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Climate Change Effects and Academic Staff Role Performance in Universities in Cross River State, Nigeria

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Abstract
Climate change is a scourge that is attracting wide-spread apprehension in the world today. Its harsh effect is felt on how people, plants and animals live. This survey designed study is geared towards assessing the climate change effects on academic staff role performance in universities in Cross River State, Nigeria. Two hypotheses were isolated to direct this investigation. 300 academic staff from the two universities (150 each) constituted the sample drawn from academic staff population of 1,137. Data for analysis were generated using Climate Change Effects Questionnaire (CCEQ) and Academic Staff Role Performance Survey (ASRPS). Population t-test and Pearson Product Moment Correlation (r) statistical techniques were used for data analysis. Results disclosed that climate change effects on academic staff role performance in universities in Cross River State are significantly high. There is significant relationship between climate change effects and academic staff role performance. It was concluded that virtually all the aspects of academic staff role performance are affected by climate change effects. On the strength of these findings, recommendations were made.

Key words: Academic staff; Climate change effects; Role performance; Universities

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INTRODUCTION
Climate change is an issue that is gaining widespread apprehension and is taking centre stage in virtually every human endeavour in the world today. It is not something that attracts cheering news; rather its catastrophic effect speaks volume. As a result, several seminars, workshops and other public discussions have been held and are still being held on how to combat this dangerous menace. Its devastating effect is felt on human health, agriculture, industry, education and other fields of activities man is involved in one way or the other.

According to Ekpoh (2009), climate change refers to any long-term change in the pattern of average weather of a specific region or the whole earth. It is an abnormal variation in the earth's climate that usually occurs over duration ranging from decades to millions of years. InterGovernmental Panel on Climate Change (IPCC) (2007) sees it as seasonal changes over a long period of time. It can also be viewed as an increase in global temperatures (Medugu, 2009). Similarly, United Nations Framework Convention on Climate Change in Vilnius (2006) defines it as a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is, in addition to natural climate variability, observed over comparable time periods. Climate change includes all the features associated with the weather such as patterns of temperature, precipitation, humidity, wind and seasons. These climate patterns play a fundamental role in shaping natural ecosystem, and the human economies and cultures that depend on them (IPCC, 2007). Virtually, every system, whether human or otherwise, is tied to climate. A change in climate therefore, can affect many related aspects of where and how people, plants and animals live, such as food production, availability and use of water and health risks. The primary causes of climate change has been linked to higher concentration of carbon dioxide and other greenhouse gases in the atmosphere, which are

dominantly of anthropogenic origin such as industrial processes, fossil fuel combustion, change in land use and deforestation (Ekpoh, 2009). Natural causes include volcanic eruptions, ocean current, the earth's orbit change, solar variations, plate tectonics, gradual and sudden shifts (Norgaard, 2010). All these point to natural events and human activities as responsible for this menace.

Climate change is a problem that does not spare anything that comes across it. The advent of climate change and it's negative effect on the environment can be traced to the later part of the twentieth century, precisely 1990s, when the increase in the warming of the atmosphere began to generate serious concern all over the world, with the Western World championing it. Evidence has revealed that the global mean temperature increased by 0.6^{o}c during the 20^{th} Century, with the six hottest years occurring between 1997 and 2007 (IPCC, 2007). This warming has resulted to rise in sea level, which inundated coastal areas and increased beach erosion, widespread flooding from coastal storms, changes in precipitation patterns, increased risk of droughts and flood, threats to biodiversity and potential challenges for public health in the world. In real life, these hazards were witnessed in floods which ravaged parts of Nigeria in 2010 such as Lagos, Ogun, Oyo and Sokoto States, and the thunderstorm which hit Ogoja in Cross River State in May 2009 (Ekpoh, 2009).

In Nigeria, the situation is trickier. Research shows that about one third of the nation's territory is under siege by the expanding frontiers of the Sahara Desert, with whole villages in the North disappearing under sand dunes, turning the affected villagers into refugees. In the North also, the flood disaster in Sokoto Metropolis in 2010 led to the destruction of properties worth billions of Naira. In the south, the Atlantic Ocean is threatening coastal cities including Nigeria's financial and industrial hub, Lagos and Niger Delta while increased storm and floods have dissipated agriculture, infrastructure and human habitat in the East (Eze, 2009).

