



CULTURAL DRIVERS OF CLIMATE CHANGE IN THE NIGER DELTA REGION OF NIGERIA

JACKSON T.C.B JACK

Abstract

This study examined cultural drivers of climate change in the Niger Delta. Anchored on the risk society theory and relying on both primary and secondary sources of data, the study demonstrated that climate change in the region is exacerbated by attitudinal and behavioral dispositions associated with negative environmental consumption patterns that are deeply rooted in and sustained by predominant cultural values, norms and practices. The study recommended that behavioral change especially through the promotion of a culture of sustainable natural resource utilization is expedient in mitigating climate change impacts in the Niger Delta. This can be achieved by mainstreaming mitigation and adaptation policies to address cultural and behavioral practices that intensify climate change and its impacts in the region.

Key Words: Climate Change, Cultural Drivers, Environmental Consumption, Niger Delta

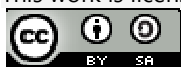
1. Introduction

Climate change is increasingly being recognized as the greatest threat to the physical environment as well as human communities. This is because changes in the climate can pose deleterious effects on the natural ecological systems which provide life support for the earth's flora and fauna. The United Nations Framework Convention on Climate Change (UNFCCC) defined climate change as "a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods" (UNFCCC,1992). Drawing from the foregoing definition, it is deducible that while climate change refers to changes in the climate overtime, it can either be as a result of natural variability or human activities.

It is however disturbing to note that contemporary changes in the earth's climate is largely associated with anthropogenic than natural factors. According to the International Panel on Climate Change (2007), increasing concentration of Green House Gases (GHGs) in the earth's atmosphere and the consequent depletion of the ozone layer are the major drivers of climate change. Green House Gases include toxic gaseous substances such as Carbon-dioxide (CO₂), water vapor (H₂O_v), chlorofluorocarbons, methane, nitrous oxide, ozone, and halocarbons which are introduced into the atmosphere from burning of fossil fuels in the process of meeting the daily energy, production and consumption demands of man.

Subsequently, the impacts of climate change are enormous as it is known to precipitate rise in sea levels, increased drought, rapid storms, unstable rainfall patterns, crop failures etc. (IPPC, 2007; Nwona, 2013). A combination of these factors would amount to diverse socio-economic, socio-cultural, livelihood and human security challenges for countries and communities whose

This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/)





capacity to adapt with the changing conditions are weak (Raimi & Jack, 2017). This situation is true of the Niger Delta wetlands where a larger percentage of its population subsists by the coastlines of the Atlantic Ocean. A cursory look at the climate change scenario in the Niger Delta reveals that the region is highly susceptible to climate change impacts by virtue of its location by the ocean. Existing studies indicates that over the last century, while the region is 3° warmer (Efe, 2010), sea level has risen by 1 foot in the last fifty years while it is further projected to rise from 1.5 to 3 feet by the end of this century (Federal Ministry of Environment, 2009). This would result in the displacement of communities by coastal flooding and dislocation of their livelihoods, economic and social capitals.

The increasing vulnerability of the Niger Delta to climate change impacts is further compounded by the over six decades of destruction of the pristine ecosystem and dislocation of the rich biodiversity by hydrocarbon pollution arising from oil and gas exploration. Suffice it to state that the oil and gas industry in the Niger Delta is a significant contributor to global climate change as satellite based studies have shown that more than 50,000 acres of mangroves have disappeared from the Niger Delta coastline due to hydrocarbon pollution (Polgreen, 2007; Odoemene, 2011), while incessant gas flaring in the region contribute significantly to global greenhouse gas emissions (Raimi, Towobola & Madueke, 2013; Jack & Zibima, 2018).

More so, aside the problems of hydrocarbon pollution, the pervasive energy poverty in the region have been identified to be a major driver of climate change in the region. The energy poverty incidence report in the region reveal that 83.2% of the population in the Niger Delta are energy poor as they lack access to electricity or affordable, clean modern cooking energy (Edoumiekumo, Tombofa & Karimo, 2013). In such precarious situation, the major source of energy for the Niger Delta people is the fuel wood. The widespread fuel wood dependence in the region has predisposed most households to harvest mangrove forests for fuel and this has largely contributed to the increasing spate of deforestation and climate change impacts in the region (Allison & Olanshile, 2016; Jack & Zibima, 2018; Jack, Ogbanga & Odubo, 2018).

