof, and no citizen of Nigeria shall be expelled from Nigeria or refused entry thereto*

or exit therefrom”. Similarly, Section 35 of the same constitution stipulates that: “Every person shall be entitled to his personal liberty and no person shall be deprived of such liberty...”. However, the state makes it mandatory, through its environmental edict on monthly sanitation, for every resident of Lagos to stay indoors and restricts movement of persons and vehicles.

The restriction of movement that comes with the sanitation on every last Saturday of the month thus runs contrary to the provisions of the above Sections of the Constitution. The judgement of Justice Mohammed Idris states that there exists no law in force by which any citizen residing in Lagos State could be kept indoors by compulsion and that the Constitution of the Federal Republic of Nigeria grants every citizen freedom of movement. In the same vein, the case of *Attorney-General of Ogun State and Ors v. Attorney-General, of the Federation*, it was decided that the States cannot enact laws to abrogate or vary the objective of the federal legislation as such laws will be inconsistent with the provisions of Constitution which confers superiority on Federal law. Thus, the monthly environmental sanitation policy of the Lagos State government has been invalidated. However, till date, the state governments still enforce strictly its restriction of movement on such dates.

The State government further argued that section 41 of the 1999 Constitution permits the government to make laws that may derogate from the right to freedom of movement while stating that the Environmental Sanitation Law of Lagos State is a clear example of such law. The government further stated that the monthly sanitation exercise is meant to keep society and environment clean and safe, while mentioning that classified exceptions to the restriction which includes emergencies, ambulance services and essential services exists.

In some instances, individuals and communities clash with the state over issues pertaining to the environment. This could occur as a result of incompatible goals or perceived infringement on citizens’ rights. Often times, this comes as a result of development. This kind of developmentally linked environmental conflict is referred to as centre-periphery conflict by Mason and Spillman (2002). To them, development in a specified area may

lead to migration or population shift. In some instances, it may lead to environmental degradation or imbalance in such areas. This would lead to the inhabitants becoming disgruntled with the government or developmental company, most especially if compensation is not effected. Hence, this becomes a source of conflict.

2.7 Theoretical Framework

Environmental insecurity has come to the fore of public discourse. A paradigm shift in the perception of environmental issues has occurred and awareness has been aroused on the significance of the environment concerning the existence of humans. Although the trigger of awareness is still a source of public discourse, the facts remain that man has underrated the importance of the environment for far too long. To combat the lost years of environmental degradation, the international community has beamed its light on mitigation as a means to stem the rate of environmental degradation hence the birth of laws that guides the environment internationally. The birth of this unity of the environment internationally has not been widely accepted hook, line and sinker for debates rage on till date on the importance and or application of such internal statutes and laws.

This scenario has given birth to dissent and an ever-growing day to day fracture in the international environmental field. Suffice to say that recognition of environmental insecurity has taken headlines in most countries hence the birth of domesticated environmental laws and policies. However, the process surrounding the promulgation and implementation of environmental laws remains with hiccups. To this end, an analytical framework, benchmarking theory, will be employed in this study to anchor the discourse on environment and global best practices.

2.7.1 Benchmarking Theory

Literature have addressed the tools, strategies and management techniques and proffering solutions to many business challenges (Noreen, Smith and Mackay, 1995; Shank and Govindarajan, 1993; Cooper, 1989; Johnson and Kaplan, 1987; Johnson, 1992).

Benchmarking is one of the tools and it is considered as a theoretical model in the literature and in actual practice.

Benchmarking is commonly understood to be comparing data belonging to competitors with the aim of measuring and carrying out reports. Bennett (1993) defined benchmarking as the assessment of the performance of a department in comparison with other departments. Benchmarking theory believes in setting the minimum acceptable standard in a given field or situation. Since environmental law is global, a certain standard is required to achieve environmental sustainability. In measuring or setting this standard, these standards are captured by benchmarking. There is a need to evaluate environmental laws promulgated in Nigeria and check if the laws conformed to a minimum acceptable standard. This theory is relevant to the study in the sense that applying benchmark theory to existing environmental laws and policies in Nigeria would aid in having a minimum acceptable standard on environmental awareness and management. It is accepted that carrying out an examination or trying to imitate some practices that are exceptional can provide the motivation that will assist the improvement of the current practices.

Benchmarking has to do with partnerships, discussions and mutual sharing of facts and information. Benchmarking is based on identifying best practice (Frazer, 2001). According to Anderson and Camp (1996), the focus of studies that have been conducted concentrated on performance measures in relation to competitors in order to establish targets that are ambitious. However, studies that have been conducted recently investigated the extent to which competitors and those who are not directly connected with industries can make their businesses more robust. The attempt at comparison has helped to build understanding about best practices.

The improvement of organisation performance through the continuous signalling of procedures and practices within and without is regarded as benchmarking. In other words, benchmarking can be termed learning by example. Identifying and applying best practice can be regarded as benchmarking. Moriarty (2009) sees benchmarking from the effective point of view. He therefore based his definition on achieving a result. To achieve such

result, benchmarking has to be effective. He therefore based his definition on some Scholars characteristics of effectual benchmarking which includes: being purposeful, efficient and causal.

Benchmarking is therefore the dynamics of organisational improvement and ensuring optimum performance through the consistent identification, understanding and adoption of exceptional practices within and without an organisation. Benchmarking is therefore all about identification and implementation of best practice. There are four types of benchmarking: internal benchmarking that is connected to the internal working of an organisation (McNair and Leibfried, 1992); Direct Competition Benchmarking with focus on competitors (McNair and Leibfried, 1992); Industry Benchmarking which focuses on trends in industries; Best-in-class Benchmarking focuses on organisations with shared practices (Maciariello and Kirby, 1994).

Benchmarking can be seen in the context of a journey which proceeds from a process that is functional. It can also be discussed from the framework of a continuum meaning from actions that are perceived as passive into actions that can guarantee performance improvement. In the reasoning of McNair and Leibfried (1992), Macneil *et al*, (1994) benchmarking is anchored on the philosophy of continuous improvement. In this context of this study, environmental benchmarking would involve comparing environmental laws and regulations of one country/ state to another using set of indices. This theory from the above conceptual understanding becomes relevant in explaining the global best practices phenomenon. From the world of business, we have a theory that gives us the needed outcome for intervening on the environmental laws. Furthermore, the theory would be used to query the motivations for best practices in the Nigerian context while evaluating the environmental policy process in Lagos state as against best practices.

2.3.1.1 Benchmarking: Policy Cycle

Jann and Wegrich (2007) argue that the policy cycle framework has helped to guide the analysis of policy from generic premise of policy-making and it has also provided an

empirical structure. However, they assert that the framework has not developed into a major theoretical or analytical program itself.

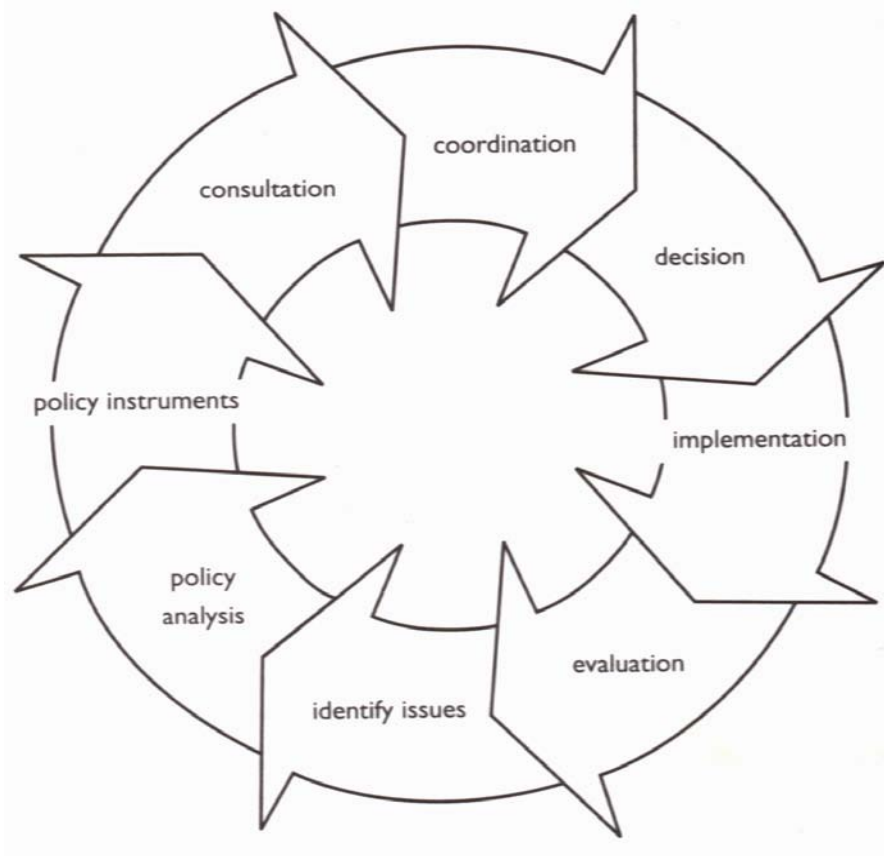


Figure 2: Policy Cycle (Dovers, 2005)

A critical aspect of this work lies in the evaluation of the various environmental laws and policies in Lagos state. This is well captured by the policy circle approach of benchmarking which sees evaluation as key to any policy, hence the theory would be used empirically to measure the impact, successes and failures of Lagos state institutional and compliance framework for environmental awareness and management. Hence, the simplicity of policy cycle would result in detailed linear policy process evolving from the Local to the National Government. Benchmarking theory therefore becomes a useful tool for this study most especially in identifying the connection between the lower tiers of government and the upper tiers of government in environmental policymaking.

2.8 Concluding thoughts

A major challenge in Lagos state is rapid urbanisation and its attendant effect on the environment. Extant studies have identified that 90% of the entire growth of global population which will occur between 2000 and 2025, will occur in the urban areas of countries in the global south of which Lagos is one (Brockerhoff, 2000; Weiss, 2001; Akiyode, 2010). Similarly, it has been asserted that most urban areas in Nigeria have grown beyond their environmental carrying capacities and existing infrastructure (NPC, 1998). This translates to the environment being increasingly inadequate to cater for the available population. However, there is a scanty literature interrogating the effect of environmental challenges as a result of rapid urbanisation on environmental policy process in Lagos state.

Literature has painted a bleak state of the environment and pointed out that an environmental anomaly can have a devastating effect on state security as well as human security (Myers, 1989; Mathews, 2002). Scholars such as Atilola (2012) pointed out that rapid development has contributed in no small measure to environmental degradation and called for adequate framework for monitoring as well as managing the environment. Consequently, the informed inclusion or mainstreaming of relevant environmental concerns into the decisions of institutions that drive national, local and sectoral development policy, rules, plans, investment, and action is imperative (Dalal-Clayton, 2009). Furthermore, Madsen (1996) posits that environmental awareness is necessary to

achieve environmental protection and restoration. This study, therefore, interrogated the level of environmental mainstreaming and awareness in Lagos state.

The role of the United Nations Environment Programme (UNEP) as the principal strategic global environmental authority providing a point of convergence for environmental actions and coordination within the UN system has reinforced in literature. Extant studies have further identified that the forces of globalization already have begun to blur environmental law boundaries in fundamental ways which makes it hard to differentiate public, domestic and environmental laws (Wiener, 2001). Furthermore, Reed (2008) pointed out that countries in the global south view environmental laws as a luxury which aims to divert resources from productive uses, its not be ascertained if Nigeria, most especially Lagos state, buys into this school of thought. This study, therefore, investigated the level of influence international environmental law has on domestic environmental management in Lagos State most especially in the light of Morag-Levine's (2003) submission that the protection of the environment is important to public health and ecological integrity. The study further interrogated the enforceability, effectiveness and compliance level of environmental laws in Lagos state in light of Yang's (2006) submission that many scholars draw the conclusion from prevailing public perception that international environmental law is unenforceable and ineffective.

It has been argued that there is a need to incorporate environmental and intergenerational dimensions within neo-classical economic development theory (Cabeza-Gutes, 1996; Martinez-Allier, 1995; Van den Bergh, 2007; Purvis and Grainger 2004). This need is borne out of the desire to push for economic development of nations while at the same time maintaining optimal environmental health. This, according to McGrath (2010), involves reducing negative impacts of humans on the environment as well as repairing parts of the environment that have been used unsustainably in the past. However, limiting the amount of pressure the ecosystem can withstand without irreversible damaging the environmental require setting up management processes and mechanisms. Literature has hardly investigated these mechanisms in Lagos state nor explored the harmonisation of the

processes. There is need to take a cursory look at these mechanisms and processes and the factors that facilitates or inhibits it. This study filled these gaps as identified.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research design

This study adopted case study research design which enabled the researcher to gather data and interrogate the subject matter. Environmental challenges typify the Nigerian nation. These challenges vary from state to state and the choice of a state which combats multiple environmental problems helped shed light on the frameworks designed to tackle these challenges. The choice of Lagos State was reinforced by the topography and population of the state hence, exploring the historical dynamics of Lagos State over a period of heightened environmental awareness to capture the process of continuity and change was imperative.

3.2 Study area

Lagos state contains one of the biggest concentrations of the black race globally. The state is positioned on the Bight of Benin (an arm of the Atlantic Ocean) and lagoons run through the state and the Atlantic cuts through large parts of the STATE. The Lagos metropolitan area, which is about 3345 sq km/1292 sq. meters, spreads over a large expanse of Lagos State and this is located on four principal islands and adjacent areas of the Nigerian mainland. The various islands in the state are intricately connected to each other and to the mainland by bridges as well as by landfills. The State is Nigeria's largest city, chief port, and her primary economic and cultural centre. It is bounded by the Bight of Benin to the south, the Ogun state to the north and east, and by the Republic of Benin to the west. Between 1914 and 1954, the area included in the state was administered by the British as part of the Nigeria colony. The provisions of the 1954 constitution led to the creation of the Federal Territory of Lagos (the 27-square-mile [70-squarekm] area of Lagos Island, including the city of Lagos) and also to the transfer of the city's hinterland to the administrative region of Western Nigeria. This arrangement hence restricted the expansion of Lagos city onto the mainland of Lagos, however, the creation of Lagos state

in 1967 by the national government restored to the city sovereignty over its hinterland. Lagos state served as Nigeria's capital until 1991, when the seat of federal power was moved to Abuja, central Nigeria.

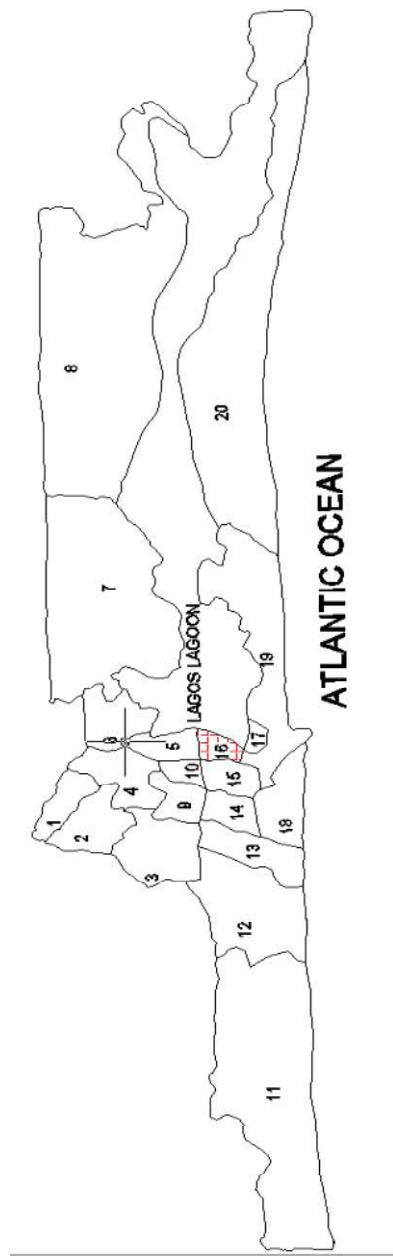
The topography of Lagos is dominated by a system of islands, sandbars, and lagoons. The climate of the state is affected by ocean and atmospheric interactions both within and outside her environment, in which the Inter-Tropical Convergence Zone (ITCZ) plays a controlling factor. The movement of the ITCZ is associated with the warm humid maritime Tropical air mass with its south-western winds and the hot and dry continental air mass with its dry north-easterly winds (Adelekan, 2009). Maximum temperatures recorded during the dry season are relatively high and range from 28–33°C most especially when the region is dominated by the dry northeast trade winds. A minimum temperature of about 24–26°C is experienced during the wet season of May to September.

The city stretches over four main islands: Lagos, Iddo, Ikoyi, and Victoria island; which are all connected to each other and to the city's mainland by a system of bridges. The entire territory of the state is low-lying with the highest point on Lagos Island being only 7 metres above sea level. The lagoons lie behind the barrier beach and extend for about 210 km along the coast. They are flanked by tidal wetlands and the permanent swamps at the eastern end are contiguous with those of the lower Niger Delta. There are two major lagoons in the state and these are Lagos Lagoon in the west and the Lekki Lagoon in the east. The two lagoons are connected by a narrow channel. The open water area described above shows that of all the lagoons and channels in the system and does not allow for islands, of which there are several. Lagos Lagoon averages 2-4m deep but is however, 10 m deep in the entrance channel. The mean depth of the Lekki Lagoon is 3.1m, and the maximum depth is pegged at 6.4m at low tide. The western channels approach to within a few dozen metres of the sea and in the east, much of Lagos and Lekki Lagoons are situated 3-4km inland.

The system is tidal. Lagos Lagoon is open to the sea through a channel some 10m deep near the city of Lagos. This is kept open, despite the powerful longshore drift, by artificial breakwaters. Normal tidal amplitude is 1.2 m, hence the tidal zones around the shores are

not very wide. Tidal influence is pronounced in Lagos Lagoon but is far less in Lekki Lagoon. The system is fed by several rivers, the most important of which are, from west to east, the Yewa, Ogun, Ona/Ibu, Oshun, Shasha and Oni (Cramer, 2008). The Yewa discharges into the channel between Cotonou and Lagos Lagoons, and the Ogun and Ona/Ibu into Lagos Lagoon. The Oshun, Shasha and Oni flow into Lekki Lagoon, from where water escapes to the sea, either via Lagos Lagoon or through the swamps to the east (Adelekan, 2009).

Her population has grown from 1.14 million in 1963 to over 15 million forty-nine years later. It has also been established that it is the second fastest growing city in Africa, and the 7th fastest growing in the world (Aderogba, 2012). Her population and topography has made it pertinent to investigate her environmental management.



1-Agege 2-Ifako- Ijaiye 3-Alimosho 4-Ikeja 5-.Shomolu 6-Kosofe 7-Ikorodu 8-Epe 9-Oshodi-Isolo 10-Mushin 11-Badagry 12- Ojo 13-Amuwo Odofin 14-Ajeromi Ifelodun 15- Surulere 16-Lagos Mainland 17-Lagos Island 18-Apapa 19-Eti Osa 20-Ibeju-Lekki

Figure 3: Study Area

Source: Lagos State Government, 2010

3.3 Population of the Study

The population of the study is 17million Lagos State residents (based on the Lagos State government population estimate of 2017). The study focused on environmental awareness and management hence, governmental institutions saddled with the responsibilities of environmental management were the target population of this study. Furthermore, directors and officers of environmental institutions and environmental officers in the Federal, State and Local Government levels, as well as coordinators of Civil Society Organisations, were chosen as the specific respondents.

