

## Impact of Mass Media as a Strategy for Environmental Literacy on Forest Management in Southern Cross River State, Nigeria

<sup>1</sup>Udumo, B.O., <sup>2</sup>Andong, H.A., <sup>3</sup>Uba, J.U. & <sup>4</sup>Odumegwu, K.P.

<sup>1&4</sup>Dept. of Environmental Education, University of Calabar, Calabar, Nigeria

<sup>2</sup>Department of Continuing Education and Development Studies, University of Calabar, Calabar, Nigeria

<sup>3</sup>Dept. of Social Science Education (Geography/Environmental Education Option) University of Nigeria, Nsukka, Nigeria

<sup>1</sup>+2348063842324, <sup>2</sup>+2348035456907, <sup>3</sup>+2348063663228; <sup>4</sup>+2347036571266

**E-mails:** <sup>1</sup>udumob4@gmail.com; <sup>2</sup>helenachiever26@gmail.com; <sup>3</sup>ubajamesuba@gmail.com

<sup>3</sup>james.uba.pg81760@unn.edu.ng; <sup>4</sup>okizitopius@gmail.com;

### ABSTRACT

Mass media is a significant instrument through which information on forest management can be disseminated to the general public. This paper, therefore, examine the impact of mass media as a strategy to environmental literacy on forest management in Southern Cross River State, Nigeria. To achieve the purpose of this study, one research question and one research hypothesis was formulated to guide the study. The descriptive research design was adopted for the study. The entire target population of three hundred and thirty (330) respondents was sampled on registered farmers in the selected 4 Local Government Areas. The linear regression was the statistical tool used for data analysis. Data collected was analyzed at .05% level of significance. The result of analysis of data revealed that mass media significantly influenced forest management in Southern Cross River State. Based on the findings of the study, it was recommended among others that, massive use of mass media in spreading environmental information should be encouraged in the study area in order to build the capacity of residents on sustainable forest management.

**Keywords:** Mass Media, Environmental Literacy, Forest Management, Cross river State, Nigeria

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### 1. INTRODUCTION

Nigeria as one of the African country is blessed with enormous natural resources such as forest, natural gas, tin, iron ore, coal, limestone, niobium, lead, zinc among others. Forest among other natural resources has attracted both national and international conventions. The International Council for Science (ICSU) in partnership with the International Social Science Council (ISSCO) (2015) highlights the sustainable development goal 15 (SDG) as a bench mark for all citizens regardless of nationality, which states "To protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss". The SDGs 15 is geared towards promoting sustainability and management of forest ecosystem from 2015 to 2030. Forests according to Offiong, Offiong and Ekpe (2014) are homes to countless of plants and animals that are vital elements of our life support system.

Udumo, Uba and Efut (2018) further opined that forest is categorized as the entire assemblage of organisms such as trees, shrubs, herbs, bacteria, fungi and animals including people together with their environmental substrate (the surrounding air, soil, water, organic debris and rocks), interacting inside a defined boundary. The importance of forest according to Offiong, Offiong and Ekpe (2014) goes beyond the provision of physical needs of human; to exact tremendous impact on our environment such as reduce extreme heat or cold air which is essential for human existence and serves as carbon sink absorbing toxic gases emitted from industries and other human anthropogenic activities (Regal & Orphel, 2008). Despite the importance of forest in ensuring livelihood, the management of forest resources is a concern. Forest management is essential due to the unique ecological and socio economic roles it plays to those who depend on it. Forest management is a branch of forestry concerned with overall administrative, economic, legal, and social aspects such as silviculture, protection and forest regulation. Forest management cannot succeed unless it is linked to opportunities and activities targeted at those whose pursuit of livelihood threatens the viability of the ecosystem. In Cross Rivers State, forest management is anchored on different land uses such as creation of protected areas or landscapes which are, forest reserves, national park and wildlife sanctuaries etc. The management of forest relies solely on the level of educational attainment, literacy level, awareness among others.