Drawing from the foregoing, while it becomes clear that existing studies have largely attributed climate change in the Niger Delta to hydrocarbon production activities and the environmental consumption patterns especially fuel wood dependence in the region, what remain unexplored is the cultural factors influencing such environmental consumption patterns in the region. It is this gap in knowledge that this study seek to fill by specifically uncovering the cultural factors, attitudes and behavioral predispositions that promotes unsustainable production and consumption activities that contributes significantly to climate change impacts in the Niger Delta.

2. Theoretical Framework – Risk Society Theory

The risk society theory was propounded by the German sociologist, Ulrich Beck to describe the changing nature of human society as a result of modernization and the inherent risks associated with it. According to Beck (1992:21) risk society is “a systematic way of dealing with hazards and insecurities induced and introduced by modernization itself”. The major thrust of the risk society theory hinges on how society can deal with the inherent problems associated with societal development and human progress itself. It argues that human activities especially in the



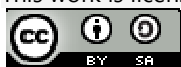


contemporary era of modernization and the application of advanced technology in almost every sphere of life has on the flipside constituted massive risks to man and his society. This implies that as technological change progresses more and more rapidly, it produces new forms of manufactured risks, which in turn requires constant adaptation and mitigation strategies from society. In recent times, there is an increasing consensus amongst scholars that scientific advancement itself have created unintended consequences such as nuclear holocaust, environmental pollution or artificial creation of diseases, hence the unknown and unintended consequences of technological and economic advancement constitutes the risk society (Beck, 1999; Giddens, 2009; King & McCarty, 2009)

More central to the risk society thesis is the problem of environmental pollution which happens to be a significant negative outcome associated with industrialization and modernization, in fact Beck himself addressing this specific issue argues that the industrial society is slowly dissolving as environmental problems gradually builds up. This according to Beck (1999) will drive humanity into a new type of ‘world risk society’ where risk consciousness and risk avoidance will become the central focus since environmental pollution permeates national boundaries as a result of globalization. Drawing from the foregoing, it is from this theoretical perspective that this paper interrogates the issue of climate change which has over the last two decades have topped the agenda of global environmental and development discourse. This is largely so because climate change is a global phenomenon as its impacts are evident across the globe hence it has increasingly become a global risk created by human activities that leads to emission of greenhouse gases. More so, while it has been established that climate change is a global phenomenon, it can also be said to be local. This is so because the cause and impacts of climate change can be localized to specific countries, environments and cultures based on peculiarities of such society. This therefore implies that specific activities within specific regions or countries across the globe contribute to climate change impacts and it is the collectivity of these specifics across the globe that accounts for the global nature of the problem. It is in the light of the foregoing that this paper adopting the risk society theory focuses on how prevalent localized culture, values and norms influences localized attitudes and behavioral practices and actions that contribute to global climate change risks in the Niger Delta region of Nigeria.

3. Materials and Methods

The study adopted the qualitative participatory research approach to provide in-depth understanding of participant’s environmental attitudes, values and behaviors and how these influences their perceptions of climate change. The study involved a survey of nine (9) communities including Bille, Bodo, Akala-Olu and Iguruta communities of Rivers state; Ogboinbiri, Obunagha and Polaku communities of Bayelsa state; and Kokodiagbene and Umutu communities of Delta state. Data collection involved the utilization of qualitative instruments such as the in-depth interviews, focus group discussions and personal observations of the researcher. In each community, 2 focus group discussions made up of 6 participants each were conducted separately for men and women. Participants of the focus group discussions are local fishermen and farmers who daily interact with the natural environment for their livelihoods. More so, a total of 18 key informant interviews were conducted across the communities with key





stakeholders such as community leaders, representatives of community based organizations and opinion leaders across the communities. Participants of interviews and focus group discussions were purposively selected based on their position in the community and their knowledge of the phenomenon under study. The interviews were recorded with a tape recorder with the consent of the participants and interviews were conducted at the convenience of the respondents while their rights to anonymity and confidentiality were ensured. Interview records were transcribed and this involved the rigor of the researcher reading and re-reading the transcripts to make meaning of the data. The content analysis technique was utilized to analyze the data which involved the researcher describing and interpreting the data to make meanings and culminating in identification of themes and categories of meanings relevant to the study objectives.

4. Results and Discussions

The study revealed several cultural drivers of climate change in the Niger Delta region; these are discussed according to the themes that emerged from the data.

