

# **ENVIRONMENTAL ADMINISTRATION AND POLICY IMPLEMENTATION IN NIGERIA: EVIDENCE FROM ANAMBRA STATE ENVIRONMENTAL PROTECTION AGENCY (2014–2022)**

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## **Abstract**

*This study critically examined the interplay between public policy and environmental administration in Nigeria, with specific focus on the Anambra State Environmental Protection Agency (ANSEPA) from 2014 to 2022. It investigated how environmental policies have been formulated, implemented, and the extent to which they have influenced the effectiveness of ANSEPA in managing environmental challenges such as erosion, waste disposal, flooding, and pollution. Employed both conceptual and empirical approaches, the research analyzed the roles of ANSEPA, the challenges it faced, and how public policy has shaped its performance in environmental protection. The hypotheses generated were also analyzed and evaluated in line with available data. Findings reveal that ANSEPA has made strides in refuse collection and environmental enforcement, its impact is undermined by policy inconsistency, inadequate funding, poor infrastructure, and limited public awareness. The study concluded that despite ANSEPA's effort, the environmental challenges in Anambra State were still persisted from 2014-2022. Recommendations included that ANSEPA should strengthen Policy framework enforcement, provide regular training for enforcement officers to improve their ability in enforcing environmental regulations effectively, increase funding and allocation through government budget resources, encourage Public-Private Partnership (PPP), grants and international aid among others.*

**Keywords:** Public Policy, Environmental Administration, Anambra State Environmental Protection Agency (ANSEPA), Anambra, Nigeria

## **Introduction**

Scientific and technological development, uncontrolled economic and socio-cultural activities, unsustainable exploitation and spread of pollution pose threat to human and natural habitats, this situation calls for intervention from countries, individuals and organizations to search for an appropriate solution to protect and improve the environment. In the past, the three components of the environment (air, soil, and water) were pure, uncontaminated and hospitable. But the reverse is the case today because progress in science and technology is also leading to environmental degradation and serious ecological imbalance, which in the long run, may prove disastrous for mankind (Sharma, 2002).

Globally, it is now recognized that the environment needs protection. In the last hundred years, there has been an exponential increase in the types and quantity of pollutants, some of which are synthetics. We have created new-comers to the planet whose long-term consequences we do not yet know. There has been an explosive population growth, bringing increased demands for natural resources and competition for clean

water and food in many parts of the world. A different phenomenon is also occurring in some places: affluence expressed by an excessive and unprecedented rate of consumption, and a remarkable indifference to wastes from that consumption which clog our oceans and poison on groundwater. Facing such assaults, the environment cannot be its own advocate; it needs human voices and human actions. Environmental protection is a practice of caring for the environment, by individual, organization or governmental levels, for the benefit of the natural environment and future generations. Following the increase in global population, the demand for natural resources increases and consequently there is pollution increase. When this happens, there is environmental degradation which could be temporal or permanent. The degradation of land, air or water has continued to generate conflicts among various communities in various regions all over the world. In recent times, the discovery of oil and subsequent growth in the industry and massive importation of goods have brought about increasing negative environmental impacts hence attracting the attention of the government, as what brought the consciousness of environmental protection to the fore in Nigeria was the incident of Koko port in the Niger Delta region.

In 1988 a large consignment of toxic waste of Italian origin was dumped in the Port Town of Koko. Many people in the area suffered from strange disease and death toll was mounting on daily basis. This incident constituted a major catalyst for the government of Nigeria to act in order to protect the Nigerian environment. This resulted in the creation of the Federal Government Protection Agency (FEPA) by Decree 58 of 1988 and strengthened by Decree 59 of 1992. Prior to June 1988, Nigeria responded to most environmental problems on an ad hoc basis.

The Nigerian government followed this action by organizing an international workshop on the environment. Consequently, the Federal Environmental Protection Agency 1988 (FEPA) was created and charged with the administration and enforcement of the environmental law. Concessions were granted by Federal and State to business promoters to establish industries with little or no attention paid to the pollution generated for their operational activities. OkoroduduFubara (1998), observed that the interdependency of man with or within the ecosystem is fundamental to human existence. Adelagan (2004) lends credence that the need for environmental control arising from the fact that it brings improved health and better living conditions. The need for environmental control arises from the fact that it brings improved health and better living conditions (Adelagan, 2004).

In pursuant to this, other regulatory agencies were created such as; KAPA (Kaduna State Environmental Protection Agency), KASEPPA (Kano State Environmental Plan Protection Agency), OGEPA (Ogun State Environmental Protection Agency), Adamawa State Environmental Protection Agency, River State Environmental Protection Agency, Lagos State Environmental Protection Agency etc. These agencies were created to control and regulate environmental issues in the various states as established by the states. Other agencies were created such as; Department of Petroleum Resources (DPR) which enforces safety and environmental regulation in the Oil and Gas Industry and ensures that operations conform to national and international practice standards. Standards Organization of Nigeria (SON) implements, audits and certifies standards in Nigeria. Following the Stockholm Conference in 1970, many countries established ministries

of environment and environmental legislation began to increase. There was also growing recognition that pollution does not respect land borders and pollution from one country crosses to another. In addition, phenomena such as the greenhouse effect, global warming was identified. As such there was a need to develop international environmental legislation. This has organizations such as the

1. United Nation (UN). The most common treaties called conventions include: United Nation convention on law of the sea (UNCLOS I, II, III),
2. UN convention on Biological diversity (1992),
3. UN frame work convention on climate change (1994),
4. UN convention to combat Desertification (1997),
5. Vienna convention for the protection of the ozone layer (1988),
6. Stockholm Convention on Persistence Organic pollutants (2001, 2004),
7. Basel convention on the Trans-boundary movement of hazardous waste,
8. Bamako convention on the ban of the import Mito African and the control of transboundary movement of hazardous wastes within Africa (Adelagan, 2004).