Educational institutions in Nigeria are also experiencing the harsh effects of climate change. Tertiary institutions are feeling the pangs of environmental disruptions that challenge their administrations, academic staff and effective functioning of these institutions, especially their teaching/learning situations. A case in point is the flooding of parts of Usmanu Dan Fodio University in Sokoto in 2010, which disrupted academic activities and rendered them comatose until succour come from the Federal Government and other well-meaning individuals in the country.

The effects of climate change on academic staff role performance in the universities can be felt in disruption of teaching/learning activities, poor instructional delivery, irregular class attendance, difficulty in maintaining infrastructural materials and other facilities (Ajayi, 2010). Role performance signifies the procedures, ways or manner in which academic staff carry out their assigned institutional responsibilities or tasks. Whenever academic staff experience the harsh effects of climate change such as erosion, flooding, increase rainfall, excessive heat, windstorms, rainstorms, amongst others, their level of role or task accomplishment is drastically affected.

Climate change confronts education with chaos, complexity and uncertainty, presenting a system in which changes in one or more elements can reverberate through the whole (Selby, 2007). That is, it affects academic staff role performance in such a way that when one aspect such as classroom teaching is involved, other aspects are not spared. It does not only contaminate the classroom atmosphere, but also the overall institutional learning environment. Under this scenario, academic staff role performance usually suffers terrible setbacks leaving on its trail, low achievement of set goals and poor output.

Despite the ravaging effects of climate change, universities in Nigeria, especially in Cross River State have not embarked on any tangible measure to mitigate the dangers posed by it to academic and other institutional activities. Their approach has remained at best tepid.

However, there is a ray of hope in providing solution to the dangers posed by climate change in Nigeria with the activities of such bodies as Nigeria Climate Action Network (NigeriaCAN), which organise conferences aimed at proffering a way out of climate change threat. Even at that, the Federal Government showed seriousness in confronting climate change threat following her support to Sokoto, Lagos, Oyo and Ogun states affected by flood disasters in 2010 in form of providing succour to the victims. Eze (2009) reports that Government displayed a firm grasp of the situation by raising an alarm on the dangers, and declaring that climate change and global warming pose threats to national security. Despite these laudable efforts, the Federal Government is yet to provide the requisite effective leadership for the articulation of a national programme for the mitigation of the dangers of the global scourge. It is on this background that this study seeks to assess climate change effects on academic staff role performance in Cross River State universities.

1. HYPOTHESES

1) Climate change effects on academic staff role performance are not significantly high.
2) There is no significant relationship between climate change effects and academic staff role performance in terms of:
   (a) Classroom teaching
   (b) Research productivity
   (c) Administrative responsibilities

2. LITERATURE REVIEW

Climate change menace affects whatsoever come across it negatively. Its negative effect is felt on how people live, work and achieve results. Academic staff in universities are not exempted.

Ileuma and Isah (2010) reported that the effects of climate change are all over Nigeria. Flooding resulting from increase in rainfall is felt in all parts of the country on yearly basis. In 2010, three states in south-west namely: Lagos, Ogun and Oyo were seriously affected by flooding leaving over 240 communities displaced. In the Middle Belt, Lokoja, a confluence town of Rivers Niger and Benue experienced over flooding, while in the north-west, Sokoto, Kebbi and Jigawa States suffered the same problem of over flooding. In south-east and south-south, where Cross River is located, the menace of gully erosion has been accelerated by the tempo of rainfall leading to heavy casualties. Under these conditions, academic staff found it difficult moving to and from office. Thus, over flooding results to loss in man-hours in universities, which reduces academic staff output.

The effects of climate change in Niger Delta, which Cross River is part of, have been identified in a study. These include soil fertility loss, decreased agricultural yield, deforestation, fishery resource decline, flooding, coastal/marine erosion, health decline, natural disasters, reduction in the water available for drinking and washing, food insecurity, heat waves, air pollution, social dislocation, infectious diseases and erosion (Chinweze & Abiola – Oloke, 2009; Etuonovbe, 2007). These effects lead to untold hardship on academic staff in universities, which reflect on low role performance.

