

## CLIMATE CHANGE AND WOMEN'S VULNERABILITY IN NIGERIA: THE VIEW THROUGH GENDER LENS

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### *Abstract*

*Climate change affects male and female differently just as their responses to the impacts of climate change also do not come in the same way. Climate change in the form of extreme weather, floods, droughts and food insecurity affect men and women disproportionately. Nigerian women more than any group bear the harsh gendered impacts of climate change. Women and men are shaped by the societies in which they live, and societal expectations affect the roles both women and men play in the political, economic, and social spheres. This means that women and men often do different work, have differentiated access to resources and information, and experience natural disasters differently.*

*This paper attempts a critical analysis of women's vulnerability to climate change in Nigeria, using*

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*gender lens. We argue that gender considerations influence women's adaptation and mitigation to climate change. Consequently, policy to address the problem of women and climate change must take gender analysis of this issue into consideration. The paper therefore recommends gender-related approach such as incorporating gender-based differences in climate change national policies and programmes.*

## **Introduction**

**C**limate change is a global phenomenon, which impacts are already being experienced on a human level. It is one of the most fundamental challenging issue facing the world in the 21<sup>st</sup> century. It affects lives, health and the general wellbeing of millions of the world's population, especially those in the developing countries where the world's poorest reside (Adejumobi, Ojebiyi, & Adesina-Adebayo, 2013). The effects of climate change pose widespread implications for the earth's ecosystem and human development across all sectors of the society. From the exacerbation of poverty, to the breakdown of infrastructure, to the loss of environmental, political, economic and social security, the impacts of climate change are extensive. These effects are taking place in the context of gender relations as well as differences in ethnicity, age and social status.

The impact of climate change differs by regions, age, social groups and sex. Women seem to be the most affected by the adverse effects of climate change as they constitute the largest percentage of the world's poorest people. Children and youth – especially girls-and elderly women, are also vulnerable (Brody, Demetriades & Esplen 2008).

Climate change affects male and female differently, just as their responses to the impacts of climate change do not come in the same way. Basically, the differing roles of men and women in the society, access to resources, knowledge, level of education and training, gives them different opportunities and abilities to adapt and mitigate the effects of climate change (Huyers, 2012). Because climate change is not only an environmental issue but also a social justice issue, the call for increased attention for the vulnerable

groups such as women, youth and children is on the increase (Levy & Patz, 2015).

It is recognized that it is those who are already the most vulnerable and marginalized that experienced the greatest impacts and are in the greatest need of adaptation strategies in the face of shifts in weather patterns and resulting environmental phenomena (UNFCCC 20007 p.34). At the same time, it is the vulnerable and marginalized who have the least capacity or opportunity to prepare for the impacts of a changing climate or to participate in negotiations on mitigation (Huyers, 2012). Women happen to be in these two categories. They are more vulnerable to the impacts of climate change, at the same time they have limited capacity to prepare for the effects of climate change. It is a double jeopardy for women. Equally more important is the inability of women to participate in negotiations on mitigation. This is because when it comes to placement in political decision-making positions in Nigeria, women continue to face discrimination and marginalization which limits their political relevance and prevents them from contributing to climate-related planning, policy-making and implementation.

This paper analyses women's vulnerability to climate change in Nigeria using gender lens. It uses descriptive and critical analysis to interrogate the impact of climate change on women. On the basis of this analysis, the paper suggests that policies and climate change-related programmes of government must take gender implications of the issue into consideration.

### **Conceptualising Climate Change and Gender**

Climate change has been conceptualised by the United Nations Framework Convention on Climate Change (UNFCCC) as a change which is attributed directly or indirectly to human activities that alters the composition of the global atmosphere over a long period of time. It basically refers to any change in the climate overtime resulting from natural variations as a result of human activity (Mccarthy, 2012).

The Inter-governmental Panel on Climate Change (IPCC, 2014) defined climate change as a change or the state of the climate that can be identified

through the use of statistical tests to study variations that persists over a long period of time. Basically, they use statistical tools and tests to find out how climate change influences physical and biological systems. Climate change is caused by Greenhouse gases emissions resulting since the industrial revolution, global warming resulting from increased volcanic eruptions in recent times, and human contributions with the increased dependence on fossil fuels and the release of  $\text{CO}_2$  and methane into the atmosphere often (Kaddo 2016, p.4). Climate change is the result of changes in weather patterns resulting from an increase in the earth's average temperature caused by increases in greenhouse gases in the earth's atmosphere. This has brought significant differences in weather patterns over an extended period of time thereby resulting in an increase in global temperatures. These gases soak up heat from the sun but instead of the heat leaving the earth's atmosphere, some of it is trapped, making the earth warmer. This is why climate change is also known as global warming (Haas 2009, p.4).

