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## INFLUENCE OF CLIMATE CHANGE AWARENESS ON YOUTH ACTIVITIES IN SOUTHERN SENATORIAL ZONE OF ADAMAWA STATE, NIGERIA

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### Abstract

*The study examined the influence of climate change awareness on youth activities in Southern Senatorial zone of Adamawa State. Two research objectives and three hypotheses were formulated to guide the study. The study employed ex-post-facto research design. The population comprised of 2,400 SS 2 students. A sample of 240 SS 2 Students was randomly selected from the estimated population of 2,400 SS 2 Students from the nine Local Government Areas of the Southern Senatorial zone. The research instrument was a self-developed checklist titled "Climate Change and Youth Activities Battery (CCYAB)". Kolmogorov Smirnov two sample tests was used to test the hypotheses. The result showed that youths in the Southern Senatorial zone lack the basic information on the causes and consequences of climate change. They also lack the capacity to respond to the effects of climate change. It was recommended that environmental psychologists and climatologists should help the youths by creating awareness about climate change and expose them to some of the mitigation measures aimed at helping to acquire means of livelihood.*

**Keywords:** climate change, Environmental Scientists, Youth awareness

### Introduction

Climate is defined as the average weather condition of a place over a long period of time usually 30-35 years. It refers to the condition of the atmosphere as described by data obtained from repeated observations of temperature, humidity, atmosphere, pressure, wind, rainfall, and numerous other meteorological elements in a given region over a long period of time (People's Focus Multi Services

(PFMS), 2010). Thus climate change is a long term change in the statistical distribution of weather patterns over period of time that range from decades to millions of years (Ibrahim, Shamaki, Aliyu, Tahir & Nasir, 2012). It may be a change in the predominant weather conditions or a change in the distribution of weather events with respect to an average. Climate change may be limited

to a specific region or may occur across the earth. At the root of climate change is the phenomenon known as the greenhouse effect, the term scientists use to describe the way that certain atmospheric gases “trap” heat that would otherwise radiate upward, from the planet’s surface, into outer space. On the one hand, we have the greenhouse effect to thank for the presence of life on earth; without it, our planet would be cold and unlivable. But beginning in the mid- to late-19th century, human activity began pushing the greenhouse effect to new levels which include a planet that is warmer right now than at any other point in human history, and getting ever warmer (Turrentine, 2022). This global warming has, in turn, dramatically altered natural cycles and weather patterns, with impacts that include extreme heat, protracted drought, increased flooding, more intense storms, and rising sea levels. Taken together, these miserable and sometimes deadly effects are what have come to be known as climate change.

Climate change is induced by two major factors which are variations in solar radiation received by earth which Mamman in Onokala (2012) termed as ‘natural changes in climate’, and human activities at various levels such as burning of fossil fuels, industrial wastes, industrial emission of gases among others. Akande and Kumuyi (2008) explains that climate change harbours many risks, particularly increased number of and intensity of extreme weather events such as unusually heavy rainstorms, cyclones and hurricanes, change in rainfall patterns, both in terms of the quantity and distribution over an area. Consequently, climate change makes some areas become wetter and even subjected to frequent flooding while other areas become drier, and face critical water shortages as observed by this study. More so, urban areas might experience more heat waves and increase presence of certain air pollutants. These and many other risks harboured by climate change could have a direct impact on the people of Southern senatorial zone of Adamawa State.

Youth particularly in the developing countries, are the driving force for economic development. They possess the potentials which if properly harness promotes economic, cultural, social and political values of a society (Usman, 2015). To Gwary, Kwaghe, Ja'afar-Furo, & Dennis (2011), youths are the young people in a society who are characterized by ample ideas, energy and new ways to seek life and face problems. The educated youths in particular, are more likely to adopt new innovations if they are involved in an activity. Isah (2015) opined that the youths are a cross-section of the country's population with abundant energy that needs proper channeling and harnessing for increase productivity.

Empowerment is the process of creating awareness, helping one to discover and appreciate oneself, have knowledge of things happening around so as to adapt to the ongoing changes and strive towards improving the current situation for future decision making. Empowerment in a nutshell is about creating/provision of condition conducive to enhance through motivation the performance of a person(s) (Jimoh, 2014). It is geared toward developing person's sense of self determination and enhancing his/her belief in self-efficiency.

