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**CLIMATE CHANGE, GLOBAL WARMING AND SOCIAL CHALLENGES IN  
CONTEMPORARY WORLD: AFRICA'S PERSPECTIVE**

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**Abstract**

*That Africa, like all other continents within the global family contributes to climate change and global warming is no longer in doubt, but how to fill the gap between Africa and the developed world on the contextual understanding of the causes of climate change has been a Jinx that the international community has not taken out a serious thought upon. For this reason, Africa is often schemed out of most global planning's on how to address this 21<sup>st</sup> century threat to humanity. This paper stressed the need to explore Africa's cultural contextual understanding of the causes and implication of climate change because of the strategic place Africa occupies in the causes and solution to this scourge; insisting that an over-dependence upon foreign data could create psychological distance on the risk perception of climate change between Africa and the more developed continents of the world. The significance of carrying Africa along is stressed by the fact that where, in the past, Africa's perception of global challenges were sidelined, the rest of international community was known to catch cold from the sneezing effect of Africa in form of some endemic diseases, poverty, drought and flood. Thus, the paper recommended that to ensure impactful utility value of world effort at tackling climate change, such effort must resonate within the framework of cultural and social understanding of all stakeholders because, to do otherwise may be counterproductive.*

*Key Words: Climate Change, Global Warming, Social Challenges and Africa's Perspective*

**Introduction**

The odds against the world efforts in tackling climate change and global warming are varied but central to these odds is the deepening lack of contextual understanding of the risk-perception by various parts of the world (Akerlof, 2019) For instance, the climate risk perception of the third world especially within African Continent, is a far cry from the understanding of this phenomenal development in the more developed economy. In an economically challenged Continent as in Africa, with all the attendant odds, the quest for

survival along with cultural and religious indices create such psychological distance between the *ought* and the *is*, thus causing irreconcilable hick-ups in the effort to arrest the ugly trend arising from environmental fall-outs of climate change that has become the inevitable reality of the contemporary world (Akerlof, 2019).

One approach that drives a wedge between Africa and vision of the developed world each time global solution is sought regarding any scourge is the superficial understanding of the cultural context in which Africa approaches virtually every matter or better still, an over-reliance upon foreign data, leading to the assumption that African context of such scourge is inconsequential. Such assumption with consequential failure has always been the result of failure to appreciate the fact that every measure towards global result has always been known to create impactful utility value when it resonates with, and within the framework of societal values of each people (Mark, 2019). For this reason, this paper attempts to redirect global attention to African perception of climate change, which has caused remarkable changes in form of global warming, flood disaster, various degrees of violent storms and Tsunamis, in several Countries of the world and in African situation, increased poverty and lack, with other forms of environmental degradations during this century.

The significance of this paper is borne out by the fact that the world having evolved into a global village, failure to carry African Continent along in the world effort to tackle climate change and its fall-out could be counter-productive because, when Africa sneezes for poverty or some other endemic disease and crisis, the world has been known to catch cold. It is expected that from this paper, the stakeholders in climate change movement will resort to designing climate services that could readily cater for the silence of climate services that could readily meet the yearnings of African Continent. The paper is equally intended to sensitize some form of international and inter-governmental measures, resulting in the development of community-specific adaptation strategies that may address contemporary climate change challenges in Nigeria, and Africa in the long run.

### **Causes of Climate Change**

Change in the amount energy emitted by the sun is a primary cause of climate change (Rankoana, 2018). The face of the sun is said to exhibit dark patches of “sun-spots” varying with a fairly regular cycle around 11 years on time scale of 80 years and longer, with long term fluctuations, linked to climate change, all the same. Thus, the warming of the C20th was largely linked to sun-spot activities in the length of sun-spot cycle because, as the stream of solar energy in form of heat and light reaches the planet, the character of the earth’s orbit and its rotation plays a major role in causing long term climate change (Rankoana, 2018).