It has become a global issue in recent time as increased industrialization in developed countries has led to the introduction of large quantities of Greenhouse gases, carbon IV oxide ( $\text{CO}_2$ ) and Methane, ( $\text{CH}_4$ ) into the atmosphere. These have on the long run, caused droughts, floods, cyclones, intense storms, and environmental stress (Ogbo, Ndubuisi & Ukpere 2013, p.3).

Basically climate change affects people across the globe, but it affects some more than others. The degree to which people are affected by climate change is a function of their status, gender, poverty, power and access and control of land resources (UNDP, 2013).

The link between climate change and gender can be better explained when we interrogate gender roles and the responsibilities associated with them. As observed earlier, climate change affects men and women differently due to the different social and economic roles they have been ascribed by society. Hence, the need to examine the concept of gender and the impacts of climate change on the female gender.

Gender is defined as the differences in socially constructed roles and opportunities associated with being a woman or a man and the interactions between being women and men (Agwu & Okhimamhe, 2009). It refers not only to male or female, but to masculine or feminine designations. Gender describes the characteristics associated with being male or female. These attributes, opportunities and relationships are socially constructed and are learned behaviour, influenced not only by biological sex, but predominantly by the society we live in (UNWomen, 2013). Inequality between the sexes is not due to biological factors, but is determined by the learnt, unequal and inequitable treatment socially accorded women. The overarching theme in gender and climate change research is that climate change is not gender-neutral but has gender-differentiated causes and effects (Dankleman, 2002). The female gender especially those in the developing countries are more vulnerable to climate change as they depend largely on local natural resources for survival. Women charged with securing water, food and fuel for cooking and heating face the greatest challenges. Women experience unequal access to resources and decision-making processes, with limited mobility in rural areas (UNDP 2013, p.2).

The conceptualisation of gender and its link to climate change is made more comprehensible by the United Nations Development Programme:

Gender refers to socially constructed roles, responsibilities and opportunities associated with men and women, as well as hidden power structures that govern the relationships between them. Inequality between the sexes is not due to biological factors, but is determined by the learnt, unequal and inequitable treatment socially accorded to women. In response, the use of a 'gender lens' can help people to better understand social processes, thereby ensuring that adaptation projects consider gendered differences and do not inadvertently perpetuate inequality (UNDP 2010, pp.5-6).

According to Bathge (2010), the gender dimension in climate change comprises primarily two aspects: women, particularly in developing countries, are more vulnerable than men to the consequences of climate

change (higher vulnerability); second, men and women play different roles in dealing with climate change, whereby women are major actors in several areas of mitigation and adaptation (agents of change).

Women, considered as second class citizens in most developing nations, are majorly at the receiving ends of the adverse effects of climate change (UNDP Global Gender and Climate Alliance (GGCA), 2011). The patriarchal nature of the society ensures that the female gender is more often than not relegated to the background of politics and decisions-making (Okeke, 1999). This unfair relegation of women in decision-making positions enhances their vulnerability to adverse effects of climate change. For instance rural women especially in Nigeria have less access to productive resources, services and opportunities such as lands, livestock, finance and education (FAO, 2015).

Women activity in food production, community management, natural-resource and biodiversity management, education of children and family care place them at the centre of development. They are the collectors of fuel and water for their families, and users of energy to prepare food and care for the sick. Women engage substantially in agricultural production, both paid and unpaid. Thus, recognizing and supporting the activities and needs of women especially on the issues of climate change is essential for socio-economic development (UNCTAD, 2011).

Report from the World Conservation Union/Women's Environment and Development Organization (IUCN/WEDO) shows that, women and children are 14 times more likely to die than men during disasters (IUCN/WEDO 2007). Women and girls are particularly vulnerable to climate change due to a combination of factors which include differences in socialisation where girls are not equipped with the same skills as their brothers, such as swimming and tree climbing that may help them survive disastrous situations like flooding. For example, it has been documented that women in Bangladesh did not leave their houses during floods due to cultural constraints on female mobility and those who did were unable to swim in the flood waters (Brody, Demetriades, & Esplen, 2008).

According to Ugaigbe and Eweka (2014, p.49), evidence from the 2012 flood disasters in five states in Nigeria including Edo, Delta, Anambra, Kogi and Bayelsa shows that women were more adversely affected. This is because the onerous tasks of providing and protecting the children fell squarely on the women. This role became more hazardous because they have less capacity to move from the path of oncoming hazardous events and disasters before the events or disaster strike. The narratives of the differences in the way men and women experience climate change necessitates the call for targeted policies to protect the vulnerable in the society.

