
Integrated Model of Communication as a Panacea for an Effective Environmental Order

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Abstract

This work posits that the impacts of human activities on the environment are dualistic, positive and negative. The work further argues that the negative impacts are rendering the environment very dangerous for sustainable livelihood, both for flora and fauna. The paper notes, however, that much of human effort is being made to forestall the possible infliction of these cataclysmic effects on the world, but regrets that, like other scientific revolutions, the efforts are only being accessible to professional environmentalists and other science- and environment-based nongovernmental organization and civil society agencies. The implication is that the bulk of the public is not sensitised about the initiatives for effective environmental protection or management. The work points out that the current level of global environmental pollution, degradation and mismanagement can be stopped or curtailed with effective communication techniques for effective sensitisation and management, through the involvement of the collective rather than the individualistic professional scientists and experts' approach. The study paper concludes that when environmental management innovations are appropriately communicated using the integrated model recommended in this work, the prospects of a new world environmental order of securing sustainable human development goals shall be realised.

1. Introduction

The most permanent of all things, according to Democritus, is change. Every other thing is in a state of perpetual flux. It is therefore from this point of view that one can say that what is fashionable is change. In the world, what is most important is the ability to appreciate this change, which is usually in the form of historical dialectical materialism and possibly adapt to this change, where necessary, and or prevent changes that may be inimical to humanity and the earth, on the one hand; or to work toward possible measures for the establishment of a sustainable co-existence in the midst of these changes, on the other hand.

Environmental issues - issues that concern the earth and everything around the earth - are mostly those that affect humanity. They also almost always bring about change in relation to the earth, humanity and all that exists in the world, including the earth's flora and fauna, galaxies and the interrelationship between organism and their worlds and inter-galaxies relations. One of such changes is the problem of green gas effects and that of ozone layer depletion and climate change, which are mostly the cause of global warming. Climate change is typically caused by such factors as: the use of fossil fuels, deforestation, industrialisation, uses of chlorofluorocarbons (CFCs) dichlorodifluoromethane or (Freon), fossil fuel harvesting and usage, hydrocarbon harvesting and usage, emission of sulfur dioxide (SO₂) over population, intensive agricultural activities, deforestation, bush burning, and other activities that are driven by hyper-trade-liberalisation, powered by World Trade Organisation and Britonwood and Paris Club agencies.

It is imperative to understand that all that these issues are relational and are also based on the extent of human social, political and economic development, and the various socio-economic and human production, distribution, and consumption relations that are prevalent, according to the spirits of the time. There have been consistent researches and documentation on environmental problems that are consciously being addressed by natural scientists: biologists, chemists, photochemists, physicists, and geophysicists. It is worthy to note that aside these efforts, the social scientists, political scientists, political economists are as well deeply involved in environment protection matters. This does not obliterate the effort of national and international governmental agencies; national and international nongovernmental agencies; faith-based civil society agencies and other public-spirited individuals and philanthropic organizations.

2. Communication

Communication is so variously conceived that there is yet no concise definition of the concept. For instance, Harrold Lasswell (1948) asserts that the best way to describe communication is to answer the questions: Who says what? through which channel? to whom? with what effect? Seen from this perspective, one would be inclined into seeing communication from the classical authoritarian view point. Here, the great mind, the authority, good people, great ideas hold sway.

In another sense, communication is seen by Wilson (1997) to mean so many things but one thing: the process or a means of access to the mind or thought of another, an exchange of meaning where each participant comes into communication situation with his or her own experience which he or she hopes to exchange with the other participants with the result of a reduction of uncertainty. In his point of view, without communication through reading, listening (the receptive skills), speaking and writing (the productive skills) mankind would find it hard to unravel some of the mysteries of life. These positions of communication are very widely held. This can be seen as a democratic, humanistic and scientific approach to the essence of communication. It tends to be a popular approach to the understanding of the essence of communication.

