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**TRADITIONAL FOLK MEDIA AND CLIMATE CHANGE
MITIGATION MEASURES OF AGRICULTURAL LAND USERS IN OGOJA
EDUCATION ZONE OF CROSS RIVER STATE, NIGERIA**

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Abstract

This study examined traditional folk media and climate change mitigation measures of agricultural land users in Ogoja Education Zone of Cross River State, Nigeria. One research questions and one statement of hypothesis was formulated to guide the study. Literature review was carried out based on the variable under study. Survey research design was considered most suitable for the study. Stratified random and simple random sampling techniques were adopted in selecting the 404 respondents sampled for the study. A validated 15 item four point modified Likert scale questionnaire was the instrument used for data collection. The reliability estimate of the instrument of 0.84 was established using Cronbach Alpha method. Simple linear regression statistical tool was used for data analyses. The hypothesis was tested at 0.05 level of significance. The findings revealed that traditional folk media has a significant influence on climate change mitigation measures in the study area. It was recommended that awareness creation on traditional

plays as a climate change awareness strategy should be improved and made an integral part of community norms and values by community elders and chiefs.

Introduction

Climate change is one of the most topical global, national and local issues in recent times. This is so because of the glaringly evidential impact which it has on man's continuous existence on earth. The phenomenon as a concept refers to any long-term change in the usual pattern of the average weather of a particular region or the entire earth as a whole. In simpler terms, it refers to any observed long-term variation in the usual pattern of elements of climate such as temperature, rainfall, wind, cloud cover, vapour pressure, etc. The reason why the phenomenon has become a topical issue at various levels of human socialization is because it has been observed that global mean temperatures have rose by 0.6°C towards the end of the 20th century (International Panel on Climate Change (IPCC), 2007). This made temperatures of the 6 hottest years ever in human history to be recorded between 1997 and 2007.

Since then till date, temperatures have risen beyond the normal global mean temperature and this has given rise to certain unforeseen consequences. Worthy of note is that climate change consequences are never the same in every part of the globe (Chikaire, Tijjani & Abdullahi, 2016). It has been observed that the low-latitude tropical countries in Africa and South-East Asia have received and will receive the worst impact of the phenomenon. This is due to their heavy reliance on agriculture, the most climate sensitive sector of any given economy. Within Nigeria, the consequences of climate change have been evidential in form of flooding, sea level rise, intense thunderstorms, incessant droughts, etc. These unusual environmental disasters have in turn given rise to social-based problems such as food insecurity, social dislocation and increasing poverty levels (Ekpoh & Ekpoh, 2011). As earlier stated, worst hit are the rural dwellers whose main occupation is farming. This is because their over-reliance on farming serves to heighten their vulnerability to the phenomenon's consequences.

Studies have revealed over time that the main driver of climate change is man through his developmental activities. Climate change is as a result of an increase in mean global temperatures. This increase is brought about by an accompanying increase in the amount of greenhouse gases released into the earth's atmosphere. What brings about the increase in greenhouse gases released into the earth's atmosphere in developing societies are issues of deforestation, pollution, over-reliance on chemical fertilizers, slash and burn agricultural practices, etc. According to Hellmuth, Moorhead, Thomson and Williams (2007), agriculture and its allied businesses contribute towards the release of about 80% of the total amount of greenhouse gas emissions in developing societies.

In order to ameliorate the disastrous impacts of climate change, responses by man has come in form of climate change mitigation and adaptive strategies. Mitigation refers either to policies or interventions aimed at reducing emissions of the greenhouse gases or enhancing the absorption of the already emitted gases while adaptive strategies refer to policies or interventions designed to help minimize predicted impacts of the phenomenon on people (Okoroh, Olaolu & Igbokwe, 2016). The essentiality of mitigation measures among farmers is mainly because of the proven fact that "prevention is better than cure".

The first and foremost need why rural agricultural land users have to engage in appropriate climate change mitigation measures is because of the extent of their vulnerability to climate change induced rainfall alterations. About 95% of agriculture within the country depends on rainfall (International Fund for Agricultural Development (IFAD), 2008) and it has been

estimated that for each 1⁰C rise in the average temperature of a given area, agricultural produce will drop by 10% (Food and Agricultural Organization (FAO), 2008). The rural agricultural land users' non-adoption of necessary mitigation measures seems to be an influential contributory factor towards the state having one of the highest deforestation rates in the country which is presently estimated to be about 2.2% (Ogogo et al, 2013). The nature and extent of the consequences of the phenomenon does not necessarily determine the vulnerability of farm produce. What rather determines the vulnerability of farm produce is the ability of the agricultural land users to adopt measures which will help ameliorate the situation within their immediate environment. Adoption of needful mitigation measures in turn depends on the awareness which they have concerning best practices.