3.4 Sampling Method

The sample population for this study was drawn purposively. The study employed the multi-stage sampling method. In the first stage, Lagos State was delineated along the three senatorial districts. In the second stage, a Local Government was chosen from each of the three senatorial districts. The Local Governments were chosen based on the magnitude of occurrence of environmental issues in the selected senatorial zones. Thus, Lagos Mainland Local Government (Lagos Central), Kosofe Local Government (Lagos East) and Alimosho Local Government (Lagos West) were purposively selected. In the third stage, environmental health officers (EHO's) were purposively selected based on their knowledge of the subject matter. Furthermore, environmental officers and directors of state and federal environmental agencies were purposively selected while director of an environmental civil society organisation (CSOs), Environmental Rights Action/Friends of the Earth Nigeria (ERA/FoEN) was purposively selected based on their advocacy towards environmental sustainability in Lagos state

Table 2.1 Multi-stage sampling table

Senatorial district	Local Governments	Sample
Lagos Central	Lagos Mainland Local Government	2
Lagos East	Kosofe Local Government	2
Lagos West	Alimosho Local Government	2

3.5 Sampling technique

Institutions saddled with environmental issues in Lagos State are numerous though, many of these institutions are collapsed under a central body. The Federal Ministry of Environment, Lagos State Ministry of the Environment and the Local Government environmental institutions carry out oversight function on all environmental activities in Lagos state. Nevertheless, the Lagos State Ministry of the Environment has six major agencies which regulate other environmental agencies and these are: Lagos State Environmental Protection Agency (LASEPA), Lagos State Parks & Gardens Agency (LASPARK), Lagos State Safety Commission (LSSC), Lagos State Waste Management Agency (LAWMA), Lagos State Wastewater Management Office (LSWMO) and Lagos State Signage and Advertisement Agency (LASAA). The study selected the stakeholders and directors of these agencies, as well as the Federal Ministry of Environment and the Lagos State Ministry of the Environment as its sample size. In addition, the director of National Environmental Standards and Regulations Enforcement Agency (NESREA), the federal agency domiciled in the Federal Ministry of Environment with the oversight function of maintaining the environmental standard, was included as part of the sample size.

Lagos state is divided into three (3) senatorial district thus Lagos East, Lagos West and Lagos Central. To further achieve the objective of the study, Local Government level of environmental awareness and management were necessary. The Local Government was stratified along the three Senatorial districts. These Local Governments were picked purposefully from each of the senatorial zones are these are Lagos Mainland Local Government (Lagos Central), Kosofe Local Government (Lagos East) and Alimosho Local Government (Lagos West). The environmental officers in agencies saddled with environmental awareness and management in the selected local government formed part of the sample population.

A total of 25 Key Informant interviews were conducted with respondents purposively selected in the following manner: Federal Ministry of Environment (2), NESREA (2),

Lagos State Ministry of Environment (2), Lagos State Environmental Protection Agency (2), Lagos State Parks & Gardens Agency (2), Lagos State Safety Commission (2) and Lagos State Waste Management Agency (2). Others include officials of Alimosho Local Government (2), Kosofe Local Government (2) and Lagos Mainland Local Government (2). Additionally, one official from Environmental Rights Action/Friends of the Earth Nigeria (ERA/FoEN) was also interviewed. Environmental Rights Action/Friends of the Earth Nigeria has been in the forefront for advocacy environmental sustainability in Lagos state and has focused on the effective protection and management of man-made environments. The civil society organization's perspective on the Lagos environment will contribute immensely to this study.

Table 2.2 Sampling technique table

Source(s) of Data	Method of data Collection	Sample
Federal Ministry of Environment	KII	2
NESREA	KII	2
Lagos State Ministry of the Environment	KII	2
Lagos State Environmental Protection Agency	KII	2
Lagos State Parks & Gardens Agency	KII	2
Lagos State Safety Commission	KII	2
Lagos State Wastewater Management Office	KII	2
Lagos State Signage and Advertisement Agency	KII	2
Lagos State Waste Management Agency	KII	2
Alimosho Local Government	KII	2
Kosofe Local Government	KII	2
Lagos Mainland Local Government	KII	2
Environmental Rights Action/Friends of the Earth Nigeria (ERA/FoEN)	KII	1

3.6 Sources of Data

Data for the study was collected from two main sources: primary sources and secondary sources

Primary Sources: Primary sources were interviews conducted with directors and officers of relevant environmental agencies as well as Civil Society Organisations, 2016 Lagos State government gazette on the environment and the 2017 *Harmonised Environmental Law*.

Secondary Sources: Secondary data was collected from existing literature, newspapers, magazines and internet materials on environmental activities and issues in Lagos state.

3.7 Method of Data Collection

Data was qualitatively gathered through Key Informant Interviews (KIIs) with respondents who were selected purposively. Non-participant observation was also employed. Furthermore, government documents and gazettes such as the *Harmonised Environmental Law* of Lagos state as well as the 2016 Lagos State Gazette on the environment were utilized to complement KII.

3.7.1 Key Informant Interviews (KIIs)

The key informant interview guide served as the research instrument for data collection. The semi-structured form of KII guide was utilised. Its appropriateness inheres largely in the fact that it afforded the researcher the opportunity to follow up on respondent's responses which further enriched the quality of data derived using the key informant interview method. Additionally, the interview questions were developed from the research objectives and designed by the researcher to elicit useful information with regards environmental frameworks and the challenges of environmental awareness and management in Lagos State.

A total of 25 Key Informant interviews were conducted. KIIs conducted were distributed in the following manner: Federal Ministry of Environment (2), NESREA (2), Lagos State Ministry of the Environment (2), Lagos State Environmental Protection Agency (2), Lagos

State Parks & Gardens Agency (2), Lagos State Safety Commission (2), Lagos State Wastewater Management Office (2), Lagos State Signage and Advertisement Agency (2), and Lagos State Waste Management Agency (2). Others include officials of Alimosho Local Government (2), Kosofe Local Government (2) and Lagos Mainland Local Government (2). Additionally, the director of Environmental Rights Action/Friends of the Earth Nigeria (ERA/FoEN) was interviewed. The discussions centred on the shaping of environmental laws and policies in the state by prevailing environmental issues and global environmental regime.

3.7.2 Non-participant observation

The researcher observed the monthly Lagos State general environmental sanitation twice in Okota and Ogba area of the State. Similarly, the researcher also observed the weekly market sanitation twice Idumota and Daleko area of the State. This aided the researcher in observing the environmental health officers performing their duties actively and spotting the compliance of the people to the State's environmental sanitation law.

3.7.2 Document analysis

Some of the important government documents employed in the study included the *Harmonised Environmental Law* of Lagos State of 2017, the 2016 Lagos State government gazette on the environment and the act that guided the formulation and operation of LASEPA. The *Harmonised Environmental Law* of Lagos State for example provided insights into the environmental frameworks designed for the state. Furthermore, the Gazette and LASEPA act was useful in identifying and interpreting continuity and change in environmental frameworks in the state.

3.8 Method of Data Analysis

Data from Key Informant Interviews (KIIs) were transcribed and juxtaposed with information extracted from government gazettes and documents as well as from secondary sources. Furthermore, the gathered data was processed, pooled together and categorised thematically based on the research objectives. Additionally, the data were content analysed descriptively.

3.9 Limitations of Study

Directors of civil society organisations initially scheduled to be interviewed could not be reached despite several efforts. However, the researcher was able to establish links to one of the directors, as against the three scheduled for an interview, who supplied needed and vital information which ensured that validity of data was not affected. Additionally, efforts to seek an audience with the chairman and other honourable members of the Lagos State House of Assembly committee on the environment was not fruitful. The reliability and validity of data obtained were, however, not affected by these limitations neither were the outcomes of the study in any way hampered.

CHAPTER FOUR

ANALYSIS AND DISCUSSION OF FINDINGS

This section presents the results of the analysis of the responses from the Key Informant Interviews (KII) conducted with officials of the Federal Ministry of Environment, National Environmental Standards and Regulations Enforcement Agency (NESREA), Lagos State Ministry of the Environment, Lagos State Environmental Protection Agency (LASEPA), Lagos State Parks & Gardens Agency (LASPARK), Lagos State Safety Commission (LSSC), Lagos State Waste Management Agency (LAWMA), Lagos State Wastewater Management Office (LSWMO), Lagos State Signage and Advertisement Agency (LASAA), Alimosho Local Government, Kosofe Local Government, Lagos Mainland Local Government and the coordinator of a Civil society organisations (CSO), Environmental Rights Action/Friends of the Earth Nigeria (ERA/FoEN).

4.1 Research Question One: What are the specific environmental challenges existing in Lagos State?

It was uncovered, through information supplied during the KII by interviewees, that the specific environmental challenges in Lagos State includes rapid urbanisation and population explosion, illegal squatter settlements, defacement, attitudinal practices, waste management and air pollution. The officers from the federal environmental institutions identified waste management and air pollution as prevalent challenges.

Carbon emission from all forms of vehicles on the Lagos road are one of the challenges the state grapples with. With about 900,000 cars on the road each day, the emission has become a major challenge to clean air in the state. A visit to Olusosun would show you the heaps of waste generated daily so apart from pollution of the air, waste generating and its management is also a very key challenge in the state (KII with Mr. Nosa Aigbedion, Head, NESREA (Lagos office), Surulere, March 21, 2017).

The environmental officers sampled from the state-owned institutions agreed with the position of the officers of NESREA and Federal Ministry of the Environment. They however added that pollution, defacement and population explosion are challenges bedevilling the State. They argued that the increase in population of the state over the years has exacerbated the environmental challenges.

Environmental challenges peculiar to Lagos State are unprecedented in Nigeria due to the rate of rapid urbanisation being experienced. These have seen the state experience pollution, flood and defacement of the state. (KII with Mr. Faleti, Babatunde, Head, Environmental Sanitation, LASEPA, Ikeja, March 3, 2017)

The sampled population from the Local Governments noted that attitudinal practices of citizens to the environment and illegal squatter settlement are challenges the State grapples with which have hampered the State achieving a sustainable environment.

Illegal squatter settlements have sprung up all over the State and these settlements end up distorting the city masterplan. The inhabitants of these places are exposed to various health and security risks and sometimes become vectors through which diseases are spread around the State (KII with Mrs. Banjo Odusina, Environmental health officer, Lagos Mainland LG, Yaba. March 21, 2017).

While (Olajide, 2010) identified waste management as the biggest environmental challenge in Lagos state, the study discovered that waste management and other challenges are largely due to rapid and uncontrolled urbanisation as well as population explosion being experienced in the state. This and other identified challenges are discussed below.

Rapid urbanisation and population explosion

Civilization has championed a modernized system of human day-to-day operations. This system has resulted in rapid population increase which is being experienced in most part of the world especially in urban centres such as Lagos State. According to Eduardo (2002), most traditional and urban cities of the world are trying to contend with the problem of population increase. This is borne out of the fact that increases in urban population mount a corresponding pressure on the limited available resources deposited in

the environment. One of the attendant effects of urbanization and urban development is the problem of providing adequate facilities which will cater for the growing population. The more people migrate from rural and peri-urban areas to urban centres, the denser the urban residential areas will be. The dramatic changes experienced at the level of development across the globe and the surge in urban population has invariably increased the consumption rates of the populace. Hence, the demand for resources has increased and, in some instances, far exceeds the supply (Hassan, 1981).

Lagos State boasts of being a metropolitan state with a population which ranges from the official figure of 7 million to a projection by the state of 22 million. The State, like other megacities, experiences diverse issues associated with the status of being a mega city. However, such issues are context specific as well as locale specific. The state has the presence of the Federal, State and Local Government that is, the three tiers of government. The oversight function of the environment in the state is under the purview of the three tiers of government with roles spelt out by the constitution. This was emphasised by the state director of NESREA when he posited that Environmental issues need synergy from the three tiers of government (KII with Mr. Nosa Aigbedion, Head, NESREA (Lagos office), Surulere, March 21, 2017). In the same vein, the deputy director, pollution control at the Federal Ministry of Environment affirms that the constitutional duties of each tier of government are spelt out by the constitutions and the smooth management of the environment has been based on the synergy of the three tiers of government in the state.

The Nigerian constitution spells out the terms of operation of the three tiers of government and this has in a way helped in environmental governance in Lagos state (KII with Mr. Adewunmi Kalejaiye, Deputy director, pollution control, FMOE, Surulere, March 22, 2017).

To buttress this, the deputy director of pollution control in the Federal Ministry of Environment, Lagos office in his submission, maintained that pollution is not a standalone environmental problem rather, it is an attendant effect of overpopulation (KII with Mr. Mukaila Sanusi, Director, Public and Research Directorate, MOE, Ikeja, March 3, 2017). Economic development, which has been attributed to the status of Lagos as a former

capital city, led to rapid urbanisation. The improved living standards and opportunities in Lagos as a result of government policies led to increase in migration to the state and a corresponding geometric increase in population. Hence, rapid urbanisation exacerbates the demand on the environment and leads to increase in the production of waste and other pollutants thereby putting stress on the available infrastructure. It is therefore premised that the major environmental challenge faced in Lagos state is overpopulation. This view was affirmed by the NESREA director who noted that population explosion is a major challenge of urban Lagos.

Rather than reduce, the population of Lagos state is growing in leap and bounds (KII with Mrs. Banjo Odusina, Environmental health officer, Lagos Mainland LG, Yaba. March 21, 2017). Literature also assented to urbanization as a cause of major environmental challenge in any mega city (Guber 2003). Respondents linked population explosion in the state to rapid urbanisation while positing that environmental challenges peculiar to the state are unprecedented in the Nigeria due to the rapid urbanisation being experienced. This is reinforced by the topography of Lagos state as well as the status of the state as a former Federal Capital Territory.

Illegal squatter settlements

One of the environmental challenges facing Lagos state since its status as the capital of Nigeria was confirmed till today, after the capital was moved, is the problem of illegal squatter settlements. Squatter settlements are uncontrolled illegal and temporary settlements (Srinivas, 2015; Oduwaye, 2007). Such settlements spring up in cities and are often are as a result of poor housing facilities on one hand, and expensive housing facilities on the other. Such settlements defy the city plans and are often developed arbitrarily hence posing a risk to the planning of the city and creating environmental hazards due to lack of basic infrastructure cutting across such settlements. Illegal settlement has therefore been flagged as one of the negative characteristics of a mega city.

These settlements are spread round Lagos in fragile ecosystems which overtime places strain on the available environmental facilities of the state. The settlements, which are as a

result of rapid urbanisation, leads to population explosion which in turn stretches the available facilities in the state and promotes poor sanitation practices. Some of the people who grow up in such environment often end of being miscreants as posited by the general manager of LASPARK (KII with Mrs. Abimbola Jijoho-Ogun, General Manager, LASPARK, Ojodu, March 7, 2017). Thus, the inhabitants soon find the need for a better abode and spread the settlements to other parts of the state. Some often migrate from such settlements and make parks, bus-stops, under bridges and other public places as a place of abode. Efforts to relocate such settlements have often been met with resistance and rejected vehemently. Such cases include the relocation of inhabitants of Badia, Maroko and a host of other places in recent past. Apart from the destruction of the city masterplan, the inhabitants of these places are exposed to various health and security risks and sometimes become vectors through which diseases are spread around the state (KII with Mrs. Banjo Odusina, Environmental health officer, Lagos Mainland LG, Yaba. March 21, 2017).

The state government has often been criticised for its strong-arm method of evicting inhabitants of these settlements and this has stemmed the efforts of the government towards reducing these settlements. The focus has shifted from eviction to the provision of facilities close to the settlements around the state. This is in line with best practices which postulates that the increase in facilities and infrastructure would help reduce over-stretch of existing facilities. Such approach, however, can only be viewed at best, as a stop-gap approach which will become obsolete in the foreseeable future with the continual surge in the Lagos state population (KII with Mrs. Abimbola Jijoho-Ogun, General Manager, LASPARK, Ojodu, March 7, 2017). This is because environmental shock has often proved dire to such settlements in terms of loss of livelihood, lives, and properties.

Defacement

Defacement of the environment is otherwise referred to as environmental vandalism. It is the destruction of, or damage to, public or private property. This is done through various means and in some instances, may be unintentional, however, it is counted as an illegal act. Scholars such as Philipps (2015) however differ on the use of the term destructive to

characterise defacement. They see defacement as an alternative communication medium that gives a form of expression to groups who have limited access to the mainstream media. This suggests that defacement is a form of showing grievance or dissatisfaction using a non-conventional means. To further broaden the discuss, Cammaerts (2007) suggest that defacements are creative and effective hence overlooking the negative aspects of such act. It is opined that they often present subtle and aesthetically appealing modifications and that such interventions, through defacement, open up the potential for change in everyday thoughts and actions.

The angle at which defacement is being examined above did not take into cognizance the effect of defacement on the built environment but rather on political thoughts. This is owing to the fact that it has always been used to show subtle or overt dissent to the status quo in developed nations. However, recent events in developing nations have re-conceptualised defacement to include environmental concerns. The spread, for instance, of posters, graffiti and waste which characterises the Lagos environment is the opposite of enhancing aesthetics as suggested in literature. Destructive defacement, rather than being aesthetically appealing and stimulating reflection, destroys the environment and becomes a source of insecurity in some instances. It can be as a result of the accumulation of rubbish, garbage, or refuse and become a detriment to the public health, safety, and welfare of the citizens. Similarly, inoperable vehicles and long-abandoned vehicles have been and continue to be a detriment to the health, safety, and welfare of the citizens of Lagos State. This is because such vehicles tend to harbour insects and attract vermin, cause traffic and safety hazards, cause visual blight, cause security challenge and poses a threat of environmental contamination (KII with Mrs. Belinda Aderonke Odeneye, Director of safety, compliance and enforcement, LSSC, Ikeja, March 3, 2017).

Defacement has overtime proved to be a major source of environmental challenge in Lagos state (KII with Mr. Idowu Omisore, Information Officer, LASAA Oregun, March 7, 2017). Issues of graffiti and the defacement of public and private property is a detriment to the public health, safety, and welfare of the citizens of Lagos State and it has proven a challenge for the state over the years. Defacement of private and public property tends to

depreciate property values, interfere with the use of property as well as pose public nuisance to citizens.

Defacement of public and private property causes a physical blight on the landscape of the city. Upkeep of landscaping features and proper property maintenance has been said to aid in the reduction of visual blight and enhances the aesthetics of a given community. The distribution of free literature or posters can blight public spaces if leaflets and other printed materials are subsequently dropped as litter (Jana and De, 2015). The unauthorized placement of containers, dumpsters, clothing bins, unauthorized fixtures, cables or wires running in the urban areas in quite an unorganized way, ill-arranged and dazzling billboards, old dilapidated buildings, dumped construction materials, utility poles, advertising vehicles and signs adds to visual blight and contributes to safety concerns hence, the focus of the state government through its environmental institutions such as LASPARK and LASAA was specifically to counteract the effect of visual blight by reducing defacement on one hand and reducing visual blight on the other.