This may explain why Tubbs, S. L. and S. Moos (1996) assert that “Communication is the sharing of experience... directly and vicariously... the process of creating a meaning between two or more people”. Communication, seen in this perspective, is a common and very popular view. Lie Vrouw (2006) as cited by Izuu, Nwankwo E. (2007, p. 20) see communication as “...the process of sharing ideas, information, and messages with others in a particular time and place”. Communication includes writing and talking, as well as nonverbal communication (such as facial expression, body language, or gestures), visual communication (the use of images, pictures, such as painting, photography, video or film), and electronic communication (telephone calls, electronic mail, cable television or satellite broadcasts).

Seen as a science, communication has been defined as “a science which seeks to understand the production, processing and effects of symbols and signal systems by developing testable theories, containing lawful generalisations, that explains phenomena associated with production, processing and effects” (Berger and Chaffee, 1987).

Following these view points, one can conclude that communication is

a process that deals with the art of processing and sharing of meaning between a source and a receiver in a spiral never-ending dialectical process. One can equally posit as indicated above that the process of communication can be seen as an art or as a science. These theories/definitions as seen are heavily inclined to explain the human society from the view point of intra-individual terms like social motives, attitudes, cognitive balancing mechanisms, personality characteristics. Danziger Kurt (1977) has stressed that viewing social process in terms of the influence that one set of intra-individual variables has on a similar variables in another individual has led to a relative neglect of the process of communication, which constitutes interrelationships between individuals.

The notion of communication so highlighted is difficult and hard to understand, though it has become a prevailing paradigm of understanding communication. What is really important is the fact that communication involves the process whereby meanings are shared in the process of human relations in the entire production, distribution and consumption pattern. Domminick Joseph R. (1990, p. 5) has it that the elements in the communication process, at a general level, involve the following: a source, a process of encoding, a message, a channel, a process of decoding, a receiver, the potential for feedback and the chance for noise. This further implies that communication is and can be deployed to solve human problems of sharing meanings from a source to a receiver through a given channel, with the intent to create harmony.

Environment Change Communication

If communication is about everything, it follows that there should be communication that is concerned with the environment. What is communicated about the environment is to a great extent predicated on the extent of scientific revolution on what the environment is, on the one hand, and the epistemic development and the volume of integrated sharing and harvesting of the available knowledge on environmental issues between scientific researches on the environment, the volume of environmental consciousness, which is a form of social consciousness, the extent to which this knowledge is made available to environment change communication practitioners and the volume of resources that is assigned to the awareness and mobilisation programme, on the other hand. This is perhaps what Keith Stamm, Fiona Clark and Paula Reynolds Eblacas, (2000) had in mind, when

they argue that:

In addressing the role played by mass communications in solving environmental problems such as global warming, a better grasp of what constitutes "understanding" of an environmental problem is clearly needed. It should be stressed that the ways in which people think about environmental problems, their individual "understandings," are not necessarily accurate or complete. Nevertheless, these cognitive processes are likely to influence both their willingness and ability to participate in solving the problems.

It is in this sense that the question of an appropriate communication initiative for prevailing environmental agenda, the extent of the knowledge of what is considered environmental safety, the kind of issues that portend danger and depreciators of our dear environment, and the volume of awareness of the communication strategies to be involved as well as the debt of knowledge of innovation diffusion techniques can be addressed. To understand the problem of environmental change, it is important to know that previously people were living in an environment filled with abundant resources: food, fresh air, clean and pure water, with full integrity.

Human activities since the industrial revolution (1750 till date) have been undermining the safety of our environment. Though all concerned are aware of these disastrous activities and their implications for the earth and her flora and fauna, not much sincere consideration has been given to how to stop the process. Issues like artificial fuel to drive machine just like cars, atomic energy, and the use of fertilizers to replenish the soil for agricultural activities, lumbering and the use of many artificial devices have brought about exploitation, depletion and degradation of the environment.

It is worthy to note that environmental degradation is a very complex phenomenon which has, to a considerable extent, been provoked principally by human factors. These factors have resulted in the generation of Green House Gases. Most of these GHGs include: Carbon dioxide (CO₂), Methane, (CH₄), Nitrous Oxide (N₂O), water vapour (H₂O) Tropospheric ozone (O₃), Chlorofluorocarbons (CFCs), Hydrochlorofluorocarbon (HCFCs), Perfluorocarbons (PFCs), Sulphurhexafluoride (SF₆), Black carbons, Sulfates, organic carbons and other aerosols (Metillo, Richniond and Yohe, 2014).

