



## REVIEW OF ENVIRONMENTAL PERCEPTION FOR SUCCESSFUL WASTE MANAGEMENT POLICY IMPLEMENTATION

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### **Abstract**

*This study focused on examining the concept of environmental perception with the view of making transparent ways of having a successful waste management policy implementation. The data for this research were mainly generated from published books and journals, conference proceedings, workshops and seminars. This way, emphases were laid upon environmental perception, public perception about solid waste management, policy demand/output, public policy and public policy administration, to enable critical review of the success/failure of waste management policy implementation. It was depicted that policy implementation was hindered by Lack of clear policy assigning responsibilities, poor environmental perception, inappropriate institutional framework, duplication of responsibility, weak and poorly enforced environmental laws and inadequate professional manpower/ research activities as the major constraints in waste management policy implementation. Further to that, SWM will continue to be a daunting task for municipal and district authorities who seem to lack the capability and logistics to deal with the escalating waste situations. Identification of general perception regarding SWM was recommended among others, to be taken in to consideration when attempting to design environmental education programs and that, public perception, with respect to problems of generation and disposal of solid wastes is needed to be included in the design of programs of environmental education.*

**Key words: Environmental Perception, Waste Management and Policy Implementation..**

### **Introduction**

Policy implementation is about the most critical dimension in the policy process given the fact that success or failure of any given policy is, to a high degree, a function of implementation (Ikeji, 2003). Policy implementation is the process of putting a plan into practice by carrying out planned activities, including compliance and enforcement activities or ensuring such activities are carried out in accordance with the guidelines for identification of regions and agencies/institutions for implementation (Egonmwan, 2000; Agamuthu, et al., 2011 and EMBP, 2014). The state plan therefore, shall take: the identification of the responsibilities of state and sub-state (regional, local and interstate) authorities in the development and implementation of the state plan; the means of distribution of federal funds to the authorities responsible for development and implementation of the state plan; and the means for coordinating sub-state planning and implementation (Agamuthu, et al., 2011).

In another dimension, many constraints and problems, ranging from socio-cultural, economic and management problems hinder effective environmental sanitation practices in Nigeria (FME, 2005). Some of these constraints can be traced to: Lack of clear policy assigning responsibilities for environmental sanitation within the levels of government; Poor perception of environmental sanitation as an essential service and a major determinant of health and good standard of living; Inappropriate institutional framework; Duplication of responsibility by many stakeholders in the sector; Weak and poorly enforced public health laws, state laws and bye-laws; Lack of adequate professional manpower especially at the State and LGA levels; and Inadequate research activities. Far-reaching forms of regulation can primarily be realized by creating quantitative measures, but unfortunately the strong emphasis on quantitative indicators can result in street-level workers concentrating on activities that are easy to control to the detriment of other important tasks yet contributing to a displacement of policy goals and meeting the quantitative target may become a goal in itself (Ikporukpo, 1983; Egonmwan, 2000; and Ajayi, 2006). Therefore, evaluation of success and failure of implementation process should be considered in respect of the extent to which program goals have been met and how much measurable change in the larger problem was addressed.

The process of recognizing, organizing, and interpreting sensory information may be termed perception. Perception deals with the human senses that generate signals from the environment through sight, hearing, touch, smell and taste, however, vision and audition are usually best understood. Simply put, perception is the process by which we interpret the world around us, forming a mental representation of the environment (Healey, 2017). Environmental perception is however, understood as the relationship human beings have with the environment (Buenrostroet al., 2014). This relationship determines the attitudes of the people in favor of or against the environment. Further to that, the author pointed out that human environment interaction refers to the relationship between human social systems and the rest of the environment. It is a term that is used to define the dynamics between these two entities, and it can also be used to predict the future of this interaction.



It is important for policy makers to understand human environment interaction, as it affects the future of the human race. For instance, if the interaction is to the detriment of the ecosystem, it means that man may not have a place to call home in the near future. It is important to try and modify this interaction to such a degree that both human life and the environment are preserved.