Youth empowerment as viewed by Vavrus and Fletcher (2006) is an attitudinal, structural and cultural process whereby young people gain the ability, authority and agency to make decisions and implement change in their own lives and the lives of other people, including youths and adults. Thus, youth empowerment through participation in environmental activities will not only create carrier opportunities for the teaming youths, but combat climate change

and its accompanying impacts. No wonder then, Onokala (2012) stressed the need for youths to be aware of the climate change debate which is very important for the modern world. This awareness needs to be created as early in life as possible and not only when they are in the university.

The researcher observed that the youths in the Southern Senatorial zone of Adamawa State are seen carrying out activities such as indiscriminate cutting down of trees, burning tires, bush burning, burning of fuelwood, burning of incinerators and other acts out of ignorance. The activities of these youths have led to flooding of farmlands and settlements, disappearance of some regular and indigenous grains, drying up of water bodies, short rainy season which equals to long dry season, rise in temperature which leads to intense heat during the day undue drought, loss of biodiversity, outbreak of heat inducing health problems such as malaria and cerebro spinal meningitis (CSM) among others.

These and few other environmental problems are occurring at an alarming rate but these youths do not know that, they are all as a result of their destructive attitudes towards the environment. If these youths who are the leaders of tomorrow, the bulk of Nigerian population and the active age group are left in ignorance of climate change, then the future of this senatorial zone is definitely at stake. The position of this paper therefore is to determine the influence of climate change on youth empowerment in Southern Senatorial zone of Adamawa State.

## Statement of the Problem

Climate change as stated by Houghton (2001) is sometimes used to refer specifically to human activity such as burning of fossil fuels, industrial wastes and emissions of gases by industries. Similarly, these activities as investigated by Akande and Kumuyi (2008) lead to increased number and intensity of extreme weather events such as unusual heavy rain storms, change in rainfall patterns both in terms of the quantity and the distribution over an area.

Despite the adverse consequences of climate change, this study has observed indiscriminate cutting down of trees, burning of fuel wood, burning of tires, bush burning and a few other climate change inducing activities. Therefore, the destructive attitude of these youths may be due to total ignorance of climate change which indicates that very little or no attention has been paid in the aspect of youth empowerment as regards combating climate change. This study therefore investigates the influence of climate change on youth empowerment.

## Objectives of the Study

The study is aimed at identifying the causes and consequences of climate change on youth empowerment. Specifically, the study seeks to achieve the following objectives:

- i. Determine the extent to which youths are aware of climate change, its causes and consequences
- ii. Determine the effect of climate change on youth empowerment

## Research Hypotheses

The following null hypotheses were formulated and tested at .05 level of significance:

- i. There is no significant awareness about the causes of climate change among rural and urban youths

- ii. There is no significant differences in the awareness of climate change between rural and urban youths
- iii. There is no significant differences in awareness of climate change between boys and girls.

## Methodology

This research study is an ex-post-facto design. The ex-post-facto research as stated by Oche (2007) is aimed at the discovery of possible causes of the behaviour of people towards an impending phenomenon.

## Population and Sample

The population consisted of all the senior secondary school (SS 2) Students with an estimated population of 2,400 in the nine Local Government Areas of the Southern Senatorial Zone of Adamawa State. 240 students were sampled using stratified random sampling technique. The schools were made up of 120 students each. Therefore, 120 students were drawn rural schools and 120 students also, from urban schools. Gender equality was maintained in the selection process.

## Research Instrument

The research instrument was a self-developed checklist titled "Climate Change Youth Awareness Battery (CCYEB)." The

instrument comprised of 33 items divided into three sections. Section 'A' contained 9 items which was concerned with the awareness of climate change, section 'B' contained 11 items with focus on the effects of climate change while section 'C' which contained 13 items concentrated on youth activities causing climate change. The students were required to tick the statement that concerns them. The face and content validity of the instrument was established by experts in counseling psychology in the Department of Science Education, Adamawa State University, Mubi. The instrument was pilot tested in schools in Mubi North Local Government Area of Adamawa State. The internal consistency was determined. The reliability of the instrument was calculated using Kuder Richardson formula (KR-21) which yielded the reliability index of 0.82.

## Method of Data Analysis

Kolmogorov Smirnov two sample test was used to test the hypotheses formulated. The use of Kolmogorov sample test was most appropriate because it is superior to chi-square and t-test. It is a test that is sensitive to order irrespective of sample size.