These are serious issues of public discussion and media and cultural debates. It is equally issues that nations now sit to legislate on. There are also

international actions: political, social economic and jurisprudential, on how to save the environment. This agenda includes a comprehensive research initiative: observational, experimental, survey, focus group analysis and content studies of the environment qua environment, and the effects of human activities on the global environmental health and safety, and what particular human activities in particular areas have contributed to the safety and otherwise of given environments and how the environmentalists have viewed these.

Whereas the concept of environment refers to everything around us as conceived by scientists of all forms, the concept of environmentalist can now be stretched to include the politicians concerned with environmental legislation, legal practitioners or any person who may be concerned with litigation on environmental problems. It is in this sense that we can call the communication scholar who is concerned with environmental issues an environmentalist. This type of environmentalist decides what environmental agenda should be communicated, the media to use, when and how the communication process should affect the environmental issues to communicate and the anticipated effects of such a communication process, including the feedback.

This implies that the person shares meanings, talks to one another, uses means of communication like television, newspaper, radio, film, the hairstyle, and literary criticism and other means in spreading of information (Fiske 1982). Ezenibe (1994), a sociologist of communication, posits that “The term communication comes from the Latin word, *Communis* (common) or *Communicate*, to establish a community or commonness or simply to share”. To him, it means sharing, a meeting of minds, a bringing about of a common set of symbols in the part of the participants, and sharing of understanding. Merrill and Lowenstein, as cited in Ezenibe (1994) see communication basically as a social process. Akpan (1987), on the contrary, sees communication from the uses and gratification point of view. In his view, communication is the process of establishing commonness with oneself or with others. What it implies in this case is that communication is the means through which environment matters can be made common between oneself and the others.

3. Functions of Communication

Fundamentally, there are various forms of communication; verbal and nonverbal, intrapersonal and interpersonal-; dyadic, triadic, group and

machine-assisted group, and mass communication. Communication can also be categorised into modern and traditional, according to the genre of media involved. These media of communication can be classified further into: presentational: the voice, face, body; representational media like books, painting, photograph, writing, architecture, interior decorating, gardening etc.; and mechanical media: telephone, radio, television, telex, internet and transmitters of all forms.

The traditional media are in different or various taxonomies: membranophone; membrane instruments like drums; idiophones; self-sounding instruments such as wooden and metal gongs, bells, etc, aerophone; air instruments like flutes, trumpets and harmonica, etc.; Objectified, palm fronds, chalk, uli, etc.; symbology, floral communication; cultural troupes and association. The use of signals, color schemes, music, fraternity and confraternity, age grades, labour unions, or pressure group, political and cultural associations are all forms of traditional media taxonomies.

The mass media are simply categorized into the electronic media - radio, television satellite internet and all internet-powered initiatives like the social media, the blog, and others; films, home video, cable networks, etc.; and the print newspaper, magazine, books, pamphlets, leaflets, posters etc. (Wilson 1988, Uyo 1997, Comer, 2004, Zettle, 2006, and Gamble and Gamble, 2002). These instruments of communication are mainly employed to perform functions that are many and varied. These functions have been discussed variously. For instance, in *Many Voices, One World*, Macbride Sean et.al, (1980 p. 14) enlist the following as the functions of communication: information; collection, storage, processing and dissemination; socialization; the provision of common fund of knowledge which enable people to operate as effective members of the society. This could be uniform, integrated or deferential in nature.

Debate and discussion - which is meant to provide a common fund of facts needed to facilitate agreement, entertainment, cultural promotions and integration. In addition to these enlisted, communication is a major instrument for the resolution of political, industrial, social, economical and educational problems. Communication also is used for surveillance: beware and institutional, mobilization, economic, entertainment and culture development. Other functions of communication include status conferral on persons, situations, strategies, and tactics. There are other issues: political, socio-cultural and philosophical and ways in which media communication can

be employed. Some of these ways range from the transmission of common fund of knowledge among individuals, to the stimulation of individuals to participate or not to participate in a given project's unique transient endeavour undertaken to achieve a desired outcome. (Batchelor, 2010).