Man and the Environment were created to interact with each other on balance basis. Whilst a fair decent shelter, food supplements including economic resources were created by the natural environment, man on the other hand is supposed to care and protect the environment from destruction (Fekadu, 2014). Additionally, looking at determinism as a doctrine based on the occurrences in nature, social or psychological phenomena causally determined by natural laws or preceding events. From a metaphysical and philosophical position, for everything that happens there are conditions, such that without those conditions, nothing else could happen. It is also the view that every event has a cause and that everything in the universe is absolutely dependent on and governed by causal laws since determinists believe that all events, including human actions, are predetermined, determinism is typically thought to be incompatible with free will (Fekadu, 2014). The author further stressed the inverse or critics that seem to act against the determinist is environmental possibilism. It stresses the freedom of man to the extent that he is able to use innovation, adaptation or sheer hard work, or choose the pattern of his activity on earth, to escape from environmental bonds. Possibilism therefore, viewed that the physical environment provides the opportunity for a range of possible human responses and that people have considerable discretion to choose between them. These imply that both the viewpoints are interdependent on each other in such a way that 'man influences environment, just as the earth influences man.'

We know that humans perceive data, but we are not as sure of how we perceive. We know that visualizations present data that is then perceived, but how are these visualizations perceived? How do we know that our visual representations are not interpreted differently by different viewers? How can we be sure that the data we present is understood? We study perception to better control the presentation of data, and eventually to harness human perception. The brain makes assumptions about the world to overcome the inherent ambiguity in all sensory data, and in response to the task at hand (Healey, 2017). Further to that, visual representations of objects are often misinterpreted, either because they do not match our perceptual system, or they were intended to be misinterpreted. Illusions are a primary source of such misinterpretations. The study of perception is to identify not just this machinery, but the whole process of perception, from sensation to knowledge. These illusions are due to our perceptual system's structure, and the assumptions it makes about an image or scene. The interpretations are due to a variety of reasons and are the result of how the process works.

### **Operational and Perceptual Environment**

The functional portion of the geographical environment, that which impinges on man as individual or group, influencing behavior in some way or another, is the operational environment, the environment in which man operates. Nested within the portion of operational environment is the perceptual environment, that portion of the operational environment of which man is conscious either because of an organic sensory sensitivity that exists because of a lack of body adaptation - that is the element lies outside the range of conditions to which the body can react "unconsciously" (e.g. temperature, atmospheric pressure, oxygen concentration of the atmosphere) - or instead because of a sensitivity that drives from man's learning and experiences (Mayfield, 1972). The portions of the operational environment of which man is unaware, or to which he is insensitive, lie outside the perceptual environment. Additionally, Man's view of geographical space is extremely varied, and the views of individual men are always in part unique. Entering in to the particular outlook of a particular man are a host of experiences, prejudices and desires, some shared widely with others, some quite specific to the individual. Thus, the political, social, cultural and economic values held by a man blend into an overall image whose components may be particular to him or held in common by many.

### **Public Perception about Solid Waste Management**

The work of Longe, et al., (2009) on people's perception on household Solid Waste Management (SWM) in Ojo local government area in Nigeria, advocates for improved SWM system through proper monitoring of the services of the private sector participation/operators by the local government authority for improved service efficiency. Further to that the authors said that the willingness of the people to pay for waste management services shows the acceptability of the current scheme by the people of Ojo LGA, and hence, a pointer that the scheme could be sustained. Until recently, in most countries of the world, Especially developing and transition countries and European social democracies, the management of waste has been considered to be the responsibility of the government, financed by general revenues. However, in recent years, partly as a result of austerity and structural adjustment policies and pressures from multilateral financial institutions, and partly as a result of pressures to limited taxes (revenue sources), various governments have increasingly focused on identifying specific revenue sources for waste management.



SWM in Developing Countries has become a daunting task for municipal and district authorities who seem to lack the capability and logistics to deal with the escalating waste situation (Sulemanet al., 2015). In addition, the author pointed out that studies about the public perceptions and attitudes towards urban SWM in the Berekum Municipality, BrongAhafo Region of Ghana revealed that residents recognized SWM as a major problem; however, they do not pay for waste management services rendered to them. Prior to the implementation of SWM program, strategies to address such solid waste problems arising from poor public perception ought to be considered. Such considerations should be on adequate supply of containers and intensive public education and awareness before the introduction of user fees for waste management services. Identification of general perception regarding SWM should be taken in to consideration when attempting to design environmental education programs. Public perception therefore, with respect to the problem of generation and disposal of solid wastes is needed to be included in the design of programs of environmental education (Buenrostroet al., 2014).