Bianchi (2005) and UNDP/World Bank (2004) found that more gas is flared in Nigeria than anywhere else in the world, with close to 2.5 billion cubic feet of gas being flared every day, amounting to about 70 million tons of carbon dioxide emitted daily. This flaring has contributed some 75% greenhouse gases than all other sources in Sub-Saharan Africa combined. Eket/Ibeno, an oil producing town contributes 30% out of the 75%. More worrisome is that Eket/Ibeno Oil Terminal is located in Akwa Ibom State which lies on the same coastal axis with Cross River State. Akwa Ibom State was formally part of Cross River State before it was carved out in 1987. Therefore any effect gas flaring has on Eket/Ibeno will also be felt in Cross River State.

A study by USEPA (2001) reported that heat wave resulting from climate change is dangerous to human health and can easily cause deaths. According to this study, hot conditions cause smoke particles and noxious gases to linger in the air and accelerate chemical reactions that generate other pollutants. This leads to increase in risk of respiratory diseases like bronchitis and asthma (Wittwer in Ekpoh, 2009). The consequence of this is that those resourceful persons, including academic staff that impact positively on the university education system in particular and nation's economy in general remain sick and wasteful in hospitals due to these respiratory diseases and ailments (Ekpoh, 2009).

World Energy Council (2006) analysed the general equilibrium impacts of international climate change on the economy of Western Australia. The study found that poor health incurs some cost to the state economy in terms of declining gross state product. It further revealed that poor health was a consequence of emissions of dangerous greenhouse gases into the atmosphere, and that greenhouse gas emissions create unfortunate health conditions for humans by polluting the air and subsequently reducing vitality for greater output, thus lowering economic outcomes.

3. METHODOLOGY

This study was executed in Cross River State, which is located on the eastern axis of the South-South geo-political zone of Nigeria. It is part of the oil-rich Niger Delta region. Two universities namely: University of Calabar and Cross River State University of Technology provided the setting.

Survey research design was used, with 1,137 academic staff constituting the population. Out of this, 300 of them made up the sample (150 from each university), drawn using stratified random sampling technique. The basis of stratification was ownership of the universities. One (University of Calabar) federal, and the other (Cross River State University of Technology) state.

Data for analysis were generated using Climate Change Effects Questionnaire (CCEQ) and Academic Staff Role Performance Survey (ASRPS) constructed by the researchers. Both had 2 sections - A and B. Section A of CCEQ sought information on 6 demographic variables, while section B arranged on 6-point rating scale had 32 items - 4 of which measured each of the 8 variables used in this study. Section A of ASRPS contained information on 6 demographic variables, while section B also arranged on 6-point rating scale contained 12 items - 4 of which measured each of the 3 variables also used in this study.

The two instruments were face-validated by experts in measurement and evaluation, while their trial tests yielded reliability coefficients such as 0.58, 0.67, 0.72, 0.75, 0.81, 0.84, 0.88 and 0.91 for CCEQ; 0.63, 0.79 and 0.88 for ASRPS. These figures confirmed the reliability of using the instruments to achieve this study's objective.

Administration of the instruments was handled by the researchers, with the help of research assistants recruited for data collection purposes. The respondents were allowed 2 weeks interval to complete the instruments. This measure yielded a 100 percent returns rate. Population t-test and Pearson Product Moment Correlation (r) statistical techniques were used to analyse the data collected for this study. Summaries of the results were presented in tables.

4. RESULTS

4.1 Hypothesis One

Climate change effects on academic staff role performance are not significantly high. Climate change effects were measured by erosion, flooding, increase rainfall, excessive heat, windstorms, rainstorms, greenhouse gases and humidity. The data collected were analysed using population t-test (test of single mean). Summaries of the result were presented in table.