4.1 Environmental Consumption Patterns

The Niger Delta people have a close affinity with their natural environment which serves as the major source of livelihood support system for the people. The predominant livelihood activities in the study communities is fishing and farming. These activities are supported by natural resources which the communities harness to meet their daily livelihood needs. The predominant environmental consumption pattern the study identified across the communities is the over-dependence on mangrove trees for fuel wood and other productive activities.

The mangrove forests as well as the coral reefs in the Niger Delta provide diverse ecological services for the pristine biodiversity in the region as well as human communities. This notwithstanding, human activities in the region has constituted a tremendous increase in mangrove deforestation in the region. The environmental consumption patterns associated with mangrove forest harvesting in the Niger Delta as identified by the study is addressed within the foregoing thematic considerations.

a. Fuel Wood Use for Domestic Energy

The study revealed that across the study communities, most respondents reported to depend on mangrove woods for their domestic energy needs. During the course of the field work, it was observed that almost every home across the study communities have an outdoor kitchen with a fire place set aside for the use of wood for cooking. The prevalence of fuel wood across the study communities was reiterated by the participants of the women focus group discussion in Iguruta community when they asserted thus:

“In this village as you can see almost every household have an outdoor kitchen where we prepare our daily meals with the firewood... The firewood is the major source of cooking fuel for us and we cannot do without it” FGD/Iguruta/Women/2018.

Similarly, participants of the male FGD in Bodo community held similar views when they buttressed that:



“In this our Niger Delta there is no community you would go to that they don’t use firewood... Our mothers and wives that is what they use in cooking our meals, drying our fishes we catch and do so many other things for us” FGD/Bodo/Men/2018.

The use of fire wood across the study communities indeed is an indication that the rate of mangrove forest harvesting is very high in the Niger Delta and this has severe implications for climate change mitigation and adaptation.



Plate 1: Fuel-wood as Preferred Source of Domestic Cooking Energy
Source: Fieldwork, 2018

More so, further investigations into the drivers of mangrove forest harvesting and fuel wood dependence across the study communities revealed that diverse cultural and socio-psychological factors account for this trend. Firstly, the study identified that respondents have a strong sense of attachment with their natural environment and this have influenced their perceptions and attitudes towards the environment. This connection with the environment is deeply rooted in their environmental world views and indigenous environmental knowledge systems which have been passed down from one generation to the other. The environment is viewed as the sole source of all man needs to survive hence the environmental consumption patterns predominant across the study communities have formed long held traditional values and norms which sustains these practices. Addressing this concern, a chief of Polaku community has this to say:

“The rivers, creeks and mangrove forests have predated our ancestors, they have been here before we all were born, the environment has given us fish to eat, water to drink, land to farm and the mangrove to harvest trees for our energy needs... It has become our way of life over the centuries and we cannot do away with the fuel wood because it is our culture”.

KII/Male/Community Chief/Polaku/2018

In the same vein, the women of Obunagha community in their FGD shared similar sentiments when they argued thus:



“The trees in the mangrove were provided by God for us to use, it is what our mothers used to cook for us to eat and do so many things, so we too are using them and our children will depend on them too... It is part of our culture to use the fire wood to cook”

FGD/Women/Obunagha/2018

Secondly, findings from the study revealed that most respondents across the study communities have a preference for food cooked with firewood as compared to those cooked with kerosene stove, gas or electric cooker. This attitude is hinged on their natural attachment to the environment; hence it is more natural to cook with fuel wood than any other source of energy. More so, it was discovered that participants perceive food cooked with fire wood to be sweeter and healthier. Expressing this view, participants of the women FGD in Umutu community argued thus:

“You know firewood is natural and when we cook with firewood the food always comes out sweeter and even healthier, it is even faster to cook with when compared to stove and gas. That is why we love cooking with firewood” FGD/Women/Umutu/2018

The preference for food cooked with firewood has overtime increasingly become a contributing factor to the pervasive extraction of mangrove forest trees in the study communities.

b. Production of Material Culture

The findings from the study also indicate that aside the use of mangrove trees for domestic energy use, it serves other cultural uses for the people. In fact the mangrove forests are of great cultural significance to the Niger Delta people as it serves as a source of materials and tools for the material culture of the Niger Delta people. Describing the significance of the mangrove trees in cultural production, a community chief in Bille community opined thus:

“The mangrove forest is the very essence of our existence; we derive our culture and identity from it... It provides not just the food we eat, but the materials we use to construct our homes, boats, masquerades and so on” KII/Male/Community Chief/Bille/2018.