It is a truism that education has a dominant role to play in the attainment to improve the quality of life. In order to promote individuals capacity to understand the environment and its usefulness to our existence, adequate information must be provided. Environmental literacy which involves understanding the underlying scientific and technological principles, societal and institutional value system, and the spiritual, aesthetic, ethical and emotional responses that the environment involves may go a long way to shaping the attitude of forest management. Environmental literacy is aimed at promoting a sustainable environment; it could be formal or informal. In the formal setting, it involves classroom experience where students are taught how to conserve the resources of the environment and in the informal setting environmental literacy can be achieved through mass media, workshops programmes, community mobilization, public enlightenment campaigns, community based organizations among others. Mass media as a strategy to environmental literacy can be used in addressing forest management. Mass media is a powerful tool used to effect social change. The media, be it traditional media such as newspaper, television, social media such as internet social network and information such as university bulletin board has a common influence on the masses. Media as a strategy can be utilized to create environmental awareness about the need to manage forest resources prudently. Continuous exposure of media creates behavioural change and brings impact in various dimensions of the society.

### **1.1 Mass Media (Radio) and Forest Management**

Mass media is the collection of multifaceted devices (equipments) through which information's are disseminated. Lulman (2014) asserted that mass media deals with all those institutions of a society that make use of repetition technologies to disseminate communication. These could be through radio, television, news paper among others. Mass media such as radio is a powerful tool that is used to effect social change (Quigly 2006). The change could be behavioural or attitudinal in managing forest resources. Forest are not just a socio-economic or environmental resource, they are also a socio-cultural issue for most people. Continuous exposure of media creates behavioural change in a given society. Bainbridge (2011) opined that the media itself can be differentiated by its ownership, scope of target audience, coverage and mode of communication. In addition, informal media for example bulletin board is used in a smaller scope of audience; nevertheless, all the media have certain degree of influence to its audiences. Findings from the Cross River State Ministry of Environment (2002), established that over 90% of Nigeria forest have already been cleared, and more than 50% of forested areas is found in Cross River State. Ajake and Enang (2012) has it that Cross River State is chosen as the biodiversity Hotspots because it harbours more than half of the country's remaining forest. The involvement of local communities in forest management is vital given that individuals are dependent on the forest for their livelihoods.

According to Pulhin (2007) individuals living close to forested areas dependent mainly on timber and non timber forest product for a variety of products and services. Although forest management is being regularized at the national and local level, it has not reached the grass root level. Mass media can provide educational information as well as collecting feedback from the community on the most suitable ways of managing the forest (Sedyawati 2015). The reason being is that environmental discourse in the media has been mainly focused on the event and damage rather than the solutions. Critics against the media said that the environmental discourse on the media tend to emphasis on the perpetrators and the problems without focusing on the solutions (Kensicki 2004). A study was conducted by Onyemucheya (2003), he pointed out that there is need for environmental campaign across the nation body, Onyemucheya noted that, environmental education will enlighten not only those in the grassroots but all other citizenry, government agency, industries etc. the media can be used to set agenda or issued relating to environmental management in our society. Evidence over the years has shown that high level of education has a role to play in environmental/forest management.

Banjo, Adebambo and Dairo (2012) conducted a study of inhabitants' perception of forest management in Ondo State of Nigeria. The aim was to determine the effectiveness of radio communication on the attitude change toward forest resource management. To have a precise data, four hundred (400) copies of questionnaire was administered to the respondent in the selected household using simple random sampling technique and non- probability technique. A descriptive simple statistical method was used. The result showed that radio was the most available, easily accessed and effective sources of environmental information in addressing forest management. The study showed the effectiveness of mass media, particularly the radio and television in creating awareness about forest management.