Table 1
Population t-test (test of Single Mean) of Climate Change Effects on Academic Staff Role Performance (N = 300)

	Observed Mean	Expected Mean		
Variables	$\bar{X}$	μ	SD	t-value
Erosion	10.37	14.00	4.40	-13.080*
Flooding	11.46	14.00	3.17	-14.111*
Increase rainfall	12.07	14.00	3.03	-11.354*
Excessive heat	10.92	14.00	3.25	-16.211*
Windstorms	11.89	14.00	3.79	-9.591*
Rainstorms	12.23	14.00	2.98	-10.412*
Greenhouse gases	12.45	14.00	3.43	-7.750*
Humidity	11.34	14.00	5.49	-8.313*

* Significant at 0.05; df=299; Critical t-value=1.968

The results in this table 1 disclosed that the calculated t-values were found to be higher than the critical t-value of 1.968 at 0.05 level of significance and 299 degrees of freedom with regards to erosion($t=-13.080$, $p<.05$); flooding($t=-14.111$, $p<.05$); increase rainfall($t=-11.354$, $p<.05$); excessive heat($t=-16.211$, $p<.05$); windstorms($t=-9.591$, $p<.05$); rainstorms($t=-10.412$, $p<.05$); greenhouse gases($t=-7.750$, $p<.05$); and humidity($t=-8.313$, $p<.05$). The null hypothesis was therefore rejected at these climate change effect variables, while the alternate hypothesis was upheld. As such, it was held that climate change effects on academic staff role performance are significantly high.

Close observation of the result revealed that the observed mean ($\bar{x}$) climate change effects on academic staff role performance was lower than the expected mean of 14.00. Statistical comparison of these observed mean values and expected mean value of 14.00 using Population t-test of single mean statistical technique gave significant negative t-values. This implies that climate change effects on academic staff role performance in universities in Cross River State are significantly high.

4.2 Hypothesis Two

There is no significant relationship between climate change effects and academic staff role performance in terms of:

a) Classroom teaching
b) Research productivity
c) Administrative responsibilities

The independent variable in this hypothesis was climate change effects, measured by erosion, flooding, increase rainfall, excessive heat, windstorms, rainstorms, greenhouse gases and humidity. Dependent variable was academic staff role performance, measured by classroom teaching, research productivity and administrative responsibilities. Pearson Product Moment Correlation Coefficient (r) test statistic was used in analysing data collected from these variables. Summaries of the result were presented in table 2.

Table 2
Pearson Product Moment Correlation (r) Analysis of the Relationship between Climate Change Effects and Academic Staff Role Performance in Universities (N=300)

Variables	$\bar{X}$	SD	r-value
Erosion (X_1)	10.73	4.40	
Classroom teaching(Y_1)	10.56	3.62.	0.778*
Research productivity(Y_2)	11.35	3.83	0.712*
Administrative responsibilities(Y_3)	12.14	3.77	0.671*
Flooding (X_2)	11.46	3.17	
Classroom teaching (Y_1)	10.56	3.62	0.795*
Research productivities(Y_2)	11.35	3.83	0.136*
Administrative responsibilities(Y_3)	12.14	3.77	0.401*
Increase rainfall (X_3)	12.07	3.03	
Classroom teaching (Y_1)	10.56	3.62	0.651*
Research productivity (Y_2)	11.35	3.83	0.334*
Administrative responsibilities (Y_2)	12.14	3.77	0.447*
Excessive heat (X_4)	10.92	3.25	
Classroom teaching (Y_1)	10.56	3.62	0.525*
Research productivity (Y_2)	11.35	3.83	0.521*
Administrative responsibilities (Y_3)	12.14	3.77	0.109
Windstorms (X_5)	11.89	3.79	
Classroom teaching (Y_1)	10.56	3.62	0.191*
Research productivity (Y_2)	11.35	3.83	0.262*
Administrative responsibilities (Y_3)	12.14	3.77	0.105
Rainstorms (X_6)	12.23	2.98	
Classroom teaching (Y_1)	10.56	3.62	0.503*
Research productivity (Y_2)	11.35	3.83	0.152*
Administrative responsibilities(Y_3)	12.14	3.77	0.121*
Greenhouse gases (X_7)	12.45	3.43	
Classroom teaching (Y_1)	10.56	3.62	0.343*
Research productivity (Y_2)	11.35	3.83	0.050
Administrative responsibilities (Y_3)	12.14	3.77	0.226*
Humidity (X_8)	11.34	5.49	
Classroom teaching (Y_1)	10.56	3.62	0.603*
Research productivity (Y_2)	11.35	3.83	0.595*
Administrative responsibilities (Y_3)	12.14	3.77	0.263*