Many of the decisions that man make seem to be related, at least in part, to the way in which he perceived the space around him and to the differential evaluations he place upon various portions of it (Mayfield, 1972). It was further stressed by the author that, for the moment this is a bald and unsupported assertion, but it seems reasonable that the manner in which man view his spatial matrix imping upon and affect his judgments to some degree. For example, man decides to migrate, not on a regular surface of equal opportunity or desirability, but in a world often perceived in an extreme, differential manner. Additionally, man also decide to grow crops and raised animals for his sustenance, not in an arbitrary way, but in part according to his particular views of the space around him. Therefore, it is not difficult to think of many other examples where maps that are carried in man's head might be relevant in unique crucial ways. Connected to Kubanza's (2010) work on perception and issues of SWM in South Africa, research can therefore be carried on the government's role, community perception and willingness of the community to manage the waste in their area.

The work of Haideret al., (2015) on knowledge, perception and attitude of common people towards SWM indicated that the perception of males and females about disposal of solid waste was not same as males were more concerned for segregation and recycling than females. However, this hinges on the question of uniqueness and generality of viewpoints. Because the total experiences of individuals are unique it might seem, at first glance, that they perceived the world around them in unique distinct, and/or totally individualistic ways. But if this were really so, it would be impossible to say anything of general, and, therefore, of scientific worth about their spatial perception (Mayfield, 1972). Further to that, though this statement may sound almost tautological, it does raise, by jarring our common sense experience, the notion that the views of individuals are not, in fact, totally disparate. We may disagree with some about the desirability or undesirability, the beauty or ugliness, of a particular place, but we can be almost certain of finding someone whose "views from the bridge" closely parallels our own. Perhaps, then, this is the key: a portion of our viewpoint is quite particular to ourselves, while another part is shared, or held in common, with many of our fellows.

### **Policy Demand/Output**

The growth of human population coupled with increased economic activities and increased consumption of goods and services in towns and cities result in high rate of solid waste generation. It is inevitable that almost every human activity involves solid waste generation, hence the need for the provision of effective framework and institutional mechanisms to properly manage these wastes (Lagbas - Aranas, 2015). However, in every responsive political system, various demands are made upon the policy maker by various groups. Consequently, only a few demands get the attention of the policy makers. Those demands that are chosen or those upon which decision makers are compelled to act constitute the policy agenda.

Whereas policy output may be perceived as the services rendered by the government, the policy outcomes may be concerned with the changes in the environment caused by policy actions. Waste management flows in a cycle: Monitoring, Collection, Transportation, Processing and Disposal/Recycle. Through these steps a company or an institution can effectively and responsibly manage waste output and the positive effects they have on the environment.

### **Public policy**

The study of public policy, including the methods of policy analysis, has been among the most rapidly developing fields in the social sciences over the past several decades (Ulrich, 2001). In addition, policy analysis is a field of professional practice that is concerned with the scientific analysis of the contents and consequences of policies, particularly in public sector management and planning. Policy analysis emerged to both better understand the policymaking process and to supply policy decision makers with reliable policy-relevant knowledge about pressing economic and social problems. Public policy can be seen as the principled guide to action executed by administrative executive branches of a nation with regard to class of issues in a way consistent with law and institutional customs (Ramalingam, 2014). The author further said in general, the foundation is the pertinent national and substantial constitutional law and implementing legislation such as the US Federal code.

Additionally, it includes both judicial interpretations and regulations which are generally authorized by legislation. For instance in Nigeria, National Environmental Sanitation Policy is one of such policies being put in place, to serve as a veritable instrument for securing quality environment for good health and social wellbeing of present and future generations (FME, 2005). Public policy on spatio-political and administration devolution adopted in the country has made important achievements in Nigeria, as demonstrated by Bashir (1997).

