# CONTRIBUTORY INFLUENCE OF MASS MEDIA TOWARDS ENVIRONMENTAL SUSTAINABILITY

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## Abstract

*The environment is endangered by a variety of environmental challenges such as global warming, industrial waste, and environmental degradation from unabated socio- economic development, air and water pollution, biodiversity, desertification and deforestation, among others. Consequently, the need to protect and preserve the environment has become a global concern. The contributory influence of the mass medic towards environmental sustainability has, therefore, become necessary, since human activities can have negative or positive impact on the environment. This paper uses analytical discussion method to highlight the various roles the mass media can play to enhance a sustainable environment. The paper is anchored on the agenda-setting theory of the mass media, which posits that the mass media sets the agenda for public debate and discussion, by focusing on an issue repeatedly. Undoubtedly, the mass media can create awareness on how best to protect the environment. While concluding that efficient use of the mass media can help in calling attention to the urgent need for environmental sustainability, the paper recommends that all channels of the mass media should be exploited to educate and inform the public on the imperative of environmental sustainability.*

**Key words:**     Mass media, Environment, Sustainability, Development, Environmental protection.

## Introduction

Environmental matters ranging from pollution, erosion, climate change, global warming, flood, earthquake, tsunami, and so on, have increasingly taken centre stage among issues of global concern, in recent times. The need to preserve, protect and maintain a healthy environment that can continuously sustain the co-existence of the living organisms as well as the non-living things that make up the environment is obviously a cause of concern for environmentalists and other stake holders, who are worried about the activities of human beings that have the potentiality to endanger the environment.

The mass media are credited with a huge capacity to reach millions of people who are spatially scattered with relevant information on socio-economic, political, cultural and environmental matters that could have significant implications on their wellbeing. Indeed, the mass communication technologies have helped to widen the horizon of people from different cultural backgrounds with relevant information from diverse fields of life. Governments of developing countries, in particular, have also recognized that there may not be sustainable development without the collaborative role of the mass media as a critical partner in the development process. According to Soola (1993, p. 49), "the mass reach and simultaneity of the mass media have remained unparalled by any other medium". This view, perhaps explains the place of the media in the development trends of the third world countries where the mass media were seen as pivotal "in informing the people, mobilizing the people, harnessing their resources and championing the course of development" (Nwosu, 2005, p.59).

Similarly, Lerner (1974) opines that the mass media are a major instrument of social change. The media, thus, can veritably disseminate relevant information that can create awareness about the need for a healthy and a sustainable environment. The media can help to raise issues and highlight the problems and challenges facing the environment in such a way that environmental literacy can be enhanced.

Human activities have a significant effect on the state of the environment. As Oyeshola (2008, p. 8) vividly asserts, "human beings are now introducing an unacceptable negative influence that the earth ecosystem may not be able to accommodate if its continuous existence is to be guaranteed". It therefore behooves the media to provide a veritable forum for human beings to be better informed and educated on the principles and practices that can protect the environment from degradation.

This paper seeks to examine the contributory influence of the mass media towards environmental sustainability. The need for humans to be environmentally friendly is critical because a continuous neglect or

abuse of the environment by the actions or inactions of humans could exert an unbearable pressure on the environment, which may jeopardize its capacity to sustain humanity and the other living organisms on earth. Oyeshola (2008, p. 21) puts this notion in a clearer perspective when he opines that "the environment that inhabits all things has become increasingly tenuous and this in turn has begun to threaten the quality of life, both for human and non human on the planet". It is therefore essential that the environment is protected, so that it can yield optimal service to the living things that depend on it for sustenance.

Consequently, environmental literacy, through the mass media, is a crucial factor that can enhance environmental sustainability. This means that a good knowledge of environmental matters, what to do and what not to do to entrench a safe environment are essential for environmental sustainability. A sustainable environment can simply be described as the basis for sustainable development, whereas the concept of sustainable development, according to Nwabueze (2007, p. 52) "entails developing today's society while not destroying opportunity of tomorrow's generation to develop the society".

**The Concept of the Environment**

The environment is generally seen as everything that makes up our surroundings which affects our ability to live on the planet earth. It subsumes the land, the air we breathe, the water covering the earth's surface, the plants and animals on earth. According to Wikipedia, the environment is also the living things and what is around them, which includes physical, chemical and other natural forces. Oyeshola (2008, p. 8) defines the earth's environment as "the atmosphere and human beings and bio-diversity of fauna and flora. They are to co-exist in the happiest possible equilibrium". This notion of the environment by Oyeshola reveals a significant nature of the environment which reflects the interactive relationship between humans and other living things and their environment. This implies that the activities of human beings and other living organisms in the environment can affect the environment while the environment, itself, can also influence the living organisms it inhabits. Consequently, while the environment influences human beings, human beings in turn shape the environment through their various actions and inactions.