Lagos state is a mega city and visual blight disfigures the state hence we aim to eliminate visual blight and ensure the state has a serene, beautiful and aesthetically pleasing environment. (KII with Mr. Temitope Akande, Director, corporate affairs department, LASAA Oregun, March 7, 2017).

In attaining and maintaining the status of a megacity, defacement needs to be eradicated or minimised in the state. Placement of posters indiscriminately on every wall and public space has been a norm in the state. However, the creation of LASAA in 2012 has reduced drastically such act but conversely, the use of graffiti has grown in the state. This is done mostly by advertisers and recruiters who focus on recruiting all and sundry to the job being advertised. Similarly, election periods have been utilised by politicians to write on walls and roads while at the same time placing posters around the walls and infrastructure of the state. Suffice to say that these posters are often washed away by rain and the papers end up being a contributor to blockage of drainages. This is in line with Jana and De (2015) assertion that handbills are thrown away by the recipients and such handbills are washed away into the drainage thereby causing problems and contributing one way or the other to flooding.

Waste management

Waste generation has been identified as a recurring environmental challenge in Lagos. Every respondent sampled for this study pointed to waste generation, disposal and management as a challenge to the state. One of such waste is e-waste which has the capacity to rapidly degrade the environment (KII with Mrs. Belinda Aderonke Odeneye, Director of safety, compliance and enforcement, LSSC, Ikeja, March 3, 2017). The magnitude of e-waste permeating Lagos environment cannot be quantified most especially considering the level of technological equipment's that come in and out of the state monthly. Furthermore, the state boasts of technology villages in different locations hence, the waste from these equipment are dumped indiscriminately with no specific policy directed towards managing such wastes. Conversely, the head of public-private partnership at the *Lagos State Waste Water Management Office* stated that waste water was more of a concern to the state than e-waste (KII with Mr. Awolusi Ayodeji Kolawole, Head of public-private partnership, LSWMO, Ikeja. March 8, 2017).

Waste water is a product of virtually all types of waste including e-waste, therefore, the management of wastewater is key to the environment much more than e-waste. However, the general manager of Lagos State Waste Management Agency opines that the proliferation of solid waste is a major contributor to environmental degradation (Interview at LAWMA, Oshodi, January 20, 2017). He traced his belief on extant practices and global practice in line with benchmarking theory. Solid waste can be in form of waste matter from the human body, agricultural waste, industrial waste and domestic waste and it has a lot of health and environmental implication.

In examining environmental challenges in Lagos from the Local Government perspective, it must be noted that indiscriminate dumping of waste affects the aesthetic of an emerging megacity while at the same time leads to the blocking of drainages (KII with Miss Temitope Adeleke, Environmental health officer, Kosofe LG, Ogudu. March 8, 2017). Mis-management of solid waste both by the government and the citizens can become a source of defacement to the state thereby depreciating the aesthetic value of the state and

ultimately leading to flooding and health implications. In the same vein, solid waste disposal in parks, gardens and public infrastructure renders such infrastructures unusable thereby defeating the purpose for constructing them. Waste disposal and management is, therefore, a constant source of worry for environmental institutions (KII with Mr. Segun Adeniji, Public Relations Officer, LASPARK Ojodu, March 7, 2017).

Accordingly, the effect of solid waste on the Lagos state environment cannot be overemphasised. Indiscriminate disposal of solid waste is a major trigger of flooding in the state. This is in line with Yusuf (2012) position that drainage blockage, notwithstanding dredging efforts by the state government, has contributed majorly to flooding in the state.

Literature has identified waste as a major source of environmental concern in Lagos state. Extant studies interrogated the interlinkages between waste, environmental degradation with a major focus on solid waste. However, efforts have been on solid waste while little or no literature has been given to liquid waste.

A lot of people are aware of the consequences of pollution actions; however, waste water is not noticeable. Waste water includes the end product of water used for industrial, domestic, agricultural, commercial and medical purposes and it is a major issue in environmental management in Lagos State. (KII with Mr. Awolusi Ayodeji Kolawole, Head of public-private partnership, LSWMO, Ikeja. March 8, 2017).

Hence, a key environmental challenge in the state is waste water management. Waste water management is novel in Nigeria and the first state to identify it as a challenge is Lagos state. Globally, waste water is always premised majorly on industrial and domestic waste water with little attention to other possible sources of waste water. The usage of water for various domestic and industrial reasons results in waste generation. This transcends industrial and domestic but stretches as far as medical, commercial and agricultural field. The focus on domestic waste water was characterised by the ‘wolewole’ concept in the early 90’s where sanitary officers paid visits to various homes to ascertain sanitary compliance vis-a-vis environmental cleanliness such as gutter maintenance as

well as septic tank maintenance however, such practices have been de-emphasized (KII with Mrs. Anjorin Olufunke, Environmental health officer, Alimosho LGA, 22 March, 2017).

The sanitarian officers in the Local Government Councils differed slightly on prevalent environmental concerns in the state. While postulating that population explosion is a major factor, inadequate sanitary officers to population ratio, according to the environmental sanitary officer in Kosofe Local Government Council, is more of a challenge than waste disposal. This view is in line with the Chief State counsel, LASEPA's claim that staff strength of environmental officers is itself an environmental challenge. However, the waste disposal habit of the citizens, most especially solid waste, has posed a challenge to the sanitary health officers' ability to promote environmental quality in the councils (KII with Mr. Adeyemi Adegboyega Felix, Environmental health officer, Kosofe LG, Ogudu. March 8, 2017).

Attitudinal practices of citizens

Man is the greatest beneficiary of the environment. Man feeds, lives and survive in the environment. The activities or inactivity of man on the environment is inevitable, however, the attitude of man to the environment in the process of carrying out these actions is key to environmental sustenance. A positive or negative disposition towards the environment will determine if the environment will be degraded or conserved. Hence, the attitude of man to the environment is key to environmental quality. The low attitudinal foresight of citizens and environmental offenders in Lagos state is a major source of environmental challenge in the state (KII with Mrs. Akinyemi Olusola, Deputy director, environmental health, FMOE, Surulere, March 22, 2017). The citizens, according to the deputy director, environmental health at FMOE, do not know the effect of their actions on the environment while those who know, carry an inherent belief that the environment will repair itself in the long run.

Attitudinal dimension to environmental issues was discussed by Dunlap and Jones (2002) who defined it as the degree to which people are aware of problems with regards the

environment and support various efforts to solve them and indicate a willingness to contribute personally to their solution. Furthermore, Dunlap and Jones (2002) identified gender, race, as well as religious beliefs as important correlates of environmental attitudes. Research has argued that the concept of environmental concern involves several hidden concepts, with attitudes frequently representing one of such underlying dimensions (Carman 1998; Klineberg et al. 1998; Guber 2003). LASAA director of corporate affairs, while speaking about defacement as a key challenge to the state's environment, also mentioned attitude as an underlying factor for people guilty of defacement (KII with Mr. Temitope Akande, Director, corporate affairs department, LASAA Oregun, March 7, 2017). This agrees with Krech & Crutchfield (1948) assertion that environmental attitude is an enduring combination of motivational, emotional, perceptual and cognitive processes with regards the environment.

In the same vein, Local Government interviewees submitted that recurring environmental challenges in Lagos are as a result of the attitude of people to the environment and to the policies put in place to protect the environment. In instances where people know the law and are familiar to the dictates of the law, inbred attitude guides their compliance to the law and their conservation of the environment (KII with Mr. Adeyemi Adegboyega Felix, Environmental health officer, Kosofe LG, Ogudu. March 8, 2017). Little attention has been beamed on environmental attitude in Lagos state Nigeria in relation to environmental concerns. Hence, the identification of the respondents of environmental attitude as being germane to understanding environmental challenges in the state is sacrosanct.

Air pollution

Scholarship has acknowledged pollution as a product of urbanisation and vehicular emission has been identified as an air pollutant (Olekesusi, 1998; Eneh, 2011). The Lagos state government in 2016 submitted that the number of vehicles on the state road was far above what is obtainable in any other state of the federation. The large number of vehicles on the road produce a high level of CO₂ emission in the state thereby contaminating the air in the Lagos environment. Efforts to mitigate the effect of vehicular emissions on the state ecosystem has proved unsuccessful (KII with Mr. Shorunmu Ahmed, assistant director,

environmental management, NESREA (Lagos office), Surulere, March 21, 2017). According to the NESREA assistant director on environmental management, migration of people to Lagos on a daily basis with the attendant vehicular movement in its wake is a source of environmental challenge in the state. This view was supported by other respondents who posited that the vehicular emission being experienced in the state was unhealthy for the environment's flora and fauna.

Furthermore, improper sanitation and indiscriminate waste disposal measures will invariably lead to air pollution (KII with Mr. Mukaila Sanusi, Director, Public and Research Directorate, MOE, Ikeja, March 3, 2017). Apart from vehicular emissions, however, other sources of air pollution abound in the state such as bush burning, smoking, generator fumes and industrial fumes. The state has promulgated laws on smoking in the state and banned smoking in some open places, however, compliance with the law is relatively low. Generator fumes are also a source of air pollution in the state. This includes both industrial and domestic generators. The State, being the important economic beehive of the Nigeria, houses many industries and companies hence, the level of generator fumes permeating the atmosphere is high (Interview at LSSC, Ikeja, March 3, 2017).

This research unearthed the fact that the *Lagos State Waste Management Agency* incinerate the waste collected from various sources in the state in an open waste treatment plant situated at Ojota thereby contributing to the air pollution experienced in the state. This contributes to the depletion of the ozone layer and can be a contributor to climate change extremes.

Heatwaves

Other attendant effects of overpopulation in Lagos state includes pollution, vehicular emission, waste management as well as heatwaves (KII with Mr. Shorunmu Ahmed, assistant director, environmental management, NESREA (Lagos office), Surulere, March 21, 2017). Literature has yet to focus extensively on heatwave as a source of environmental challenge in Lagos. A heat wave is generally defined as a period of time,

usually for several days, when temperatures significantly higher than average are registered (Martinez & Bandala, 2016). The high temperature is often ascribed to natural causes however, the focus of late has shifted to population extremes as a major cause of heatwaves. Hence, the effect of heatwaves on countries with high population density such as India and Malaysia have been studied by scholars such as Martinez and Bandala (2015) as well as Shehadeh & Tarawneh, (2014).

The focus has generally been around countries in the global south. These cannot be unrelated to the rapid urbanisation experienced in developing countries and the lack of efforts to cushion effects of this on the environment. Lagos State landmass is small compared to other states in Nigeria, however, her population to landmass ratio is unrivalled. The topography of the state, however, due to her environmental composition of oceans, rivers, and streams, has so far hidden the effects of heatwaves on the citizens. The oceans, streams, and rivers which surround the state counter the effect of heatwaves and cools the environment thereby counteracting heatwave.

However, a recent study by LASPARK has revealed an increasing account of heatwaves in the state. This has seen the agency focus on tree-planting campaign as a way of combating heatwaves (KII with Mr. Segun Adeniji, Public Relations Officer, LASPARK Ojodu, March 7, 2017). In countries with challenges of heatwave, tree planting is seen as a measure used in combating the effects of heatwaves. Hence, it is hoped that the combination of oceans, rivers, streams, and trees will further reduce the occurrences of heatwave most especially with the ever-growing population of the state.

It was avowed by the sample population that the state's environmental challenges have grown over the years with issues graduating from simple to dynamic. Challenges as identified above were treated with kid gloves due to the perceived minimal effect on the environment, however, the challenges have grown complex and are daily posing management challenges to the government.

4.2 Research Question Two: Which policies and legislations were adopted in response to these challenges?

Environmental challenges have existed in Nigeria as early as the 1950s, right before independence. However, focus on the environment did not come to the limelight till 1988 following the electronic waste episode in Koko, old Bendel state. The incidence attracted international concerns and this gave birth to the Basel convention. (KII with Mrs. Fehinti Ogbemudia, Chief state counsel, LASEPA, Ikeja, March 3, 2017).

The attention the incident got forced the hand of the government to act. As a response to the incidence therefore, the Nigerian government embarked on an environmental policy drive to prevent the reoccurrence of such incidences while at the same time combating the consequences of the incident.

To this end, the Federal Environmental Protection Agency (FEPA) was signed into law and diverse environmentally related treaties were signed by the Federal Government. The 1999 constitution of Nigeria entails environmental protection and creates room for Federal, State and Local Government governance of the environment. This legal backing empowered the state and local government legislatures to formulate and laws and policies with regards their immediate environment while at the same time empowering the State and Local Government executives to enforce environmental laws. Such laws are not formulated arbitrarily but, in most cases, as a response to a threat, challenge or foresight. This research, therefore, sought out to investigate the laws and policies formulated in in Lagos state as a result of the challenges posed by the environment.

Instances have been cited where institutions were created and laws were promulgated as a result of environmental challenges. Kosofe Local Government created an epistemology department under the environmental unit after outbreaks of environmentally related diseases in 2001. The outbreak prompted the Local Government council to consult available edicts and bye-laws as well as Public Health Law to ascertain the best way to tackle the outbreak. This led to the creation of the department which was charged with the sole duty of tackling environmentally related health issues (KII with Miss Temitope

Adeleke, Environmental health officer, Kosofe LG, Ogudu. March 8, 2017). Similarly, an instance was cited in Alimosho Local Government where the environmental officers discovered the dumping of waste by a community at an illegal site. This prompted the Local government to consult the available laws on waste generation and disposal both at the state level and at the Local Government level and this prompted the creation of a sanitation unit in the Local Government. Additionally, the Local Government consulted with the laws of the state (KII with Mrs. Anjorin Olufunke, Environmental health officer, Alimosho LGA, 22 March, 2017).

However, Alimosho Local Government is yet to formulate its own environmental laws. Same goes for the three Local government in context. The peculiar environmental challenges in these Local Government, therefore, stimulated the environmental officers to adapt a mechanism for control and mitigation, albeit from other sources apart from Local Government specific bye-laws. All the Local government health directors meet once a month under a unified forum and during these meetings, issues pertaining to the environment are discussed and oftentimes, a unified stance is taken. Hence, the resorting to a common law and shared ontologies is not far-fetched. The Ikeja bye-laws on the environment were formulated based on challenges in the locale hence, the usage of these laws, or the domestication of such law by other Local Government councils is in line with the research objectives.

The Federal Ministry of Environment and her agencies have a registered presence in Lagos and this is backed by law. However, the State Government rather than depend on the Federal Government for its laws on the environment, in accordance with the constitutional power vested in her, promulgate environmental laws. According to the public relations officer of the Lagos State Ministry of the Environment, the government in response to these challenges has been proactive in addressing the challenges posed by the environment (KII with Mr. Mukaila Sanusi, Director, Public and Research Directorate, MOE, Ikeja, March 3, 2017).

He further stated that the State Government endeavours through constant research to foresee environmental challenges and efforts are made to curb the manifestations of such challenges in the state and this is achieved by the introduction of policies. It was further stated that

Environmental responsibilities are rested on the Governor and it is delegated to the Ministry of the Environment. The Ministry carries out its functions with the help of its parastatals. The Ministry is in charge of policies while the agencies regulate together with the Ministry (KII with Mr. Mukaila Sanusi, Director, Public and Research Directorate, MOE, Ikeja, March 3, 2017).

Suffice to say that the supervision of the environment rests on the oars of the Governor and this is delegated to the Ministry of the Environment and her parastatals. Environmental institutions are therefore created by the Governor if and when the need arises. These institutions are created based on environmental needs and challenges as asserted by the Public Relations Officer of the Lagos State Ministry of the Environment and reinforced by a respondent who stated that:

This issue of waste water forced the hand of the government to fill the gap created by waste water hence the creating of the agency and ensured it had a legislative backing (KII with Mr. Awolusi Ayodeji Kolawole, Head of public-private partnership, LSWMO, Ikeja. March 8, 2017).

Corroborating this view, the *Lagos State Signage Agency* (LASAA) posited that Lagos was brought to her knees by environmental issues most especially before the 3rd republic. The advent of democratic governance in 1999 saw to the systematic handling of the environment most especially with the creating of institutions backed by laws for environmental governance.

Few years ago, Lagos state was in shambles. Every junction and every street and every road you will see banners and posters and defacement. People just put signpost anywhere they like because they were no regulation but now, LASAA came into existence and has brought sanity. (KII with Mr. Temitope Akande, Director, corporate affairs department, LASAA Oregun, March 7, 2017).

The general manager of LASPARK posits that the six agencies created under the Ministry of the Environment had a specific mandate to tackle headlong environmental issues specific to the state. A classic example of this is LASPARK whose mandate was to ensure a serene and clean atmosphere for the citizenry. To fulfil this mandate, the agency embarked on a tree planting drive in every nook and cranny of the state to ensure a clean and green environment (KII with Mrs. Abimbola Jijoho-Ogun, General Manager, LASPARK, Ojodu, March 7, 2017). This is as a result of best practices where it is believed that the greener the environment, the more pollution, most especially air pollution, will be mitigated. The respondent's stance is in accordance with literature with regards the concept of best practice in environmental governance. Best practice in the environmental management of an activity, or series of activities, is the management of the activity(-ies) to achieve an ongoing minimisation of the activity's environmental harm through cost-effective measures assessed against the measures currently used nationally and internationally for the activity (Preston, 1987). Hence, a form of transplantation was employed by the state government in environmental governance.

According to Watson (1993), transplantation is the deliberate replication and adaptation of substantial portions of statutes or particular doctrines of law by one country from another. Transplantation is hardly done if the law had been proven a failure in the originating country hence, an important feature of transplantation is the success or degree of success ascribed to a particular environmental law from the originating country. In this case, the state government did not focus on any country but rather focused on many countries with a similar climate to the State in a bid to juxtapose working practices. This was reinforced by a respondent who stated that:

Often times, the majority of these practices have gone through a lot of environmental processes before been approved. the best practice, however, is based on a standard so we pick the one that's best and applicable to us and localise to our environment. (KII with Mr. Segun Adeniji, Public Relations Officer, LASPARK Ojodu, March 7, 2017).

Thus, the state government ensures that best practices guide environmental governance in Lagos. To further strengthen this stance, a survey conducted by LASEPA revealed that the

formulation of the laws in the state is a direct response to challenges hence, all the laws of Lagos state follow the global best practices (KII with Mrs. Fehinti Ogbemudia, Chief state counsel, LASEPA, Ikeja, March 3, 2017). This proves the earlier stance of this research that transplantation is employed by the state government in its environmental governance drive. Most laws the State promulgate are juxtaposed with global laws in response to local challenges. According to the assistant director, environmental management department in the Ministry of the Environment, Lagos follows the global framework and adapt best practices to her local environmental issues. It was further stated that the idea of waiting for specific challenges to occur before acting on such challenges have been revolutionised. Rather than wait for environmental challenges to arise, the State government has instituted a proactive disposition to the environment by learning from the experience of people and governments around the world.