4. Environmental Communication Models

To understand the problem of environment - everything around us like oil spillage, acid rain, the best method of sewage disposal, the problem of noise, air and soil pollution, ozone layer depletion, forest and forest resources degradation - there must be effective environmental conservation communication. This process must come up in the following phases: attention attraction ideological preparation, action taking and review. The essence of the four phases is, according to Ukam (1991), to:

- 1] ensure that environmental progress is better understood by the general public
- 2] encourage informal education through publicity
- 3] mobilize favourable public opinion for a new world environmental agenda and
- 4] publicise the campaign.

The initiative for mass communication and mobilization could be in the form of sport announcement, news broadcast, interviews, speeches, lecture talks, panel discussion, round table and group discussion, drama, music, magazine and newspaper publication. Schools can through environmental campaigns carry out effective media festschrifts aimed at the demystification of environmental campaigns, using simple methods like the use of age, appropriate teaching methods, Afrocentric methods of education, education through entertainment and storytelling, field experimentation and exhibition approach, praxis and the modified dialogical method of education, where complex concepts are first reduced through the process of dialogue, transliteration, demystification and humanizing epistemological approach for knowledge cultivation, harvesting and sharing. Agencies, governmental and non-governmental, faith-based and civil society agencies can power film shows, debates, cultural dance, quiz and dramas.

Local governmental groups could be developed in age grade, cultural associations, etc. What this means here is that there must be multi-media approach, traditional and modern, in the mobilization of people toward the realization of a new world environmental agenda. Environmental

conservation should be built into our educational system as a veritable medium of communication. In addition, environmental protection clubs and viewing centres should be established in our communities. It is also argued that mass media are instruments of mass mobilization. The argument that mass media can be used in mass mobilization was initially based on the stimulus responses theory of mass communication. This theory pictures the mass media as a giant hypodermic needle piercing and plunging at a passive audience.

The model, according to Elihu Katz (1963), seems to have consisted of an all-powerful media, capable of impressing ideas on defenceless minds, the atomized mass audience connected to the mass media but not to each other. The theory also drew its support from nations concerning development in the United States of America during the era of mass society which was seen as consisting of a mass audience of standardized and unified individuals bound only loosely by interpersonal relations. This trend manifested such traits as uniformity or homogeneity in dress and speech pattern and values that seem to result from mass media exposure and mass production. It also points to the evolution of the popular myth of mass culture in the eighteenth and nineteenth centuries Europe.

The theory, otherwise known as the bullet theory, was also based on the apparent power of Goebbels propaganda campaigns during the Second World War; the role of the United States media in arousing positive public opinion towards the Spanish American War and the function of the Roman Catholic Agency for propaganda and the fear of Madison Avenues influence on commerce and voting behaviour. Recently, however, scholarly research in communication - who says what in which channel to whom with what effect (Lazwell) has cast considerable doubts on all powerful media with all powerful influence on human behaviour, the hypodermic needle or stimulus response theory of media. Researches now consider the theory as a mere infinitive theorizing about historical events which is too simple, mechanistic and extremely gross to accurately account for mass media effects. The critical position communication scholars took against the stimulus response model caused media researchers to propound other theories. Some of these theories or models are:

The two steps flow model which major proponents and advocates were

- 1] Lazensfeld and Menzel whose study of the US presidential elections of 1940 indicates that: people appeared to be much influenced in their political decision by face to face contact with other people than by the

mass media directly (Lezensfeld and Menzel 1963, 96)

- 2] Elihu Katz, whose interest was to analyse the truth of the mass communication research which has tended to envision society as an audience of isolated individuals, looking up to the mass media but not to each other, or the mass media as a symbol of an atomized mass society. He traced the movement of given practices, over time, through specific channels of communication, within a given structure with the effect arising there from.