Similarly, Olatunji (2004, p. 4) describes the environment "as an all- embracing concept involving all the facets that comprise the planet earth and its surroundings". The author adds that the environment includes the land into which man is born, lives and dies, the air he breathes, the hydrographic and all aquatic lives. Also for Adegoroye (1997, p. 12) the environment is "the aggregate of the physical and biological entities outside of man and supporting the existence of man, whether on land, in water or air". From the various perspectives enunciated above, the environment can be classified as physical and non-physical. While the physical environment consists of the aquatic and terrestrial environment, the non-physical aspect of the environment comprises the intangible influences which shape the existence of man, which include economic, political, cultural, social and religious environment (Nwabueze, 2007, p. 13).

The environment is also made up of natural resources, such as animals, fish, plants, sunlight, forest, and so on which constitute the renewable resources in the environment. However, the non-renewable resources in the environment are those aspects of the environment that are limited in supply, such as fossil fuel and ores. It is necessary that both the renewable and non-renewable resources should be judiciously utilized to ensure equilibrium on earth.

Again, the relationship between humans, animals, plants, soil, water, light, temperature and other aspects of the environment has significant implications. Organisms in the environment respond to changes in the environment, while the environment reacts to the impact of human activities. Since humans affect the environment by their activities, it becomes imperative that they should be well informed on how their interactions with the environment could be channeled to ensure that they do not jeopardize the capacity of the environment to continually support human existence on the earth's environment. Environmental literacy through the mass media, thus, holds the key to environmental sustainability.

**Theoretical Framework**

This paper is anchored on the agenda- setting theory of mass communication and to a certain degree, framing theory. As regards the agenda setting theory which the writer believes is very relevant to this study, the media set the public agenda in the sense that they may not exactly tell you what to think, but they may tell you what to think about. According to the proponents of this theory, McCombs and Shaw (1972), "in choosing and displaying news; editors, newsroom staff and broadcasters play an important part in shaping political reality". The authors argue that "readers learn not only about a given issue but also, how much importance to attach to that issue from the amount of information in a news story and its position...." Consequently, agenda-setting theory describes the ability of the news media to influence the salience of topics on the public agenda.

One of the basic tenets underlying the agenda-setting theory is that the media concentration on a few issues and subjects leads the public to perceive those issues as more important than other issues. This means

that the nature of prominence and coverage given to certain issues by the media determines the level of importance people place on such issues. McQuail (2005, p. 512) explains the agenda-setting function further by saying that "the core idea is that the news media indicate to the public what the main issues of the day are and this is reflected in what the public perceives as the main issues".

Applying this theory to our discussion on the contributory influence of the mass media towards environmental sustainability, the media can, indeed, raise the salience or prominence of environmental issues by a regular reportage of the problems facing the environment. Invariably, the media can engage in advocacy to sway public opinion towards the need to protect the environment. As McQuails and Windahl (1981, p. 62) aptly argue, "the mass media simply by the fact of paying attention to some issues and neglecting others will have an effect on public opinion." The authors further explain that people tend to know about those things which the mass media deal with and adopt the order of priority assigned to different issues. Thus in the various public affairs programme formats such as news coverage, editorials, opinions, commentaries, news analysis, features and documentaries (Owuamalam, 2016), the mass media can set the public agenda through the dissemination of environmental information and mobilization of the media audience.

Framing theory is also fundamental in our discussion of the contributory influence of the mass media towards environmental sustainability. Framing theory presupposes that the way an issue or information is presented to the audience, which are called "the frames", influences the choices people make about how to process the information. Framing theory as propounded by Goffman (1974) posits that people interpret what is going on around their world through their primary framework. Explaining the techniques of framing theory, Fairhurst and Sarr (1996) observe that issues could be framed as a metaphor; as stories (myths or legends); as tradition (rituals, ceremonies or cultural mores); as slogan, jargon, catch phrase; as artefacts; as a contrast or a spin.