### **Theoretical Orientation: Feminist Critical Discourse Analysis**

This paper adopts the Feminist Critical Discourse Analysis (FCDA) as its theoretical stand point. Lazar (2005) one of the major proponents of Feminist Critical Discourse Analysis situates it at the nexus of critical discourse studies and feminist scholarship. Lazar (2005b, p.1) argues that feminist CDA has the potential to advance a rich and nuanced understanding of the complex workings of power and ideology in discourse in sustaining a (hierarchically) gendered social order.

It is important to note firstly that Feminist theory is a movement that seeks to define, establish and defend equal political, economic and social rights for women in the society. It basically aims to understand the nature of gender inequality by examining women's social roles and lived experience (Daly & Chesney-lind, 1988).

The Critical Discourse Analysis is known for its political stance and is concerned with addressing all forms of inequality and social injustice (Lazar, 2005). It is an approach that seeks to uncover power relations between groups in the society by identifying those groups that oppress, control and produce inequalities in the society (Huynh 2017, p.13).

The CDA posits that problems in the society are identified by those in power that is, the policy makers and solutions to these problems are also proffered by them. Bacchi and Evelyn (2010) are of the opinion that since the solution to problems depends on the problem itself, problem

identification is very key in the context of climate change. As the policy makers involved in making policies pertaining to climate change in developing are mostly men, they represent largely the interests of the male folk, leaving out the needs and interest of the women who are the most affected by the impacts of climate change. This is why it has been argued that although there is enough evidence to show that women are at the centre of sustainable development, yet mainstreaming gender issues into climate change and sustainable development policies and projects is happening slowly and in a piecemeal fashion, with varying degrees of success (BNRCC, 2011).

The feminist CDA has a potential of aiding our understanding of how hegemonic power relations and ideology in climate change policies can reproduce unequal gender hierarchies and inequality. It is also useful in examining the effectiveness or otherwise of policies made to promote climate change adaptation and mitigation. Due to the likely 'uneven impacts of climate change on women' therefore, there is a need for critical feminist studies that describe and explain such gender asymmetries.

### **Viewing Climate Change through Gender Lens**

Climate change significantly affects vulnerable groups (including women) because of a variety of factors, including low adaptive capacity, limited resources, and poverty. Disparities in the effect of climate change on women and men exist because of the social position of women in the family and the community, and because climate change affects factors that are mostly essential to women's means of subsistence – food, water and energy supply (Alexander, Nabalamba & Mubila, 2011). Climate change has specific gender characteristics emanating from women's social roles, discrimination and poverty (Kisauzi cited in Constable 2015, p.11). It exacerbates women's vulnerability: Poor women's limited access to resources, restricted rights, limited mobility and muted voice in shaping decisions make them highly vulnerable to climate change. Climate change therefore magnifies existing patterns of inequality, including gender inequality (Seymour 2013, p.5).

Despite the international community's increasing acknowledgement of the differential experiences and skills women and men bring to development and environmental sustainability efforts, women still have lesser economic, political and legal clout and are hence less able to cope with and are more exposed to—the adverse effects of the changing climate (GGCA, 2013). Table 1 below shows how gender shapes men and women differential experience of climate change.

	Women	Men	Link to climate change vulnerability
<b>Roles</b>	Stay home to care for children and elderly and sick members of the family	Can migrate to access economic opportunities	Their ability to migrate in search of economic opportunities makes it easier for men to deal with crisis, and may result in benefits for the family as a whole. However male migration often increases women's workload, as they are left behind to manage the household in addition to usual tasks. It can also increase women's exposure to risks such as gender based violence and HIV infection
	Produce household crops and livestock products	Produce market crops and livestock products	Both crops and livestock are affected by climate change, with profound consequences for household food security. Men often claim safer/ more fertile land for growing market-oriented crops leaving women to grow household crops on less fertile land
	Are responsible for food storage and preparation	Are responsible for selling (valuable) produce and livestock	Climate change has implications for food preparation and storage (water for food preparation and the vulnerability of food stores to extreme events such as cyclones and floods). Harvests may be reduced or destroyed by changes in weather, floods or droughts. This affects market prices and the availability of surplus to sell –placing pressure on both men and women to identify other sources of income and reduce major expenditure (e.g. school fees). In times of shortage, women are often expected to feed other members of the family before themselves.
<b>Resources</b>	Have lower incomes and more likely to be economically dependent	Have higher incomes and are more likely to own land and other assets	Men typically have more money and other assets than women. Men's savings provide a buffer during tough times and along with other assets make it easier for them to invest in alternative livelihoods.
	Have less access to education and information	Have more access to education and information	Managing climate-related risks to agricultural production requires new information, skills and technologies such as seasonal forecasts, risk analysis and water saving agricultural practices. Men are more likely to have access to these resources, the knowledge and the power to use them, and are therefore better equipped to adapt. Women often have traditional knowledge that can inform adaptation efforts. Old and new information can be important in adapting.