The cumulative workings therefore can be explained in form of the stream of solar energy reaching the earth’s atmosphere so that the constituents of the atmosphere, including gases and particles, clouds and pollution interfering with the energy stream reflecting some heat and light to space release a proportion of its trapping (Masih, 2014). This makes the industrialized world more culpable for recent global warming than other Nations.

Explosive volcanic eruption has also been projected as a contributor to factors that result in pollution that change the warmth level of the atmosphere, where such eruptions inject

large quantities of dust, gas and sulfur dioxide into the atmosphere. (Akerlof, 2019) Here, whereas volcanic debris in the lower atmosphere may fall or wash out by rain fall within days, the veil of pollutions in the upper atmosphere which is usually above the weather may remain for several years and gradually, spreading to cover larger atmospheric surface of the globe (Akerlof, 2019).

Due to the variation in scientific findings on the most impactful cause of global warming or climate change, emphasis began to shift elsewhere, towards the end of the C20<sup>th</sup> to the possibility that uptake of methane, carbon dioxide and other green-house gases can be a major contributor to climate change (Hoover, 2019). Ordinarily, the amount of heat re-emitted and eventually lost to space must rank the amount gained from the sun if the temperature of the planet is to remain constant but once that energy reaches the earth surface and it is absorbed, it warms the land and ocean surfaces so that it is re – emitted to de-balance the amount of heat lost to the space, against the amount gained from the sun, thus causing global warming (Hoover, 2019).

Quite unfortunately, humanity through energy generation for all forms of industrial activities and change in land use and other processes has produced substantial increase in the amount of green-house gases in the atmosphere, thus enhancing the natural green-house effects leading eventually to a major shift in global climate. This, in the opinion of this paper accounts for why the heavily industrialized countries must bear the cost of global warming especially in Africa where little is done to aggravate the hurtful consequences of global warming, in this century. In this regard, the world seems to be gradually mobilizing effort at checking for possible reduction of global emission in the atmosphere, as a measure towards the rapid deterioration of climate situation of the earth, with far-reaching results. In Africa, the result of climate change is overwhelming but with the world obsession on the green house factor in the C21<sup>st</sup> the question is as to the level of culpability of Africa in bringing the world to the present State of horror and then, the place of African continent in the present world effort against climate change.

### **Man -made Causes of Climate Change**

As earlier mentioned, human activities substantially contribute to climate change and earth temperature through fusible fuel burning, decimation of rain forest and farm stocks, thus adding enormous amount of green-house gasses beyond the natural expectation (Kelly, 2008). Indeed, some gasses in the atmosphere may act as trapping membrane to the sun's heat to stop it from leaking back into the surface. These gases, some of whose concentration in the atmosphere are enhanced by human activities include:

- a) Carbon dioxide (Co<sub>2</sub>)
- b) Methane (CH<sub>4</sub>)
- c) Nitrous Oxide; and
- d) Fluorinated gases

With these are other causes for rising emissions which include:

- I. Burning coal
- II. Oil and gases, producing carbon dioxide and nitrous Oxide

- III. Deforestation by which trees that would have helped to regulate the climate by absorbing  $\text{CO}_2$  from the atmosphere are indiscriminately cut down for other human use and developmental activities
- IV. Increasing livestock farming, by which livestock's provide methane in the process of digesting foods
- V. Fertilizer containing nitrogen, resulting in nitrous oxide emissions
- VI. Fluorinated gases that provide up to 23,000 times warming effects than  $\text{CO}_2$

From these human activities which are more prevalent and deregulated in Africa, it has been found now that the current global average temperature is  $0.85^\circ\text{C}$  higher than it was, in the late C19th could justify the conclusion that an increase of  $2^\circ\text{C}$  in the earth temperature in pre-industrial times may be responsible for the high risk that could result in catastrophic global warming in the nearest future (Umair, 2018). The import of this is that even if the world combats causes of global warming in developed economy, not much may be achieved if Africa is left out of the equation. This is because of lack of implication of causes of global warming so of which are economically, socially and agriculturally justified by various indigenous communities within African continent.