In pursuant to the original act 1988 and amended act of 1992, different states and local government areas in Nigeria were mandated to set up their own environmental protection agencies within their own jurisdiction. In line with this order, as Anambra state has historically faced significant environmental issues such as erosion (notably gully erosion), waste management, and flooding especially in urban centers like Onitsha and Awka and Anambra State Environmental Protection Agency was established in 1988 by edict number 15, it was established to ensure that residents and businesses comply with the environmental standard delineated in the existing states. The agency has organizational structure which comprises administrative department, litigation department, planning research and statistics department, account department and enforcement department. These departments perform different functions. Administrative department is in charge of daily operations of the agency. Litigation department is in charge of taking a dispute or claim to a law court. Accounts Department is in charge of taking proper records of financial aspect of the organization. Planning research and statistics department is in charge of all the matters relating to macro-economic planning and evaluation of programmes. Enforcement department is in charge of posting of demand notice, court summon reminder and collection of sanitation levy.

Despite the different functions assigned to different sections in the agency, they still experience problems of erosion, poor municipal solid waste management, flooding, indiscriminate waste disposal, poor disposal of liquid waste especially from industries aggravating soil and water pollution, poor public environmental awareness, proliferation of illegal structures, deforestation and other global contemporary environmental challenges of which activities from Anambra state contribute to like global warming, ozone layer depletion and acid rain. In addition, individuals within the environment find it difficult to move about freely due to hold up caused by some of these problems.

It is against this background that the researcher is motivated into investigating the impact of Anambra State Environmental Protection Agency (ANSEPA) on environmental administration in Anambra State between 2014 and 2022.

### **Public Policy**

In as much that there is no consensus as to what public policy means, attempt is made to explain the concept from some authors points of view. Generally, policy is a plan or principles that guides decision making (Ojukwu, 2013). Public policy is a regulations and actions government implement to achieve social and economic goals. It is a statement of the government's intent and commitment to address a particular issue or problem. Public policy shapes the decisions of the government officials and agencies, and it affects the society, the economy and politics. It can also be seen as a deliberate and systematic attempt to address various social, economic, and political issues that affects the society. It is a multifaceted field encompassing a wide range of policies making process to achieve specific goals and outcomes. In the literature of academics, the term public policy is regularly utilized in our present day life and we regularly refer to the policies which are implanted like national education policy, agriculture policy, health policy, wage policy so on. In fact, this is the area where public are involved. The concept of public policy is assuming, that there is domain of life which has totally individual and is not private, which is believed in collective (Anke, 2015). According to Ojukwu (2011), public policy is 'a set of certain course of actions or programmes made or mapped out by government of a state as strategies for achieving objectives. The lives of the citizens everywhere are formed by public policies, whether we are aware of them or not. The dream for improved life while its achievement rest on our own efforts, will probable to contain public policies to aid the result of it. In the works of Mellisa & Louise (2015), 'public policy is a decision made by government to either act, or not act in order to resolve a problem.' In agreement with this, Dye (2019), pointed out that public policy is whatever a government chooses to do or even not to do, in relation to pertinent issue of priority and interest. This is interpreted as any action or implied oriented statement of government to transform its laws and regulations into reality rather than wishing about a particular issue of interest for the benefit the people.

As a study of products of government, policy forms a significant political actor to influence, change, or frame a problem or issue that has been recognized in the political realm by policy makers and the wider public.' This context entails government's development of decision framework, aimed at solving obvious problems in the society. It is considered as an institutionalized proposal to solve relevant and real-world problems, guided by a conception and implemented by programmes as a course of action created or enacted, typically by a government or nonprofit organization, in response to social issues.

### **Environment**

Accordingly, environment may be broadly understood to mean our surroundings. It can be divided into non-living and living components. The environment provides resources which support life on the earth and which also help in the growth of a relationship of interchange between living organisms and the environment in which they live. It is important to realize that humans enjoy a unique position in nature due

to their exceptional ability to influence and mould of the environment. In the recent past the term nature has been used parallel to the word environment. It has been generally believed that nature is what man has not made. Environment and nature have been used as synonym, which incorporate most of the visible manifestation of geography. Worthy of note is that nature as 'the material world itself, is taken as including or not including human beings.' Tracing the history of the term he suggests that 'nature' has meant the 'countryside', the unspoiled places', plants and creatures other than man.'

Everything that surrounds or affects an organism during its life time is collectively known as its environment or simply put everything surrounding a living organism like people; place and things constitute its environment which can be either natural or man-made. The word environment has been derived from a French word 'environner' meaning to encircle or to surround. In the beginning, environment of early man consisted of only physical aspects of the planet earth such as land (lithosphere), air (atmosphere) and water (hydrosphere) along with biotic communities but, with the passage of time and advancement of society man extended his environment to include his social, economic and political functions too. At the organismic level it is essentially physiological interaction which tries to understand that how different organisms are adapted to their environment in terms of not only survival but also reproduction and propagation of their population.

According to Ross (2010), environment is an external force which influences us. It refers to the circumstances in which an individual life. Child's immediate environment strongly influenced their personality and intelligence. Thus, environment refers to anything that is immediately surrounding an object and exerting a direct influence on it. Our environment refers to those thing or agencies which though distinct from us, affect our life or activity.

The Federal Environmental Protection Agency (FEPA) special publication (1991) stated that the environment includes water, air, land, plant, animal, human being, living therein and the interrelationship that exists among them.

### **Environmental Administration**

Environmental Administration is a subfield in public administration which deals with environmental improvement programmes. Generally environmental management involves two basic features: first is the regulation of relations between man and earth, or between man-to-other creatures. Second is that Environmental problems particularly pollution know no political boundaries and therefore expect co-operation and collaboration between countries to tackle them. Within the framework of sustainable development, according to Thompson (1998) the term environmental management refers to the various mechanisms put in place to prevent, rectify or eliminate on a continuous basis the impacts of environment deterioration. From the foregoing, environmental management may be defined as the development and application of strategies, methods and principles towards the preservation, conservation, protection and general improvement of the environment. Specifically, therefore environmental management involves the making and implementation of public policy on the environment, the role of the courts in enforcing

environmental laws, the compliance commitment of polluting industries and the responsibility of individuals, groups and communities towards ensuring environmental improvement.