## Results

Results of the data analysis are presented with respect to the research hypotheses

**Hypothesis 1:** There is no significant awareness about the causes of climate change among rural and urban youths

**Table 1: Kolmogorov analysis of causes of climate change as perceived by rural and urban youths**

S/N	Rural			Urban			d	Ks cal	Ks cri	Dec.
	Freq.	C.F	Cum %	Freq	C.F	Cum %				
1	9	9	0.15	11	11	0.13	0.02			
2	4	13	0.22	6	17	0.20	0.02			
3	6	19	0.32	7	24	0.28	0.04			
4	7	26	0.44	8	32	0.38	0.06			
5	4	30	0.50	6	38	0.45	0.05			
6	6	36	0.60	9	47	0.56	0.04			
7	4	40	0.67	5	52	0.62	0.05			
8	12	52	0.87	15	67	0.80	0.07	0.07	0.23	Upheld
9	5	57	0.95	7	74	0.89	0.06			
10	2	59	0.99	5	79	0.95	0.04			
11	1	60	1	4	83	1	0			

Table 1 shows the major causes of climate change as perceived by rural and urban youths. The analysis shows the calculated Ks-z value (0.07) is less than the Ks-z critical (0.23). This means that there is no significant awareness of climate change among rural youths in the study area, hence the null hypothesis is upheld.

**Hypothesis 2:** There is no significant difference in the awareness of climate change between rural and urban youths

**Table 2: Kolmogorov analysis of effects of climate change as perceived by rural and urban youths**

S/N	Rural			Urban			D	Ks cal	Ks cri	Dec.
	Freq.	C.F	Cum %	Freq	C.F	Cum %				
1	3	3	0.03	6	6	0.05	-0.02			
2	7	10	0.11	9	15	0.13	-0.02			
3	5	15	0.17	6	21	0.18	-0.01			
4	6	21	0.24	7	28	0.24	0			
5	3	24	0.27	5	33	0.29	-0.02			
6	11	35	0.40	16	49	0.43	-0.03			
7	7	42	0.48	9	58	0.51	-0.03			
8	4	46	0.53	7	65	0.57	-0.04	0.04	0.19	Upheld
9	4	50	0.58	6	71	0.62	-0.04			
10	9	59	0.68	11	82	0.72	-0.04			
11	9	68	0.79	10	92	0.81	0.02			
12	10	78	0.90	10	102	0.90	0			
13	8	86	1	11	113	1	1			

**Table 2** indicates the analysis of awareness of climate change as between rural and urban youths. The Ks-z value of 0.04 is less than the Ks-z critical. The result obtained shows that there is no significant difference in the awareness of climate change between rural and urban youths. Hence, the null hypothesis was upheld.

**Hypothesis 3:** There is no significant difference in awareness of climate change between boys and girls in Southern Senatorial Zone of Adamawa State.

**Table 3: Kolmogorov analysis of awareness of climate change between boys and girls**

S/N	Boys			Girls			d	Ks cal	Ks cri	Dec.
	Freq.	C.F	Cum %	Freq	C.F	Cum %				
1	10	10	0.13	8	8	0.12	0.01			
2	8	18	0.24	9	17	0.26	-0.02			
3	12	30	0.41	10	27	0.41	0			
4	4	34	0.46	6	33	0.50	-0.04	0.04	0.22	Upheld
5	6	40	0.54	4	37	0.56	-0.02			
6	9	49	0.67	7	44	0.67	0			
7	7	56	0.76	5	49	0.75	0.01			
8	6	62	0.84	7	56	0.86	-0.02			
9	11	73	1	9	65	1	0			

Table 3 shows that the calculated Ks-z value of 0.04 is less than critical or table Ks-z value of 0.22, and therefore does not nullify the null hypothesis. This implies that there is no awareness of climate change differences between boys and girls in Southern Senatorial Zone of Adamawa State, Nigeria.

## Discussion

The finding in relation to hypothesis 1 reveals that both rural and urban youths have a very little or no knowledge on the causes of climate change. This means that human activities which is the major cause of climate change is not understood by the rural and urban youths as manifested in climate change inducing activities

such as indiscriminate cutting down of trees, burning of fire wood for charcoal, burning of tires, burning of incinerators, and clearing of land in the communities. The finding of this study is in line with the study of Turrentine, (2022) who stated that Human civilization has made extraordinary productivity leaps, some of which have led to our currently overheated planet. But by harnessing that same ability to innovate and attaching it to a renewed sense of shared responsibility, we can find ways to cool the planet

down, fight climate change, and chart a course toward a more just, equitable, and sustainable future.