In-line with transplantation, a benchmarking approach, the state studies environmental issues worldwide and promulgate laws on the environment based on experiences from other countries with a view to preventing environmental misfortune. The state was the first state to establish a state environmental agency in Nigeria after the national dimension the Koko incidence of 1988 took (KII with Mr. Mukaila Sanusi, Director, Public and Research Directorate, MOE, Ikeja, March 3, 2017). Although the incident occurred in far-away old Bendel state, the state speculated on the impact of such occurrence on Lagos hence, the introduction of the state environmental protection agency. This means in simple terms that the process of transplanting by the government of the state or the institutions of environmental governance is not only dependent on best practices from other countries but, local occurrences in the same country can be drawn upon by the State Government as a learning process for action on the environment.

Policy cycle processes in Lagos State

In some instances, general environmental challenges have been duly taken care of by the executive list. Thus, the state consults with the Federal Ministry of Environment and tweak the federal actions or laws to the peculiarity of the State. In this instance, the State doesn't refer to global practices as such but will rather rely on the Federal approach in

tackling such. According to the Deputy director, pollution control and environmental health at the FMOE, when local environmental issues take a national turn, the Federal Government is always forced to intervene. It will therefore be sufficient to say that environmental challenges can escalate to involve the three tiers of government. This is a classic example of an integrative approach to environmental governance. Policy cycle is therefore imperative in policy formulation most especially in cases where the environment has been mainstreamed.

Scholars such as Lowi and Ginsburg (1996) posited that policy can be simply understood to be whatever governments of countries choose to do or in some instances, not to do. The decision of government to overlook challenges and issues is in itself a policy of some sort if the postulations of Lowi and Ginsburg (1996) is to be followed. As a course of action (or inaction as the case maybe) however, Fischer et al (2007) posits that a policy or policies, can be in form of “a law, a rule, a statute, an edict, a regulation or in some instances an order.” The State Government’s response from the views of the respondents has been a course of action in the form of regulation, laws and institution creation with recourse to existing laws both at the local and international level. The benchmarking theory widens the understanding of these actions from the angle of transplanting as well as the employment of the policy cycle.

The policy cycle, as explained by Dovers (2005) would go through stages which includes Problem-framing, Policy-framing, Policy implementation as well as Policy monitoring and Evaluation. Identification of the problem is hence imperative to policymaking. Policy framing must be preceded by problem framing.

The laws follow the environmental circle process from conceiving to implementation. Ministry of Justice, House of Assembly and stakeholders are part of the process. Lagos is a megacity thus we follow best practices. (KII with Mr. Awolusi Ayodeji Kolawole, Head of public-private partnership, LSWMO, Ikeja. March 8, 2017).

The process involves stakeholders with varying interest and power to aid effectiveness. Respondents attested to the principle of inclusiveness practiced in Lagos state, although,

the level of inclusiveness has been a source of debate. According to the director of Environmental Right Action group (ERA), stakeholders are not carried along on all issues. This allusion was based on his objections to the processes which heralded the signing of the *Harmonised Environmental Law* by the governor.

The problems and suggestions need to be reviewed by all stakeholders before a policy is introduced. This is to prevent dissent with the law which often times leads to non-compliance. (KII with Mr. Akinbode Oluwafemi, Deputy Director, ERA (FOEn), Ojodu, April 13, 2017).

A feature central to the policy process in contemporary societies is the interface between policy-related activities at diverse levels (local, regional, national and international) and strata (governmental, parliamentary, administrative, scientific communities, and the like) of governance. Thus, the debate, implementation, enforcement, and evaluation of policies are constant. If any of this interaction is missing, the risk of the policy failing is high.

According to Amokaye (1998), environmental rules and standards, whether legislative or administrative in outlook, should not only be known in advance but they must also apply likewise to all those issues addressed by them hence, the rules must be communicated to the stakeholders and the rules must be able to address all aspects of the environmental issues within its purview. The stance of the director of ERA was based on inadequate communication to non-governmental organisations before, during and after the process involved in the passing and subsequent signing of the *Harmonised Environmental Law* of 2017. Directors of some Non-Governmental Organisations (NGO's) interpreted the supposed inadequate communication move as a ploy by the government to force the laws on them. In variance to this, the public relations officer of the state Ministry of Environment faulted the claim. He posited that the laws were debated on the floor of the state house of assembly and stakeholders were invited, including the general public (Interview at MOE, Ikeja, March 3, 2017). Similarly, the director of enforcement and compliance in the *Lagos State Safety Commission* stated the importance of stakeholders to the state government.

We go through environmental circle process in Lagos up to the stage of testing to evaluation. The stakeholders and lawmakers are also included in the law formulation. (KII

with Mrs. Belinda Aderonke Odeneye, Director of safety, compliance and enforcement, LSSC, Ikeja, March 3, 2017).

Amokaye (1998) posited that debates are key to policy making. Hence, the debates over inclusiveness or otherwise are expected. The respondents from the NGO's attested to been part of the processes but had issues with the time allocated to the debates. Suffice to say that the policy cycle accommodates such.

Consolidated Frameworks for Environmental Management in Lagos state

The state had diverse laws and policies on the environment in play prior to the year 2017. These laws ranged from those made by act, edicts, decrees, orders and laws. Some of these laws were duly gazetted while others, such as the creation of Kick Against Indiscipline (KAI), were not. Similarly, some institutions were created by executive order without the due backing of the law such as the Lagos State Waste Water Management Agency. The research aimed to isolate the frameworks which were not duly gazetted and juxtapose it with those gazetted, however, the state government harmonised all the laws and gazetted them in a single document. The document was signed into law on the 21st of February, 2017.

Part1, section 1 of the *Harmonised Environmental Law* of Lagos State states that:

The Ministry of the Environment shall be responsible for the overall management of the environment of Lagos State.
(*Harmonised Environmental Law* of Lagos State, 2017:11)

The Lagos State Ministry of the Environment is therefore empowered to manage every environmental concern of the state. To meet her mandate, the Ministry will be aided by authorities and board. These bodies are covered in part 1, section 2(1):

The following Agencies shall constitute the Authorities or Boards under the supervision of the Ministry:

- (a) Lagos State Environmental Protection Agency (LASEPA);
- (b) Lagos Water Corporation (LWC);
- (c) Lagos Waste Management Authority (LAWMA);
- (d) Lagos State Signage and Advertisement Agency (LASAA);
- (e) Lagos State Parks and Garden Agency (LSPARK);
- (f) Lagos State Wastewater Management Office (LSWMO);
- (g) Lagos State Environmental Sanitation Enforcement Agency (LSESEA);

- (h) Lagos State Water Regulatory Commission (LSWRC)
- (i) Public Utilities Monitoring and Assurance Unit (PUMAU); and
- (j) Any other agency or board as may be established under the Law of the State (*Harmonised Environmental Law of Lagos State, 2017:11*)

The law also created a space for the creation of other agency under the ministry in future. The Ministry can delegate to any Department, Authority, Agency or Board precise responsibilities and functions for implementation. In addition, the ministry will be responsible for the formulation of legislation, standards, and regulations of environmental matters in Lagos State. These give the ministry the powers to enforce, implement and evaluate the laws of the environment in the state and determine best practices within the confine of the law itself. In addition, the ministry has the mandate to foster inter-ministerial and inter-agency discussions on environmental matters of Lagos State. Similarly, the State Ministry has the mandate to liaise with the Federal Ministry of Environment on environmental matters

The ministry shall liaise with the Agencies of other tiers of Governments including the Federal Government and donor agencies in the execution of its environmental policies. (*Harmonised Environmental Law of Lagos State, 2017:13*).

In the powers of the Ministry, no direct mention was made of the Local Government however, the section above clearly states that ‘the ministry shall liaise with the agencies of other tiers of governments. The Local Government is implicitly referred to here and further explicitly stated in part 3, section 38 (c) of the law:

Concessionaire means a duly licensed and approved waste collector who has been granted concession by the Authority in collaboration with a Local Government Council or Councils to charge for, collect and dispose of waste within the local government area. (*Harmonised Environmental Law of Lagos State, 2017:43*).

Suffice to say that the law clearly states the collaboration, or possible collaboration, among the three tiers of government. The respondents from the local, state and federal agencies attested to the tripartite relationship that exists among the tiers of government. the environmental health officer at Lagos Mainland Local government explained that the Local Government makes law which are within the confines of the state laws (KII with

Mrs. Banjo Odusina, Environmental health officer, Lagos Mainland LG, Yaba. March 21, 2017). In the same vein, state director of NESREA stated that there is no alien law the state can formulate without due consultation with the Federal Ministry of Environment. Furthermore, a respondent from the Lagos State Ministry of the Environment specified that the laws on the environment from the state, no matter how novel, always confer with the constitution as regards the concurrent list (KII with Mr. Mukaila Sanusi, Director, Public and Research Directorate, MOE, Ikeja, March 3, 2017).

These frameworks by the state government are designed for the implementation, compliance, awareness, and monitoring of environmental policies in Lagos state. According to the *Harmonised Environmental Law of Lagos State*, two new environmental institutions were created and these include the Lagos State Water Regulatory Commission (LSWRC) and Public Utilities Monitoring and Assurance Unit (PUMAU). Similarly, a window was open for the creating of new agencies and institutions if the need arises. Hence, the framework is designed for the present and the future of the environmental stability of the state.

4.3 Research Question Three: What are the existing frameworks for environmental awareness in Lagos State?

Environmental awareness is integral to compliance of environmental laws (KII with Mr. Adewunmi Kalejaiye, Deputy director, pollution control, FMOE, Surulere, March 22, 2017). Environmental frameworks must of a necessity cover awareness creation. Lagos State institutional and compliance framework does have a framework for awareness.

Environmental responsibilities are rested on the Governor and it is delegated to the Ministry of the Environment. The Ministry carries out its functions with the help of its parastatals. The Ministry is in charge of policies while the agencies regulate together with the Ministry. Awareness on the environment is rested on the Public and Research Directorate so awareness is duly captured in Lagos environmental Laws (KII with Mr. Mukaila Sanusi, Director, Public and Research Directorate, MOE, Ikeja, March 3, 2017)

Environmental policy and management processes can be relatively complex. It involves various types of actors such as governmental, non-governmental, courts, scientists, industry and the local citizens, who operate at all levels of decision-making at the individual, organizational and at governmental level.

The *National Action Plan for the Promotion and Protection of Human Rights in Nigeria* (2002:52), recognises the right to clean and habitable environment and notes that the Federal Government of Nigeria has constitutional obligations namely that Government recognizes that every citizen in Nigeria has the right to:

- i. an environment that is not harmful to the citizen's health or well-being;
- ii. have the environment protected, for the good of present and future generations through reasonable laws and other way of;
- iii. prevent pollution and ecological degradation;
- iv. promote conservation and;
- v. secure ecologically sustainable development and use of the country's natural resources, while promoting valid economic and social development at the same time.

Every Nigerian has the basic right to protect the environment. The *National Action Plan* tends to shift the attention from governmental obligations to the environment to citizens input and obligations. The need for citizens to see the value of environmental stewardship is key to environmental regime as stated by Ogunleye (2004). The need to make environmental education a focal point of environmental stewardship was first championed as early as 1977 by United Nations Educational, Scientific and Cultural Organization (UNESCO Tbilisi Declaration, 1978). Environmental education is therefore not a new concept.

However, the adoption of the concept is yet to be widely accepted. This is posited by Potter (2010) who suggests that the time to intensify efforts in utilizing environmental education as a ready tool to engage the public on environmental consciousness is ripe. His call came against the backdrop of further degradation of the environment and increase in environmental challenges. Singh (2015:15) alluded to this when he stated that:

It is of utmost importance that the people should be made aware of not only the problems involved, but also of the role(s) to be played by them in protecting the environment to enable them stop putting so much pollution or waste to the environment. (Singh, 2015:15)

Hence, we can attribute the exacerbation of environmental degradation to lack of public awareness on the environment.

In contrast, Shofoluwe & Sam (2012) argue that despite the myriad of campaigns to shed light on the problem, there appears to be no concrete environmental health improvement. The environmental campaign thus exists if we go by this submission yet the environment is none the better. Somanathan (2010) states that the continual degradation of the environment is peculiar to the countries in the global south claiming sustainability of the environment is promoted more in the global north. He concurs with potter (2010) assertion that there is a need to intensify environmental education while laying continual degradation on lack of concerted efforts to keep the public aware.

The Lagos example typifies the call by scholars for an increase in environmental education. Years before the third republic commenced in 1999, the state had laws on the environment and was among the first states to promulgate environmental law after the creation of FEPA in 1988 (KII with Mr. Sanut Hussain Adeyemi, Assistant director, environmental management department, MOE, Ikeja, March 8, 2017). However, the mechanism for awareness wasn't included in the laws. The widespread practice of the citizens which exacerbated environmental degradation forced the hand of the government to go tough on environmental laws and the mainstreaming of environmental concerns. As posited by Somanathan (2010), while countries in the global north were reaching milestones in environmental management, Nigeria was battling with continual Environmental degradation irrespective of the presence of environmental regime.

A respondent to this study argued the advent of democratic governance in 1999 saw to the systematic handling of the environment most especially with the creating of institutions backed by laws for environmental governance (KII with Mr. Idowu Omisore, Information

Officer, LASAA Oregun, March 7, 2017). However, no institution was specifically given the mandate to sensitize the public on environmental consciousness. It was however revealed by a respondent that the new institutions recognised by the *Harmonised Environmental Law* were specifically given the mandate to include public sensitization in their operations and this task was laid at the feet of the Public Relations Officers. As argued by Shofoluwe & Sam (2012), despite the environmental campaigns, there seemed to be no concrete environmental health improvement in the State.

However, the slow pace of change was owing to the fact that the campaigns were not given serious considerations (KII with Mr. Akinbode Oluwafemi, Deputy Director, ERA (FOEn), Ojodu, April 13, 2017). It was noted that the campaigns changed gears in 2012 and this saw the creation of more institutions. Level of awareness improved considerable and of late, a new law was signed with the specific focus on awareness as part of the environmental regime. This was corroborated by the pronouncement of the Governor of Lagos State, Akinwunmi Ambode, that environmental sanitation is now a daily affair and not an occasional affair hence, the people should be duly sensitized.

Creating environmental awareness is a complex process that requires meticulous and continuous efforts. It involves people from all spheres of life (Afangideh et. Al, 2012). This classes of people include the people in the rural areas. Local level of awareness has received little attention from scholars. This is rooted in the fact that literature sees awareness as general and not necessarily categorised. The call for categorisation, as posited by (Afangideh et. Al, 2012) is premised on the fact that most environmental consciousness campaigns are championed from the state level leaving the local levels out. However, the contribution of the rural and peri-urban areas to environmental degradation cannot be overemphasized.

The citizens who live in the rural areas believe in myths ahead of norms and laws hence, they hold on to practices even with full awareness of the consequences of such practices in some instances, and zero awareness in some (KII with Mrs. Awolusi Ayodeji Kolawole, Head of public-private partnership, LSWMO, Ikeja. March 8, 2017). This leads to

citizens in the rural areas embracing practices that degrade the environment. Highlighting these issues, a respondent (KII with Miss Temitope Adeleke, Environmental health officer, Kosofe LG, Ogudu. March 8, 2017) pointed out that with regards awareness, the populace displays nonchalant attitude. It was further posited that illiteracy is also a hindrance to effective awareness. The citizens in the rural areas question the law and information passed based on their belief system.

Awareness campaigns are done through outreaches, mass media, and one-on-one campaigns. The mass media medium hardly gets to the rural areas due to access to the mediums. Hence, efforts at sensitizing the public hardly reach the grassroots (Foei, 2007). This was the prevalent model in Lagos State, however, a paradigm shift occurred. The Local Government now places emphasis on one-on-one sensitisation in line with the demand by the governor for awareness and correction as the first resort and, enforcement as the last (KII with Mrs. Anjorin Olufunke, Environmental health officer, Alimosho LGA, 22 March, 2017). One-on-one enlightenment and explanation of the consequences of environmental dangers have helped awareness in the state. The Local Government has been saddled with this responsibility in view of the closeness of this arm of government to the grassroots.

Environmental awareness is defined as a basic understanding of natural systems combined with the way they interact with human social systems (Mancl, 2003). As explained by Madsen (1996), environmental awareness is key to achieving environmental protection and restoration. Madsen reiterated that the public must have a basic knowledge of environmental problems and environmental awareness basically implies knowledge about the environment hence providing information with regards environmental issues to the public. It, however, goes further and covers attitude and values as well as necessary skills to unravel and find solution(s) to environment-related problems. (Sengupta and Das, 2010).

Environmental awareness seeks to understand and appreciate the seemingly inter-relationship that exists among man and his culture as well as his bio-physical surrounding.

The instance of attitude, which has been a recurring decimal in this study, has also been identified as key to environmental awareness from the position of Sengupta and Das (2010). In this case, understanding the relationship between the environment and man is, among other things, a product of culture.

Educating the citizens of Lagos about environmental system, challenges and degradation may be somewhat successful, however, a culture of attitude inherent in the citizens will not be changed without precise efforts. Studies on environmental awareness have underscored the importance of values and attitudes as well as skills and behaviour as consistent with sustainable development and effective participation of the public in decision-making (UNEP, 2007; Sengupta and Das, 2010). Public participation in environmental protection is dependent on shaping their perception to be in-tune with environmental conservation. In researching the level of awareness and awareness efforts in Lagos, this paper unearthed a fundamental issue with the state process of enlightenment. The people pay attention to environmental laws and the environment based on their belief system hence the majority of people in the rural areas display nonchalant attitude to the environment (KII with Mr. Adeyemi Adegboyega Felix, Environmental health officer, Kosofe LG, Ogudu. March 8, 2017).

Furthermore, a respondent pointed out that the citizenry must respect the environment and know that it's a cyclical phenomenon because whatever is done to the environment will sooner or later come back to haunt man (KII with Mr. Sanut Hussain Adeyemi, Assistant director, environmental management department, MOE, Ikeja, March 8, 2017). An EU publication titled *Environment Action Programme: Environment 2010: Our Future, Our Choice*, argued that environmental sustainability and conservation is important because of the cyclical nature of the environment. In the publication, the need for awareness was emphasized with a focus on attitude. Knowledge and attitude are somewhat linked to each other whereas, attitude is further connected to behaviour (Flamm, 2006). Environmental knowledge/awareness is hence dependent on attitude and the attitude of people to the enlightenment will shape their behaviour towards the environment.

Interestingly, the effect of attitude on the environment was highlighted by all the respondents from the Local Government Councils. The only noticeable exception was the perspective of the interviewee at the Lagos State Ministry of the Environment. This may be due to the closeness of the LGA's to the people due to their interactions on a day-to-day basis. The incidence of pollution and waste disposal was flagged as being one of the resultant effects of the attitudes of the people (KII with Mrs. Anjorin Olufunke, Environmental health officer, Alimosho LGA, 22 March, 2017). The attitude to the environment was linked to belief, perception, and awareness by one of the respondents and this agrees with the argument of Fahlquist (2008) who asserted that the motivation to change practice and attitude towards the environment can be strongly provided through environmental awareness. This is however achievable if the agencies and institutions charged with carrying out awareness take into cognisance the issues of attitudes.

Supporting the argument on the need for environmental awareness to recognise attitude, Department of the Environment and Heritage (2005) posited that environmental education has the potential to increase the attitude to, and knowledge of, the environment that is required to understand in detail and solve problems. The need to focus on environmental attitude can hence not be overemphasized.