### **Global Consequences**

Global warming resulting from climate change constitutes one of the gravest risk to humanity in the present dispensation and to the generation yet to come, with clearly visible impact. The chemistry of the atmosphere is changing fast with several consequences upon the humans, animals, birds and other habitats of the earth. In the Antarctica, the shrinking sea has reduced population of the Adelie penguin by 33% in 25 years; in the Canadian arctic, the Peary Caribon population has decreased from 24,000 in 1961 to 1,100 in 1997 and far below a thousand in just ten years after, due to heavy rainfall (Gordon, 1986) Thus, it is imminent that livestock's in the developing countries with less insulating finances with epileptic democratic dividends are trice at risk than industrialized countries.(Umar & Riphah, 2018) No wonder, climate change has been said to be responsible for drought, famine, flood and consequential level of lack and poverty in the last two decades in Africa. (Ranjuma, 2012) Obviously, a slight rise in temperature even by  $1^\circ\text{C}$  could have a lot of adverse effect on these sea levels thus causing disastrous effect in coastal cities of the world and desertification in desert-prone countries of the world. (Rankoana, 2018). The damage done to the overall climate condition and property destruction by wild fire in Australia from December 2019, till January 2020, speak volumes in this behalf.

### **Implications for Africa**

Implications of climate change for Africa appears to be more disastrous for several social, political and physical reasons. Africa, no doubt has always been an economically challenged Continent, arising from its gross illiteracy and uncivilized populace for which the West took advantage of the people in the slave trade dispensation. Till date, most African population remains agrarian thus explaining the risk that the immediate long term impacts of climate change could expose Africa to. Unlike the developed countries, Africa has no pro- active program against bush burning because it is regarded as a necessary pre-cursor to vast farming activities once the rain drops. Beyond this is the fact that the herders burn bush to quicken

growth of greener pastures for their animals, which practice has been the cause of several communal clashes in various African communities, in the last few decades.

Akin to this is the soil degradation resulting from increased volume of rainfall as another fall-out of global warming or climate change. Such level of rainfall has not only destroyed farmlands but subsistence and perennial crops thus enlarging the sphere of the poor population in various African countries (Obinna, 2017). Quite unfortunately however, Inhabitants of coastal and delta regions of various African countries have been hardest hit by such situation but the irony of the other side of climate change has been the resultant drought and desertification for which Africa has had her fair share over the years (Obinna, 2017). In Nigeria, where desertification and flooding were projected as northern and southern phenomenon, respectively in the past, such discrimination has become a thing of the past in the last decade because, the North is now as equally susceptible to flooding as equally as Southern states where the term "internally displaced people" (IDP) has now become as common as any common product in the market in all states and local councils throughout the country

Quite unfortunately, the world plan to contain global warming or climate change has never taken Africa's idiosyncratic situation into consideration thus leaving Africa as a global orphan that counts only where the developed countries must take census of their colonies and surrogates. Indeed, a lot of the times, the developed countries are more disposed to taking decisions on Africa's challenges without adequate data in that behalf.

### **Africa's Peculiarities**

In the last decade, the world's consciousness of the daunting consequences of climate change has resulted in several conferences at various continental and intercontinental levels (Tom McClintock, 2019). But decisions reached in some of these conferences were not only half-hearted but non-binding. Seeing the armchair attitude of the developed world towards these catastrophic phenomena, several non-governmental organizations have taken up the challenges of mobilizing awareness on it (ICCCAD, 2019). More recently six million people joined in the awareness strike to draw world attention to the need to adopt a more pro-active measure against this common enemy of humanity that nobody seems to be taking seriously (Taylor and Watts, 2019). In reaction to these movements, the world now seems to wake up from its slumber as world leaders now pledge their billions in support of measures to combat climate change. (Justine, 2019)