Thus, framing essentially depicts the way the mass media organize and present ideas, information, events and issues they cover. It also means the way or pattern that journalists define and construct their stories so as to present a slant, meaning, frame of reference or perception. By highlighting certain issues and neglecting others, the journalists can attract readers' or viewers' attentions to such stories. Framing, for Kwansih-Aidoo (2005, p. 48) "explains how journalists select stories, facts, events etc".

Consequently, framing has a significant relationship with agenda-setting theory. While agenda-setting is concerned with the mass media telling people what or which stories to think about, framing posits that the news media not only tell people what to think about but also how to think about those issues or ideas. No wonder Shah, McLeod, Gotlieb and Lee (2009) argue that both agenda-setting and framing involve similar psychological processes. However, both theories focus on the media's role in drawing the attention of the public to specific topics which set the agenda for public discourse.

However, framing takes the agenda setting a notch further in the way the news is presented, which creates a frame for that issue, idea or news item. By focusing attention on issues that concern environmental protection, preservation and maintenance, the media will make the environmental issue a public agenda, whereas the pattern of framing such environmental stories will determine the public's construction and perception of environmental matters.

In relation to our discussion, therefore, agenda-setting theory is more relevant in this study since it presents the general concern about the environment and draws the public's attention to various dimensions of environmental issues, with a view to highlight the salience of environmental sustainability. Hence environmental issues become topics for public discussion and debate.

## Need for a Sustainable Environment

The fact that the environment supports the existence of humans and other living organisms cannot be over emphasized. For this reason, the air, water, atmosphere, land, and other components of the environment should be healthy, so as to effectively support both the human beings and the other organisms that depend on the environment for their survival. This means that an unhealthy environment is capable of reducing the life span of the living organisms on earth, including human beings. This explains the need to protect the environment so as to make it sustainable for both the present and future generations of the society. Indeed, any development project that does not conserve the natural resources in the environment should not be encouraged because it is unsustainable. The World Commission on Environment and Development (WCED) (1987, p. 43) states it clearly that sustainable development is the "development that meets the needs of the present without compromising the ability of the future generation to meet their own needs".

Writing on the importance of sustainable development, Lele (1991) describes it "as a new way of life and approach to social and economic activities for all societies, rich and poor which is compatible with the preservation of the environment". This view of sustainable development by Lele, clearly captures the belief that a sustainable environment is paramount to socio-economic development. This means that environmental

sustainability is a pre-requisite for sustainable development. While sustainable development is described as the development of today's society in such a way that the future generation will not be adversely affected, environmental sustainability is ensuring that development projects or programmes are made environmentally friendly before they are commenced. Pearce and Watford (1993) stressed this point further when they assert that: "sustainable development describes a process in which the natural base is not allowed to deteriorate".

Consequently, the need to safeguard the environment against the uncontrolled activities of humans which can pose potential threats to the natural resources has continued to be a major concern for environmentalists who are passionate about keeping our environment safe. Writing on the role of environmentalists for a sustainable environment, Nwabueze (2007, p. 19) states that: "it seeks to preserve, protect, restore or improve the natural environment through sustainable management of resources, advocacy or changes in public policy and individual behavior with a view to ensuring environmental sustainable practice".

The conscious efforts of these earth lovers, no doubt, can provide a veritable framework that could minimize the untoward effects of the recklessness of humans against planet earth and the ecosystem. Indeed, any society with minimal environmental problems can be described as an environmentally sustainable one.

Thus, in ensuring that today's development projects are environmentally sustainable, societies should be less exploitative of natural resources so as to enable the future generation meet their own needs. To this end, Oyeshola (2008, p.162) explains that: "environmental sustainable system must maintain a stable resource base, avoiding over exploitation of renewable resource system or depleting non-renewable resources only to the extent that investment is made in adequate substitute". Oyeshola equally called for a conscious maintenance of biodiversity, atmospheric stability and other ecosystem functions not ordinarily classified as economic resources.

Obviously, a definite change of attitude and strategy in socio-economic development is necessary if environmental sustainability can be entrenched. Black and Cheerier (2010) equally believe that the promotion of a sustainable environment can be achieved by adjusting individual lifestyle that conserves natural resources. Obviously, the adjustment on the nature of human activities in the area of unguarded economic development which could pose potential threats to the natural resources and put a heavy pressure on the environment is critical to any programme that can guarantee environmental sustainability.

Moreover, the need for a sustainable environment became a global concern more than four decades ago, when the United Nations General Assembly initiated the World Environment Day (WED), during their conference on the human environment held on 5th June, 1972. This concern led to the creation of the United Nations Environment Programme (UNEP), as a United Nations agency to coordinate its environmental activities as well as to assist developing nations in implementing environmentally sound policies and practices.