Similarly, the women of Bodo community while addressing the benefits derivable from the mangrove forests in their daily livelihood activities argued thus:

“The mangrove tree is a wonder; it has many uses aside firewood. All the materials we need to weave our baskets, fish carts, and most domestic appliances are gotten from the mangrove tree. It has been a source of support for us and we cannot do without it” FGD/Women/Bodo/2018.





Plate 2: Mangrove Wood Processing for Livelihood Activities
Source: Fieldwork, 2018

In view of the foregoing, the cultural significance of the mangrove trees to the Niger Delta people is not far-fetched as it forms a basic aspect of their everyday life and culture. The demand for these forest resources are ever on the increase in the region thereby contributing to the fast rate of mangrove forest depletion in the Niger Delta. Some of the cultural and livelihood uses of the mangrove trees as identified by the participants of the study include:

- i. Provision of domestic energy
- ii. Production of livelihood assets
- iii. Production of fishing tools e.g. baskets, fish carts, fish processing materials
- iv. Construction of wooden boats
- v. Construction of houses
- vi. Production of herbs and traditional medicines
- vii. Production of sculptures and masquerades etc.

4.2 Changing Environmental Worldviews

The Niger Delta people possess indigenous environmental worldviews and perceptions about the natural environment which has largely influenced their nature of interaction with the environment. These indigenous environmental worldviews have been with the people for several centuries and it has been passed on from one generation to another. What is central to this indigenous worldview is the belief that plants and animals possess spirits and the places where these spirits reside such as the mangrove forests, rivers and creeks equally have spirits attached to them. In Kalabari ontology for example these are known “Owuamapu” i.e. water spirits who possess the water bodies and creeks. These water spirits are revered and feared by the people hence extraction and consumption of resources from such sacred mangrove forests are either prohibited or regulated. Expressing this view, a community Elder in Bille community posits:

“Our fore-fathers made us understand that owuamapu (water spirits) own and possess the mangrove forests, rivers and creeks... In such forests all the animals, fishes and trees are the



children of these spirits...Sometimes these spirits come out and play drums and dance in the forests” KII/Male/Community Elder/Bille/2018

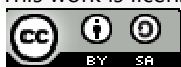
Such indigenous worldviews as expressed above are held across the study communities. The findings show that the sacredness attached to nature regulates the extractive and exploitative activities of the communities. This amounts to communities relying on several kinds of selective harvesting and spiritual interventions by means of appeasing the spirits before forest trees are fell in specific areas ascribed sacred. The chief of Kokodiagbene community describing this phenomenon posited thus:

“In the old days our people had fear and reverence for nature and the mangrove forests because spirits possess them. No one can just go into a forest to fell trees without first appeasing the spirits that own the forest... This practice really ensured that the forest resources are protected from indiscriminate exploitation” KII/Male /Community Chief/ Kokodiagbene /2018

The foregoing narrative suggests that long held indigenous environmental knowledge influences the perceptions and attitudes of communities towards their environment. The sacredness attached to the environment has engendered sustainable use of natural resources and environmental protection. This notwithstanding, these long held traditional environmental beliefs and values are gradually disappearing in recent times. Today, as result of widespread Christianization and modernization in the communities and increasing influence of foreign culture infiltrating into the communities as a result of the cultural revolution associated with the introduction of the oil and gas economy in the local communities, these long held beliefs are now generally referred to as fetish and devilish. People no longer believe in the existence of the spirits around their environments nor fear or revere them as it was in the old. These changes in the environmental worldviews have de-emphasized the sacredness of the environment and by implication undermined the traditional practices associated with natural resource extraction. Participants in the study strongly held this view across the study communities. In the male focus group discussion in Bille community participants held that:

“These days we no longer hold onto the things that our fore-fathers held dearly, our traditional belief systems have been destroyed by Christianity. People no longer believe in the potency of the power of the gods and spirits that own our forests and that is why you can see how the forests are been destroyed by our people”

From the foregoing, it is deducible that the spate of increasing environmental pollution and mangrove forest depletion in the region is largely associated with the changing environmental worldviews and environmental attitudes held by the people. The attitudes and behavior of the communities towards the environment are largely mediated by the predominant cultural values present in the communities. These cultural values influence the choice, spate and rate of individual and community utilization of natural resources especially harvesting of mangrove forest trees. These culturally inclined practices associated with environmental consumption in the region contribute significantly to mangrove forest depletion and by extension precipitating climate change impacts in the Niger Delta.