Another way one can look at environmental administration is to view it essentially as an 'environment-centered approach' in development administration. The environment is the reservoir of all resources needed to accomplish a nation's developmental goals. Thus the environment-centered approach or environmental administration ensures the preservation of resources and general environmental quality. The preservation of natural resources for future use is the goal of sustainable development. Saveland (1974) gave a summary of the important events in the environmental movement and noted that in some cases official actions of governmental organization gave status to such environmental movements.

In the light of the above stated, environmental administration can further be defined as the process of directing and managing public policies and activities in the area of environmental affairs. Most personnel working in this area are more involved with managing the relationships between different interests, e.g. people, development, and the natural environment, than with managing the natural environment itself. It is where the different interests meet that the problems usually arise and decisions need to be made; this is the area of concern of the environmental administrator.

### **Environmental Protection**

It is important to state here that due to the pressures of overconsumption, population growth and technology, the biophysical environment is being degraded, sometimes permanently. This has been recognized, and governments have begun placing restraints on activities that cause environmental degradation.

In attempts to explain environmental protection, different scholars and authorities across the globe have aired their perception of the subject matter. Environmental protection is the practice of protecting the natural environment by individuals, organizations and governments, and its objectives are to conserve natural resources and the existing natural environment and, where possible, to repair damage and reverse trends. It entails any action designed to remedy or prevent damage to physical surroundings or natural resources by a beneficiary's own activities, to reduce risk of such damage or to lead to a more efficient use of natural resources, including energy-saving measures and the use of renewable sources of energy.

This definition is also in tune with that of the US Department of Defense, which was cited in Zurlini & Muller (2008) as comprising of restoration, compliance, conservation, pollution prevention, environmental security technology, and international activities. It has to do with the mitigation and prevention of energy threats, including threats to sources and supply lines, and environmental risks and related stresses that directly contribute to political and economic instability. Environmental protection is the state of safeguarding of vital interests of the individual, society, natural environment from threats resulting from anthropogenic and natural impacts on the environment. This is supported by Belluck, Hull, Benjamin, Alcorn & Linkov (2006) who posited that by environmental protection, we mean guarding against environmental degradation in order to preserve or protect human, material, and natural resources at scales ranging from global to local. In this study, environmental protection means the act of safeguarding the

environment of Anambra State from getting deteriorated to the point of harming the living but to make it more habitable for man. Environmental protection policy is formulated and implemented by the state in order to facilitate effective environmental management. This can ensure the preservation of the environment not only for the present generation but also for the future generation. It should be noted that environmental protection means all the actions taken by the government to protect and preserve the environment. The necessity of protection is predicated on the fact that the carrying capacity of the earth is limited. This means that the more the environment, (the earth) is exploited, the more it attains its carrying capacity limit.

The foregoing is a demonstration that environmental protection is about ensuring the values inherent in our environment is preserved and sustained, to avoid obvious problems that often accompany its abuse.

The problems that make it difficult for agencies set out for the implementation of environmental protection policies in Nigeria appear to be numerous, some of the factors are high rate of growth in urban population coupled with increased commercial and industrial activities which result to phenomenal increase in the volume and diversity of solid waste being generated; inadequate physical planning; dysfunctional drainage system; improper housing condition, and environmental pollution from uncoordinated industrial activities; poorly planned road network and perpetual traffic congestion.

#### **A Brief Historical insight into Environmental Protection and Waste Management Agency in Anambra State**

When it became obvious in history to protect the environment of the state, especially from the problems caused by solid wastes generation and poor handling, the then military government in power established a full-fledged Agency called Anambra State Environmental Sanitation Agency (ANSESA) to deal with the said problems in the state. After the establishment of ANSESA, it functioned for about 14 years before being dissolved.

In 1998, a new waste management board known as Anambra State Environmental Protection Agency (ANSEPA) was constituted in place of ANSESA. ANSEPA functioned for a number of years without making much positive impact on the state environment; instead, it received varied degrees of criticisms from people within and outside the state for poor performances. In 2011, ANSEPA was dissolved and a new board known as Anambra State Waste Management Agency (ASWAMA) was formed in its place. Consequently, ASWAMA has been in directly control of waste management in Anambra State, as empowered by the Laws of Anambra State (2011) to be performing some designated functions on behalf of the state.

**Figure 1: ASWAMA Badge and Stock of Waste Bins waiting to be deployed by ASWAMA**



Source: ASWAMA Facebook page.

The law was enacted by the Anambra State House of Assembly, according to Wonah (2017), who also pointed out that the agency works under the State Ministry of Environment. ASWAMA is sponsored by the Anambra State Government, and according to Nnaji, Udunze & Dimukeje (2017), is charged with the following major responsibilities: removal, collection and disposal of domestic commercial and industrial generated waste; cleaning and maintenance of public drainage facilities; cleaning streets of Awka, Onitsha and Nnewi urban areas; removal and disposal of scrapped vehicles abandoned at legal points within the State, and weeping of major streets/roads in the State.

Presently ASWAMA operates fully in Awka Metropolis, particularly in Awka South Local Government Area (LGA) where the seat of Government of the state is situated. ASWAMA which is the institution that has the sole responsibility to manage wastes by entering into contracts with private waste manager, who have capacity and right equipment to do the job efficiently (Osuizigbo-Okechukwu, 2022). The agency renders intervention services to other LGAs managed by their respective local government authorities and private waste management formations - contractors, traders associations, NGOs and/or CBOs. However, Nnaji, Udunze & Dimukeje (2017) pointed out that during Governor Peter Obi's reign, in Onitsha and Nnewi Local Government Areas, ASWAMA worked in collaboration with a private waste management contracting firm which wished to be identified with the name Laga International Ltd under a programme called the Anambra State Integrated Development Strategy (ANIDS). This worked to some extent, even though there were noticeable lapses.