However, like other global measures on several issues, Africa is usually left out of the center of the master-plan, resulting in loss of impact of such plans on African continent. As if to show some benevolence to African nations, some of the world leaders project how much should be allocated to environmental degradation in African Countries, without putting into consideration the peculiarities of African situation (Justine, 2019). Such peculiarities include the issue of corruption, lack of in-depth risk perception on the issue of global warming, including traditional and religious factors that speak volumes about African's reaction to almost everything under the sun. Needless to say these factors have come to stay because of lack of leadership on issues like this in Africa where the ghost of each country's colonial powers that scavenged on each country always try to influence such decisions even if they lack the zest for impactful result.

In the Nigerian setting for example, workers of government agencies on internally displaced persons either for flood or communal clashes are known to feed fat on the reliefs

funds while relief materials never reach the victims themselves. Yet, government at all levels would rather look away from such corrupt practices because operators are supporters, facilitators and cronies of the party in power. In the face of such impunity, allocation of funds to African nations towards combating the fall-out of climate change without defining the framework for spending such funds or follow-up plan is only a disservice to efforts of international community against this greatest enemy of this generation of humanity.

Beyond this is the need to raise grass-root task force that could raise the tempo of African awareness on the fall-out of global warming. This is because of African penchants to explain every phenomenon to nature without more. As an incurably religious Continent with entrenched traditional beliefs, the major tide against efforts at combating climate change is how to change the mind-set of the people. While the West frowns at bush burning because of its effect on global warming but in Africa, it is more of a norm, a part and parcel of preparing land for farming in each season. Very few African governments invest in serious irrigation farming and where they give it a thought at all, they clear all forests around flowing streams, exposing these natural waters to unfriendly weather that dry them up from the source (Obinna, 2017).

Beyond this is the fact that in African Countries, where government policies are crafted to favour ethnic groups of the policy makers, the issue of environmental degradation is only an issue of lip-service. In Nigeria for example, inability of government to take a forthright measure against cattle herders who drive their animals to pollute the land and creating flood channels; and government's resolve to allocate land of indigenous population to the Fulani herders who burn such land to enhance their grazing exercise is such a hindrance to any plan to combat climate change and its fall-out in Nigeria, as in several other African Nations.

In the end, what is obvious is that efforts of international community against climate change that does not take into consideration the peculiarities of each people and Continent may be nothing but only a theatrical lip-service as has become the attitude of the Security Council members of the United Nations who constitute themselves into club houses of powers, along line of national interests of their respective nations on several issues, in the last decade. Whatever these powers do, it must not be forgotten that our past may be adjudged for the grave and that our today is in our hands but that our handling of today determines how the tomorrow of the upcoming generations will emerge. May we not be judged by our indolence and selfish national interest that defeat collective wellbeing of international community, after all?

### **Summary, Recommendations and Conclusion**

This paper is the problems arising from the scourge of climate change and global warming. It particularly examines challenges to the world effort in containing this great threat to humanity in contemporary world. Looking at climate variability and the fall-outs in Africa as against the developed world, the paper discussed the concern at the deepening contextual knowledge on climate change and its risks in African Continent. The paper took a position that one approach that drives a wedge between Africa and vision of the developed world each time global solution is sought over any scourge is the superficial understanding of the cultural context in which Africa approaches virtually every matter. The paper took exception to the

attitude of the developed world in over reliance upon foreign data in finding solution to Africa's challenges on the assumption that African context of every issue is inconsequential. The paper concluded that if the world efforts against climate change must create impactful utility value, such efforts must resonate within the framework of Africa's specific challenges, engineered by its social values. The paper thus recommended that the world return to the drawing board to involve African Continent in the world effort against climate change because, leaving Africa out of the center of efforts against this threat to humanity could be counter-productive.

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