Shofoluwe and Sam (2012) posits that lack of citizens' awareness of environmental risks could in part be blamed for the country's (Nigeria) poor environmental awareness education. They further posited that an ample awareness of environmental risk factors could stimulate citizens to take advantage of their social capital as a means to address issues of environmental quality. This position fits the narratives on the need for intense awareness at the rural level. A general awareness problem experienced at the national level can be seen as a problem at the grassroots level. With the increased focus on sustainable development, a corresponding increase at the local level will see citizens concerned about environmental quality and awake consciousness.

Diverse opinions were posited by the respondents on awareness level in the state. The level of awareness in the state was captured thus "a fraction of the people is not aware of

the regulations” by a respondent (KII with Mr. Temitope Akande, Director, corporate affairs department, LASAA Oregun, March 7, 2017). He opines that awareness level in the state is low. This agrees with earlier studies by Oshaniwa and Chikwendu (2013) which posits that there is a large gap in community awareness on the environment. Similarly, another respondent (KII with Mrs. Adewunmi Bisi, Public Relations Officer, LSWMO, Ikeja. March 8, 2017) posited that the awareness level in the state is low. He attributes this to illiteracy and in some instances decision not to learn. Studies have however shown that apart from illiteracy, belief system could also be a trigger and this was reinforced by the position of the people that some environmental issues can be best seen as an “act of God.” (USAID, 2013)

A lot of people in the state are aware of the rules but choose not to comply hence the level of awareness in Lagos State should be rated as high (KII with Mr. Shorunmu Ahmed, assistant director, environmental management, NESREA (Lagos office), Surulere, March 21, 2017). The state invests in public awareness of environmental issues however, people chose to deliberately ignore these in order to stay away from compliance. This is because awareness can be seen as a choice. One can decide to be aware or chose to ignore. Also, one can be aware yet claim ignorance of the law.

On awareness, there is no room for ignorance in law. The level environmental issues have reached in Nigeria, nobody will claim ignorance most especially with the level of awareness campaign through mass media. (KII with Mr. Adewunmi Kalejaiye, Deputy director, pollution control, FMOE, Surulere, March 22, 2017).

The respondent opines that campaigns on awareness on environmental issues are massive hence, the claim of ignorance is not tenable. In Lagos State, it is assumed that everybody is made aware of the law. This is premised on the fact that the laws itself categorically states that ignorance of the law is not an excuse. There are provisions which state that new laws should be communicated to all stakeholders hence, interviewees opined that efforts are tailored towards massive awareness before the take-off of any new law. Suffice to say that people are aware of the law but prefer to be compelled to do the law (KII with Mrs. Fehinti Ogbemudia, Chief state counsel, LASEPA, Ikeja, March 3, 2017).

Offenders of environmental law often lay claim to ignorance as a reason for breaking the law. Globally, ignorance is not an acceptable ground for breaking the law, however, awareness is encouraged to all and sundry. Awareness breeds law-abiding citizens this is perhaps why it remains a written and unwritten code in environmental governance. This agrees with the earlier postulation by this research that compliance is a product of awareness although, this is dependent on the general response of the people to the awareness. This was duly noted by a respondent who posited that “awareness is the motivating factor that ensures compliance” (KII with Mrs. Abimbola Jijoho-Ogun, General Manager, LASPARK, Ojodu, March 7, 2017). Awareness is, therefore, the key to environmental compliance and environmental safety

Effective compliance is hence dependent on awareness. The importance of awareness therefore cannot be overemphasised. In gauging the level of awareness, a respondent posited that awareness level in the state can be placed at about 75% (KII with Mr. Segun Adeniji, General Manager, LAWMA, Oshodi, January 20, 2017). To him, the remaining 25% covers those who are not conversant with the environment and the laws governing it. He, however, places the 25% as those who inhabit the rural areas of the state. This marries the findings of this research on attitudes and peculiarities of environmental issues to the rural areas. The exposure to global environmental practices is quite low. The exposure to environmental regime, though enforceable in the rural areas with no possibility of deniability, remains quite low. The Local Government environmental officers also agree with this position although with a little variance with the *Environmental Health Officers* claiming awareness drive in peri-urban and rural areas has been stepped up. Environmental awareness is however urgently needed for the hinterlands and local areas (KII with Mr. Nosa Aigbedion, Head, NESREA (Lagos office), Surulere, March 21, 2017).

Madsen (1996) posits that environmental awareness is a necessary tool in achieving environmental protection and restoration. Awareness among the citizens is also proportional to awareness within the environmental institutions. Enforcement is a product of awareness both on the path of the enforcer and the enforcee. The responsibility,

therefore, does not stop at the citizen's table but also includes organisations and the government. The environment is, therefore, the collective responsibility of the government, organisations and the individuals. The introduction of environmental regime to protect the environment will not be complete without compliance with the laws.

In the same vein, compliance is dependent on awareness. The efficacy of a policy is dependent on the awareness given to such policy. Policy co-ordination without a corresponding awareness of such resultant policy would lead to policy fail hence the need for environmental awareness. This view was echoed by a respondent 'The state government preaches voluntary compliance hence the government has an awareness drive' (KII with Mrs. Adewunmi Bisi, Public Relations Officer, LSWMO, Ikeja. March 8, 2017). The drive is targeted at both the citizens and the organisations. Shofoluwe and Sam (2012) posit that awareness campaign, which is embarked upon early enough, would deter any possible unethical future plans by organizations. Hence, awareness encompasses even industries and enforcement agencies.

The agencies are saddled with projecting environmental awareness to the citizens. This more or less means the staff of the agencies need to be up to date with environmental issues. This was affirmed by Sengupta and Das (2010) who stated that awareness covers attitude, values and necessary skills needed to find solution to environment-related problems. Hence, training and retraining of staffs of environmental institutions are key. A respondent to this study had alluded to the fact that training capacity for the personnel needs to be embarked upon for education and re-education, training and re-training on environmental issues (KII with Mr. Segun Adeniji, Public Relations Officer, LASPARK Ojodu, March 7, 2017). This is in line with global best practices as exemplified by benchmarking theory where personnel are updated with a periodic change in environmental issues. Rather than focusing on comparing two countries, best practices have evolved to inculcating learning.

In early studies, the general focus tended to be mainly on performance measures, often of other competitors, and for the specific purpose of setting a more ambitious target(s). Modern studies have however examined how non-competitors and industrial outsiders learn in detail how to

improve business processes. Thus, Comparison of various performance measures has developed and evolved into learning about best practices. (Anderson and Camp, 1995:6)

The staff of the Lagos State Ministry of the Environment, as well as agencies under the ministry, are periodically sensitized on the laws they intend to enforce (KII with Mr. Sanut Hussain Adeyemi, Assistant director, environmental management department, MOE, Ikeja, March 8, 2017). This he claims is to avoid the enforcer being schooled about the law by the enforcer. The state government understands the importance of awareness even among her staff. However, awareness among the state staff and a disconnect between the Local Government officers will amount to a gap. The Local Government environmental officers thus engage in periodic state-wide meeting that evaluates and re-familiarise Environmental Health Officers with the laws governing the environment (KII with Mrs. Banjo Odusina, Environmental health officer, Lagos Mainland LG, Yaba. March 21, 2017). The Lagos State environmental protection agency has a research desk where global issues on the environment are monitored to keep the state abreast of happening around the world with regards the environment. Hence, in line with global best practices, the training and retraining of staff is a constant in the Ministry of Environment and associated bodies.

Environmental Compliance and Enforcement in Lagos State

Frameworks are designed to ensure environment security. These frameworks include laws and institutions. According to Afolabi (2005), laws can serve and do serve a number of functions in relation to the sustainable management of the environment. However, for the effectiveness of the law, institutions are created to implement and enforce such laws. The laws hence cannot stand alone without institutions to implement and enforce such laws on the people. Compliance does not automatically lead to the strengthening of environmental performance and improvement of environmental safety, rather, it is achieved through regulations and norms that are grounded in a country's legal and administrative history and capabilities and through targeted efforts that encourage behavioural changes by all and sundry (Keene, 1999).

The success of environmental regulations largely depends on an overall culture of full compliance that is the product of a country's legal traditions, the maturity of her various institutions, the existing resources, and the adequate capacity and support of its citizens as well as the private sector (Keener, 1999). Hence, compliance is a combination of laws, enforcement as well as organisational structure and management capabilities of institutions. This means all stakeholders are key to compliance including the community. Lagos State drives an environmental governance system termed voluntary compliance by the Governor. This is achieved through massive awareness campaigns detailing the advantage of a clean environment. The Local Governments in the state have a framework for compliance that includes a prosecuting unit tasked with the issuing of criminal summons for failure to comply with environmental law. The respondents in the Local Governments argue that people tend to comply after being sanctioned (KII with Miss Temitope Adeleke, Environmental health officer, Kosofe LG, Ogudu. March 8, 2017).

The implementation stage of the policy cycle, according to Dovers (2005), involves compliance before enforcement. This is largely because the laws while been designed takes into cognisance the possibility of compliance. In the view of a respondent, "People do not care about the environment till enforcement commences. Enforcement follows the process of awareness, warning, abatement notice, enforcement then prosecution" (KII with Mrs. Banjo Odusina, Environmental health officer, Lagos Mainland LG, Yaba. March 21, 2017). This aligns with policy cycle process that promotes awareness and compliance before enforcement.

In Lagos State, a significant number of interviewees claimed that citizens prefer enforcement to compliance. They observed that people prefer to stretch the law for various reasons to prevent compliance with these laws. Until most people become the victim of environmental hazard, they prefer to shun compliance (KII with Mr. Temitope Akande, Director, corporate affairs department, LASAA Oregun, March 7, 2017). Benchmarking established compliance as a duty of the citizens. The participation of citizens in the environmental policy cycle is termed environmental citizenship (Dietz and Stern, 2002). This is germane because environmental protection is everybody's responsibility and the

duty of the citizens to the environment is full compliance to environmental laws which has as an aim, the protection of mans' immediate environment and the world environment in retrospect.

Braithwaite (2002) contends that the importance of compliance over enforcement is key to environmental citizenship. However, the Lagos State example is contrary to this based on gathered data. The people, most especially those in the rural Lagos, prefer to stretch the law rather than comply. The state government has a focus on voluntary compliance rather than enforcement. The words of the Governor allow for correction rather than enforcement and the citizen's act based on this. Enforcement agencies are saddled with continual correction of serial offenders. Enforcement is hence placed on the last cadre of the policy cycle.

To put a figure or percentile on Compliance in the state is however hard. As far as the Lagos State Government is concerned, if citizens don't comply, machineries are in place to make people comply hence a department called enforcement and advocacy is domiciled in the Ministry of the Environment which goes out to make sure people comply to environmental laws (KII with Mr. Mukaila Sanusi, Director, Public and Research Directorate, MOE, Ikeja, March 3, 2017). At the Local Government level, forced compliance is done through stages which includes *awareness, warning, abatement notice, enforcement then prosecution*. Respondents at the Local Government hence rate voluntary compliance low and enforced compliance high. Data from the State Ministry of the Environment, however, showed that compliance level in the state is rated high. Anywhere in the world, compliance level is an ongoing thing because it changes (KII with Mrs. Abimbola Jijoho-Ogun, General Manager, LASPARK, Ojodu, March 7, 2017). Hence the level of compliance today cannot be equated to the level of compliance tomorrow.

The federal environmental institutions in the state had a different view on compliance. The focus is on voluntary compliance also in place of enforcement. However, compliance level was placed on two pedestals:

Compliance level in Lagos state can be divided into two.
One of these is the industrial level where about 50% of the

population are compliant where the companies that have western affiliations comply more than local industries. At the second level, individual compliance is based on people's belief and background hence, some areas of in the state are more compliant than others (KII with Mr. Nosa Aigbedion, Head, NESREA (Lagos office), Surulere, March 21, 2017).

Regulatory compliance defines the objective that organisations or institutions set out to achieve in their efforts to ensure that they are adequately aware of, and take bold steps to comply fully with relevant laws and regulations and the said laws can have criminal or civil penalties (Tattam, 2015). The claim that industries with foreign affiliations are compliant to the statutes and laws of the state than the local counterpart was reinforced in literature by Shinn (2005) who posited that protection of the environment hasn't been a high priority for local companies. Furthermore, Gunningham (2002) reports that often, series of strict social licence conditions are made compulsory for the operations of foreign firms. The understanding of the 'polluters pay' principle and exposure to best practices and respect for the law of the land of operation is a strong reason why industries with foreign affiliations comply with available laws. Furthermore, compliance can be based on area, locale, and individual or community preferences as stated in the interview above.

However, one of the respondents posited that rating the level of compliance is hard in Nigeria because of the lack of synergy in terms of data among relevant agencies (KII with Mrs. Kassim Adepeju Rashidat, Public Relations Officer, LSSC, Ikeja, March 3, 2017). Putting a figure at compliance level in Lagos is would be next to impossible due to lack of comprehensive data to that effect. Continual citizenship education and awareness will help voluntary compliance.

Compliance level is dependent on the maxim of good, better and best. and these are the yardsticks used to measure compliance overtime. We always encourage people to increase their compliance. We give people long rope to pull before enforcement. It is only when we see people being adamant that we sanction and that in itself it's not frequent. When we see people striving towards correcting their wrong, we stay away from enforcement. (KII with Mr. Adewunmi Kalejaiye, Deputy director, pollution control, FMOE, Surulere, March 22, 2017).

Environmental Monitoring is the series of procedures, processes and activities which are undertaken with a view to ascertain the quality of the environment and it is often carried out in preparation of environmental impact assessments (by government agencies) and many other situations where human, chemical and/or industrial involvements have damaging consequences on the natural and/or built environment. It is usually characterized by ascertainable strategies and programmes and it ends up, usually, with reports and outcomes with justifications which are often intended to determine the existing condition or status of a specific environment or, in some instances, to establish noticeable trends in environmental parameters. The results of the monitoring are then collated, reviewed, analysed and consequently published. The effective monitoring and evaluation of environmental compliance depend largely on the presence of comprehensive environmental laws, capable enforcement institutions which have adequate technical capacity, appropriate facilities for monitoring, and well-trained personnel. Effective monitoring and subsequent compliance with environmental laws thus require the proactive disposition of all levels of government, related regulatory agencies, civil society organisations and most importantly, private citizens.

4.4 Research Question Four: In what way has the process and mechanisms for environmental awareness and management in Lagos state been inhibited?

Ordinarily, Lagos State should have one of the best environments fit for human habitation in Nigeria. The efforts put by the state in ensuring a clean and habitable environment is unprecedented. Yet, the state still grapples with challenges despite efforts put in place. Perhaps the complexity of environmental policies is in itself, a challenge (KII with Mrs. Fehinti Ogbemudia, Chief state counsel, LASEPA, Ikeja, March 3, 2017).

Environmental policy and management processes can be relatively complex. It involves various types of actors such as governmental, non-governmental, courts, scientists, industry and local citizens, which operate at all scales of decision-making (individual, organizational, governmental). Environmental management, according to Ofomata and Phil-Eze (2007), is defined to mean the understanding, planning, and equitable use of

natural resources in such a way to ensure sustainable development. Environmental management encompasses institutional preparedness, mitigation and emergency response. However, environmental management is beyond just being a disaster response mechanism it thus encompasses factors that aids and delimits its set objectives.

Centralisation of environmental concerns

The Nigerian constitution details environmental management functions. It makes provision for a three-tiered governmental arrangement that comprise the Federal Government, the State Governments, and the Local Governments and describes the powers vested in the three arms of government thus: The Executive, the Legislative and the Judiciary. The State Assembly has powers to make laws on matters which relates to the items listed in the State List of the Federal Constitution. State laws on matters relating to soil, water, or forestry most times lack uniformity. This results in weakness around several areas of environmental legislation. The States generally have little incentive and hardly surrender control over issues which relate to land, mines, and forests to the Federal Government, or to agree in principle in the application of the federal legislation.

The Federal Government has the vested power to make laws with respect to all matters listed in the Executive List and the Concurrent List. Nevertheless, the Federal Government can introduce laws with regards state matters upon the request for such by the State Assembly or for purposes of ensuring and promoting uniformity between the laws of two or perhaps more states. This is however subject to the inhibitions imposed by the Federal Constitution on the powers to legislate on matters which relates to State jurisdiction.

The *Environmental Objectives and Directive of State Policy on the Environment* in the Constitution states that, “the State shall protect and improve the environment and safeguard the water, air, and land, forest and wildlife of Nigeria” (Constitution, Chapter 2, Article 28). The precise competencies of the National Assembly, State Assemblies, and Local Government are hence, well-articulated. These competencies come into play at both the state and federal level as can be seen in the making of laws on the environment by the Lagos State government as well as delineation of federal environmental agencies by the

National Assembly, however, the Local Councils have been lax with regards this spelled out functions.

Data from the sample population revealed that the Local Councils depend heavily on the State Government for environmental laws. This differed from the position of a respondent who claims that the Local Councils are independent of the state with regards promulgation of environmental law (KII with Mr. Mukaila Sanusi, Director, Public and Research Directorate, MOE, Ikeja, March 3, 2017). His position is however in line with Dibia (2000) assertion that the primary obligation for economic planning and development is vested in Local Governments. With environmental sustainability being a primary focal point of development, the Local Councils hence have the constitutional backing for promulgation and implementation of environmental law. Nevertheless, the focus has shifted from law making to the enforcement of State laws. This view was shared by an environmental health officer who averred that the burden of implementation of environmental laws are on the Local Government officers (KII with Mr. Adeyemi Adegboyega Felix, Environmental health officer, Kosofe LG, Ogudu. March 8, 2017).

Furthermore, situation has been recorded where state institutions operate at the Local Governments without due consultation with the third tier of government. Although this negates the constitutional provisions, little or nothing has been done to correct such anomaly. Respondents avowed that duplication of duties often arises as a result of these leading to confusion on the parts of the populace. Part I of the Constitution's Fourth Schedule describe the roles and jurisdictions of Local Government. Environmental management wise, this would include the deliberation and making of possible recommendations to perhaps a State's commission on development and planning; environment, the development of natural resources (asides mineral exploitation); public markets and infrastructure development and maintenance as well as other issues otherwise stated. The absence of such will lead to a full reliance on top-down approach to environmental management.

Within the management and protection framework on the environment which is in play, Local Governments are seemingly left out of being a part of legislative review and redrafting processes (Dibie, 2000). Apart from limiting localised inputs at the Local Government level into the legislative processes, this also decreases the level of environmental awareness at local level thus limiting local environmental management and protection. The environmental health officers are not expected to carry out awareness of state laws which they are not privy to or, are in consonance with the process. A lacuna will, therefore, occur when the third tier of government, which is closer to the people at the grassroots, fails to inform and enlighten the people about environmental concerns. Although awareness campaigns are carried out at the local level as stated by a respondent (KII with Mrs. Sunmonu Olarigbigbe, Environmental health officer, Lagos Mainland LG, Yaba. March 21, 2017), such awareness focus on issues with regards the public health law.