In Anambra State, the general total waste collection service by ASWAMA has been consistently declining due to various factors including declining resourcing and facilitation from central government leading to internal operational constraints; inefficiencies in management structure; under-billing for collection service; inefficiencies in human resourcing as well as in revenue collection and other issues (Iguh, Ewulum & Origbakpor, 2021). If more of the residents of Awka are willing, ready and pay their waste service charges, ASWAMA is empowered to collect the waste generated in the area; else, ASWAMA and other waste managers are constrained to give an efficient and effective service to the people. General direct service

charge collections by ASWAMA have always been criticized and protested against by traders and allied workers. Also poor performance by ASWAMA, and politicking with the agency, coupled with the factors mentioned above have severely crippled the ASWAMA's ability to effectively meet the city's collection and disposal needs while meeting own operational costs over time. Several previous studies have comprehensively investigated and noted the various causes of ASWAMA's declining capacity to range from corruption to poor management.

The limited ability of residents of the state especially in the lower income areas to pay for services however has to date been largely unattractive to the medium and to the large, more established, private collectors, and over the years these areas have remained under serviced due to low ASWAMA collection ability/capacity and low medium-to-large private collector interest. While many were initially formed for the major purpose of keeping neighborhoods clean, income generation was needed to sustain these activities. As a result a number of these are increasingly simultaneously involved in the active collection, sorting, recovery, and sale of recyclables to waste dealers and to larger scale recyclers in what is currently a largely informal industry. On cleaning up of neighborhoods, residual waste collected by the groups are ideally either taken to designated ASWAMA communal waste collection points or left at the side of the roads for further transport to final disposal sites, complaints abound however of irregular ongoing waste collection by

ASWAMA.

### **State Policies and Institutions Related to Waste Management in Anambra State Nigeria**

As noted Rio Declaration on Environment and Development human beings are at the Centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature. Eberinwa (2023), observed that states have in accordance with the United Nations charter and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and development policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause harm to the environment of other states or areas beyond the limits of national jurisdiction. That right to development must be fulfilled so as to equitably meet developmental needs of present and future generations.

Despite the emphasis on the need for healthy living and neat environment, the waste management in Anambra remains in a poor state and some scholars has opined that some legislation is incompetent to mitigate poor waste management strategies. This necessitates the examination of a few laws and institutional frameworks for waste management in Anambra. The exact time waste management received ardent attention in Anambra State is uncertain, though there are several laws by different administrations in the state. From creation till date, plethora of legislations and policy frameworks have evolved, all in a bid to ensure sound and clean environment. However, the increasing wave of indiscriminate and poor waste management in the state calls for serious concern. Anambra state undoubtedly is a fast growing economy in the country with influx of people from all parts of Nigeria and beyond. Therefore, the need to ensure that lives of her residents are protected via clean and safe environment.

In Anambra State, as in other states of Nigeria, several laws were made to ensure safe and waste free environment. These laws include; Criminal Code Law of Anambra State 1991, Public Health Law of Anambra State, and Anambra State Waste Management Authority Law, 2015. Generally, the former prohibits fouling of waters including blocking of drainage system and other acts capable of distorting the environment, however, the latter deals on waste management generally. Iguh, Ewulum & Origbakpor (2021), asserted that the Criminal Code Law and Public Health Law are general laws on waste and or environment protection, the Anambra State Waste Management Agency Law is a specific legislation on waste reception and management in Anambra State as at today. These include the Anambra State Environmental Protection Agency (ANSEPA) and the Anambra State Waste Management Authority Law (ASWAMAL) 2015.

#### **Anambra State Environmental Protection Agency of 1998 (ANSEPA)**

The Anambra State Environmental Protection Agency (ANSEPA) was created by the Anambra state government to carry out policies for environmental sustainability in 1998 in replacement of the Anambra State Environmental and Sanitation Authority (ASESA). Adogu, Uwakwe, Egenti & Nkwocha (2015) observed that the establishment of this agency was triggered by the directive of the federal government that every Nigerian state should set up their environmental protection agency. This was why the Anambra State Environmental Protection Agency (ANSEPA) was established in 1998. The management of solid waste was part of the roles and responsibilities of the ANSEPA upon establishment.

However, research into the effects of the ANSEPA has highlighted that even the workers of the agency, rated the agency's performance in collection, disposal, and management of refuse as poor and in urgent need of improvement fostered by the adequate funding and good operating environment. Additionally, they suggested that adequate equipment should be provided which include 'pay loaders, bulldozers, tippers, din chassis, compactors, waste bins and refuse vans'.

Unfortunately, rather than correct the fundamental causes of the ineffectiveness of the ANSEPA, another authority was established in 2011, that is, the Anambra State Waste Management Authority (ASWAMA) take over waste management in Anambra. This reflects a potential problem. The issues that led to the inefficiency of ANSEPA were not properly analyzed and corrected, rather it was cancelled, and another agency was introduced. This raises the concern about whether the new agency as of 2011 would not suffer the same fate of ineffectiveness as its predecessor.

#### **Anambra State Waste Management Authority Law (ASWAMAL) 2015**

ASWAMAL was created and inaugurated on the 4th of June 2015 as a corporate body in charge of enforcing laws stipulated by the organization. The organization is specifically dedicated to establishing the ASWAMA and matters related to such laws. Hence, this framework plays two roles; creating policies for waste management and ensuring that the policies are enforced. The law created administrative offices for individuals in the organization that oversaw and authorize the creation of these laws such as the managing director and the governing body (Adeyemi, 2021).

Under the authority of such members of the organization, roles and responsibilities are carried out. Such roles, according to Adeyemi (2021), are highlighted in section 6 where the functions of the authority are stated as:

collect, remove, process, treat, and safely dispose of domestic, hospital, commercial, institutional, and industrial waste; recycle waste; design blueprints for establishment of sewage disposal systems and clearing of sewage; advise and make recommendations to the Ministry of Environment for improvements in the collection, removal, processing, treatment and safe disposal of wastes; clean streets; remove and dispose of carcass of dead animals from public places; monitor the clearing, cleaning and maintenance of drainage facilities within the State; prepare and update from time to time master plans for waste collection and disposal in the cities, towns and villages within the State and the control of the resultant waste systems within the State; promote, encourage, and foster the maintenance of clean and healthy environment in the State; remove and dispose of any vehicles abandoned or cannibalized on any highway, and establish, maintain and clean public conveniences issuing; control pests; and do all such acts as appear to it to be required or convenient for the proper discharge of its functions under this law.