From research works, there are many determinants which could possibly influence agricultural land users' adoption of climate change mitigation measures. Inclusive among them is the traditional folk media. This refers to the various cultural associations within a community that not only accumulate its indigenous knowledge, traditions, experiences, customs, etc., but also transmit same down from generation to generation. For this variable, most studies have revealed it as having a profound influence on locals' awareness creation (Ebenchi, Ahmed & Barnabas, 2018) while few (Umunakwe, Nnadi, Chikaire & Nnadi, 2014) affirmed its insignificance in the above regard. However, many other worrisome issues concerning the engagement of the people in climate change mitigation measures remain unanswered. It is based on the problems concerning climate change mitigation measures in the area that the researcher wonders; does traditional folk media of agricultural land users have any significant influence on climate change mitigation measures in Ogoja Education Zone of Cross River State, Nigeria?

Purpose of the study

The purpose of the study is to examine traditional folk media of agricultural land users and climate change mitigation measures in Ogoja Education Zone of Cross River State, Nigeria.

Research question

To what extent do traditional folk media influence climate change mitigation measures of agricultural land users?

Statement of hypothesis

Traditional folk media has no significant influence on climate change mitigation measures

Literature review

Conceptually, the collection of cultural associations which accumulate a given society's indigenous knowledge, norms, beliefs, customs, experiences, expressions and tradition, and pass same down from generation to generation is what is referred to as folk media. There are four fundamental criteria which usually appear when folk media is defined and they are; (i) being tradition-based; (ii) being culture related; (iii) being trans-generational, and; (iv) being shared by community-based groups (Galadima & Lawal, 2017). According to Uzochukwu and Ekwugha (2015), the community-based groups include local market women groups, age grades, local student union body, cultural men/women associations, local market groups (based on commodity sold), and local political groups.

Folk media are presumed to be a very effective way for not only community-based learning but also, preservation and/or conservation, and dissemination of the culture, past wisdom/experiences, and tradition of a given society (Idris & Umar, 2016). This is usually

evidential in the various forms of carvings on stones, walls and buildings in some societies, and these have enabled subsequent generations learn about the development of their culture. From research works, the impact of folk media in community development in rural areas has certain advantages which include; (i) enhancing the clarity and distinctness of indigenous communication; (ii) being flexible to accommodate novel themes, issues, and ideas, and (iii) bringing about some form of satisfaction to an individual's inner desire for self-expression thereby giving room for everyone to participate (Sharma & Singh, 2015).

A survey research method was employed by Oladoja, Adeokun and Fapojuwo (2008) in their probe of farmers' socio-economic factors and utilization of communication methods for information sourcing in Nigeria. Population exclusively encompassed all Oyo State registered farmers while a purposive sampling procedure was applied to draw a sample of 108 respondents. Data collection was with a questionnaire and study's enquires included a verification of farmers' extent of; (i) awareness; (ii) participation, and; (iii) attitude towards practicing usage of traditional communication methods to source for information. Analysis of data was with frequencies and percentages. Analysis revealed that; (i) all the respondents indicated awareness of using fellow farmers in their local farmers' association to source for information; (ii) 91% of them indicated the actual usage of their fellow farmers as an information source, and; (iii) 86% indicated favourable dispositions towards utilization of fellow farmers as information source.

Based on the result, it implied that utilization of fellow farmers as an information source among the farmers is high in terms of awareness, participation, and positive disposition. Presumably, this could be attributed to the clarity and distinctive flow of communication between them. With this, could this imply that farmers would welcome the idea of sourcing for climate change information from fellow farmers? The above reviewed study was earmarked as being applicable for review in conformity with its systematic study of the extent of farmers' awareness, participation, and attitude of practicing the usage of fellow farmers' association as their information source.