The World Environment Day celebration is observed on the 5th of June every year. This annual celebration helps to draw global attention to the need for a healthy and green environment, as well as to campaign for positive environmental actions. In realizing this objective, the mass media are central in creating the awareness, as the world maps out critical themes to address whatever major challenge the earth's environment is facing each year. In 2016, for instance, the world focused on the urgent need to fight against the illegal trade in wildlife, with the slogan: "Go Wild for Life" (Wikipedia, World Environment Day, 2016).

It is gratifying to note that some of the objectives of the World Environment Day campaign are geared towards promoting a sustainable environment. Some of the WED objectives include:

1.      To create awareness on environmental issues;

2.      To encourage people from different societies of the world to actively participate in the celebration and become active partners in developing environment safety measures;

3.      To encourage people to make their environment safe and clean, so as to enjoy a safer, cleaner and a more prosperous future; etc.

Apparently, the global community is very much aware that information dissemination is very important for people to take a positive action to safeguard the environment because the consequence of disregarding the environment will definitely not augur well for the living organisms on earth, including humans.

**Challenges facing the Environment**

The environment is severely challenged by a number of problems which are attributed to human activities. The air is polluted, water is contaminated and the land is degraded. In many cities of the world, evidence of environmental degradation abound. Air pollution due to toxic chemicals, such as nitrogen oxides, sulfur

oxides, volatile organic compounds and air born particulate matter that produce photochemical smog and acid rain and the chlorofluorocarbon that degrade the ozone layer. The environment is increasingly endangered by oil spillage, chemical spills, wild fire, drought, rainstorm, heat wave, hurricane, among others. Climate change and global warming as a result of ozone layer depletion has also continued to threaten the global atmosphere.

Indeed, the earth is sick and needs an urgent remedy, to avoid degenerating to the level that can destabilize the ecosystem. Already, our diseased environment is also posing a serious threat to human life and sustenance with stories of flooding in various regions of the world, tsunamis, hurricanes, earthquakes and earth tremors, and tidal waves, among other environmental disasters plaguing the earth.

Although people from different regions of the world are living in self denials about the degeneration of the planet earth, the fact remains that people of the world are destroying the earth by their activities. While the advanced countries argue that developing nations abuse the earth out of their ignorance, developing nations claim that the developed countries pollute the earth with their chemical testing and industrial wastes which they dump in seas, oceans, lakes and forests. This, perhaps, explains why 250 climate experts from 80 countries at a meeting held in March 2009, at Copenhagen issued a warning that there should be no excuse for failing to act on global warming and that without strong carbon reduction, abrupt or irreversible shifts in climate may occur that will be very difficult for contemporary society to cope with.

## Environmental Challenges in Nigeria

In the Nigerian context, as in other developing nations of the world, environmental degradation manifests in both the urban and rural areas. The urban areas in Nigeria are bedeviled with indiscriminate heaps of refuse. The problem of waste management has equally become an endemic challenge for successive governments in Nigeria. Solid wastes litter the streets while the drainage channels are blocked with refuse which people dump in the gutters, especially during the rainy season. These untoward environmental attitudes do not only leave the drainage systems blocked, they also trigger the floods that are now regularly plaguing the Nigerian states.

Also, the indiscriminate dumping *of r*efuse in the Nigerian cities equally constitutes a critical health hazard to the urban dwellers. The people, thus, are exposed to an unhealthy environment that can reduce their life span. Again mosquitoes and rats that spread malaria and Lassa fever, respectively, find breeding grounds in the filthy environment of some Nigerian cities which pose a huge challenge to human health. The solid wastes generated in the cities also pollute the air and contaminate the source of water for the people. The indiscriminate disposal of empty food packets, water sachets, polythene bags and other containers that litter the streets in urban areas constitute a major source of environmental abuse which invariably degrade and pollute the environment.

Another major environmental problem found in the cities is the increase of industrial waste from the large, medium and small scale industries located in the cities and their suburbs. The noise and other industrial wastes tend to pollute the environment. Also, automobiles that abound in the cities pollute the environment with noise, fumes and other substances that are injurious to the health of the living organisms in the environment, including humans.