The *Harmonised Environmental Law* of Lagos State, 2017 involved inputs from stakeholders (KII with Mr. Sanut Hussain Adeyemi, Assistant director, environmental management department, MOE, Ikeja, March 8, 2017). Stakeholder participation in environmentally based decision-making has been increasingly sought after and is thus duly embedded into national and international policy (Reed, 2008; Yang and Percival, 2009). Stakeholders involvement in the drafting and redrafting of environmental law cannot, therefore, be overemphasized. The policy circle opens a window of opportunity for inputs from Civil Society Organisations, the communities, the other tiers of government and other stakeholders during law formulation in line with best practices, however, it doesn't hammer on the centralisation of environmental concerns.

The Lagos example was characterised by a short window open for input whereas, the state assembly left little or no room for adjustment or major inputs (KII with Mr. Akinbode Oluwafemi, Deputy Director, ERA (FOEn), Ojodu, April 13, 2017). This explains the resistance to the bill by the civil society groups. Little wonder then that the Local Government in the state till date rely on the public health law for its operations. Environmental Health Officers interviewed claimed to have not seen in totality the

Harmonised Environmental Law of Lagos State. This same position was taken by the environmental civil society groups. The whole process was centralised and this is a possible inhibitor to the actualisation of the environmental goals of the state.

The centralisation of environmental management can however also stand as a positive. Before 1999, the laws of the environment in the state were without a viable structure (Eneh, 2011). There was lack of clear distinction between environmental institutions, jurisdictions and stated laws on the environment. The result of this was a State in environmental chaos with heaps of waste adorning the state (KII with Mr. Idowu Omisore, Information Officer, LASAA Oregon, March 7, 2017). Owing to interventions by the State Government, a dedicated structure was put in place with the Ministry of the Environment heading six environmental agencies tasked with the duty of safeguarding the environment. The shortcomings of the available framework as well as the lack of centralised legal framework gave rise to the *Harmonised Environmental Law* of Lagos State. The synergy provided by the existing law saw the Federal, State and Local Government environmental institutions work with a central goal of safeguarding the environment. The 2017 *Harmonised Environmental Law* will, therefore, be of tremendous advantage to the state and her citizen (KII with Mr. Nosa Aigbedion, Head, NESREA (Lagos office), Surulere, March 21, 2017).

Over-lapping functions of environmental agencies

International environmental policy-making has generally focused on topic, sector, or territory. This has resulted in the negotiation of treaties that more often than not, overlap and ultimately conflict with one another. This stimulates needless complications at the national level due to the fact that signatory's struggle to meet their obligations under numerous agreements. In lieu of this, the need to identify the existence of institutional and legal overlap and expedite actions on efficiency was raised by Reed (2008). Overlaps create friction in the system, hampers decision making processes and encourages inefficiency. In a bid to halt the spread of overlap in the Nigerian environmental management process, the Federal Ministry of Environment was created in 1998 and the National Environmental Standards and Regulations Enforcement Agency (NESREA) act

came into force in 2007. The minister of the environment had the oversight function of managing the institutions under the Ministry of Environment. The jurisdiction of the ministry and its agencies over state environmental institutions is clearly spelled out in the Nigerian constitution of 1999.

Lagos State environmental management processes were plagued with diverse problems as stated earlier and one of such was overlapping of functions. Oduwaye (2006) stated that Lagos state is characterised by the institutional overlap of functions and activities which transcends the State and Local Governments consequently leading to friction, conflicts, and waste of public funds. This validates the opinion of Okoye and Olatunbara (1993) who suggest that if constituent Local Governments of a large city plan and manage their own sections of the area, conflicts and narrowness in outlook are bound to occur. Overlap of functions between the State and Local Government is, therefore, a norm. This was however contested by a respondent who posited that the constant inter-relationship between the State and Local Government environmental officers ensures that overlap doesn't occur.

At the Local Government level, we have the environmental officers who work hand in hand with the Ministry of the Environment and on monthly basis, they meet to stay ahead of environmental situations in all the Local Government in the State. Going by the environmental management structure, what is done at the state extends to the grassroots hence the Local Government and State Government officials interrelate. (KII with Mr. Sanut Hussain Adeyemi, Assistant director, environmental management department, MOE, Ikeja, March 8, 2017).

The good working relationship doesn't however translate to the absence of conflict. The structure of environmental management in the state favours a top-down model of management where the laws flow from the State to the Local and the Local Governments are expected to enforce. However, enforcement rights have also been handed over to various agencies, mostly those under the Ministry of the Environment. The Kick Against Indiscipline brigade was formed to basically enforce environmental laws on sanitation and environmental safety. However, the key function of the Environmental Health Officers is related to environmental sanitation and safety also. A case occurred where the Kick

Against Indiscipline (KAI) designated for highways and state roads locked down a premise. The environmental sanitary officers damaged their padlocks and confronted them with jurisdiction issues (KII with Mr. Adeyemi Adegboyega Felix, Environmental health officer, Kosofe LG, Ogudu. March 8, 2017).

Apparently, the Local Government environmental health officers do not have a full grasp of the duties and functions of the KAI brigade. In the same vein, the KAI Corps do not also have a full grasp of their duties. Hence, an overlap of function occurred. Conflict in such instances is averted by jurisdiction functions as stipulated by the law. Furthermore, a respondent explained that overlaps are not only from the KAI brigade but also from other state agencies. “When we go out for jobs, we see papers and notices from other agencies and this is often duplicating of jobs and confusion sets in” (KII with Mr. Joshua Ayomiposi, Environmental health officer, Alimosho LGA, 22 March, 2017).

Dibie (2000) posits that friction and overlap are bound to happen in environmental management but believes however that after one or two incidences, such overlap should be nipped in the bud. It was discovered that the hypothesis stated above characterised the Lagos example. Although environmental institutions of the state often operate in the Local Government without expressly informing the Local Government, complaints from the LGA office produced a marginal change in operation which saw some of these agencies informing the Local Government of their intended activities prior to carrying out such activities (KII with Mrs. Sunmonu Olarigbigbe, Environmental health officer, Lagos Mainland LG, Yaba. March 21, 2017).

Inter-agency overlapping of functions can also characterise environmental management. The proliferation of agencies and failure to spell out the jurisdiction of each agency are key factors that can drive overlapping. Overlapping of agencies will slow down policy cycle processes. Best practices detail the spelling out of functions to enable efficiency. Lagos State has well spelt out functions of its agencies.

There are no overlapping functions in all the agencies because they have their job functions spelled out, however, the new law consolidates all the laws and each agencies role

and responsibilities are spelled out clearly. (Interview at MOE, Ikeja, March 3, 2017).

Hence, not only are the laws guiding each agency well spelled out, the job functions and jurisdiction are well taken care of in the *Harmonised Environmental Law* of Lagos State. This was further corroborated by heads of other environmental agencies in the state who claim that possible overlap had been addressed by the new law. In time past, the creation of stand-alone MDA's from under some agencies had resulted in functions overlap.

LASEPA is the lead agency for environmental concerns but a lot of unit in LASEPA have become stand-alone MDA'S and there has been a clash of function and lack of synergy. Sometimes, some MDA'S do the job of others this is why the present government has come up with a harmonized law which will outline each person's area of jurisdiction because overlapping functions waste funds and time. (KII with Mr. Faleti, Babatunde, Head, Environmental Sanitation, LASEPA, Ikeja, March 3, 2017)

One can argue that the clashing functions are as a result of lack of detailed consultation and harmonisation between the created MDA's and LASEPA. These created a situation where duties spelled out for each agency were duplicated in LASEPA leading to duplication of duties. Furthermore, these lapses were allegedly identified after a painstaking inquest by the Ministry of the Environment hence, the 2017 Harmonised Environmental Law of the state has accommodated the clear-cut distribution of duties.

Federal agencies have the constitutional powers to operate in every single state of the Nigerian federation. The oversight function of the Nigeria environment lies in the Ministry of Environment and the ministry has a presence in the 36 (thirty-six) states of the country and also in the federal capital territory (Oyefera, 2013). In the same vein, the National Environmental Standards and Regulations Enforcement Agency (NESREA), an agency under the Federal Ministry of Environment, in line with its mandate has a presence in every state of the federation. This creates a possible case of overlapping of duties between the federal agencies and the state agencies. A respondent stated that agencies from both tiers of government have been meeting on the field and in some instances,

overlapping function are identified by the agencies on the field (KII with Mrs. Akinyemi Olusola, Deputy director, environmental health, FMOE, Surulere, March 22, 2017).

When issues of overlap occur, however, the constitution comes into play and the constitution favours the federal agencies above the state. The target of the agencies is towards the safeguarding of the environment hence, overlapping at such level is seen as the pursuit of a common goal. Collaboration and synergy among environmental agencies and bodies as well as environmental awareness is key to environmental compliance and environmental safety (KII with Mr. Shorunmu Ahmed, assistant director, environmental management, NESREA (Lagos office), Surulere, March 21, 2017). The federal agencies, therefore, see overlapping as an advantage rather than a disadvantage.

Inter-agency and inter-governmental relations in Lagos state: the conflict connection

Conflict is the expressed struggle which occur between a minimum of two interdependent parties who perceive incompatible goals, scarce resources and likely interference from the other party in achieving their set goals (Wilmot and Hocker, 1985:23). To them, the cardinal point of conflict is incompatible goals. This, therefore, means that conflict would be between a minimum of two parties. These parties could range from people, to institutions and could be caused not only by incompatible goals and scarce resources but also a clash of policies. Francis & Holloway (2007) posits that conflict is an intrinsic and inevitable part of human existence. Similarly, Igwe (2002) sees conflicts as a universal and permanent attribute of nature, life, and society which is necessary and unavoidable. Suffice to say that conflict is not only integral to mankind but also unavoidable. Conflict can, therefore, be said to be as a result of the interaction between individuals who have partly incompatible needs, in which the ability of one of the actors to gain his needs depend on the choices or decision another actor takes.

Olufemi and Samson (2012) state that conflict between persons and their immediate environment are referred to as socio-environmental conflicts. Conflicts with institutions, environment, the people and government with regards the environment can occur directly and indirectly. Misuse of the environment and its resource can be tagged a direct socio-

environmental conflict whereas, conflict between the people and the institutions which set out to protect the environment can be tagged as indirect socio-environmental conflict. Furthermore, the interaction of the agencies with seemingly compatible goals can also lead to friction. The policy cycle approach of benchmarking theory involves clear-cut stages. These stages included the interaction of stakeholders, institutions, and people. These interactions will involve friction which often times results in conflict (KII with Mrs. Fehinti Ogbemudia, Chief state counsel, LASEPA, Ikeja, March 3, 2017).

Thus, the inevitability of stakeholder's interactions makes the possibility of conflict arising real more so, when stakeholders include institutions with varying jurisdiction, crosscutting diverse fields, and tiers of government. One of such was the events that predated the signing of the *Harmonised Environmental Laws* in the state whereas civil society organisations and specific stakeholders, including PSP operators on waste in Lagos, staged a protest on the failure of the law to take into account their objections. As however stated earlier, continual use of the environment by man often leads to an impasse between the people and the institutions as opined by Igwe (2002). Although, as posited by Bob and Bronkhorst (2010), such frictions are not limited to Lagos alone but are global phenomenal, although at varying degrees.

Mainstreaming, as postulated by Dalal-Clayton (2009), is the informed and deliberate inclusion of germane environmental concerns into the decisions of institutions that drive national, local and sectoral development policy, rules, plans, investment and actions. In Nigeria, this is done through the inclusion of environmental concern in the Nigerian constitution, the constitutions spell out the parts the three tiers of government have to play in environmental management. The State and Federal Government have the constitutional right to amend items on the concurrent list. The constitution gives room for the state, which understands the issues faced locally, to identify such issues and amend federal laws or, in some cases, promulgate new laws to meet the needs and demands of the state. issues can, however, occur when such amendments do not sit well with the Federal Government. Oyefera (2013) draws attention to the need to domesticate federal environmental laws at State and Local Government levels. This is in line with Integra (2008) position that laws

need to be in tune with local needs. However, the manner and way of such amendments were not clearly stated. Issues have risen on such amendments. One of which is the introduction of environmental sanitation edict (1998) by the Lagos state government which enabled the state to enforce a compulsory no-movement order on every last Saturday of the month. The law was not specific on the right of road users on federal roads in the state. Hence, the enforcement of the law threw up diverse issues between the State Government and citizens of the country from other states who were in transit.

Cases were filed in court by diverse individuals on the legality or otherwise of the law. While the State Government insisted it had the legal right to tailor the law on sanitation to meet her immediate environment, the Federal government argued on the need to fully respect the right to movement of every citizen of the Federal Republic of Nigeria. Enforcement agencies are often faced with recalcitrant citizens and conflict had arisen at diverse times. However, the landmark judgement of Justice Ademola in 2016 forced the State Government to suspend the law while admonishing the citizens to keep their immediate environment clean. This put the bed, albeit for now, the conflict arising from the compulsory stay at home order of the law.

Issues of state law versus federal law on the environment also came up in the forced sanitation of the marketplaces in the state every Thursday. Issues were raised on the jurisdiction of the law on business with a national presence such as Central Bank of Nigeria and other banks with regards the forced close down of offices till 10am every Thursday. This was also resolved albeit at the Local Government level, where it is mandated for market women and men as well as shop owners to close down their business till 10am every Thursday whereas, business with national concern were exempted. In enforcing environmental laws, conflict ensues often between the federal and state officers.

However, once issues of conflict arise, most especially among field officers as well as junior officers, efforts are made to resolve such conflicts as quickly as possible (KII with Mr. Faleti, Babatunde, Head, Environmental Sanitation, LASEPA, Ikeja, March 3, 2017). Similarly, respondents posit that conflict among the three tiers of government was

inevitable, however, dialogue has always been employed to resolve such conflicts. The use of dialogue in most cases, rather than violent clashes, has given the state a leeway in promoting environmental concerns. Laws and policies on the environment are promulgated and amended promptly with federal backing and grey areas are sorted out.

The policies and law are made in such a way that they don't conflict with that of the federal and since its mostly on matters on the concurrent list, it is stricter and implementable since the state government knows its people and knows how to implement the law. According to Mrs. Jihoho-Ogun,

The federal has the right to promulgate laws but some matters are concurrent so the State Government can make laws on the same matter based on experience...the federal laws are the minimum laws that can be created adopted but the State Government can leverage on that and create more stringent laws that are peculiar to that state. (KII with Mrs. Abimbola Jijoho-Ogun, General Manager, LASPARK, Ojodu, March 7, 2017).

Implementation is easier at the state and local level than the federal due to local knowledge of the environment, however, since such matters still remain on the concurrent list, the federal still has jurisdiction on such matters. In the case where the laws at the state are stringent than that of the federal, an offender can cite the federal law as a safety net. Cases have therefore occurred where the federal and state environment officials meet on the field with regards issues on the concurrent list. The Lagos State coordinator of NESREA attested to such incidences but posited that constitutionally, the federal laws supersede the state law hence, these principles have guided their operations in such circumstances. In instances where no amicable solution is reached, the interpretation of the law is left at the mercy of the court however, there have hardly been cases where litigation was sought out as the lasting solution (KII with Mr. Nosa Aigbedion, Head, NESREA (Lagos office), Surulere, March 21, 2017). This view was also shared by the pollution control and environmental health director at the Lagos office of Federal Ministry of Environment,

Notably, not all issues are settled in such manner. A major source of conflict in Lagos state between the federal and the state government are issues relating to environmental impact assessment (EIA). In the words of the assistant director of environmental management,

Conflict does occur with the federal especially on environmental impact assessment. EIA is a federal law although the state can anchor on it for implementation. The federal agencies believe they don't have a catchment area hence we have had situations where companies complain that the Federal and the State, as well as Local Government officers, make complaints about the same thing to them. (KII with Mr. Sanut Hussain Adeyemi, Assistant director, environmental management department, MOE, Ikeja, March 8, 2017).

EIA seeks to assess the potential environmental impacts of proposed activities, including the direct or indirect cumulative, short-term and long-term effects of such activities on the environment (Nwilo & Badejo, 2008). EIA starts from the proposal to approval for implementation which results in the issue of an Environmental Impact Statement (EIS) and later the certificate. However, when the Federal Ministry of Environment issues an EIS certificate to an organisation which the state disregards and throws up its own criteria, the dilemma will be on which side of the law to be on. The Federal Government has jurisdiction over the environment of Nigeria however, the constitution gives part of this oversight function to the State Government hence, the State Government perceives that it has the right to issue EIS to companies and developers. Whereas the federal law states that EIA should be done for buildings with a minimum of 50 rooms, the Lagos state government, based on the environmental peculiarities, state that Environmental Impact Assessment must be done on buildings with a minimum of 20 rooms.

EIA is an act of parliament. It's a federal instrument. The Federal Ministry of Environment is in charge of EIA. NESREA ensure the conditions of EIA are complied with (KII with Mr. Nosa Aigbedion, Head, NESREA (Lagos office), Surulere, March 21, 2017). EIA is therefore enforceable by NESREA and not any other agency. The collapse of buildings in Lagos state has perhaps made the State Government focus on stating the

standards it wants with regards EIA in the state notwithstanding the provisions of the constitutions on such. The deputy director, pollution control posits that,

States ought not to do EIA. They are not eligible to do it. EIA is domiciled with the federal. They are only allowed to do environmental audit report where the federal expects it in 3 years. State demands for 1-2 years which we think is short to implement whatever was seen in the former report. (KII with Mr. Adewunmi Kalejaiye, Deputy director, pollution control, FMOE, Surulere, March 22, 2017).).

States are hence not constitutionally empowered to carry out EIA rather, environmental audit report is what is expected at the state level. Contrary to this, however, the Lagos State Government carries out both EIA and the audit report. Similarly, the environmental audit report being carried out by the state government has a time frame of a year and maximum of two years. This is done due to the peculiar nature of the environmental challenges of the state. The federal law gives a three-year report as against the frequency demanded by the state. Conflicts on these issues, however have been solved and settled amicably among the two tiers of government. Issues of inter-government conflict need to be flagged, settled and the tiers of government need to work hand in hand since the overall goal is environmental safety (KII with Mrs. Kassim Adepeju Rashidat, Public Relations Officer, LSSC, Ikeja, March 3, 2017).

At the local government level, series of conflict had occurred prior to 1999 however, a system was designed to guard against such happening and this was achieved through the promotion system where environmental health officers at the Local Government are promoted overtime and employed at the state environmental agencies (KII with Mr. Ayotunde Amodu, Assistant General Manager (Engineering Services), LAWMA, Oshodi, January 20, 2017). The environmental agencies and institutions under the state Ministry of the Environment have staff who have once been the staff of the Local Governments. This promotes a peace culture where staff at the local and state level have once worked together hence less friction occurs and if peradventure it occurs, it is settled amicably.

Enforcement and stakeholder's inclusiveness

The overarching goal of the projects, activities, and policies of government is to improve the quality of life of its citizens which will, in turn, ensure national security. The citizens have been the focal point of such goals has awakened the consciousness of the need to inform the public with regards such goals as well as to involve them in the decision-making processes. Thus, in the environmental parlance, broad public participation in decision-making is increasingly mandatory and not an option (WCED, 1987: 349). Scholars have posited that decision making with regards the environment requires input from everybody. This is the reason why stakeholder(s) participation in basic environmental decision-making has been increasingly sought after and subsequently embedded into national and international policy (Reed, 2008). This is exemplified in the deliberate inclusion of stakeholders in United Nations summit on the environment which held in Paris in 2016 and the creation of feedback mechanism on the Paris agreement.