Daudu (2009) used a survey approach to investigate the issues and potentials of folk media use for agricultural extension services delivery in Nigeria. All registered farmers in Benue State were exclusively involved as the population while purposive and simple random sampling principles were used to select 100 respondents. A questionnaire was used to collect data and study's investigations included assessments of extent of; (i) usefulness of friends' and groups' associations in terms of agro-based information dissemination, and; (ii) utilization of the aforementioned source to disseminate information. Frequencies, percentage scores, mean scores (with a reference mean), and rank order were employed to analyse the collected data.

The result revealed that; (i) each of friends' and groups' associations, respectively, ranked very high in terms of usefulness for agro-based information; (ii) each of friends' and groups' associations, respectively, were agreed as being used for information sourcing. The finding therefore signified that the investigated folk media were not only found as being very useful for information sourcing but also, they were accepted as being used to actually source for information. Apparently, could this finding be attributed to the presumed derivation of satisfaction with the clarity, and distinctive communication flow, and minimized hindrance of communication barriers in members' efforts to decode messages? Perhaps, a similar feel of satisfaction could be derived among members of such aforementioned associations in the likelihood of them being used to disseminate information about climate change and its mitigation strategies, or would it not? The above reviewed study was adjudged well-suited for review in view of its scrutiny of friends' and groups' associations the usefulness and relative usage for information sourcing among rural people.

An evaluation of impacts of land degradation in Nigeria's agriculture sector was examined by Aniagboso and Iwuchukwu (2011). The study was hinged on a survey design and all registered farmers in Anambra State composed the study's population. Purposive sampling technique was applied to draw a sample of 112 respondents and responses were elicited using a questionnaire. Inquires here included determining sources of information concerning land management and conservation practices. Analysis was achieved using mean scores (with a reference mean). Analysis revealed that age grades and cultural associations as an accepted information source, thus indicating that the farmers actually used them to source for information.

The finding here seems to create the impression that farmers are very comfortable with folk media as a communication media. The findings of Oladoja et al. (2008) and Daudu (2009) coupled with this one has somehow led to the above stated assumption. Thus, does it imply that the investigated farmers here would welcome the idea of using their associations to disseminate climate change information to them? The study of Aniagboso and Iwuchukwu (2011) was given credence as being useful for review with regards to its assessment of utilizing age grades/cultural associations as an information source among farmers.

Role of extension agents and adaptation of agriculture to climate change was investigated in a study predicated on a descriptive survey method by Ozor and Nnaji (2011). Extension workers in Enugu State served as population while 120 respondents were randomly and purposively drawn. Collection of data was with a questionnaire and one of the inquiries therein assessed probable ways in which extension agents could co-opt folk media to disseminate information in line with agricultural adaptation to the phenomenon of climate change. Mean scores with a reference mean served to analyse the data. It was discovered that extension agents agreed that folk media could be co-opted through the utilization of a farmer-farmer extension strategy with a focus on awareness creation and adoption of best practices in line with climate change risk management.

This meant that the extension agents were of the view that the folk media could be made to become an integral part in the efforts to make farmers adapt their agricultural practices towards climate risk management. The simple observation to the finding is thus – could it be possible for even more extension agents to have this sort of awareness? The finding of Ozor and Nnaji (2011) was acknowledged as being well-suited for review with reference to its assessment of extension workers on the possible ways folk media could help them facilitate the adaptation of agricultural practices in line with climate risk management.

Amusa, Okoye and Enete (2015) used a survey method in their verification of determinants of farming households' climate change adaptation in the country's southwest region. Simple random sampling processes were utilized to draw 360 respondents. A questionnaire was used for data collection. Farmers' climate change information sources were ascertained. Analysis of data using descriptive statistics revealed farmers' folk media as one of the leading sources of climate change information to the farmers, thus implying that farmers within the area made a lot of use of it to source for climate change information. Despite that, another finding within the study revealed that membership of farming association insignificantly predicted farmers' extent of adaptation to climate change. Also, the farmers were found to have an appreciable level of climate change awareness. Perhaps, could it be that the farmers do not practically utilize the information they garner from their folk media? Could it be that they only share information among themselves for theoretical clarification? The finding of the above reviewed study was earmarked as being vital for review with regards to its consideration of farming households' efforts towards climate change adaptation.

In a survey designed research work, Said and Mohammed (2015) verified locals' information generation/utilization activities vis-à-vis sustainable rural community development in Nigeria.