In the Niger Delta areas in Nigeria, a peculiar form of environmental degradation occurs with oil spillage due to the impact of oil prospecting in the region. The oil spillage does not only pollute the surface and ground water in Niger Delta, aquatic life is destroyed and the remaining farmlands in the area are heavily degraded with oil spills. With the enormity of environmental degradation in the oil rich Delta areas of Nigeria, one wonders whether the oil companies operating in that area included environmental impact assessment of oil spillage in their operational policy. Of course, if they did, then they have a total disregard to the dictates of environmental impact of their operations. As Nwabueze (2007, p. 30) rightly observes, environmental impact assessment is "an intrinsic part of environmental management". The author explains that environmental impact assessment is an activity that exposes the impact of any programme, projects, technology or legislation on the environment.

More so, the built environment is not left out as houses are built in some cities without adequate concern for a sustainable environment. Some areas are developed without drainage channels in place, while the construction of soak away pits as well as the boreholes, now a common feature in the cities, are constructed without due consideration to the implications on the environment in the nearest future.

The rural areas of Nigeria are not better off, with regard to environmental degradation caused by humans. The pattern of livestock grazing in Nigeria leaves much to be desired as the Fulani herdsmen take their cattle along farmlands where the cattle do not only destroy the green vegetations in arable lands, they also destroy farmlands and crops. This attitude naturally affects food supply adversely. Also, indiscriminate defecation and urination, bush burning for agricultural purposes, indiscriminate felling of trees for housing and other development purposes without replanting new ones are some human activities in the rural areas that

are not compatible to a sustainable environment.

Again, desertification, deforestation, improper channeling of flood due to road construction, sand excavation, among other activities, are aggravating the flood menace now challenging many rural communities in Nigeria. Today gully erosion has become a huge threat to many communities in Nigeria as a result of improper channeling of flood. Flood menace in Nigeria has assumed a new dimension since 2012 when Nigeria witnessed her worst flood disaster. According to National Emergency Management Agency (NEMA), the 2012 flood disaster in Nigeria was the worst in the last 40years which affected about 30 states out of her 36 states, killed about 363 people, displaced over 2.1 million people and left Nigeria counting about N2.6 trillion losses. Since that 2012 flood disaster in Nigeria, flooding has continued to plague some states in Nigeria annually during the raining season.

In Northern Nigeria, desertification is a big challenge. Lamenting on the dangerous trend, Alkali (2007) notes that "the fighting of the desert is as critical as the ecological crisis of the Niger Delta.... The desert is already here with us, not even far away from Abuja, the Federal Capital Territory...”

Also worried about the increasing desertification of the Northern region of Nigeria, Oyeshola (2008, p. 23) observes that "desertification is the major all season environment malaise plaguing most states in Northern Nigeria where more than 90 percent of its citizens rely on fuel wood". He further argues that "the activities of herdsmen whose animals graze on the available vegetation compound the problem, leading to forest retreat and progressively low annual cropping". Desertification problem, according to Oyeshola (2008), is worst in such states as Kebbi, Zamfara, Katsina, Yobe, Sokoto and Bauchi.

Deforestation is another huge environmental issue in Nigeria. This occurs as a result of economic developments and hardwood logging for various building projects. The massive population of Nigeria estimated at 188.2 million according to the United Nations estimate as of October 10, 2016 can present another source of pressure on the environment as the explosive population struggle to survive by scrambling for the necessities of life, such as food, water, clothing, and shelter, all of which are sourced from the environment. Also, while the Nigerian forest is fast depleting, it continues to pose a threat to both the flora and fauna found in the environment. The impact of deforestation according to Oyeshola (2008, p. 24) is huge because "an estimated 484 plant species as well as certain wild life are being threatened with extinction".

Erosion menace is another major environmental problem in Nigeria, especially, in such states as Anambra, Imo, Abia, Ebonyi, Enugu, Edo, Ondo, Jigawa, Kebbi, Gombe, Sokoto and Zamfara. Erosion has led to gullies which are a major threat to human lives, households and entire communities. In Anambra state, in particular, a former commissioner for Environment, Mr. Romanus Ejikeme, says that there are over 960 active erosion sites in the state, where many families have lost their homes in such communities as Nanka, Ekwulobia, Nnewi and Ichi (Ejikeme, 2016).