The statistical analysis for hypothesis 2 indicates that awareness of climate change did not differ significantly between rural and urban youths. This finding is in line with the views of Anyadike (2009) who reported that general environmental effects of climate change include changes in dates of onset and end of the rainy season, reduced rainfall amounts leading to drought and increased rainfall amount leading to flooding. Waugh (2003) also reported that climate change is associated with food security, health effect, loss of biodiversity and sea level rise. The findings of this study is in line with the observations of the researcher who reported that reduction in family food supply, reduction in the supply of fresh water, flooding of farmlands and settlements and rise in temperature are prevalent in most communities in Southern Senatorial Zone. Knowing quite well that climate change occur irrespective of time and space, this finding stresses the need for youths to be empowered on the effects and mitigation measures of climate change.

The finding in hypothesis 3 reveals that no significant difference existed in awareness of climate change between boys and girls. The researcher observes that the youths of the Southern Senatorial Zone of Adamawa State whom are largely rural and illiterate boys and girls do not have the knowledge of climate change and hence the need for awareness.

## Conclusion

The study concluded that awareness of climate change is needed in the Southern Senatorial Zone of Adamawa State though it adverse impacts are felt.

## Recommendations

- i. The study found out that both rural and urban youths lack awareness on the causes of climate change. This study therefore is recommending for the inclusion of environmental education in the junior and senior secondary school curriculum.
- ii. This study found out no significant difference in the awareness of climate change between boys and girls. This study therefore recommends both male and female students should be actively engaged in combating climate change.
- iii. The study found out that the awareness level of climate change is very low among youths. This study therefore recommends for the establishment of climate change awareness clubs in our secondary schools.

## References

1. Akande, T. & Kumuyi, A. (2008). *Challenges of Climate Change for Nigeria, a Multidisciplinary Perspective*. Paper presented at the Nigerian Institute of Social and Economic Research (NISER), Ibadan.
2. Aliyu,U., Shamaki, M.A., Ibrahim, K., & Tahir, M.B. (2012). *Climate Change and Sustainable Crop Production in Sokoto State: Vulnerability and Adaptation*. In Iliya, M.A., Abdulrahim M.A., Dankani, I.M. & Opponkumi, A. (Eds). Proceedings of the Association of Nigerian Geographers, held at Usmanu Danfodiyo University, Sokoto (UDUS), 14-19
3. Gwary, M.M., Kwaghe, P.V., Ja'afar-Furo, M.R., & Dennis, A. (2011). Analysis of Entrepreneurial Agricultural activities of Youths in Michika Local

- Government Area of Adamawa State, Nigeria. *Journal of Development and Agricultural Economics*, 3(3): 91-97
4. Houghton, J.T. (2001). *Climate Change: Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)*.UK: Cambridge
5. Ibrahim, K., Shamaki, M.A., Aliyu,U., Tahir, M.B. & Nasir, A.M. (2012). *Forestry: A veritable tool for Mitigating Climate Change*. In Iliya, M.A., Abdulrahim M.A., Dankani, I.M. & Opponkumi, A. (Eds). Proceedings of the Association of Nigerian Geographers, held at Usmanu Danfodiyo University, Sokoto (UDUS).
6. Isah, Y. (2015). Entrepreneurship Development a Means for Poverty Reduction and Sustainable Development. *Journal of Economic and Social Research*, 2 (1):49-58 | IJASEPSM | 79 of 189
7. Jimoh, M.S. (2014). *Youths Empowerment, A key to Sustainable Economic Growths and National Development*. A paper presented during the 45 World Day of Communication at St. Philip Neri Catholic Church, Jattu Uzairue, on 26 March, 2011.
8. Oche, E.A. (2007). *Fundamentals of Educational Research and Statistics*. Ibadan: Deray Prints Ltd
9. Onokala,P.C. (2012). *Climate change and the need for curriculum Development in Geography*. In Iliya, M.A., Abdulrahim M.A., Dankani, I.M. & Opponkumi, A. (Eds). Proceedings of the Association of Nigerian Geographers, held at Usmanu Danfodiyo University, Sokoto (UDUS).
10. People's Focus Multi Services (PFMS), (2010). *Farmers' Guide on climate change adaptation strategies in Sokoto State, Nigeria*. Draft Report for a consultative workshop, sponsored by UNDP Country office, Nigeria.
11. Turrentine, J. (2022). What are the causes of climate change? nrdc.org
12. Usman, D. (2015). Entrepreneurial Education for Youths Development in Gombe State. *Journal of Management and Sustainable Development*, 3(6):64-72 | IJASEPSM | 80 of 189
13. Vavrus, J. and Fletcher, A. (2006). Guide to Social Change Led by and with young people. *The Free child Project*.