Radio is often associated with a wider geographical coverage and a relatively cheap cost of acquiring and using in contrast to the print media. In support of this, Akpoghiam and Okoro (2014) stated that radio is an effective environmental communication tool which could be used to raise public awareness and consciousness towards environmental concerns with a high degree of effectiveness. A study conducted by Apolinary (2011), on the role of print media in creating awareness on forest management in Tanzania, Africa. The study showed that print media, which is still dominant are most influential compared to electronic media, (internet, radio, television, blogs, etc.) in Africa, has so far played a leading role in educating and informing the public on effect of forest mismanagement and related human impacts. Udumo, Uba and Efut (2018) has it that despite the impact of mass media in ensuring adequate sensitization, forest resources are being depleted through deforestation, lack of adequate sensitization of community members regarding sustainable forest management, logging, abuse of indigenous laws and regulations, unsustainable farming methods, uncontrolled bush burning among others. The need for the masses to be well informed on the effect of some of their actions on the biotic and abiotic environment is of great concern.

### **1.2 Statement of the problem**

Forest resources are exploited at much faster rates than ever before. This is evident in the rate of forest cover change between 2000 and 2008 in the Cross River State. These unprecedented losses in forest have no doubt impacted on the biological diversity and livelihood of the forest communities. The major driver of the mismanagement of forest resources both timber and non timber forest products is attributed to increased economic activities characterized by population growth, accelerated urbanization trends, agricultural products, logging, hunting and other forms of forest resource exploitation. It is estimated that Nigeria destroys around 600,000 hectares of her forests year in year out as a result of indiscriminate destruction and that "Nigeria's forests are threatened as the forest cover declined from approximately 24 million hectares in 1976 to 15 million hectares in 1995 and down to 9.6 million hectares in 2011."

The rapid depletion of these resources through human activities especially in the forest areas led to the participation of Nigeria in major international initiatives, and signatory to a lot of treaties, protocols and conventions like the UN Conference on the Human Environment, Stockholm Report 1972, Belgrade Charter 1975, Tbilisi Report 1977, Brundtland Commission of 1983 and Agenda 21 of Rio Declaration 1992 to name a few. The United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil in 1992, popularly known as the Earth Summit, also adopted an action plan for Sustainable Development, Agenda 21.

The Nigeria government, through the Federal Ministry of Environment (FMENV) and other relevant agencies has made efforts to educate the public on environmental issues using both print and electronic media; Community based organizations, workshops, public enlightenment campaigns among other. Efforts have also been made by government to ensure sustainable forest management such as the reservation of tracks of forests and its biotic components, example, the National park, Afi Mountain/Wildlife sanctuary and so on. These efforts by government have yielded no desired results. Since environmental literacy strategy help sensitize people against unsustainable timber logging, massive hunting, crude agricultural practice and many other degrading activities in the forest. One begins to ponder whether environmental literacy strategies have any influence on forest management in Southern Education Zone of Cross River State, Nigeria?

### **1.3 Purpose of the study**

The main purpose of the study was to ascertain the influence of mass media as an environmental literacy strategy on forest management. Specifically the study sought to;

1. investigate the extent to which mass media (radio) has influence forest management in Southern Cross River State

### **1.4 Research question**

The following research question was posed to guide the study

1. How does mass media (radio programmes) influence forest management in Southern Cross River State?

### **1.5 Research hypothesis**

The following hypothesis was formulated for the study:

1. Mass media (radio programmes) does not significantly influence forest management in Southern Cross River State

## **2. METHODOLOGY**

The descriptive survey research design was adopted. According to Isangedighi (2012) descriptive survey research design is appropriate because of the nature of the situation as it exists at the time of investigation. However, the design was chosen because it gives the researcher an opportunity to make generalization of the study to the entire population. The research area is Southern Cross River State consisting of Akamkpa, Akpabuyo, Bakassi, Biase, Calabar municipality, Calabar South and Odukpani. (See figure 1 for map of research area). The population of the study consist 330 registered farmers across the four L.G.As and 2 communities in each of the LGAs. The sample size for the study is 330 (see table 1 for population distribution and sample size by L.G.As and communities) with age from 30 years and above. The researchers decided to use the entire population as sample respondent based on it manageability therefore there will be no sampling technique. The questionnaire was the major instrument for the study. The instrument was made up of two sections. Section A was made up of demographic respondent of gender, age, educational level while section B was made up of the sub-variable (mass media) placed on a four point modified Likert-Typed scale of strongly agreed (4 point), agreed (3 point), disagreed (2 point), and strongly disagreed (1 point).