Whereas policy can be referred to as a principle of behavior or conduct thought to be desirable or necessary as formally expressed by government or other authoritative bodies, guideline on the other hand, can be thought as a plan or explanation to guide one in setting standards or determine a course of action or behavior (Egonmwan, 2000). Further to that, policy can again be understood as a political, management, financial and administrative mechanism arranged to reach explicit goals. It is in fact a principle to guide decisions and achieve rational outcomes. Additionally, policy entails a statement of intent and is implemented as a procedure or protocol.

Subjecting public policy implementation strategies to research and evaluation in order to assess situations and provide potential solutions to problems is an important step in evaluating public policy process. Thus for SWM policy problems to be assessed and be provided proper and adequate solutions public policy implementation strategies should be subjected to research and evaluation and that knowledge pertaining public policy should be fully utilized by the policy-makers.

Public policy includes any policy that is concerned with the public, at the federal, state or local government levels (Ramalingam, 2014). Furthermore, understanding public policy involves observing, analyzing, and often comparing actual public policy to theory, as opposed to actually participating in the creation of the policy. In addition to that, the author said, because theory is not equal to knowledge or factual information, it is an imperfect study often involving debate and sometimes controversy. Perhaps, the most well-known kind of policy is public and foreign policy, as developed and implemented by national governments. These policies are ideally designed to maximize the public good and to serve the interests of the nation (Flamand, 2014). Advisers and policy makers, such as legislators, (referred to as prescriptive policy analysts) attempt to formulate policies that either maximize efficiency or ideally, serve the social good. They are more concerned with proposing and implementing policy, as opposed to describing it.

### **Public Administration and Public Policy**

Based on the following fundamental questions that include i) what shall be done, (policy direction), ii) who shall do it, (personnel management) and iii) how to enforce compliance, (accountability, traditional public administration and the new public management) approaches to public administration were compared.

### **Traditional public administration**

Developing economies need good governance with a system of laws, a justice system that enforces the laws (e.g. a contract system and bankruptcy laws), a financial system with account financial institutions and a just social system. Without these prerequisites, economic development is impossible; and these prerequisites depend on a traditional form of public administration, which is not to say that new public management ideas are never relevant to developing countries (Pffner, 2004). The author further pointed out that, one of the main concerns of the traditional model was the accountability of the implementers of public policy to the governing constitutional rulers. If a system of government has not yet achieved the threshold of accountability, the implementation of new public management techniques is risky and may be counterproductive.

### **The new public management**

The term new public management encompasses a wide range of techniques and perspectives that are intended to overcome the inefficiencies inherent in the traditional model of public administration (Pffner, 2004). Further to that, new public management can be seen as the entire collection of tactics and strategies that seek to enhance the performance of the public sector. Controlling behaviour of workers from the top does not allow those closest to service delivery to react quickly enough. Thus the new public management favours decentralized administration, delegation of discretion, contracting for goods and services and the use of the market mechanisms of competition and customer service to improve performance.

### **Contrasting approaches to public administration**

With respect to public administration, Pffner (2004) observed that each modern state must answer these questions: i) what shall be done (who shall control policy), ii) Who shall do it (who shall implement policies), iii) Who shall enforce compliance (who shall measure performance). In a state setting, policy control needs upholding the division of powers, the core of public administration lies in its executive function. Bound by the rule of legal regulations, it executes the laws passed by the



democratic legislative body. In its hierarchical system of order it follows the instructions issued by the executive's political leaders.

In another way, the new public management would alleviate the problems caused by tight, hierarchical control by delegating greater flexibility and discretion to lower levels in the production of goods and services. It would delegate implementing discretion to those closest to service delivery. They would have greater control of hiring and firing personnel as well as discretion about how to spend money in the accomplishment of policy goals. If program implementation is contracted out, management decisions are at the discretion of private sector managers; and their decisions are acceptable as long as they legally produce the goods or services under contract.

Personnel control in traditional public administration require hiring personnel of government through a merit system designed by the government personnel agency and often enacted in law. A merit system is designed to prevent partisan political interference in the implementation of policy. The hallmark of such a system is neutral competence, with competence achieved through a system of hiring the most qualified workers for the positions. The new public management approach would carry out the policies of the state largely with employees who are not directly employed by the government. In the case of privatization, the government would abandon the attempt to provide some services entirely and leave their provision to the private sector. Control would be achieved through the market system; if goods are overpriced, a competitor will spring up to provide them at a lower price in order to make a profit. The conditions for successful contracting include a market for goods and services in which there is competition among many firms and few barriers to entry. The costs that ought to be calculated when governments write contracts, in addition to the cost of production, include expertise needed to write a precise contract and the cost of overseeing the contractor and inspecting the product.