At the level of countries or nation states, environmental issues are best handled with the involvement of all citizens. Every individual shall have appropriate access to information with regards the environment that is held by public authorities and have the opportunity to fully participate in decision-making processes (UNCED, 2008:30). Everyone is therefore involved in the environmental management process. From the conceiving stage to the implementation stage, every stakeholder count. Environmental democracy dovetails into a bottom-up approach to the formulation of environmental policies and legislation (Aniyie, 2007). This approach, bottom-up approach, has proven to be effective management approach to the environment universally. Following this trend, the Lagos State Government through deliberate benchmarking claims to use the bottom-up approach. The *Harmonised Environmental Law* of Lagos State provides an umbrella that encapsulates all existing rules, edicts, and guidelines on the environment and the bottom-up approach was allegedly used by the government.

The approach, however, depends on awareness. Inclusiveness can be achieved when all stakeholders know about the environmental policy cycle process and participate one way or the other in the process. As stated earlier, the awareness drive of the government is

tailored towards inclusiveness and general enlightenment. To this end, all the environmental agencies under the Ministry of Environment have the work of driving awareness and this duty is domiciled under the office of the public relations officer. Similarly, the new law accommodates an office designated solely to enlightenment. Failure to encourage inclusiveness and awareness will in the long run lead to enforcement issues.

Enforcement is an issue likely to inhibit Lagos State from achieving her environmental goal. Enforcement of environmental legislation is a major issue (Valentine and Smith, 2011). The policy cycle process is incomplete without enforcement of environmental laws. Enforcement is the last lap of the cycle which involves forceful enforcement of environmental laws when voluntary compliance is not done. Scholarship posits that the problem of enforcement is peculiar to developing countries.

According to Keene (1999), enforcement capabilities in developing countries are weak, levels of compliance are poor, and few actual improvements in environmental quality have been recorded. He avers that voluntary compliance in developing countries has proven to aid environmental safety although he rated compliance very low. Similarly, Nwufor (2010) states that there is still the problem of enforcement of environmental laws in developing countries and this appears to be a lack of political will on the part of the government and thereafter, the failure of the government to adequately enlighten the public on the existing environmental laws and stringently enforce same. Hence, inclusiveness and awareness are key ingredients to voluntary compliance.

The compliance level in Lagos, however, is not in consonance with Keene (1999) and Nwufor (2010) positions. As stated earlier, Lagos, a state in Nigeria which is a developing country, has an average level of voluntary compliance hence this negates their postulations. Similarly, the state has enforcement capabilities and a pseudo-agency under the Ministry of the Environment whose major function is the enforcement of environmental law. However, as Nwufor (2010) stated, the political will for enforcement of laws in Lagos is low. According to an Environmental Health Officer, the fear of

environmental health officers by the populace is minimal and this isn't helped by politicians who implore the enforcers to allow offenders go (Interview at Lagos Mainland LG, Yaba. March 21, 2017). Offenders complain of the inhuman attitude of the government and often promise to vote out the government for enforcing environmental laws. The politicians, in turn, implore leniency rather than strict enforcement of the law. To further buttress this, the chief state counsel at LASEPA said,

I will not rate enforcement too high because Lagos State always tries to put a humane face. If we enforce as the law stipulates, we will be seeing a very barbaric government. We temper judgment with mercy. We have companies who hide under leniency. We do not totally enforce the strict letters of the law because we get Governors who are humane. Although to me, in global practice, the law is enforced without putting a human face. (KII with Mrs. Fehinti Ogbemudia, Chief state counsel, LASEPA, Ikeja, March 3, 2017).

Best practices push for zero tolerance of environmental degradation which translates to strict enforcement. However, the Lagos state system works more on leniency than on enforcement. This can derail the environmental aim of the state most especially if voluntary compliance fails over and over. The leniency approach to enforcement is however not limited to the state alone.

At NESREA, we want compliance and not enforcement hence enforcement is quite minimal. NESREA has added a human face to their enforcement approach hence we give companies times to implement our recommendation. It's only when the offender is recalcitrant that we introduce litigation. Federal level, leniency is promoted ahead of enforcement. (KII with Mr. Nosa Aigbedion, Head, NESREA (Lagos office), Surulere, March 21, 2017).

Litigation is seen as the final stage of environmental enforcement. Rather than enforce, more time is given for offenders to retrace their steps. At the Local Government level, same steps are employed with warnings first issued, abatement notice following suit before enforcement is done (KII with Mrs. Anjorin Olufunke, Environmental health officer, Alimosho LGA, 22 March, 2017). The status quo, however, differs slightly from that of other tiers of government. On issues of sanitation, the Local Government closes down shops immediately after the first warning. This according to an interviewee, makes

people compliant with the laws. It was noted that such people prefer to avoid breaking such laws again after strict enforcement is done by the Environmental Health Officers. More so, such actions, such as sealing of buildings, are carried out promptly in instances of disease breakout (KII with Mr. Adeyemi Adegboyega Felix, Environmental health officer, Kosofe LG, Ogudu. March 8, 2017).

Furthermore, an impediment to enforcement of environmental laws in the state is lack of the presence of the third arm of government. The judiciary, which is the third arm of government, has the singular responsibility of interpreting the laws. Fines and punishment for offenders of environmental laws can only be done by the Judiciary arm of government. These, however, become impossible given the findings of this study that the judiciary has little or no presence at the State's Local Governments. Although magistrate courts are spread all over the Local Governments, the courts do not entertain environmental offences. There is lack of courts in Alimosho hence, no prosecution has been carried out (KII with Mr. Joshua Ayomiposi, Environmental health officer, Alimosho LGA, 22 March, 2017). The available courts are on one hand not enough to entertain the quantum number of cases available while on the other, the courts do not entertain cases related to the environment. Furthermore, the failure of courts to entertain the cases creates a situation where prosecution is next to impossible.

A citizen armed with the knowledge of the lack of power for prosecution of the Environmental Health Officers will definitely break the law daring the consequences and this was captured by an interviewee who noted that 'the Local Government has well-educated citizens who are aware of the lack of courts hence, in some instances, break the law and dare the EHO's' (KII with Mr. Joshua Ayomiposi, Environmental health officer, Alimosho LGA, 22 March, 2017). Such circumstances will exacerbate environmental pollution and pose a challenge to environmental management.

It was however revealed that leaving the environment at the mercy of offenders was not always the case in some Local Governments. Rather than relying on the court, the Environmental Health Officers take law into their own hands

The Magistrates Courts have blatantly refused to attend to environmental issues in the Local Government. The officers, therefore, employ the use of force by locking premises for enforcement. Instances have not occurred where the offenders sue the Local Government to court over such actions. (KII with Mrs. Sunmonu Olarigbigbe, Environmental health officer, Lagos Mainland LG, Yaba. March 21, 2017)

The courts, even when provided the law guiding the environment, refuse to entertain cases. This results in self-help by the EHO's. Enforcement, in tune of fines, lock-down of premises and other actions stipulated by the law, is carried out without a court warrant or directive. The use of force by the EHO's is a source of conflict although, the interviewee stated that no conflict has ever ensued over forceful enforcement neither has a counter action, such as suing the Local Government councils, ever occurred. Thus, the rule of law, with regards enforcement at the Local Government level of environmental governance, is suspended.

Such challenges are however peculiar to the Local Governments in the state. At the state level of environmental management, the courts entertain environmental-related cases. Several cases related to environmental misdemeanour have been filed at the high court by both individuals and the government. It was however observed that rather than being a facilitator to achieving the environmental goal of the state, the reverse is the case.

We have so many cases in court where lawyers have gone to stop a function that is very necessary and the laws must take its cause. We have cases since 1999 that has been unnecessarily prolonged by polluters and offenders. (KII with Mrs. Fehinti Ogbemudia, Chief state counsel, LASEPA, Ikeja, March 3, 2017).

Environmental polluters and offenders have allegedly employed the use of the courts to stall the implementation of a policy or law related to the environment on one hand, as well as promote delay in prosecuting on the other. It was further stated that some of such cases have been in the courts for close to 18 years hence, justice is delayed while the environment keeps suffering consequences of pollution. Interestingly, the general manager of LASPARK stated that such challenges are being handled increasingly using the

Alternative Dispute Resolution (ADR) technique which is premised on out of court settlements. Conflict resolution has reduced court cases because people now opt for negotiation and out-of-court settlement (KII with Mrs. Abimbola Jijoho-Ogun, General Manager, LASPARK, Ojodu, March 7, 2017). Such methods will reduce the number of cases yet to be heard in the court as well as cases delayed by court processes hence facilitating the environmental goal of the state.

The fate of offenders at the federal level of environmental management slightly differs. Environmental offenders are arraigned at the Federal High Court and not the State High Court as in the case of the State Government. The court employs the use of federal laws to prosecute cases related to the environment. However, the processes of such arraignment are seemingly tedious and longer than at the state level. Offenders avoid allowing issues get to that level of enforcement (Interview at NESREA, Surulere, March 21, 2017). This assertion suggests that offenders of environmental laws break the law based on prosecution probabilities. Laws are broken at the Local Government level due to the knowledge of lack of courts interpretation of the environmental law. Similarly, the possibility of dragging cases empowers many to break the law and elongate court cases at the state level while at the federal level, efforts are made to comply to the laws to avoid federal prosecution. The importance of the judiciary therefore in environmental management cannot be overemphasised.

Notable challenges to environmental management in Lagos

A recurring theme in the interviews conducted is the mention of a shortage of manpower as an inhibitor to achieving environmental goals in Lagos state. Inadequate equipment, manpower, and green plants are seen as a hindrance to environmental quality (KII with Miss Temitope Adeleke, Environmental health officer, Kosofe LG, Ogudu. March 8, 2017). Environmental agencies worldwide depend on some equipment such as mammoth and compactors, to function effectively. The equipment differs based on the focus of such agencies (Nubi and Omirin, 2006). Respondents attest to the availability of these equipment but insist the available ones are not enough to effectively manage the environmental challenges in Lagos state.

Similarly, shortage of manpower has been put forward as a possible inhibitor to a clean Lagos. Statistically, 313 environmental health officers are gainfully employed in all the Local Governments in Lagos (KII with Mr. Joshua Ayomiposi, Environmental health officer, Alimosho LGA, 22 March, 2017). 313 EHO's managing over 20million citizens is at a ratio 1:63898 which is grossly inadequate to the diverse environmental challenges in the state. The Local Governments, however, employ the services of other EHO's, who are not directly employed by the Local Governments, to enable them to function appropriately. This is clearly an anomaly which will clog environmental management in the State. The Local government is the first point of call with regards environmental issues. The Inability of the Local governments (or local councils) to effectively and efficiently manage the environment will ultimately lead to environmental degradation.

Population distribution changes have led to the emergence and growth of urban and peri-urban areas (HPG, 2009). One of the key urban areas in Nigeria is Lagos State with population pegged at 16 million by the state government. This translates to the environment being inadequate to cater for the available population hence, this poses an environmental threat to the state. Lagos State has been characterised by changes in population distribution which has translated to advancement in settlements to urban and peri-urban areas. Dispersal of population throughout the state is a threat to the agricultural and environmental viability of large expanse of land, while the concentration of population in specific areas can have a principally damaging effect on the environment once the critical pollution thresholds are exceeded. Population growth, which has been linked to a cause of environmental challenge by scholars such as Madu (2007), often leads to rapid urbanisation and, urbanisation has been identified as one of the foremost challenges faced by the environment (Jiboye, 2011).

Lagos State is at present said to have an estimated population of 17 (seventeen) million people and an estimated growth rate that is about ten times faster compared to the population of New York and Los Angeles (Lagos State Government, 2009).

Population is the strength of a nation why it is also a source of challenge for a mega city. The population of Nigeria is

increasing at 6% annually. The working population generates a lot of waste and this is between the age of 15-59. This population range doesn't have the willingness and ability to pay hence the laws are not followed to the latter. (KII with Mr. Segun Adeniji, General Manager, LAWMA, Oshodi, January 20, 2017).

This poses a threat to the available space in the state and throws up various environmental challenges. One of such challenge was earlier flagged vis-à-vis manpower to population ratio. However, an interview specifically mentioned overpopulation as a gargantuan challenge being faced in the state. The major challenge being faced in the Local Governments and in the State is overpopulation which often leads to flooding due to drainage blockage and waste disposal attitudes (KII with Mrs. Sunmonu Olarigbigbe, Environmental health officer, Lagos Mainland LG, Yaba. March 21, 2017), The attitude of a large population towards waste disposal will contribute immensely to the degradation of the environment.

The attitude of the citizens to change can also be a deciding factor in environmental management aim in the state. The citizen's susceptibility to change will go a long way in determining the effectiveness of a policy. Such attitude transcends embracing new laws to embracing acquired knowledge on the dangers of actions or inactions pertaining to the environment.

The greener and cleaner Lagos initiative advocates change in the status quo of how we do things. Change is not always well received and this may inhibit the goal but people should embrace change and see it as a positive change that will culminate into the beauty of Lagos and the well-being of her citizen (KII with Mr. Mukaila Sanusi, Director, Public and Research Directorate, MOE, Ikeja, March 3, 2017).

Laws and policies on the environment are made for cleanliness of the environment and for the benefit of the populace. No law is made to the detriment of citizens hence, it is imperative that the people know that attitudes to the environment need to be positive. More and more sensitization on the environment is needed. It is hoped that the more

people are aware, the more they will be more law abiding (KII with Mr. Faleti, Babatunde, Head, Environmental Sanitation, LASEPA, Ikeja, March 3, 2017).

A significant element to achieving the goal(s) of environmental safety is the availability of funds. Financial resources are needed to execute green Lagos and once that is done, there will be a faster realisation of the objectives. Finances cover basically most points noted earlier. The purchase of relevant equipment for environmental management is dependent on the availability of funds. Similarly, the employment of more hands will largely depend on political willpower and provision of funds. The commitment of the staff of environmental institutions to environmental safety will largely depend on remuneration and motivation of staff hence, the importance of finance to environmental sustainability cannot be underscored.

Manpower, which includes training capacity for the personnel for education and re-education, training and re-training is key to achieving set environmental objectives (KII with Mr. Segun Adeniji, Public Relations Officer, LASPARK Ojodu, March 7, 2017). Such capacity building will require finance hence finance is key to achieving set environmental objectives of the State. To achieve her environmental goals, the state has to keep demonstrating the willingness to enforce laws as well as not withholding resources for capacity and implementation unlike the federal where bureaucracy overshadows work (KII with Mrs. Akinyemi Olusola, Deputy director, environmental health, FMOE, Surulere, March 22, 2017). The interviewee noted that financing at the federal level is slower than the state level hence, achieving environmental goals is slower at the federal level than the state. To achieve these, bottleneck has to be reduced.

Furthermore, some services with regards the environment require the citizens to pay. Such services include waste disposal, drainage construction for individual houses and environmental sanitation. Lack of will by the citizens to pay for such services will hinder the achieving of set goals (KII with Mr. Idowu Omisore, Information Officer, LASAA Oregon, March 7, 2017). Environmental management, as stated earlier, is dependent on all stakeholders. The onus lies on the government agencies to implement laws and policies;

however, the citizens are saddled with the responsibilities of paying for some environmental services rendered in line with the policy cycle. Thus, the relationship between the government and other stakeholders is established for effective environmental management. Other factors such as obeying of states environmental law, protecting of the immediate environment and reporting of environmental issues to the relevant agencies all contribute to the achieving or otherwise of the set environmental goals of the state.

This thesis argued that environmental awareness creation in Lagos State is not coordinated in such a way as to ensure mass enlightenment. Accordingly, compliance with environmental legislations was hampered largely by judicial bottlenecks as well as politics and culture-sensitive enforcement. Furthermore, role conflicts among different environmental regulatory agencies, lack of environmental bye-laws at the local government level, population density of the State, inadequate manpower among others constituted the main inhibitors of the frameworks for environmental awareness and management in the State.

Thus, Lagos State has potentially appropriate institutional frameworks for environmental management. The thesis posits therefore, that environmental awareness is key to effective environmental compliance. Consequently, environmental awareness needs to be mainstreamed and the incessant role conflicts among regulatory agencies addressed. Additionally, the policy cycle process for framework development needs to be strictly adhered to most especially in the aspect of awareness, Judiciary inclusiveness and evaluation.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1 Summary

The general objective of this study was to examine the institutional and compliance frameworks and the challenges of environmental awareness and management in Lagos State, Nigeria. Specifically, the study assessed the environmental frameworks in Lagos State from the angle of the Local Government and State Government bye-laws, policies and laws. This was juxtaposed with the Nigerian laws on the environment. This was with a view to identifying the challenges and lacunas in the frameworks and their implications for the natural and built environment as well as the resultant effects on the citizenry.

The study adopted the Benchmarking theory popularised by Leibfried and McNair as analytical framework and utilized the case study research design. Primary and secondary sources of data were employed in the study. The primary data were derived from key informant interviews and the state harmonised environmental laws while books, journal articles and government gazettes served as secondary sources of data. Purposive sampling technique was utilised in conducting twenty-five interviews with environmental actors across the three senatorial districts of the State as well as across the environmental agencies in the State. The interviews were conducted with respondents including heads of Federal, State and Local Government environmental agencies, environmental officers and the head of an environmental Civil Society Organisation. The data collected from the field investigation were themed, harmonized and analysed using content analysis. The results of these analyses were thereafter discussed in detail.

This chapter, therefore, essentially presents a summary of key findings and the conclusion drawn from the findings. Recommendations of the research are also presented in this chapter. The Summary of the key findings is presented in line with the study objectives.

5.2 Summary of major findings

Lagos State environmental challenges have grown over the years with issues becoming complex in manifestation. Challenges as identified below were treated with kid gloves due to the perceived minimal effect of these challenges on the environment. The challenges, however have grown complex and are daily posing management challenges to the government. Environmental challenges such as waste management practices, illegal squatter settlements, defacement, attitudinal practices of citizens, air pollution and heatwaves, are due to uncontrolled rapid urbanisation and the geometric progression of population increase being experienced in the state. These challenges were not adequately addressed due, largely, to the perceived minimal effect on the environment. Consequently, the challenges became more complex and more difficult for the Lagos State Government to manage in a comprehensive and durable manner.

Furthermore, the state was largely reactive to environmental concerns despite the plethora of environmental laws specifically designed for the management of environmental problems in the state. Hence, frameworks were hitherto designed during or immediately after an environmental disaster. The State government has however changed its approach in response to these challenges and adopted hybridised environmental best practices. Rather than wait for environmental challenges to arise, the state government has instituted a proactive disposition to the environment by learning from people and governments' experience round the world. This paradigm shift culminated in the 2017 Harmonised Environmental Law of Lagos State.

The state institutional and compliance frameworks were designed for the implementation, compliance, awareness and monitoring of environmental policies in Lagos State. Despite the *Harmonised Environmental Law* creation of two new environmental institutions which included the Lagos State Water Regulatory Commission (LSWRC) and Public Utilities Monitoring and Assurance Unit (PUMA), there is no clear-cut agency responsible of environmental awareness. The traditional approach to environmental awareness has been indirectly through the office of the Public Relations Officer of the Lagos State Ministry of Environment. The current realities on ground, most especially with regards compliance,

show that environmental awareness is key to the environmental management. Hence, beyond a fleeting mention of environmental awareness in the laws, institutionalisation of environment awareness is necessary to achieving environmental sustainability.