The responsibilities of the ASWAMA are lettered a-z in section 6 of the law provision. However, this research has highlighted a fraction of these which are considered more applicable to urban waste management. Based on the provided responsibilities, it will be noticed that the ASWAMA covers several important aspects of waste management. For instance, it makes provisions for the disposal of waste produced by different organizations and even vehicle waste. Furthermore, it not only focuses on adequate disposal to improve the poor environment, but it also seeks to maintain and sustain a clean environment. It will also be noted that it extends beyond waste management and includes control of pets. Therefore, the responsibilities of ASWAMA are far-reaching, which, in theory, should increase their effect if these roles are efficiently carried out.

It is important to note that while the roles and responsibilities of ASWANA are numerous, they are realistic, especially considering that the organization is given powers to discharge its function. These powers are listed in the section of the authority law. Similar to the responsibilities of the organization, the powers are abundant and listed in letters a-y. A few of these powers are listed below, according to Eberinwa (2023):

Employ such staff as it may consider necessary for carrying out its functions under this law; determine the fees payable for issuance and renewal of licenses to Private Waste Collectors; engage in the sealing off of all premises that do not conform; acquire any land for planning, designing, transferring, managing, constructing, operating and maintaining waste disposal and processing facilities per the Land Use Act; establish advisory bodies composed of administrative, technical or other experts in such environmental areas as the Authority may consider useful and appropriate to assist it in carrying out the purposes of this law; make with the approval of the Governor other subsidiary legislations for this law, and fix the Charges and Tariffs for collection and removal of wastes and refuse which may vary from area to area; prescribe penalties for offences against any regulation made under this section.

The above-highlighted powers are structured to ensure that the roles and responsibilities of the ASWAMA can be carried out. In essence, they have enough autonomy to make and enforce laws through such powers. For instance, members of staff are an important part of any organization, hence, it is quite notable that the ASWAMA has the power to select and employ its staff. Furthermore, if individuals or citizens refuse to conform to the stipulations of the law, the ASWAMA can impose strategies such as sealing off their houses or offices. ASWAMA is an independent organization as it can fix the Charges and Tariffs for collecting and removing waste although this may differ from one area to another. This difference could be a result of the type and size of waste the areas produce. For instance, industrial areas typically produce more waste and are more solid than liquid. Additionally, they can determine payment to issue and renew licenses for Private Waste Collectors. The ability to decide their charge and tariff and payment for licenses, also indicates that they earn as an organization.

Aside from the power to decide their charge and tariff, another important power is the ability to prescribe penalties for violating any regulation stipulated by the organization. It is important to note that the keyword in the clause is 'prescribe' which indicates that the ASWAMA does not have the power to effect penalties, their power is limited to stating such penalties which are tantamount to the offence that has been committed. Additionally, the ASWAMA also has specific guidelines on obligations, offences, and penalties related to the public. Under the third part of the law from sections 11-19, titled sanitation obligations, offences and penalties, the law stipulated the ramifications for offences committed. Among these laws, some are listed as follows: The owner, caretaker, or occupier of any premises within the state shall; (a) provide and maintain a covered dustbin outside the premises suitable to be used solely for depositing waste; ... (b) keep the premise and its surroundings clean, neat, and free from odour, and bag all refuse. Such obligations are specific to the home environment. This implies that the ASWAMA has obligations that are specific depending on the location and the purpose of the building. This makes sense because the modes of waste management and disposal may differ based on the size and kinds of waste that is being disposed of. To establish the fact that the ASWAMA takes cognizance of differences in the purpose of housing, part three of the law further highlights the obligations of other categories.

For instance, in section 16, the law states that the owner of any undeveloped plot in a built-up area who fails to keep it clean, tidy, or free from overgrown grasses commits an offence and is liable on conviction (a) to a fine of not less than N15, 000 (Fifteen thousand naira) and (b) to the cost of clearing the overgrown grass by the Authority (Eberinwa, 2023). This supposes there are obligations and penalties for such abandoned buildings if the stipulations of section 16 are violated. This makes sense because abandoned buildings are more liable to becoming dump sites especially if no individuals are managing them and no activities are going on in the building or its immediate environment. Other individual obligations include the placement of a refuse collection bin in the vehicle by a vehicle owner or the driver, the deposition of silt from construction or repairing drains, and in places designated by the Authority by individuals who excavate silt.

Unfortunately, while the Authority covers several aspects of living that may lead to the production of waste, it does not specifically provide penalties for every aspect. This may jeopardize the chances that such obligations would be taken seriously. Akinloye (2018), observed that only general penalties were highlighted such as any person who contravenes any of the provisions of this law or any regulations made under this law for which no penalty is provided shall be liable on summary conviction to a fine of not less than N5,000.00 (Five Thousand Naira). This may lessen the seriousness of these penalties as they are tied to lumped obligations which are not specific. Having identified some lapses on the ASWAMA Laws, Mr. Mike Ozoemena, the Managing Director, noted that the current ASWAMA law which was made in 2015 can no longer carry the present realities on ground, and advised the 7th House of Assembly for resolving in their wisdom to amend some sections of the law. The MD argued that it is not possible to get waste management to the level being intended with the former rates which was fixed when diesel sold at eighty-five naira; now a liter of diesel is about eight hundred naira. This is why amendment of the Agency's laws is being sought for.

### **Strategic ways ASWAMA manages Waste in Anambra State**

There are several methods of wastes reception and management, including: recycling; refuse reclamation, land filling, surface impoundment, incineration, deep well injection, chemical treatment, land treatment, solidification and annular disposal of pump able drilling waters (Ifeoma, 2019). The commonly used approaches, especially in developing nations, such as Nigeria, which Anambra State is part of, include, but are not limited: sound waste management systems include tipping on land (open dump), pulverization, tipping in the sea or river, separation and salvage, controlled tipping and composting, recycling, waste conversion, construction of effective drainage system, the use of chemicals to clear oil spills, dams and irrigation system, and low waste-yielding processes. The choice of any method of wastes disposal and management is hugely dependent on economic and geographical considerations such as the cost of transport and the availability of wastes reception facilities.