Kwara State based rural dwellers exclusively composed the study's population while 384 respondents were sampled purposively. One of the study's posers as contained in the questionnaire was to ascertain the extent to which locals' information dissemination sources (numerous including folk media) correlated with utilization in the communities. Data analysis was done using Pearson Product Moment Correlation (PPMC) technique and it discovered that a strong correlation (.875) existed between the investigated information dissemination source of folk media and its utilization.

From the result, it implied that the rural dwellers actually utilized information disseminated from folk media. Thus, the observation here is – “could it be that the folk media are probably disseminating information related to climate change and its mitigation strategies as part of their sustainable community development in the area?” The finding of Said and Mohammed's (2015) study was valued as being appropriate for review on the grounds that it determined the extent of correlation between information disseminated by folk media and its subsequent utilization towards sustainable community development.

Methodology/Materials

A descriptive survey design was utilized for the study. The study was carried out in Ogoja Education Zone of Cross River State. The Education Zone is made up of five Local Government Areas (LGAs) namely; Bekwarra, Obanliku, Obudu, Ogoja and Yala. The area lies between latitudes $6^{\circ}18'$ and $7^{\circ}03'N$ of the Equator and longitudes $8^{\circ}38'$ and $9^{\circ}70'E$ of the Greenwich Meridian (Akwaji & Edu, 2017) and has a landmass of 4527km^2 . According to National Population Commission (NPC) (2019), the 2019 projected population for the area is 1,143,074 thus having a population density of 252 inh/km^2 . Stratified random sampling technique was employed in selecting the sample for the study. Secondly, simple random sampling technique was used to select the respondents that were sampled for the study, taking into consideration, the gender disparity of the respondents.

The sample for the study was 404 respondents (male and female from all walks of occupations obtainable in the study area). A questionnaire designed by the researcher was used to elicit data for the study. It is tagged the “Folk Media and Climate Change Mitigation Questionnaire” (FMCMQ). The Cronbach Alpha reliability estimate method was used to ascertain the reliability coefficient of the instrument. The result of the reliability showed an index of 0.82. Data was analysed using the simple linear regression statistical tool.

Result/Finding

The hypothesis stated that traditional folk media has no significant influence on climate change mitigation measures. The independent variable of the study is traditional folk media while the dependent variable is climate change mitigation measures. Simple regression statistics was used in testing the hypothesis and the results are presented in table 1.

The simple regression analysis in table 1 on traditional folk media influence on climate change mitigation measures produced an adjusted R^2 of .354. This implies that only 35.4 percentage of the variance can be predicted from the independent variable (traditional folk media) in predicting climate change mitigation measures. The F-value of the Analysis of Variance (ANOVA) obtained from the regression table was $F = 218.745$ having a p-value .000 with 1 and 398 degrees of freedom at .05 level of significance. The null hypothesis was rejected. This result therefore signifies that traditional folk media has a significant influence on climate

change mitigation measures, as traditional folk media predicted 35.4% of climate change mitigation measures.

Table 1 Summary of data and simple regression analysis on the influence of traditional folk media on climate change mitigation measure.

R		R Square		Adjusted R Square		Std. Error of the Estimate	
		.597	.358			.354	4.51297
Model	Sum of squares	DF	Mean Square	F	Sig		
Regression	4455.152	1	4455.152	218.745	.000		
	Residual	8065.283	397	20.367			
	Total	1250.435	398				

a. Predictors: (Constant): Traditional folk media

b. Dependent Variable: Climate change mitigation measure

Discussion of result

It was revealed from the findings obtained from analysis and testing of the hypothesis that the null hypothesis was rejected. This implied that traditional folk media has a significant influence on climate change mitigation measures. This finding is not surprising because awareness creates knowledge, and knowledge brings solution to problems. The finding of this study agrees with Idris and Umar (2016) that folk media are presumed to be a very effective way for not only community-based learning but also, preservation and/or conservation, and dissemination of the culture, past wisdom/experiences, and tradition of a given society. Membership of farming association insignificantly predicted farmers' extent of adaptation to climate change. Also, the farmers were found to have an appreciable level of climate change awareness.

Conclusion

It was concluded that traditional folk media has a significant influence on climate change mitigation measures of agricultural land users in Ogoja Education Zone of Cross River State, Nigeria.

Recommendation

Based on the findings of this study, it was recommended that awareness creation on traditional plays as a climate change awareness strategy should be improved and made an integral part of community norms and values by community elders and chiefs.

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