* Significant at 0.05; df = 298; Critical r-value = 0.113

Results presented in table 2 revealed that the calculated r-values were found to be higher than the critical r-value of 0.113 at 0.05 level of significance and 298 degrees of freedom with regards to erosion and classroom teaching ($r=0.778$, $p<.05$), research productivity ($r=0.712$, $p<.05$), administrative responsibilities ($r = 0.671$, $p<.05$); flooding and classroom teaching ($r = 0.795$, $p<.05$), research productivity ($r=0.136$, $p<.05$), administrative responsibilities ($r = 0.401$, $p<.05$); increase rainfall and classroom teaching ($r = 0.651$, $p<.05$), research productivity ($r = 0.334$, $p<.05$), administrative responsibilities ($r=0.447$, $p<.05$); excessive heat and classroom teaching ($r = 0.525$, $p<.05$), research productivity ($r = 0.521$, $p<.05$); windstorms and classroom teaching ($r = 0.191$, $p<.05$), research productivity ($r = 0.262$, $p<.05$), rainstorms and classroom

teaching (r = 0.503, p<.05), research productivity (r=0.152, p<.05), administrative responsibilities (r=0.121, p<.05); greenhouse gases and classroom teaching (r= 0.343, p<.05), administrative responsibilities (r=0.226, p<.05); humidity and classroom teaching (r=0.603, p<.05), research productivity (r = 0.595, p <.05) and administrative responsibilities (r = 0.263, p<.05). The null hypothesis was rejected on these variables, while the alternate hypothesis was upheld on them. This means that there is a significant relationship between climate change effects and academic staff role performance in respect of classroom teaching, research productivity and administrative responsibilities. On the other hand, the calculated r-values were found to be lower than the critical r-value given the same level of significance and degree of freedom in the aspects of excessive heat and administrative responsibilities (r = 0.109, p > .05); windstorms and administrative responsibilities (r = 0.105, p > .05); greenhouse gases and research productivity (r = 0.050, p>.05). The null hypothesis was by these results accepted, while the alternate hypothesis was rejected. With this result, there is no significant relationship between 3 climate change effects and academic staff role performance in respect of research productivity and administrative responsibilities.

5. DISCUSSION OF RESULTS

Results in table 1 showed that climate change effects on academic staff role performance in universities in Cross River State were significantly high. This, by implication means that the effect which climate change has on academic staff role performance is negatively high. That is, it affects their role performance in great magnitude. A plausible explanation for this finding is that Cross River State, where the universities used in this study are located, is a coastal state in which the threats of erosion, flooding, increase rainfall, windstorms, rainstorms, humidity are high. Closely akin to this, are the greenhouse gases resulting from carbon dioxide emitted into the atmosphere through the burning of fossil fuel from the utilisation of generating sets in the campuses and cement manufacturing plant located in Calabar. All these phenomena combine to put pressure on the temperature thereby fouling it. The resultant climate change brings on its trail, increasing incidence of disease and a rising number of heat waves (Medugu, 2009), and as well bodily discomfort and lack of concentration. This reduces the level of task accomplishment of academic staff.

This finding is corroborated by the reports of Ekpoh (2009) and Vilnius (2006) that climate change affects how people live and work. According to them, the physical and biological changes resulting from climate variations bring with them health challenges with significant negative impacts on human functioning. Thus, climate change affects academic staff well-being whose exacerbated effects result to poor role performance.

Results in table 2 held that there is a significant relationship between climate change effects and academic staff role performance in the aspects of classroom teaching, research productivity and administrative responsibilities. That is, climate change influences the way and manner academic staff perform their roles in universities. Thus, the more the effects of climate change, the less the ability of academic staff to perform their roles and the less the effects of climate change, the more the ability of academic staff to perform their roles.

This finding suggests that the climate change effects determine the extent of academic staff role performance. This is so because climate change affects the health of academic staff, from which energy is released to accomplish specific tasks. The resultant poor health affects job output. This was confirmed by the results of World Energy Council (2006) study that poor health leads to declining gross state product, an aftermath of low output.