A close observation in Anambra State, revealed that the methods of waste reception and management put to use include: recycling, pulverization, incineration, composting, separation and salvage, chemical treatment, Refuse reclamation, open dump, deep well injection, solidification; freezing or making liquid waste solid, controlled tipping, and composting.

1. Recycling: The National Environmental (Sanitation and Wastes Control) Regulation, 2009 provides for waste recycling as one of the methods of waste management/disposal. Regulation 106 of the Regulation defines recycling of waste to mean the processing of waste material into a new product of similar chemical composition (Ifeoma, 2019). This appears to be the trend now probably, because of its economic value. Recycling is therefore the process of converting wastes to finished good. It is without doubt and apparent that recycling of industrial and domestic wastes will protect the environment, reclaim valuable substances for re-use, and save our natural resources for more economically viable use. Recently, Chicason Group of companies established a waste recycling company in Nnewi. It is a good development that is encouraged.

**Figure 2: A bunch of plastics in Onitsha ready for Recycling**



2. Open dumping: The open dump is the most widely used method in Anambra State today, even though ASWAMA has been kicking against this approach of waste disposal, as it is destructive to the environment. As a result when open dump is employed in waste disposal; the site should be in an isolated area, be properly supervised and about seven kilometers from the nearest town or district boundary. Describing this practice, Ogunmakinde (2018), noted that this method involves the depositing of solid and liquid wastes in a land disposal site in such a way that the whole thing is left uncovered with little or no regard for control of scavenger, aesthetics, disease, air pollution and water pollution problems. This method he further noted allows for easy management of wastes as all kinds of wastes are easily received. It can be easily put into operation within a short period and it is not capital intensive. However, it is quite insightful and can be a disease breeding management strategy. It causes air pollution where such wastes have to be burned. Ogunmakinde (2018) argued that some researchers have revealed that the leaching brings about contamination of ground water and surface water which can in turn affect man, animal and plants, as well as creates problems in land use.

**Figure 3: The ugly scene of waste dumped in on open gutter in Onitsha**

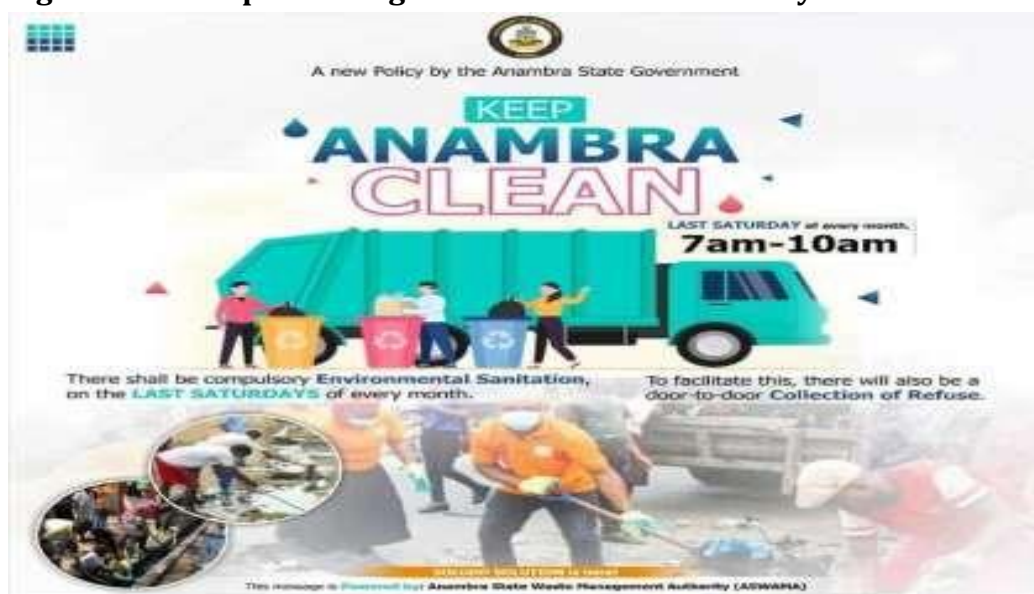


Source: ASWAMA Facebook page.

However, despite the noted difficulties associated with the practice of open dumping, the economic value of this method cannot be overruled. The habit of reclaiming valleys and low-lying areas at low cost by controlled tipping is not uncommon. Although the method is hardly properly controlled in the strict sense, however, local authorities favour the land reclamation method, partly because of the comparatively low disposal cost per ton of refuse and partly because of the potentials which is provided by this form of disposal for enabling the development of various schemes for reclamation of land.

3. Monthly sanitation and stationary public bins: ASWAMA coordinates the monthly sanitation exercise that is scheduled for last Saturday of each month, and deploys relevant waste machine and vehicles in the process to pick up waste and carry out any possible incineration.

**Figure 4: A flier publicizing the Anambra State monthly sanitation**



Source: ASWAMA Facebook page.

ASWAMA usually works in collaboration with Red Cross Society, Miss Anambra Beauty Pageant, Communities, etc., towards achieving the desired result.

**Figure 5: Miss Anambra Beauty Pageant, Red Cross and Community members participating in the monthly sanitation**



Source: ASWAMA Facebook page.

The monthly sanitation exercise is usually encompassing, as the entire residents of the state, businesses, offices (government and non-government), religious worship centers, etc., are obliged to participate. However, compliance is usually very discouraging. No wonder the Managing Director of ASWAMA, Mr. Mike Ozoemena decried the nonchalant attitude of our people towards the monthly environmental sanitation exercise (Ogbuagu, 2022). The MD while monitoring the level of compliance in some parts of Awka the capital territory expressed disbelief that even with all the publicity, people still needed to be coerced in order to comply. He added, 'as you can see, people always need to be forced and cajoled to be able to do what they ought to do, I don't know what is wrong with our people; instead of clean their surroundings, they prefer to come to the market and sit down; it is very unfortunate to say the least'.