The face validity was employed to test the validity of the instrument while the Cronbach Alpha Reliability Coefficient was used to test on 50 respondents in Ikom L.G.A of Cross River State who did not form part of the sample respondents but has the same characteristics/ features as that of the sample respondent. The indices for the reliability showed 0.85 and 0.75 respectively. This showed that the instrument was measurable.

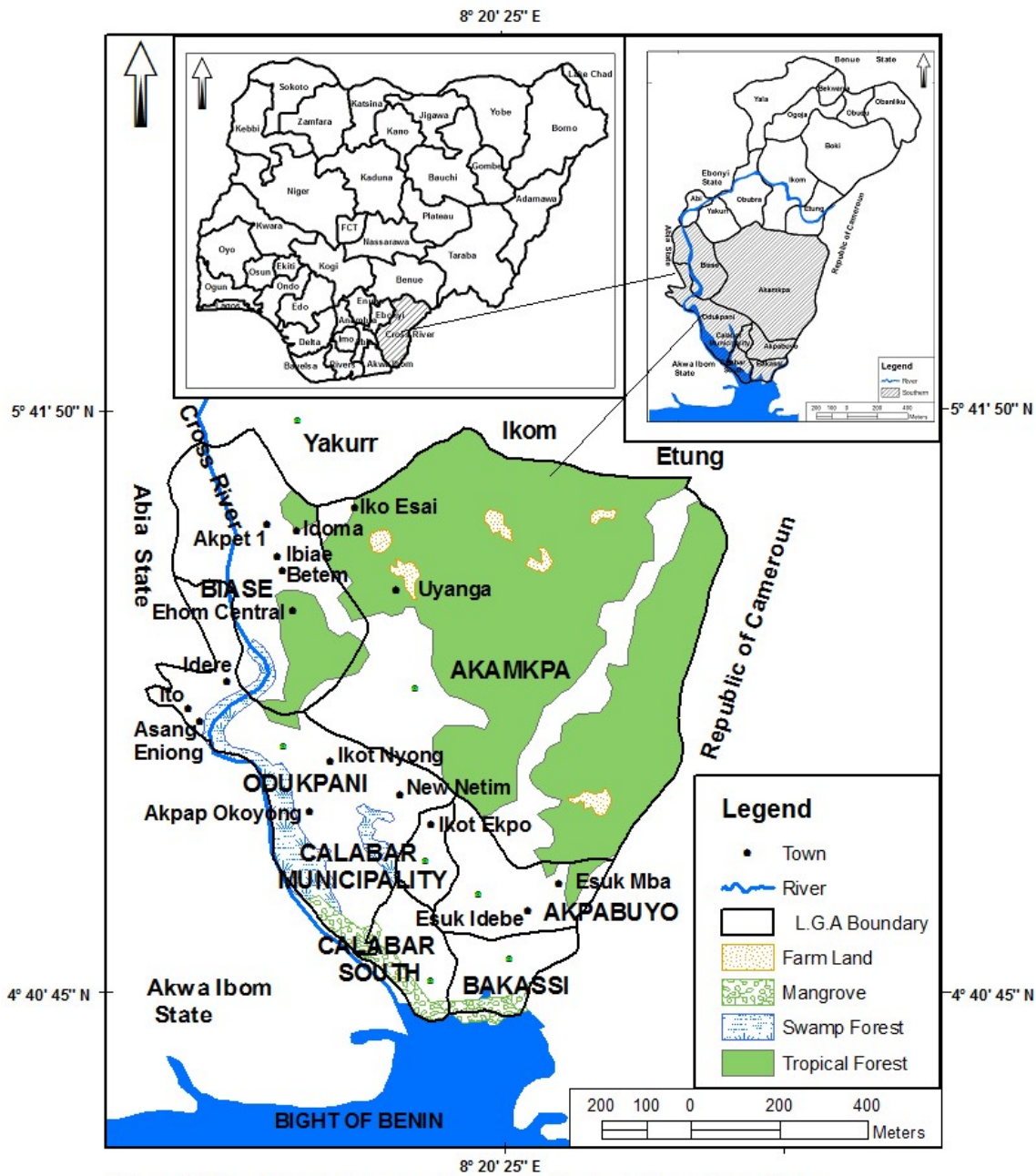


Figure 1: Map of Local Government Areas in Southern Cross River State

Source: Cartography / GIS Unit, Dept. of Geography & Environmental Sc., Unical

**Table-1: Sample distribution of the study by communities and gender distribution**

S/N	L.G.A.s				No of communities in each L.G.A.
		Males	Females	Total Sample size	
1	Akamkpa	70	70	140	2
2	Akpabuyo	24	26	50	2
3	Biase	30	30	60	2
4	Odukpani	40	40	80	2
	Total	230	119	330	8

### 3. RESULT AND DISCUSSION

**Table 2: Frequency distribution of the demographic respondent (N=330)**

SN	Sub variables		Frequency	Percentage
1.	Gender	Male	156	47.3
		Female	174	52.7
2.	Age	Below 30 years	139	42.1
		30 – 50 years	150	45.5
		Above 50 years	41	12.4
3.	Educational level	FSLC	52	15.8
		SSCE	136	41.2
		NCE/ND	92	27.9
		BS.c/HND	36	11.2
		PGD/M.Sc/Ph.D	14	3.9

The result presented in Table 2 showed that out of 330 respondents, 156 of the respondents representing 47.3% were males while 174 (52.7%) respondents were females, this result is so because there are more females in the population than males and because females are more involved in forest resource utilization in the study area than males. The distribution of the respondents based on age revealed that, most of the respondents 139 (42.1%) were 30 years and below, next in the list 150 (45.5%) were between 30-35 years while 41 (12.4%) respondents were 51 years and above. This result was so because forest management requires individuals with strength. Out of the 330 respondents, 52 (15.8%) have FSLC; 136 (41.2) had SSCE; 92 respondents (27.9%) had National Certificate in Education (NCE) or National Diploma; 36 (11.2%) had Bachelors' degree; 14 (4.8) had Post graduate degrees.