5. Conclusion

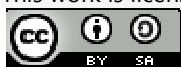
The problem of climate change has been attributed to human behavior and activities that emits Green House Gases in the atmosphere which the Niger Delta region is a significant contributor. It has been established that amongst other factors increasing deforestation in the region accounts for this problem. This study has been able to identify the cultural drivers of mangrove forest depletion and by extension climate change impacts as evident in the environmental consumption practices and changing environmental worldviews. In view of the foregoing, the study concludes that the attitudinal and behavioral dispositions of the people which are deep rooted in the predominant cultural values, norms and practices of the people will not only exacerbate climate change impacts in the region but would hinder the capacity for mitigation and adaptation.

6. Recommendations

Based on the findings of the study, it is recommended that behavioral change especially through the promotion of a culture of sustainable natural resource utilization should be advocated at community levels in mitigating climate change impacts in the Niger Delta. This can be achieved by mainstreaming mitigation and adaptation policies to address cultural and behavioral practices that intensify climate change and its impacts in the region.

7. References

- Allison, T.F., & Olanshile, A. (2016). Deforestation and Climate Change in the Niger Delta: Examining the role of energy poverty. *Wilberforce Journal of Social Sciences*, 1(1), 1-14
- Beck, U. (1992) *Risk Society: Towards a New Modernity*. Sage. London
- Beck, U. (1999) *World Risk Society*. Polity. Cambridge.
- Edoumiekumo, S.G., Tombofa, S.S., & Karimo, T.M. (2013). Multidimensional Energy Poverty in the South-South Geopolitical Zone of Nigeria. *Journal of Economics and Sustainable Development*. 4 (20), 96-103.
- Efe, S.I. (2010): Climate Change and Food Insecurity in Africa. Delta State Nigeria Experience. In Aydike, RNC; Madu, I.A and Ajero, CK (Eds). *Climate Change and the Nigerian Environment*. Conference Proceedings, Nsukka, Department of Geography, University of Nigeria, pp 105-126.
- Federal Ministry of Environment (2009): "Nigeria and Climate Change: Road to Cop15".
- Intergovernmental Panel on Climate Change (2007). Climate change: Impacts, adaptation and vulnerability. Contribution of working group II to the fourth assessment report of the Intergovernmental Panel on Climate Change Cambridge: Cambridge University Press.
- Giddens Anthony (2009): *Sociology*. Sixth Edition. Cambridge, Polity Press.
- Jack, Jackson T.C.B; Ogbanga, Mina Margaret and Odubo, Tonbra Robert (2018): Energy Poverty and Environmental Sustainability Challenges in Nigeria. *Ilorin Journal of Sociology*. Vol 10 (1) pp. 19-31.





Website: www.nduwjss.org.ng ISSN: 2504 – 9232 Special No. 1 (2019)

- Jack, Jackson T.C.B, and Zibima, T. (2018): Gas Flaring and the Energy Poverty Paradox in the Niger Delta. *Abuja Journal of Sociological Studies*, Vol. 5 no 2 (168-189), June 2018
- King Leslie and McCarthy Deborah (eds.) (2009): *Environmental Sociology: From Analysis To Action*. Second Edition. Rowman and Littlefield Publishers, Inc. New York.
- Nwona, H.A (2013). Climate Change: Causes, Effects and the Need for Science Education for Sustainable Development. *Mediterranean Journal of Social Sciences*. 4 (8), 35-41
- Odoemene, A. (2011). Social Consequences of Environmental Change in the Niger Delta of Nigeria in *Journal of Sustainable Development Vol. 4:2*
- Polgreen, L. (2007). Nigerian Gangs turn their Guns on their Own. *International Herald Tribune*, Online Edition Available at: <http://www.iht.com/bin/printfriendly.php?id=8252160>.
- Raimi, L., Towobola, W.L., & Madueke, L.I. (2013). Redressing the Energy Challenge of Gas Flaring in Nigeria: The MEEs Approach. *Journal of Sustainable Development Studies*, 2(2), 242-257.
- Raimi, L., & Jack, Jackson T.C.B (2017). How Does Climate Change Pose Human Security Risks in the Niger Delta? Implication for Policy Makers. *Maiduguri Journal of Arts & Social Sciences* | Vol. 14. 80-90.
- United Nations Framework Convention on Climate Change. (1992). Accessed online September, 3, 2016, from <http://unfccc.int/resource/docs/convkp/conveng.pdf>