Compliance to environmental laws and policies in the state is premised on force. The environmental agencies believe that citizens don't comply unless punishment such as fines are involved. These have led to clandestine desecration of the environment with offenders aiming at avoiding being caught by environmental enforcement agencies and these have led to a cat and mouse game between the environmental offenders and the agencies. Furthermore, the magistrate courts in Lagos do not entertain environmental cases. Hence, offenders who are charged to the court at the Local Government levels are always set free by the claim of the Magistrate Courts that it has no jurisdiction with regards environmental concerns.

Despite the fact that the Local Councils are independent from the state with regard to promulgation of environmental law, the Local Councils in Lagos State depended heavily on the State Government for enunciation and implementation of environmental laws. Thus, the focus of the local councils has shifted from enforcement of bye-laws to enforcement of State laws. This has led to top-down approach of environmental management in the state and has resulted in overlapping functions among the three tiers of government most especially between the state and Local Government environmental officers. Furthermore, Inter-agency overlapping of functions has also characterised environmental management in the state. Proliferation of environmental agencies and failure to adequately have a grasp of jurisdiction of each agency by the officers are key factors that drive overlapping. Overlapping of these agencies slows down policy cycle processes in the State.

The increasing population of Lagos State poses a threat to the available environmental space in the state and has raised various environmental challenges. One of such challenge is the manpower to population ratio which falls within the range of 1:63898. Enforcement therefore becomes skewed and unbalanced. Not only has this had an effect on the

environment but, it has also left a devastating effect on the environmental officers. Available infrastructures are also being stretched, as posited by respondents, and daily becoming inadequate. The parks and gardens built by the state government as a way to promote its greening policy, drive tranquillity and drive aesthetic has become a home for the homeless thereby defeating the purpose of which it was built as a result of population density.

Heat waves, which has been peculiar to countries with high population density such as India and Malaysia, has become an emerging threat in Lagos State. Although scholarship had indeed situated the prevalence of heatwave in tropical areas, recent studies has revealed that heatwaves are not only restricted to such areas but can be triggered by climate change factors and overpopulation. According to a recent study by Lagos State Parks and Gardens (LASPARK), the phenomenal has been dampened in Lagos due to the combination of Oceans, Rivers and Streams which surrounds the State. Heat waves is currently being driven in the state by the population density of the state. Efforts to combat the occurrence of heat waves are currently being done by the tree planting drive and conservation however, awareness of the effects and occurrence remains relatively low in the state

5.3 Recommendations

Studies on the environment have posited that environmental frameworks can easily mitigate environmental degradation. Amokaye (1998) argued persuasively and recommended that to guarantee sustainable development and sustainable environment, environmental frameworks must be promulgated and put in place. This study, however, revealed that proliferation of environmental laws has failed to mitigate environmental degradation in Lagos state. Consequently, it is recommended that the available frameworks be revisited, redesigned and strengthened. To achieve this aim, the policy cycle process needs to be strictly adhered to, most especially in the evaluation aspect. The success of these processes relies heavily on collaboration and cooperation of stakeholders hence, greater stakeholder's participation is necessary.

One key factor responsible for an effective environmental framework in any clime is the level of awareness of the populace. Policies are often targeted at inhabitants of a stated environment. Failure to intimate the people who are meant to comply or adhere to policies on the environment has been at the heart of the reason for the collapse of such policy. The frameworks in Lagos are specific to diverse environmental challenges in the state, however, a large number of the citizens are not familiar with the laws and policies. Despite various efforts at public sensitization, environmental awareness is still low. Environmental awareness, therefore, needs to be mainstreamed into the educational system and environmental governance in the State. Similarly, the Local Governments in the state should increase the efforts on peri-urban and rural sensitization campaigns. Thus, an action plan on environmental mainstreaming into education, media and governance needs to be documented and implemented. Furthermore, the creation of an office of public awareness, though commendable, will need to define a way of tackling attitude of citizens to environmental issues. The study revealed that some citizens are aware of the laws but chose to ignore the law based on belief system and attitudes hence, an awareness drive without taking cognisance of attitude will produce a similar result as experienced in the past.

The role of the judiciary with regards environmental management is distinctly defined in the Nigerian constitution. They act as arbitrators and interpreters of environmental laws while in some instances, adjudicate between conflicting parties be it between the tiers of government, stakeholders or defaulters. The failure of magistrate court at the Local Governments in the state to prosecute cases related to the environment needs to be reversed. Substantive environmental laws and code of environmental conducts need to be presented to the magistrates and their roles clearly defined. Furthermore, lack of adequate Magistrate Courts in each Local Government also contributes to the failure of the courts to hear environmental cases. Defaulters and environmental offenders are aware of the limited number of courts at the Local Governments and their refusal to treat environmental cases hence the flouting of environmental laws. To halt this trend, it is therefore recommended that more courts be situated in each Local Government in Lagos state and the courts intimated about its constitutional duty with regards the environment. Furthermore, cases

relating to the environment in the federal high courts should be treated with urgency to enhance environmental compliance.

The manpower to population ratio in the state is critically low. This is owing to the daily increase in the population of the state. Since the increase in population and migration cannot be immediately checked, the manpower handling the environment in Lagos state needs to be increased. The increase in manpower should be specifically targeted at the Local Government level of environmental management. This should be followed by training and retraining of staff with the focus of positioning them to handle environmental issues in line with changing trends of environment governance globally. Increase in manpower, however, needs to be balanced by a corresponding increase in infrastructures and equipment. There should, therefore, be a renewal, maintenance, and purchase of environmental equipment across board.

Issues of conflict emanating from inter-agency frictions have been ascribed to overlapping functions. The *Harmonised Environmental Law* of Lagos state has sought to tackle this trend with functions and duties of each state agencies clearly spelt out. Efforts at mitigating conflicts and overlapping functions among the tiers of government have however not been sorted out. Issues on the concurrent list have often put the federal and state agencies at loggerheads while issues on the legislative list have at times created problems among the State and Local Governments agencies. The study, therefore, recommends a stakeholders meeting with the aim of deliberating on all issues of conflict among the tiers of government.

The Local Government has the constitutional duty of promulgating laws on the environment with regards their immediate environment. This stated duty is well documented in the legislative list on the constitution of the Federal Republic of Nigeria. Despite this, the Local Governments choose to employ the use of ‘public health law’ as its guidelines and laws on the environment. The Local Governments do not legislate on laws of the environment hence, issues specific to each local environment is not effectively captured in the State Government law on the environment. The complete reliance of all

Local Governments in the state on 'public health law' is a practice not healthy for the rural environment. There is, therefore, the need for the local councils to carry out a detailed study of their immediate environment and promulgate environmental laws.

Heatwaves have contributed to severe illness and become a source of concern to scholars. Although scholarship had indeed situated the prevalence of heatwave in tropical areas, recent studies have revealed that heatwaves are not only restricted to such areas but can be triggered by climate change factors and overpopulation. Suffice to say that a state like Lagos with a population ranging from 16-22 million experiences heatwaves most especially during the dry season. One way of combating heatwaves is through the planting of trees. The State Government has placed a lot of emphasis on the building of parks and planting of trees around the state, however, the rate of these palliatives is slower to the rising population being experienced in the state. Massive tree planting and conservation of the trees in the state, as well as conservation of the remaining forests in the state, is highly recommended to stem the possible health calamity heatwaves may bring upon the state.

5.4 Conclusion

Environmental sustainability is crucial to an emerging mega city such as Lagos. The state has been faced with challenges of competing demands for development and a sustainable environment. Frameworks designed to strike a balance between the ever-growing population, attendant of an emerging megacity, and the spatial space has evolved over the years due to increasing challenges posed by the environment. The focus has tilted from the traditional government-centric to globally acceptable people-centric practice. Lagos, which prides itself on being in-tune with best practices, has seen its various efforts at environmental awareness and management being stampeded by the dynamics of the environmental space.

The population of the state has grown in leaps and bounds over the years and till date, the influx of people into the state continually puts a strain on available resources throwing up challenges to health, climate change variabilities, increase vulnerability and infrastructural deficit. A drive at urban renewal to slow down environmental degradation has however

succeeded in increasing environmental risk. Similarly, the soft stance of the government on environmental defaulters has succeeded in exacerbating the negative attitudes of people towards the environment. Although efforts have been made on increasing awareness, a large percentage of the population remain uneducated about the perils a degraded environment poses. Many however who are aware or made aware of such perils are guided by mythologies, culture, and perception on their attitudes towards environmental concerns. In addition, a fraction of those aware remains largely guided by political leniency hence lean on such leniency to continually degrade the environment.

A bold step in gathering all frameworks into a singular document has presented a bright future encapsulated with legal backing, in line with best practices, giving room for stakeholder's involvement in environmental management and awareness. However, the slow take-off of the dictates of the *Harmonised Environmental Law* and the low awareness drive on this law targeted towards the institutions and stakeholders has increased the strain on the environment and made full implementation a rising challenge daily. Beyond enunciating environmental policies and frameworks, there is a need for the implementation, more specifically, the enforcement of such policies. Accordingly, an increased vigour towards local awareness of environmental frameworks needs to be calibrated. The study showed that the environment is the essence of human existence; hence, the environment needs to be protected and managed efficiently. It must be stated that when the environment is protected, it will provide a safe haven for the human race.

Thus, the study made three key contributions. In the first instance, dominant discourse claimed that framework failure was as a result of poor laws. In contrast, this study argues that environmental failures result largely from non-compliance with the laws. Secondly, attitudes to the law, to a huge extent, determine the successes or otherwise of such law. Hence, the study examined the relationship between environmental management and environmental awareness frameworks from a mutual causal direction and posited that environmental awareness is crucial to environmental management in Lagos state. This is a reverse of the dominant narrative that has only studied the relationship from a single causal direction. The study has attempted to advance scholarship beyond studying the

frameworks for environmental management to interrogating the processes that are involved in birthing frameworks and their dependency on environmental awareness in Lagos state. Thirdly, the study brought to the fore the importance of Local Government engagement in environmental awareness and management. Hence, the study looked beyond the mere interrogation of frameworks from the conventional State and Federal context to the Local Government involvement in environmental awareness and management.

5.5 Contribution to Knowledge

This study has made three key contributions. In the first instance, dominant discourse claimed that environmental framework failure was as result of poor laws. In contrast, this study argues that environmental framework failures result largely from non-compliance to the laws. Secondly, attitudes to the laws on the environment, to a large extent, determines the successes of such law. Hence, the study examined the relationship between environmental management and environmental awareness frameworks from a mutual causal direction and posited that environmental awareness is key to environmental management in Lagos state. This is a reverse of the dominant narrative that has only studied the relationship from a single causal direction. The study has thus advanced scholarship beyond studying the frameworks for environmental management to, interrogating the processes that are involved in birthing environmental frameworks and their dependency on environmental awareness in Lagos state.

Thirdly, the study brought to the fore the paramountcy of Local Government engagement in environmental awareness and management. Thus, the study not only interrogated the frameworks from the conventional State and Federal context but further interrogated the Local Government involvement in environmental awareness and management in Lagos State

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APPENDIX I
Interviewees List

S/N	Name	Designation	Location of Interview	Interview Date
1	Adeyemi Adegboyega Felix	Environmental Health officer	Kosofe	March 8, 2017
2	Temitope Adeleke	Environmental Health officer	Kosofe	March 8, 2017
3	Anjorin Olufunke	Environmental Health officer	Alimosho	March 22, 2017
4	Joshua Ayomiposi	Environmental Health officer	Alimosho	March 22, 2017
5	Banjo Odusina	Environmental Health officer	Lagos Mainland	March 21, 2017
6	Sunmonu Olarigbigbe	Environmental Health officer	Lagos Mainland	March 21, 2017
7	Belinda Aderonke Odeneye	Director of safety, compliance and enforcement, LSSC	Ikeja	March 3, 2017
8	Kassim Adepeju Rashidat	Public Relations Officer, LSSC	Ikeja	March 3, 2017
9	Mukaila Sanusi	Public and Research Directorate, Lagos State Ministry of the Environment	Ikeja	March 3, 2017
10	Sanut Hussain Adeyemi	Assistant director in the environmental management department, MOE	Ikeja	March 8, 2017
11	Awolusi Ayodeji Kolawole	Head of public-private partnership, LSWMO	Ikeja	March 1, 2017
12	Adewunmi Bisi	Public Relations Officer, LSWMO	Ikeja	March 1, 2017
13	Fehinti Ogbemudia	Chief state counsel, LASEPA	Ikeja	March 3, 2017
14	Faleti, Babatunde	Head, Environmental Sanitation, LASEPA	Ikeja	March 3, 2017
15	Akinbode Oluwafemi	Deputy Director Environmental Rights Action (ERA)	Ojodu	April 13, 2017

16	Idowu Omisore	Information Officer, LASAA	Oregun	March 7, 2017
17	Temitope Akande	Director, corporate affairs department	Oregun	March 7, 2017
18	Abimbola Jihoho-Ogun	General Manager, LASPARK	Ojodu	March 7, 2017
19	Sanusi Abdulateef	Public Relations Officer, LASPARK	Ojodu	March 7, 2017
20	Segun Adeniji	General Manager, LAWMA	Oshodi	January 20, 2017
21	Ayotunde Amodu	Assistant General Manager (Engineering Services), LAWMA	Oshodi	January 20, 2017
22	Nosa Aigbedion	Head, NESREA (Lagos office)	Surulere	March 21, 2017
23	Shorunmu Ahmed	Sanitation Officer, NESREA (Lagos office)	Surulere	March 21, 2017
24	Akinyemi Olusola	Deputy director, environmental health, FMOE	Surulere	March 22, 2017
25	Adewunmi Kalejaiye	Deputy director, pollution control FMOE	Surulere	March 22, 2017

APPENDIX II
INTERVIEW GUIDE

A. What specific environmental challenges exist in Lagos state?

1. What would you consider as a prevailing environmental problem in Lagos state?
2. How would you gauge the efforts of the state government in combating these environmental problems?
3. Do you think these environmental issues have forced the hand of the state government in accelerating the formation of environmental laws?
4. In what way has the environmental issues therefore shaped policy process in the state?
5. How would you rate the state intervention so far in mitigating the environmental issues?

B. What policies and regulations have been adopted in response to these challenges?

6. What framework did the government design for implementation, compliance, awareness, and monitoring of environmental policies in Lagos state?
7. Can you estimate the number of laws and policies concerning the environment being used in Lagos state?
8. Are all the environmental laws and policies in the state gazetted?
9. How many institutions can you estimate as being saddled with the responsibility of managing the environment
10. Do the institutions managing environmental challenges in Lagos include local government bodies?

C. What are the existing frameworks for environmental awareness in Lagos State?

11. To what extent does environmental laws and policies in the state toe the line of global environmental regime most especially in the aspects of awareness drive?
12. Does the state government domesticate all global environmental treaties in which Nigeria is a signatory to?
13. Does the state make use of laws and policies of which Nigeria is not a signatory to?
14. Are people and the regulatory agencies aware of these laws?

15. How would you gauge people's awareness and compliance with environmental laws in the state?
16. How would you rate the enforcement capabilities of the various environmental agencies?

D. In what way has the process and mechanisms for environmental awareness and management in Lagos state been inhibited?

17. Do agencies and institutions for environmental management in Lagos have overlapping functions?
18. If yes, does possible conflict arise from such?
19. Do the tiers of government have overlapping environmental functions?
20. If yes, does possible conflict arise from such?
21. Has occasion arisen where the state's environmental policy runs contrary to neighbouring state's environmental regime or vice-versa?
22. Have there been instances where the three tiers have government encountered conflict in the environmental policy process in the state?
23. What factors can you identify as tending towards encouraging the realization of environmental goals in Lagos State?
24. What do you think impede or can impede effective environmental awareness and management in Lagos State?

APPENDIX III

Selected Plates from Field Investigation

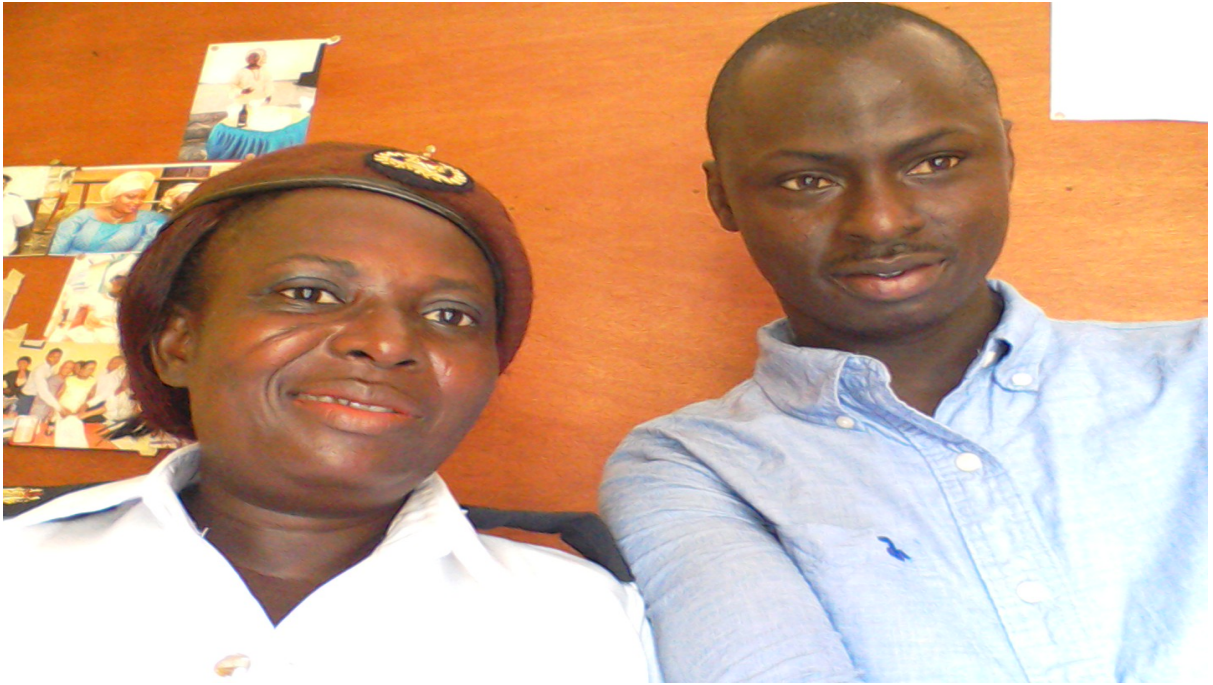


Plate 1: The Researcher with the head, Alimosho Local Government Environmental Health Officers



Plate 2: The Researcher with the Lagos State Coordinator, NESREA



Plate 3: The researcher with the Deputy Director, Pollution Control, Federal Ministry of Environment, Lagos office



Plate 4: The researcher and the General Manager of LASPARK



Plate 5: The researcher and the Chief State Counsel, LASEPA



Plate 6: The researcher and the Public Relations Officer, Lagos State Ministry of The Environment



Plate 7: De-silting of drainages by the Mushin Local Government Environmental Unit



Plate 8: Refuse build-up at Ikotun road, Alimosho Local Government