This finding also revealed that climate change effects resulting from erosion, flooding and increase rainfall have significant relationship with academic staff role performance. This outcome may be explained from the fact that Cross River State lies on the coastal axis which is vulnerable to erosion and flooding resulting from sea-level rise and increase rainfall. As such displacement of academic staff in their residential areas and office may be common features. When this happens their role performance is likely to be disrupted.

It was further disclosed from the outcome of this study that climate change effects resulting from excessive heat had a significant relationship with academic staff role performance. That is excessive heat influences academic staff role performance. This is so because when the weather is hot, excessive heat results which cause bodily discomfort, a state that cannot lead to improved role performance. The findings of United States Environmental Protection Agency (2001) are in consonance with this outcome. Their study revealed that hot conditions cause smoke particles and noxious gases to stay longer in the air and accelerate chemical reactions that generate other pollutants, which increases the outbreak of respiratory diseases like bronchitis and asthma (Wittner in Ekpoh 2009). In consequence therefore, academic staff that contribute positively to the nation's manpower training in universities run the risk of contacting ailments and remain wasteful instead of being productive.

Climate change effects emanating from windstorms and rainstorms were found to have significant relationship with academic staff role performance. This outcome may be explained from the perspective that windstorms and rainstorms are accompanied by violent winds; thunder and lightning that can blow away roof tops of university buildings and destroy other school property, and so render classroom teaching, research productivity and administrative responsibilities redundant.

Climate change effects resulting from greenhouse gases and humidity were found to have significant relationship with academic staff role performance. That is, these two variables of climate change can exert significant effect on the role performance of academic staff in the aspects of classroom teaching, administrative responsibilities and to a lesser extent, research productivity. The findings of greenhouse gases effect on the academic staff role performance can be viewed from the fact that greenhouse gases pollute the air which can result to respiratory disease attacks. This position was accentuated by World Health Organisation (2007) report that increases in the emission of greenhouse gases have increased the average earth's surface temperature, resulting in increased weather extremes including heat wave and worsening of air quality. According to World Energy Council (2006), greenhouse gas emissions create unfavourable health conditions for humans by polluting the air and subsequently reducing vitality for greater output, thus lowering role performance outcomes. Humidity on its part can result to dampening of air which can easily lead to easy disease infections and this no doubt, is likely to result to low role performance of academic staff in the aspects of classroom teaching, research productivity and administrative responsibilities.

However, the outcome of this study also indicated partly that climate change effects resulting from excessive heat, windstorms and greenhouse gases have no significant relationship with academic staff role performance in the aspects of research productivity and administrative responsibilities. Excessive heat and windstorms showed no significant relationship with administrative responsibilities aspect of academic staff role performance, while greenhouse gases had no significant relationship with research productivity. These imply that excessive heat and windstorms do not affect academic staff role performance in the aspect of administrative responsibilities. That is, academic staff's administrative responsibilities are executed irrespective of the effects of excessive heat and windstorms. Similarly academic staff carry out their researches without greenhouse gases being a hindrance.

CONCLUSION AND RECOMMENDATIONS

Conclusion

From the outcome of this study, it was concluded that climate change has high negative effect on academic staff role performance. Climate change effects resulting from erosion, flooding, increase rainfall, excessive heat, windstorms, rainstorms, greenhouse gases and humidity have significant relationships with academic staff role performance in the aspects of classroom teaching, research productivity and administrative responsibility to a large extent. However climate change effects emanating from excessive heat and windstorms do not significantly relate with academic staff role performance in the aspects of administrative responsibilities. This also holds for greenhouse gases and research productivity aspect of academic staff role performance. It therefore follows that the inability of academic staff to perform their roles creditably is direct fallout of the ravaging effects of climate change in universities in Cross River State.

Recommendations

Prompt action should be taken by Government and university internal administrators to tackle the menace of climate change by organising more seminars, workshops and conferences for academic staff as part of institutional leaders. The awareness gained from these fora can empower them to mitigate the harsh effects of climate change and be more responsive to the demands of their roles in the university.

Health facilities in the campuses should be improved by stocking them with drugs. This will enable academic staff to receive quality treatment whenever illnesses associated with climate change comes calling. Similarly, academic staff should be encouraged to make themselves available for regular medical check-ups. This will result to early detection of ailments resulting from exposure to climate change and checkmate them. Prevention, as rightly pointed out, is better than cure.