Measurement of Success as regards traditional model of public administration places its major emphasis on accomplishing the mission and accountability for resources. A hallmark of the traditional model is its rhetorical stress on efficiency. But efficiency is very difficult to measure, and perhaps the rhetorical value of efficiency is so high because it is so hard to measure objectively. At a micro - level, of course, efficiency can be judged over time (e.g. more output from the same resources than last year) or compared with a similar unit producing comparable goods. But at higher levels of generality, e.g. at the program level, there are no broadly accepted measures of efficiency. Thus one of the most common measures of government production is that of resources used, that is, inputs.

In contrast to the line - item or inputs approach, performance budgeting was developed between 1935 and 1960, and was intended to provide measures for evaluating the performance of certain functions. Rather than a control orientation, it was management oriented, and intended to measure the performance of governmental activities. The focus was on work to be done (activities) rather than the things (inputs) to be used in the work. The activities done were the outputs of the government programs. On the other hand, the new public management approach rejects measuring inputs and advocates the use of "performance measures" to evaluate programs and management. Accountability for resources is less important than the accomplishment of goals at a given cost. Creative managers should be given the widest flexibility to use the resources at their disposal to accomplish programmatic missions. Their success will be measured by their performance in accomplishing goals rather than in their careful accounting for the resources (inputs) used. This model of performance measurement is quite attractive, as long as valid measures of public purposes can be devised. If we have good measures, we can choose between contractors by evaluating their measured output, and we can judge government agencies against proposals by contractors on the common measures. Managers can be rewarded based on the achievement of their performance goals. The difficulty lies in choosing the correct indicators that will validly measure what the governmental program is really intended to accomplish. The more precisely the service or good can be objectively specified, the more likely the public will be able to evaluate the product and judge whether it is getting the best value for its payments.

### **Conclusion**

Policy implementation as the process of putting a plan into practice by carrying out planned activities is hindered by constraints for effective waste management, including compliance and enforcement activities in accordance with the guidelines for implementation. Lack of clear policy assigning responsibilities, poor environmental perception, inappropriate institutional framework, duplication of responsibility, weak and poorly enforced environmental laws and inadequate professional manpower/ research activities are the major constraints hindering effective environmental sanitation, hence failure in waste management policy implementation.

Among the problems recognized to be associated with SWM is public failure to pay for waste management services rendered to them. Therefore, SWM will continue to be a daunting task for municipal and district authorities who seem to lack the capability and logistics to deal with the escalating waste situations.

It was realized that, the tension between traditional public administration and the new public management reflects the fundamental tension between accountability and efficiency that has always characterized public administration, but the balance is in flux. Thus new public management approaches - however, not a blanket solution to all of the problems of public administration in modern governments- can be useful to governments and ought to be seriously considered.

### Recommendations

For proper peoples' environmental perception and a successful waste management policy implementation it was recommended that;

1. Identification of general perception regarding SWM is to be taken in to consideration when attempting to design environmental education programs. Public perception therefore, with respect to problems of generation and disposal of solid wastes is needed to be included in the design of programs of environmental education.
2. Adequate supply of containers and intensive public education and awareness before the introduction of user fees for waste management services are needed to be considered for assured waste management policy implementation. This should be followed by governments' SWM strategies through proper monitoring of the services of public and private sector participation/operators for improved service efficiency.
3. Policy makers need to understand human environment interaction, as it affects the future of the human race. It is important to try and modify human environmental interaction to such a degree that both human life and the environment are preserved. This is because, if the interaction is allowed to be continued at the detriment of the ecosystem, it means that man may not have a place to call home in the near future.
4. Subjecting public policy implementation strategies to research and evaluation in order to assess situations and provide potential solutions to problems is an important step needed to be taken in evaluating public policy process. Thus for SWM policy problems to be assessed and be provided proper and adequate solutions public policy implementation strategies should be subjected to research and evaluation and that knowledge pertaining public policy should be fully utilized by the policy-makers.

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