This study also rejects the supposition of the "all powerful mass media" because from the rural sociologist perspective with which he analysed the concept, he also discovers that the individual dwells in the society, with the possibility of their being in regular contact. This assumption negates the mass communication approach which assumes that the receivers of mass media messages are isolated unit, who never talk to each other, though the two step flow model has helped communication analysts to focus on mass media and its interpersonal intercourse, according to Roger (1973), like a system not without its shortcomings some of such shortcomings according to him are that:

- 1] The two step model indicates that active individuals in information seeking are opinion leaders and that the remainder of the mass audience was passive who are mostly impervious to innovations.
- 2] The view that mass media communication process is essentially two stepped limits a critical analysis of the process.
- 3] Two step flow model implies reliance by opinion leaders by mass media channels. This emphasizes the view that the primary sources of information for opinion in some cases receive their messages from channels other than the mass media.
- 4] The original inquiries into the model did not take into consideration the channel behaviours by receiver on the basis of time of knowing about new ideas.
- 5] Different communication channels function at different stages in the receiver's innovation division process. The original two step flow study did not take into consideration the roles of different communication channels at different stages of innovation decision.
- 6] The audience dictionary of opinion leaders' version followers was implied by the two step flow model.

Katz (1963); Rogers and Swenning, (1969), Van den Ban (1966) as quoted

from Roger 1973.292.

One-step flow model: The two step flow model gradually gave way to the one step model as a result of what have been considered the basic shortcomings. The one step flow model posits that the media transmit information straight to the unitized audience without the message being relayed through opinion leaders. It further argues that messages from the media do not reach individual receivers in the same proportion, just like they does not have the same effect on each receiver.

The model from a critical point of view argues in favor of theories of selective exposure, attention, perception and retention. It also supposed that the media is not almighty and that different impacts are created with different effects from the target audience. The logical proportions in this model are that: people voluntarily expose themselves to the information channels and pay attention selectively to the issues and problems based on the level of utility they derive there from; retain experiences according to the level of interest they give to the information the impression created and have for the message. The model is also based on the assumption that dissonance or discord or disharmous situations can be created or reduced or avoided by selectivity in information; and that people select in supportive information and select out non-supportive information and information channels. In addition, the theory holds the idea that perception is functionally selective.

This means that people perceive things according to their social, cultural, religious, economic, ideological environmental needs, uses or gratifications. What it implies is that environmental campaigns through a given media are not of all importance to all people. The issue of degradation is of more interest to those who suffer the impact and of less importance to the agencies of degradation and their collaborators (backward political structure, reactionary government and their leakages).

Another model is the multistep flow theory which combines the other theories or models. This holds that the media use both the one-step flow and the two step flow models a combination of which will create a powerful media. The model also suggests that the use of opinion leadership, whether it be monomorphic (concentrated on specific topics) like in religion leadership club, or association leadership, pressure groups leadership or medical consultancy leadership and others or polymorphic (leadership that specializes in diverse topics, like communication leaders, information bureau, confraternities, trade union, social movements etc.) The polymorphic

leadership offers information and interprets it to their members according to the specialized membership.

The model also argues that for effective communication, or mobilization process, interpersonal communication channels must be effectively utilized. It further argues that the relay system may be either homophilous (a situation where in the communicator and the communicatee share similar communication environment). This relay pattern suggests that the sender's channel, linguistic cue, economics, political, religious, social psychological disposition must overlap for effective information dissemination; or heterophilous relay pattern, (a situation in which the encoder and decoder of information share different communication environments, be it psychological, social, cultural, political and even linguistic and paralinguistic cues). The religious, ethical, socio economic and other aspirations are at variance too. This kind of mobilization relay pattern is always very ineffective except when powerful coercive measures are employed.

In homophily relay, the structures are based on elites versus elites, "masses" versus "masses", communist versus communist, capitalist versus capitalist, environmentalists versus non-environmentalists. Topically, the campaign is between experts and scientists who water down the environmental issues to the understanding for effective understanding. Typical example of this relay pattern in Nigeria is the current position wherein experts channel their communication to non-governmental organizations, who, in turn, reach out to community-based agencies who relay the message to the end users, using the modified dialogical method to diffuse innovation. This approach was also used in 1973 to communicate unit change from inches foot to metric or S. I unit, left-hand-side-driving national policy in Nigeria.