Lamenting on the impact of environmental abuse in Nigeria, Anyaoku (2004, cited in Nsude, 2007, p. 353) says "the degradation of the Nigerian environment contributed in no small measure to the exacerbation of drought, acute water scarcity, low agricultural productivity, rural poverty and the proliferation of diseases with extreme temperature and poor environmental condition". Sadly, on September 11th and 12th, 2016, Nigeria experienced a multiple occurrence of earth tremors or vibrations at three locations in Jebba Local Government Area of Kaduna state. The affected communities are Kwoi, Nok and Samban Dagi which left scores of buildings with cracks or total collapse. According to Vanguard Newspaper report (2016) Prof. Alex Lar of the Department of Geology, University of Jos, 'warns that Nigeria should brace up for more earth tremors and probably an earthquake following the occurrence of the phenomenon, at Kaduna'. Indeed, that multiple earth tremor that occurred about 250Km South of Kaduna metropolis is a clear warning that all is not well with the Nigerian environment. In this regard, Baresh and Webel (2002, p. 477) observe that:

> The soil once eroded away, can take centuries to be replenished; certain forms of contamination (plastics, nuclear waste, long lived pesticides) will probably be around longer than human history has thus far endured; the atmosphere once warmed, may be impossible to cool; and species, once extinct, cannot be recreated.

With the myriad of problems facing the Nigerian environment in particular, and by extension, other developing countries and the wider world, there is an urgent need for a behavior change among humans to halt the reckless depletion, degradation and pollution of the environment. The time for humans to make peace with the earth to enhance environmental sustainability is now and the mass media can exert a powerful influence, if properly utilized.

**The Contributory Influence of the Mass Media towards Environmental Sustainability**
The mass media which comprise newspapers, magazines, books, radio, television, film, movies, VCR and the

internet are powerful tools of information dissemination to a mass audience. The media by their statutory function of information and education can create awareness on environmental issues, educate the media audience on proper environmental management principles and practice, mobilize the public *to* take active and positive actions in preserving and protecting the environment. By projecting or reporting environmental issues on the pages of the newspapers and magazines consistently, the public will begin to understand and appreciate the importance of environmental protection and subsequently, begin to pay more attention to their environment.

Also, by the coverage and reportage of environmental issues on radio and television news; the presentation of the diverse challenge facing the environment as news commentaries or news analysis, features and documentaries on radio and television broadcasts, the salience of environmental matters will be raised significantly to attract the attention of the public. Just as political reportage or sports stories are already occupying focal points in the media industry due to the prominence such reports enjoy, environmental stories can also become front burners in the media reports.

The influence of the mass media towards environmental sustainability is deeply rooted in their capacity to spread information to a wide audience. As Nwabueze (2007) rightly observes, by reporting local, regional, national or global environmental issues to the media audience, such issues will become critical and widespread. Similarly, Nwosu (2005, p.15) believes that "all human endeavour from social activities to scientific creativity attain excellence or folly only through communication". Communication according to Gerbner (1967, cited in Hanson, 2005, p. 3) is "a social interaction through messages". Jayaweera (1991, p. 17) sees communication as "an interaction process through which persons or groups relate to each other and share information, experiences and culture". The interactive, two- way process of communication is facilitated by the mass media technologies, which are also described as machine mediated communication channels, or technology-based communication tools (Agbanu, 2013, p. 10.

A focus on environmental issues by the mass media can create an opportunity for media audience to have a better understanding of how to relate with the other things that make up the earth environment. In his definition of environmental communication, Nwodu (2007, p. 346) says:

> It is a conscious communication effort to bring people to the knowledge of environmental problems around them, encourage them to desist from actions that are harmful to the environment and sensitize them to show greater commitment to activities aimed at safeguarding the environment.

The capacity of the mass media to make information available to their enormous audience is easily achieved through their various channels, each with its own unique strengths to attract its special audience. For instance, the print media comprising newspapers, magazines and books have their strength in the durability and permanence of the printed word, which can be read over and over again. The print media can be used to provide a detailed explanation of environmental matters. In terms of durability of information, books are more durable than magazines, while magazines are more durable than newspapers. Also, while the newspaper is more current than the magazine, the later is more current than books.

Also, radio broadcasting is credited with a mass appeal as it transcends the barrier of illiteracy and poverty to beat television. Radio is regarded as the true mass medium in terms of reaching a mass audience, especially in a developing country such as Nigeria (Okunna and Omenugha, 2012, p. 103). As for Nwabueze (2007, p. 66) radio is by far," a potent and effective environmental communication tool for reaching a vast range of audience". Radio is cheap, portable and can operate without electricity. Radio as a medium of information is the best and truly widespread, even among the rural population (Moemeka, 1981; Okigbo, 1990; Sobowale and Sogbanmu, 1984).