Awareness campaigns should be carried out on regular basis to sensitize both academic staff and other members of university community on the dangers of climate change. This has become necessary because during the course of this study, some subjects displayed crass ignorance of climate change. This will empower them with up-to-date information on this menace and position them properly on how to ensure that they are not unduly exposed to the harsh effects of climate change.

University internal administrators should ensure that the construction of buildings especially classroom and office blocks as well as residential quarters adhere strictly to specified construction guidelines. This will shield the buildings from climate change impacts such as windstorms, rainstorms, erosion and flooding. Where buildings are old, bulwarks should be constructed to prevent the menace of erosion and flooding. These measures can help put in check the ravaging effects of climate change and assist academic staff perform their roles effectively.

REFERENCES

Ajayi, I.A. (2010). Teachers and Classroom Management with Respect to Climate Change. In A.O. Ayeni, U.G. Emetarom, S.O. Nwafor & A.I. Atanda (Eds.), *Educational Management, Environmental Literacy and Climate Change* (pp.85-92). Ibadan: Nigerian Association for Educational Administration and Planning (NAEAP).

Bianchi, S. (2005). *Greenhouse Gas Emissions: A Publication of Friends of the Earth.* Burlington; Shems Kassel and Sanders Plc.

Chinweze, C., & Abiola-Oloke, C. (2009). *Women Issues, Poverty and Social Challenge of Climate Change in the Nigerian Niger Delta Context*. Paper Presented at IHDP Open Meeting, the 7th International Conference on Human Dimension of Global Environmental Change, UN Campus, Bonn, Germany.

Ekpoh, I.J. (2009). *Climate, Society and Environment.* Calabar: St. Paul's Printing and Publishing Company.

Etuonovbe, A.K. (2007). *Coastal Settlement and Climate Changes: The Effects of Climate Change/Sea Level Rise on the People of Awoye, Ondo State, Nigeria.* Strategic Integration of Surveying Services. FIGR Working Week. Hong Kong SAR, 13-17 May 2007. Retrieved from http://www.fig.net/pub/fig2007/papers/ts-8/fts-03-etuonovbe.

Eze, I. (2009). *Nigeria's Economy and the Effect of Climate Change.* Retrieved from http://www.businessdayonline.com/NG.

Ileuma, S., & Isah, E.A. (2010). Educational Challenges of Climate Change in Developing Countries: Policy Options for Nigeria. In A.O. Ayeni, U.G. Emetarom, S.O. Nwafor & A.I. Atanda (Eds.), *Educational Management, Environmental Literacy and Climate Change* (pp.51-58). Ibadan: Nigerian Association for Educational Administration and Planning (NAEAP).

Inter-Governmental Panel on Climate Change (IPCC) (2007). *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Geneva: WMO.

Medugu, N.I. (2009). *Combating Climate Change in Nigeria.* Retrieved from http://environmentalsynergy.wordpress.com

Norgaard, K.M. (2010). *2010 World Development Report*. Wikipedia - The Free Encyclopaedia. Retrieved from http://en.wikipedia.org/wiki/the_world_development_report_2010.

Selby, D. (2007). *The Need for Climate Change in Education.* Retrieved from http://www.bne.portal.de/coremedia/generator/pm/en/issue.

UNDP/World Bank. (2004). *Management of Indigenous Vegetations in the Arid Zones of Africa.* Project Document.

United States Environmental Protection Agency (USEPA) (2001). *Municipal Solid Waste in the United States: 2001 Final Report*. Retrieved from www.epa.gov/osw/nonhaz/municipal/pubs/msw2001.pdf.

Vilnius, D.H. (2006). *Predicting and Managing the Effects of Climate Change on World Heritage.* A Joint Report from the World Heritage Centre, its Advisory Bodies, and a Broad Group of Experts to the 30th Session of the World Heritage Committee, 16-17, March 2006.

World Energy Council. (2006). *Climate Change and the World.* Retrieved from http://www.worldenergy.org.

World Health Organisation (WHO). (2007). *Health and Environment in Sustainable Development.* Geneva: WHO.