**Hypothesis one:** Mass media (radio programmes) does not significantly influence forest management in Southern Cross River State

**Table 3: Simple linear regression analysis of the influence of mass media on forest management (N = 330)**

	R= .241	R <sup>2</sup> =.058	Adj.R <sup>2</sup> =.055	St= 5.601	
Source of variance	SS	Df	MS	F	P-value
Regression	5.010	1	5.010	20.216	.000
Residual	81.279	328	.248		
Total	86.289	329			

The result of analysis of data presented in Table 3 revealed that mass media significantly influenced forest management in Southern Cross River State. In addition, the result of regression analysis of variance presented revealed that there was a significant low influence of mass media on forest management  $F(1, 328) = 20.216$ ;  $p < .05$ . This result indicated that there is a low contribution of mass media to forest management. This showed that there is low utilization of mass media as an environmental literacy strategy in Southern Cross River State, Nigeria. The finding from the analysis of hypothesis one revealed that the null hypothesis was rejected while the alternate hypothesis was retained. This implied that there was a significant low influence of mass media on forest management in Southern Cross River State. The finding is in line with the finding of Sedyawati (2015) who stated that mass media can provide educational information as well as collecting feedback from the community on the most suitable ways of managing the forest.

#### 4. RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

1. Massive use of mass media in spreading environmental information should be encouraged in the study area in order to build the capacity of residents on sustainable forest management
2. Government should always mobilize communities in forest areas for awareness creation.
3. Enlightenment campaigns should be carried out at regular intervals in order to mobilize people towards developing sustainable means of forest management

#### 5. SUGGESTION FOR FURTHER RESEARCH

Based on the limitations associated with the study, the researcher suggests that;

1. A similar study should be carried out in the study area to cover other environmental literacy strategies that were not covered in this study
2. A similar study should be carried out in other Senatorial District to assess the phenomena under investigation

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