However, while radio shares flexibility in language with television, television outweighs radio by its capacity to transmit audio and visual signals. Television is also very effective in demonstrative learning especially for environmental communication. Both radio and television share the attribute of spontaneity as events happening at anywhere in the world can be transmitted live to the media audience with the aid of outside broadcast van or satellite facilities. The huge strength of the mass media, perhaps; lie more on the nature of their audience which Akakwandu (2015, p. 70), and Agbanu 2013) characterized as 'large', 'anonymous', 'heterogenous', 'scattered' or 'dispersed', and active'.

Also, in this era of Information and Communication Technologies (ICTs) which include the internet, mobile telecommunications, video text, communication satellites, cable system, electronic newspapers and magazines, cable television, digital television and radios, all of which are referred to as the "new media"; information dissemination to the media audience has assumed a new dimension. The social media which are widely described as web based and mobile technologies have helped to turn communication into an interactive dialogue Agbanu, (2013, p. 95). Okunna and Omenugha (2012, p. 41) are right when they opine

that "with the social media, everyone has the chance to become a mass communicator". Also, with the emergence of the social media, immediacy, access, greater speed, immediate feedback, two-way traffic, multiple platforms, user-generated content, mobile media and audience segmentation are guaranteed (Agbanu 2013; Okunna and Omenugha, 2012).

According to Oladepo (2012), new media are a wide range of technologies and communication tools that have emerged more recently, including the internet. Nwabueze (2007, p. 75) also describes ICTs as "a gamut of sophisticated technologies which facilitate easy and meaningful communication in the modern age". With the advancements in the mass media technologies, the global village predicted by Marshal McLuhan (1964) has become a reality, as people from different ends of the globe can today interact and share ideas about themselves and their environment with a much more ease and greater speed than was obtainable in the recent past. The mass media can thus shape the lives of the people and their environment. Writing on the impact of the mass media, Agbanu (2013, p. 71) argues that "consciously or unconsciously, these media of mass communication are affecting the users in virtually all aspects of their lives". He adds that "researches in media effects have proven that the mass media wield a lot of influence both on the individual and the society".

Apparently, communication scholars have widely agreed that the mass media play the roles of information dissemination, education multipliers, mobilization, entertainment, advertising, innovation diffusion and watchdog for the society. In the area of environmental sustainability, the mass media are not only linking humans and their environments; they are, indeed, contributing in creating the much needed awareness and enlightenment to the public in attitudinal change. The mass media help in informing and educating the media audience on the trends in environmental issues. The media also help in mobilizing the public for active participation in ensuring a sustainable environment.

The main function of the mass media according to Adelaku (2015, p. 68) is "to enhance development", and communication is an essential aspect of development. Development simply means an improvement in the quality of life of a people in all spheres of life, including the environment. Olukotun in Oso (2002) explains that "development is conceived in both quantitative and qualitative terms to capture; such issues as employment generation, equitable income distribution, spatial equity and balanced growth as well as environmental sustainable policies".

Environmental sustainability can be enhanced by the mass media by educating the people on what to do to preserve, protect and maintain the renewable and non-renewable resources in the physical environment. Actions like planting new trees after cutting down existing ones for various uses, sustainable agricultural practices, such as the use of organic fertilizer instead of inorganic fertilizer that can jeopardize the soil in the long run, environmental sanitation and protection, among other environmental friendly behaviour could be promoted through mass media news and programme. Books can be written on environmental issues, while newspapers and magazines can devote a substantial number of pages for environmental stories. Radio and television air time can also he extensively devoted to education and mobilization of the people on environmental friendly initiatives.

Through the various contents of the mass media, awareness on harmful practices that could endanger the environment can easily be created. By covering and reporting the untoward activities of humans that are detrimental to the environment, such as indiscriminate dumping of refuse, poor waste management reckless economic development, a more positive behaviour that can mitigate climatic and environmental change will be entrenched in the minds of the audience.

The media can also engage in advocacy by attracting the attention and interest of governments, international aid agencies and other stakeholders to initiate programmes and policies that can enhance environmental sustainability. Again, the media can do a lot to advocate for a judicious use of natural resources. In this regard, such organizations as: Global Environmental Facilities (GEF), Global Environmental Monitory System (GEMS), World Commission on Environment and Development (WCED), United Nations Environment Programme (UNEP), Environment Renewal and Development Initiative (ERDI), Environmental Modification (ENMOD), International Relief System for Sources of Environmental Information (INFOTERRA), United Nations Conference on the Human Environment (UNCHE), National Emergencies Management Agency (NEMA), and State Emergency Management Agency (SEMA), among others, could be lobbied through a variety of media campaigns to initiate a positive action, policy or programme that can enhance environmental sustainability.