The campaigns are typically elites versus the elites; as a result, the communication campaign is grossly inhibited by such factors as heterogeneous social, economic, psychological and educational orientation, hence, their failure. The information flow is in dissonance except when the source or receiver or both in the heterophily communication environment are able to project themselves into the position or roles of the other. When that is done, the result is that those in heterophily conditions now place themselves in similar communication environment with their larger audience or the larger audience project themselves to the status or position of the communicator. This situation is called empathy. That the agencies of environmental conservation have refused to empathize, harmonize and create a homogenous

communication environment is the cause of the present failure of the campaign.

This implies that the message supplied to the less classical audience and the media on communication is selected to suit the said target audience. The multi-step proposition is in consonance with the uses and gratification theory which asserts that people attend to information according to the need and gratification they derive therefrom; an application of utilitarian philosophy. It is more so pragmatic in approach and discards the erroneous impression of an all-powerful media through the emphasis on social category model which is implied in the various interpersonal relay models. This belief that the audience is categorized according to such variables as social position, age, sex, educational level, level of economic attainment argues that members of the class would tend to hawk out such homophilous communication cues and disregard or tend to misunderstand heterophilous communication cues.

Other models that had been of extraordinary importance in mobilization campaign are the environmental cue theory, cultural norm theory, the organic theory, and Frank Ugboajah's concentric circle diameter and the oramedia theories. These theories range in their scope from the basic assumptions that people tend to receive their information, react to it according to their environmental needs, cultural norms and organic composition based on the theory of hereditary and variation, to the fact that culture has diameter given the system in a circle - the nation, state province and the village and the use of accessible proximate channels, oramedia.

They advocate that for effective mass mobilization both the mass media and other media like membranophones, aerophones, symbology, signs and symbols, audiophones, as well as the internet-powered media, cultural associations, linguistic and paralinguistic, inter-personal, cross-cultural leadership must be employed in a harmonium. The aforementioned are in agreement with the multi-step flow. Although leading communication researches are strongly against the traditional view of the omnipotent media which they see as an extravagant generalization, they have been careful in qualifying what they say by allowing a number of cases when the mass media may have or has been powerful. Some of the cases are:

1. When the target is to inform rather than in attitude change.
2. The audience attention needed is casual.
3. When the media source is prestigious, trusted or liked and when monopoly condition is complete.

4. When the issue at stake is very remote from the receivers' experience or concern, and when personal contact is not opposed to the direction of the message and when the recipient of the message is cross-pressured.

5. Integrated Modeling of Environmental Communication Design

Most mobilization campaigns within and outside Nigeria are almost always mere frustration because they do not see traditional and modern as a continuum. Humanity cannot think alone as a social individual but find themselves in an inherited situation and attempt to order further the inherited mode of responses or substitute others for them in order to deal more effectively with new changes in his situation, so are the mass media. Miliband, F. (1968) puts it more clearly when he asserts that the mass media cannot ensure complete conservative atonement just like nothing can; but they can and do contribute to foster new world environmental order that can address climate change problems.

In summary, for effective mass mobilization, there must be:

- 1] Communication which may be intrapersonal, interpersonal, organic, group, mediated interpersonal or mass media communication.
- 2] Communication based on the people's environmental, cultural, political, social, or intellectual setting, within a linguistic system or within groups that can decode the encoded information.
- 3] The system that is a principal factor on the communication process and the mobilization outfit. The campaign may be authoritarian, developmental, libertarian, revolutionary, socially responsible patriarchal. The measures employed must reflect the said theories. An anti-people government cannot facilitate effective and positive campaign.
- 4] Information campaigns cannot be effective with the mass media except when the aim is to inform large, heterogeneous audience. And the audience must be toned to the channel otherwise other measures like agenda setting function must be carried out. This can be done through the use of traditional media like cultural troupes, especially when the aim is for innovation diffusion like environmental conservation.
- 5] For effective mass mobilization through communication, the media, groups, instruments, opinion leaders, association or co-operative

association are very necessary.