4. Sanitary and Secured Land Filling: This is the method of disposing of refuse on land without creating nuisance or hazards to public health or safety, but utilizing the principles of engineering to confine the refuse to the smallest practical area, to reduce it to the smallest practical volume, and to cover it with a layer of earth at the conclusion of each days operation or at such more frequent intervals as may be necessary. This strategy is slightly an upgraded version of open dumping. It involves the use of land site that is located to minimize water pollution from turn-off and leaching. This strategy requires the waste to be spread in thin layers, compacted, and covered with a fresh layer of soil each day to minimize pests and aesthetics loss, disease, air pollution and water pollution problems. The method is very useful for land reclamation or enhancing the value of sub marginal land. Nevertheless, in situation where the strategy is poorly managed, it can degenerate into an open dump. One major constraint of this strategy is the need for

large land space to be used as landfill sites. It could be pretty difficult to come by such sites, especially in countries where there are not enough land space for other human activities such as construction of houses, farming and provision of social infrastructures. On the other hand, secured land filling is a method of waste management that involves the use of a land site for the storage of hazardous solid and liquid wastes, which are normally stored in containers and buried; such sites are restricted and continually monitored. The danger in this strategy is that transporters of such wastes always capitalize on the ignorance and poverty level of people to secure such site. Hence, the health effect becomes unavoidable for the neighbouring inhabitants.

5. **Pulverization:** Pulverization method uses specialized refuse vans to crush solid wastes by its grinding mechanism. The ground material is then tipped on land or sea. The special vans have compactor system, which grinds the refuse reducing them to tiny particles, as they are loaded into the van. The refuse being so grinded makes it unattractive to flies and other animal disease vectors. The reduced refuse provides useful mixture for fertilizing and lightening heavy soil. Pulverization is a valuable process not only as a preliminary to composting but also as a means of reducing the volume of refuse before tipping. Research revealed that pulverized refuse/waste is less offensive to humans and less attractive to flies and rodents than crude refuse/waste. Pulverization as a method of waste management is one of the methods that ASWAMA should pay more attention to.

6. **Tipping into the Sea or River:** Tipping into the sea or river is also one of the methods of waste disposal and management especially amongst coastal state. Although this method have been condemned and heavily criticized because it pollutes territorial waters,, it is still common among people, as it also involves people pouring the generated waste in gutters in a hope that rain water could drive it to any large water body that is close by. This practice, even though is condemned by ASWAMA, is largely deployed by some residents of Anambra State, and most time it get stuck and abandoned in the drainages.

**Figure 6: OCHA Bridged, as ASWAMA collaborators observing a waste-blocked gutter**



Source: ASWAMA Facebook page.

The Managing Director of ASWAMA, Mr. Mike Ozoemena has expressed optimism that the issue of enforcement will be adequately addressed given the renewed partnership between ASWAMA and the Operation Clean and Healthy Anambra (OCHA Brigade). The MD stressed that the issue of street trading and blocking of drainages, 'as seeing on fig. 6', is possibly going to be addressed as the partnership with the OCHA Brigade on this matter intensifies. However, disposal of refuse into the gutters in the area has often been increasingly criticized as causing more havoc to water bodies and the environment in general.

7. Separation and Salvage: Separation and salvage involves the use of sorting machines to separate different kinds of wastes mixed together for ease of disposal or management. Here, dust is extracted first and used for lightening heavy soil or disposed on any suitable land. Metals are magnetically removed, and sold as scrap. Bones are salvaged and used for glue making. Bottles and glassware are also salvaged while the remaining waste is then automatically fed into incinerators to be burnt, pulverized or control-tipped. As costly as this method is, especially with costly machines required to operate it, some manually scrap-pick and sort the waste the waste accordingly. ASWAMA lacks the capacity to fully deploy this method, except in some cases whereby waste scavengers manually sort the waste in line with their commercial values.

8. The 5 Million Plastic Challenge: This Initiative by the Governor Soludo led Administration was to encourage residents to stop discarding plastics and leathers that might be considered as waste, rather gather as many as possible to be converted for further production purpose. This motivated a lot of people in the State to key into search and gathering of plastic cans ifor pecuniary attachment.

**Figure 7: The publicity for the 5-Million Plastic Challenge Initiative**



Source: ASWAMA Facebook page.

With this 5-Million challenge, a lot of plastics were recovered and properly recycled, with commensurate compensations.

From the foregoing reviews, the researcher summarized the strategic methods that ASWAMA might have been deploying for the implementation of waste management policies that promote environmental protection to include, but are not limited to: recycling; monthly sanitation; open dumping; collaboration

with OCHA brigade, Miss Anambra Beauty Pageant, communities, and private contractors. If these were effectively applied, it could lead to enhanced participation of residents in monthly general sanitation exercise, sanctioning defaulters, discriminate dumping of refuse, neat and tidy environment, steady clearance of drainage system, effective evacuation of waste from dumping sites and effective recycling of waste in the State.

### **Factors that Militate against Effective Implementation of Policies on Environment by ASWAMA in Anambra State**

In Anambra State, especially the urban and semi-urban centres, one notices that the rate of influx of waste materials into different dump (legal and illegal) locations far outweighs their rate of disposal, leading to accumulation of these discarded materials at the dumpsites, with their consequent social, economic, environmental and health problems. Eberinwa (2023) argued that there have been concerted efforts by government, individuals and even private sector all geared at ensuring clean environment devoid of wastes and its appurtenances. Meanwhile, most of these efforts are being thwarted by some factors including: lack of waste management skills; inadequate sanitation staff; lack of fund to procure/maintain modern waste disposal/processing equipment; lack of will and indifference by courts and undue adherence to legalism in determining cases of environmental degradation; excessive defense for offenders in our environmental laws; corruption amongst sanitation officers; inadequate penalty for breach of environmental laws; poor urban planning, inadequate waste dump/disposal sites; continuous importation of fairly used/expired products, economic consideration; lack of political will; indifference by people in reporting environmental defaulters are notable challenges faced in waste management generally in Anambra state (Eberinwa, 2023). These challenges make it almost impossible for ASWAMA to achieve their statutory objectives.