As the watchdog of the society, and by extension, the environment, the media can beam their searchlight on the activities of people, industries or corporate organizations whose operations constitute a hazard to the environment. The media can report or direct the attention of the public through news coverage, commentaries, news analysis, opinions, debates and panel discussions on the various human and individual activities that could pollute or degrade the environment, by this watchdog role, individuals or organizations who disregard the impact of their operations on the environment will be exposed and the groups concerned

could retrace their steps and adopt a more environmental friendly approach in their operations.

More so, the media can help in mobilizing the citizenry for active participation in environmental protection and sanitation. A good example is the monthly national sanitation exercise held in the last Saturday of every month in Nigeria, which the mass media have consistently sustained through news coverage and public service announcements. For instance, radio or television jingles on proper waste disposal methods, proper drainage channels, sanitation or tree planting campaigns could be produced and aired at peak periods to mobilize the public towards a sustainable environment.

The contributions of the new media in environmental sustainability are equally noteworthy. With the ICTs' weather forecasts, environmental health education with pictures, charts and other aids via the internet can help in creating awareness and raising the consciousness of the public on environmental matters. As Nwabueze, (2007, pp. 78-79) rightly observes "data on different kinds of environmental problems - tsunami, hurricane, earthquake, typhoon, global warming, greenhouse gases, ozone layer depletion, land, sea and air pollution etc are contained in the World Wide Web". Today, people can easily send, receive or share information and ideas about the emerging environmental issues despite their location, with their internet access. Also people can learn more about all kinds of plants and animals on planet earth through satellite broadcast channels, such as National Geographic channel and Discovery channel through the evolution of digital satellite broadcast television.

## Conclusion

The mass media as potent tools for public education, advocacy, mobilization, and campaign towards environmental sustainability cannot be over emphasized. A proper mix of both the traditional mass media and the contemporary media can go a long way in marketing positive environmental actions to all classes of people. Since a majority of the problems facing the environment are man- made, a change of attitude towards environmental issues can help in preserving the earth. Agba (2002, p. 561) believes that "a lot of environmental hazards would be averted if people change the way they think and act". This change can be influenced by the mass media which provide various channels of reaching human beings with relevant information and communication that can help to change their attitude towards the environment.

The media's influence, apparently lie in their capacity to disseminate critical information that can influence people's orientation towards environmental sustainability. As Olayinka in (Musa, Kola and Lawal, p. 1999) observes, environmental illiteracy is a factor that is contributing to the complexity of environmental problems in Nigeria. Effective and efficient education of the media audience on means and ways of managing their environment can mitigate the effects of continuous degradation of the environment.

As a development communication issue, environmental communication will help to bring about the overall development of the people which will invariably ensure a better and improved lifestyle for the people. Consequently, much depends on the nature of information available to the people on how to protect, restore and promote sustainable use of the terrestrial ecosystems, sustainable management of the forest reserve, combat desertification, desist from land degradation and prevent biodiversity loss.

No doubt, the media can enhance environmental sustainability through awareness creation on the problems facing their environment, as well as mobilize them for popular participation in actions that can safeguard the environment. The obvious implication is that a copious spread of information about the environment can assist humans to achieve harmony with their environment. Since it is incontrovertible that the mass media can have a tremendous influence on the audience's knowledge, attitude and practice towards environmental sustainability, effective use of the media can go a long way in entrenching environmental sustainability.

## Recommendations

In view of the incontrovertible contributions that the mass media can make in enhancing environmental sustainability, the paper recommends as follows:

1. For the mass media to achieve their laudable influence in environmental sustainability, the journalists should be properly trained on environmental reporting to enhance their capacity to report, inform and educate their audience on environmental issues.

2. All channels of the mass media should be exploited to educate and inform the public on the importance of environmental sustainability.

3. A regular coverage and reportage of environmental matters is necessary so as to keep the issue on the front burner of the mass media, just as political and sports stories have become prominent due to the pre-eminent position placed on them by the media.

4.  Since non-response to environmental protection and preservation could largely be tied to environmental illiteracy, environmental education could be introduced as part of the major curriculum in Nigerian schools and colleges to promote environmental sustainability.

5.  Government at all levels, in Nigeria in particular, can also help to ensure that the policies created about environmental protection are enforced to promote environmental sustainability.

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