Power	Have less power over family finances and other assets	Have more power over family finances and other assets	Without the power to decide on family resources and finances women's ability to manage risks, by for example, diversifying crops, storing food or seeds or savings, is limited.
	Have limited engagement in community politics	Have greater involvement in community politics and decision making	Men are likely to have more influence over local governance-promoting policies and programmes than women and may not support women's rights and priorities.
	Face many cultural restrictions/ prohibitions on mobility	Face few cultural restrictions on mobility	Mobility is a key factor in accessing information and services. It is also critical for escaping the danger posed by extreme weather conditions. Women are at high risk from such events, but men in heroic roles may also be at risk.

Adapted from Annecke (n.d) Gender and Climate Change Adaptation

According to United Nations Development Programme (2013), a number of factors account for the discrepancy between women's and men's differentiated exposure and vulnerability to climate change risks. First, gender-based differences in time use, access to assets and credit and treatment by markets and formal institutions (including the legal and regulatory framework) constrain women's opportunities. As a result, there is a global gender gap in earnings and productivity- women make between 30 and 80 percent of what men earn annually (ibid, p.2). The cumulative effect of poverty and social, economic and political barriers is that women are often disadvantaged in coping with the adverse impacts of the changing climate. Second, compared to men, women face huge challenges in accessing all levels of policy and decision-making processes. This renders them less able to influence policies, programmes and decisions that impact their lives. Third, socio-cultural norms can limit women from acquiring the information and skills necessary to escape or avoid hazards (e.g. swimming and climbing trees to escape rising water levels). Similarly, dress codes imposed on women can restrict their mobility in times of disaster, as can their responsibility for small children who cannot swim or run. Such social influences render women disproportionately vulnerable to disasters and related negative effects of climate change.

Fourth, a lack of sex disaggregated data in all sectors (e.g. livelihoods, disasters' preparedness, protection of environment, health and well-being) often leads to an underestimation of women's roles and contribution (UNDP 2013, pp.3-4). A gender blind climate change policy which does not take into consideration the gender differentiated roles of both men and women in the society may be the outcome of this situation. Such policies can have unintended effect of actually increasing gender-based vulnerability.

A report by Women's Environmental Network (2010) examines the distinct impacts of climate change on women in both developed and developing countries, women's contribution to climate change, and their involvement in decision making about tackling climate change.

The report finds that, because of their increased likelihood of living in poverty, and their gendered social roles, women are more likely than men to:

- die in climate change-related disasters, and suffer from increased workload, loss of income, health problems, and violence and harassment in the aftermath of such events;
- be displaced, or encounter problems when other (usually male) family members migrate for economic reasons;
- experience increased burden of water and fuel collection, and resulting health problems, due to increased incidence of drought or other changes in climate;
- feel the effects of rising food prices most acutely, and be the first to suffer during food shortages;
- suffer exacerbated health inequalities;
- suffer from violence, including sexual violence, in resource conflicts;
- be expected to, and need to, adapt to the effects of climate change, increasing their workload;
- suffer as a result of intended solutions to the problem of climate change, such as forestry projects and biofuel production.

In the specific context of Nigeria, women are more vulnerable to the effects of climate change than men. Differences in how climate change impacts women and men in Nigeria are rooted in a variety of historical, cultural

and social reasons. The household division of labour between women and men is not equal, and there is a 'feminization' of poverty due to gender inequalities in access to resources such as land, credit and information technology (BNRCC 2011, p.1).

Two reported cases in Cross River States in Nigeria adapted from BRNCC (2011) exemplify the nature and degree of the impacts of climate change on Nigerian women.

**Case study 1: Climate change and food insecurity: the case of the Wula Ekumpuo community in Cross River State.** A need assessment conducted in this community showed that food shortage and water scarcity during the dry season are the major impacts resulting, in part, from the climate change. Other related problems are loss of animal and plant species due to deforestation as people continue to harvest firewood for domestic use and sale. Food shortage in Wula is generally attributed to poor soil fertility, which is made worse by changing and unpredictable rainfall patterns. As an adaptation strategy, people resorted to growing cassava as a staple food, instead of yam, since cassava grows better in infertile soils than yam. People also resorted to buying imported foods, such as rice, 'indomie' (instant noodles), spaghetti and other 'exotic' food items from outside the community. The effect of this dependency on cassava and imported foods is lack of adequate nutrition for children.