- 6] Mass mobilization for environmental agenda must be homophilous.
- 7] The agents of change, that is, the government must be responsible. What this means is that their activities toward change must not be like their attitude toward Ogoni and Wemco, for example.
- 8] The agents who try to develop industries in Nigeria must at least ensure that they do not work with fake and obsolete equipment.
- 9] Nigerian level of poverty must be destroyed to ensure decency, honesty and a good attitude toward research and development.

5. Conclusion

What can be gathered from this work is that mass mobilisation campaign is a viable communication initiative for a new world environmental agenda. To do this, the basic communication structures, traditional and modern, must be used complementarily and very effectively, using the multi-step flow model and Frank Ugboaja's concentric circle diameter. The said usage must further be used with discretion since anything else other than this would result in dependency and imperialism of one of the said forms. In addressing the problem of bush burning, solid waste disposal, acid rain, oil spillage, hunger, sewage disposal, global warming, air, water and land pollution, destruction of the available watershed, and conservation of urban aquifer to be solved, and for the effective conservation of our environment, the previous models which are fundamentally based on experts to experts interactions, and in some cases, expert riveting their expertise on the supposed ignorant public approaches cannot relay effectively environmental change initiatives.

It is only in the use of the integrated model, using modified dialogical approach that a new world can be realized. In this sense, the communication campaign such as prescribed above must be designed and implemented through such a comprehensive use of the said integrated media in a complementary model. Such a homophilous communication environment will ensure that the environmentalist and other major consumers: the political structures, the state and its functionaries, organizations, youth, cultural, social and economic must communicate environmentalism harmoniously and without bitterness.

6. References

- Akpan Emmanuel 1987, *Communication and Media Arts: A New Approach to the Basic*, Uyo: Modern Business Press.
- Comer, E. Douglas, (2002) *Computer Networks and Internets with internet Applications*, New Jersey: Pearson and Prentice Hall
- Ezenibe, Solomon Udoka 1994, *Macs Communications As a social process: An Introduction*, Calabar: Wusen Press.
- Fiske, John 1982, *Introduction to Communication Studies*, London: Methuen.
- Gamble, Teri Kwai and Michael Gamble (2002) *Communication Works*, Boston: McGraw Hill.
- Gachet, Alain (2023) *Water and Peace*, London: Arcadia Books.
- IPPC (2014) *Climate Change 2013*, New York: Cambridge University Press,
- Katz, Elihu, "The diffusion of new ideas and practices: in Wilbur Schram (ed.). *The science of Human Communication*, New York: Basic Books.
- Katz Elihu, 1957 "The two-step flow of Communication: An up-to-date report on a hypothesis," *Public Opinion Quarterly* 21:61-78
- Lazarsfeld, Paul F., and Hersert Menzel 1963 "Mass Media and personal influence in Wilbur Schramm (ed.), *The science of human communication*, New York: Basic Books.
- Mac Bride Sean et al, 1981, *Many Voices, One World, Report by the International Commission for the Study of Communication Problem*, Ibadan: Ibadan University Press.
- Melillo, Jerry M., T. Terese, C. Richmond and Gary W. Yohe (2014) *Climate Change Impact in the United States: the Third National Assessment*, U.S.A.: Global Change Research.
- Meril, I. John and Ralph L. Lowenstein, 1971, *Media Message and Men*. New York: David Mackay Company.
- Milliband, Ralph 1968, *The State in Capitalist Society*; London: Weidenfeld.
- NRC (2010) *Advancing the Science of Climate Change*, National Research Council, Washington DC: National Academy Press.
- PerIroth, Nicole (2020) New York: Bloomsbury publishing.
- Rogers, M. Everett, 1973; *Mass Media and International Communication in Ithiel desola pool et al (ed), Hand Book of Communication*, Chicago: Rand McNally.
- Ugboaja, Frank, 1986, *African Council for Communication Journal*, Kenya: ACCE Press.
- Uyo, Adidi, 1987, *Mass Communication Media: Classification and Characteristics*, New Yew: Civiletis Internal

Wilson, des, 1990, in Emmanuel Akpan (ed.) *Communication Arts Principle Application and Practice*, Uyo: Modern Press.

Zettle, Herbert (2006) *Television Production Handbook*, United Kingdom: Thomson and Wadsworth.

Time International Special Edition on Environment 1997.