On the other hand, while the ASWAMA is designed to have a wide purview and be effective, Iguh, Ewulum & Origbakpor (2021), threw more light into the several limitations jeopardizing the efficiency of waste management in Anambra State. These are buttressed hereunder, according to Iguh, Ewulum & Origbakpor (2021):

a) **Illegal Take-Over of the Responsibilities of ASWAMA by the State Ministry of Environment:** This is the most significant cause of the low efficiency of the ASWAMA. The Anambra state ministry has taken over a significant part of the functions that should be performed by the ASWAMA as it has reserved the power to enter contractual relationships with waste collectors and even collect fees from them. Such a situation is obtained in many cities in the state such as Nnewi, Onitsha, Ekwuolobia, and Ihiala among others. ASWAMA is left with one city to manage, the capital of the state, AWKA. With the ministry controlling over 95% of the state, there are complications related to what the state is known for; the Ministry of Environment is not known to law for waste management in the State and so it cannot legally enforce any agreement with these contractors for lack of 'locus standi'. Waste contractors are privy to this loophole and they take advantage by doing their work while disregarding standards to the disadvantage of proper waste management. Hence, researchers have highlighted that with the sidelining of the ASWAMA from its responsibilities and competencies, the authority has been turned to Awka Waste Management Authority (AWAMA).

b) **Traditional Environmental Misconceptions:** Another factor that limits or even cripples the function of the ASWAMA is the misconception that the environment is immune to pollution. This traditional belief triggers uncooperative environmental behaviors among people in Anambra. The Igbo phrase; 'Orimiri a tu nnu' which means that the river can never be salted enough, idiomatically means that anything can be done in or thrown into a body of water without polluting it. This explains why in Awka among other cities, people are more inclined to dump refuse into water bodies. Furthermore, another Igbo phrase "Afo Eju Ani" that is, land cannot be filled up, idiomatically means that anything can be emptied into or on land without causing any harm to it or to the environment. Hence, with such beliefs they do not appreciate laws stipulated by the ASWAMA to help maintain a clean environment.

c) **Lack of Equipment and Trucks for Efficient Waste Management and poor Funding:** The cancelation and replacement of ANSEPA with ASWAMA was besieged by lack of funding and adequate equipment. Unfortunately, these issues have persisted and are also hindering the functioning of the ASWAMA. The poor funding of the ASWAMA is made most obvious because the Ministry of environment has usurped it from its functions in most cities; hence, it has also usurped its sources of income in all the states where the ASWAMA cannot carry out its responsibilities. Furthermore, available trucks are insufficient to support the ASWAMA in carrying out its waste collection roles and the few available are old and break down often.

d) **Judicial Corruption:** In support of the ASWAMA and to assist with the enforcement of penalties stipulated in the ASWAMA laws, the Environmental Sanitation court was established. The establishment of this court was also triggered by the desire to quicken the process of dispensing environmental justice. However, in practice, this is far from the case. Research showed that members of the ASWAMA stated that many of the court magistrates often request monetary incentives before they can sit in court. On the other end, are the police who delay in making arrests for offences under the ASWAMA laws. This reflects that the ASWAMA is not intrinsically problematic. Most of its limitations occur as a result of external factors. This explains why despite an entire Authority with laws and a supreme court existing for waste management in Anambra state, the issue of poor waste management persists. Unfortunately, these factors are quite profound and significantly cripple their effectiveness and activities. Realistically, unless these challenges are removed or mitigated, the effectiveness of the ASWAMA is only a dream.

e) **Poor Monitoring and Insincerity in Supervising Privately Contracted Waste Management Firms:** This has always been Nigerian major problem, as authorities either lack the capacity to monitor and supervise such an important program and or do it without any sense of patriotism, due to obvious reasons, which might be related to nepotism, favouritism, tribalism and other corrupt practices. This issue cuts across the rural, semi-urban and urban centers, even though the cities, such as Onitsha, Awka, Nnewi and Ekwulobia are worst hit by heap of waste.

From further observation, some of the specific factors that have undermined the functionality of ASWAMA, include: absence of adequate technology for proper waste management; inadequate policy making and poor implementation of existing government policies; inadequacy of enabling legislation; corrupt practices; poor public enlightenment programmes on the needs for proper waste management;

abandonment of policy implementation by new administrations; poor funding, poor data management inadequate taxation, and lack of human resources, inadequate trucks to dispose waste from dumping sites; partial evacuation of refuse from dumping sites; lack of modern landfill, ground-water protection and leachate recovery; absence of municipal composting program; extremely poor participation of residents in the monthly sanitation exercise, and poorly trained ASWAMA and affiliate members of staff.

## **Conclusion**

From the foregoing, the study was able to capture the strategic methods at the disposal of ANSEPA for the implementation of Public policies that promote environmental administration, including, but are not limited to: recycling; monthly sanitation; open dumping; and private contractors. The study established the connection and the influencing factors between the variables, Public policy (independent/predictor variables) and Environmental administration (dependent/criterion variable). Furthermore, issues affecting ASWAMA included: lack of fund, politicization of ANSEPA and bureaucracy, inadequacy of support from the general, It is against the above facts that this study makes recommendations:

- 1) **Strengthen Enforcement Mechanisms:** By this it is recommended that ANSEPA should be empowered with greater legal authority to enforce environmental laws and regulations. By establishing an Environmental Task Force with legal backing to monitor compliance, issue penalties, and shut down illegal dumping sites and Creating a mobile environmental court system for speedy prosecution of offenders.
- 2) **Enhance Inter-Agency Collaboration:** ANSEPA should foster effective coordination between ANSEPA and related bodies such as the Ministries of Environment, Health, Urban Development, and Local Government through regular joint planning meetings and integrated policy frameworks and also establish an Environmental Coordination Council to align all government agencies and stakeholders under a unified strategy.
- 3) **Promote Public Awareness and Civic Participation:** Government should launch intensive environmental education campaigns in schools, marketplaces, religious centers, and through the media and Introduce environmental clubs and reward-based programs to encourage local ownership and compliance and encourage citizens to sort waste at the source through the provision of color-coded bins and incentives.
- 4) **Build Institutional and Human Resource Capacity:** Conduct regular training and retraining of ANSEPA staff on modern environmental practices and policy enforcement and also Increase ANSEPA's staffing and provide adequate protective equipment and tools to frontline sanitation workers.

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