Water scarcity put additional burden on women and children in Wula since they are the ones primarily involved in water collection. The reduced nutritional status of the diet together with the increase burden of water collection in the community means that the women and children are very vulnerable to further changes in resource availability due to climate change.

**Case study 2: Renewed hope for the women of Akwa Esuk Eyamba (Coastal Line Initiative (COLIN) Calabar).**

The Akwa Esuk Eyamba community in Akpabuyo Local Government Area (LGA) of Cross River State is a coastal community where fishing is the main livelihood for both men and women. However, the viability of this livelihood is in decline as a result of rapid depletion of the fishery due to

several changes, some of which are climate change related. As reported by BRNCC (2011), a local organisation, Coastal Line Initiative (COLIN), works with this community and identified women and children as the most affected by changes in the fishery. For generations, the men have done the fishing while the women take the catch to the market. Now this is changing because the catch is so low, compared to how it was some years ago. One reason given for the reduced catch is the increase of sea surges into the community estuaries. Salt water intrusion into a fresh water ecosystem has adverse effects on the aquatic biodiversity. Other reasons which are not related to climate change include increased fishing pressure with higher local population growth and unsustainable fishing methods. The women and children are most vulnerable to this situation because women depend almost entirely on fish as a means of income to support themselves and their family basic needs. Some farming is also done but the viability of agriculture has also affected by flooding due to sea level rise and storm surges along the coast. In terms of food security, fish is traditionally the main source of protein so, in addition to loss of an important livelihood, the health of women and children are also compromised. The men are not as vulnerable since they tend to migrate to neighbouring communities away from the coast to engage in hired farm labour, palm fruit harvesting, firewood marketing (logging) as well as delivering fresh water with their boats to distant fishing communities to sell. The women have no such alternatives and experience a double burden when the men leave as they are left to manage the household challenges alone.

After extensive consultation with community members, a decision was taken to start a fish farm as an alternative means of livelihood. The women contributed their local knowledge in choosing the site for the pond by detecting flood-prone areas. A committee made up of men and women leaders in the community was established to manage the operations and proceeds from the fish farm. It is expected that the women will engage actively in the purchase and retailing of the fish, which they will buy from the men who fish from the pond.

The account of the two cases reveals the gender-specific vulnerabilities and responses to climate change. It also reveals that women in Nigeria

have long played and continue to play an important role in the economic and social development of the country.

Generally, some of the factors that have increased the vulnerability of women in Nigeria include: limited access to resources, dependence on natural resources and sexual division of labour, lack of education and access to information, limited mobility among many others. These call for the need for gender sensitive policy response to address the effects of climate change on women and how they can be empowered to adapt to these changes.

### **Conclusion**

Climate change affects everyone, but not equally. Women bear severe gendered impacts of climate change. This is because of the different roles played by men and women in the society, coupled with historical, cultural and social reasons that enforce disparities between men and women making the women unable to cope with climatic changes. It becomes an imperative that in addressing the issues of climate change, the differentials in the roles played and the needs of both men and women be taken into consideration. Women's experience and vulnerabilities to climate change is made worse by lack of policies that are sensitive to their needs. It is widely acknowledged that approaches and policy development to address climate change have focused primarily on technical and scientific measures – with less regard for the way in which political decisions and economic environments influence the response of women and men, or the social implications on the lives of women and men (BRNCC, 2011). Policy re-direction towards addressing this issue is crucial and requires the participation of women and gender experts in the climate process for developing just, effective and efficient measures of climate protection. Furthermore, women's experiences of the impacts of climate change in different communities, knowledge and skills deployed for adaptation will be relevant for climate-related policies and therefore making climate change responses more effective.

We therefore recommend that the traditional mechanisms (as demonstrated in one of the cases for example) often devised by women, be taken into consideration in seeking for ways of adaptation and mitigation of climate

change. Women (based on their experience) should be at the centre of framing solutions suitable to their realities, so that policies made will not increase the inequalities and marginalisation suffered by women.

Specifically, Nigerian government should be encouraged to incorporate gender-based differences into the design of her climate change policies. There is also the need to empower women through changes in decision making and control of resources and consequently, incorporating them in the planning and implementation of sustainable natural resources management practice that will enhance their adaptation capacity.

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