

Climate Change Education and Bringing about a Responsive Awareness to the Rural Settlers in Africa

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The problems of Climate change constitute the major threats in our world today. As a global problem, climate change affects both our present and future generations. It is quite unfortunate that in our world, some people do not see the need to address the issue of climate change. Such people see the whole climate change topic as an unnecessary issue on which we should not spend our time and energy discussing. Such people neither believe in the effects of climate change nor see its effects as worth the attention given to it. One of such instances is the United States National Security Strategy released in 2017, in which there is not even a mention of the climate change topic. This very action possibly suggests that the 2017 National Security Strategy does not see the issue of climate change as something dire enough to pose a threat to the United States. One can hardly deny that climate change has brought about frequent episodes of flooding, heatwave, environmental displacement of people leading to migration, poverty, and so many other problems around the world.

Yet, this global threat can only be solved by the collective effort of everybody living on every part of the planet. Some climate change researchers like Christine Wamsler and Ebba Brink, who address climate change approaches and adaptation, focus only on the urban areas and the city settlers while ignoring the rural areas. In affirming the necessity for a climate change policy adaptation in the rural areas, this article focuses on bringing about a responsive awareness of climate change to rural settlers in many African countries, through the engagement of an educational process. This, definitely, does not belie the importance of bringing about climate change awareness and response to the urban settlers around the world. However, it is essential to focus not just on the urban settlers but even more on the rural areas in developing countries because due to the “low adaptive capacities and the projected impacts of climate change, a consensus has emerged that developing countries are more vulnerable to climate change than developed countries”.¹ A case of such developing areas with low adaptive capabilities to the climate change impact

is Mokwa local government area of Niger state in Nigeria, but this is not limited to this case study as it can be seen in most other parts of Africa and the entire world.

When I speak of the concept of climate change in this article, I mean the negative alterations of the ozone layer in the atmosphere that are caused by the emission of greenhouse gases like carbon dioxide, methane, nitrous oxide, and ozone. In giving a clearer definition of climate change, the United Nations Framework on Climate Change (UNFCCC) defines its main characteristics, asserting:

Increases in average global temperature (global warming); changes in cloud cover and precipitation particularly over land; melting of ice caps and glaciers and reduced snow cover; and increases in ocean temperatures and ocean acidity due to seawater absorbing heat and carbon dioxide from the atmosphere.²

This concept of climate change by the UNFCCC not only gives a definition of what climate change is all about but also gives some details of its dire effects on our planet.

Now, some people may ask: Of what use is it to address climate change education to the rural communities in Africa and especially to the rural community in Mokwa local government area of Niger state, Nigeria? The main reason why this article focuses on rural communities in Africa and especially on Mokwa local government area of Niger state, Nigeria, is due to their ignorance of the environmental factors that contribute to climate change and its causes. This is the case because most of these rural dwellers are not aware of the causes of climate change to which they ignorantly contribute. A survey was conducted by Odjugo P. A. Ovuyovwiroye, to analyse climate change awareness in Nigeria. This survey used statistical techniques like percentages and Chi-square to select a few random states, among which are Rivers, Imo, Lagos, Adamawa, Niger, and Zamfara. Within each of these states, a rural and an urban area were picked at random and analysed. The result of the awareness survey in Niger state showed that 29 percent of the population had never heard of climate change, 50 percent of the population knew little about it and only 18 percent knew well about the climate change concept while the remaining 3 percent of the population had nothing to comment

about the phenomenon of climate change. Also, combining the results in all the rural areas where this survey was conducted, 33.4 percent of the total population had never heard of climate change, 56.6 percent knew little about it and only ten percent knew well about climate change.³

Apparently, in parts of Eastern Africa, the awareness of climate change is quite commendable as the most percentage of Eastern Africans are aware of the effects of climate change and its contributing factors. In Kenya, a survey was carried out by Wairimu Macharia, et al. directed by the Institute for Development Studies at the University of Nairobi. The survey was conducted to find out the perception of climate change and its effects on the agricultural production in the country. The result of this survey showed that 65 percent of Kenyans had heard about climate change while 35 percent of Kenyans had neither heard of it nor knew what it is.⁴

A similar survey was conducted by Mvumi Moyo, et al. in “two districts of semi-arid Zimbabwe using participatory research techniques, to investigate farmers’ perceptions of climate variability”.⁵ The outcome of the survey showed an insufficient awareness of the changing climatic conditions in these communities, especially on the part of the rural farmers.⁶ Nevertheless, some of these farmers are aware of the changing alterations of their environment but do not understand the causative factors that lead to it. They end up misinterpreting these alterations, attributing them to different causative agents other than those of climate change. It is surprising to note that up to 53 percent of the rural farmers in this survey were not only misinformed but also believed that the alteration of the climate was brought about either by cultural and religious reasons or by political problems leading to the gods being angry with them.⁷ The result of this is that, by not knowing the causes or the effects of these alterations, the solutions to the problem will remain far-fetched.

In juxtaposition to the above surveys, a two-year social marketing project was endorsed in Lusaka by the climate change secretariat of Zambia in 2016 and the contract given to BlackDot media to carry out a social project on assessing the knowledge of climate change and raising awareness of its effects as well as its impacts. This survey was carried out in three Agro-ecological regions of Zambia.⁸ The result of the

survey showed a well-versed knowledge of not only the climate change phenomenon but also of the consequences emanating from it. Out of all the respondents, 75 percent detected the unpredictable weather events such as late rains; 65 percent mentioned, as pertaining to climate change, the increase and decrease in temperature; 56 percent detected drought as a cause of climate change; while 41 percent detected the increase in rainfall patterns and flooding.⁹ On finding out about the use of social media to gain knowledge of climate change, 80 percent said they got their knowledge of climate change and its effects from their access to the radio, 58 percent from the television, 53 percent from their cell phones, 33 percent from access to newspapers and 17 percent got theirs from the internet.¹⁰ When asked about how they felt about climate change and what should be done, 50 percent of the surveyed respondents acknowledged that an increase in public education and an awareness of impacts and issues on climate change were either “important” or “very important” to the community. Meanwhile, 68 percent of the surveyed respondents noted that the government should be responsible for educating the people on climate change.¹¹

The results of these surveys, especially that of Nigeria and Zimbabwe, serve to explain the urgent necessity of climate change education to the rural settlers in Africa. The necessity of climate change education is even more important as most of these rural dwellers live in extreme conditions of poverty. This state of poverty makes them even more vulnerable to the negative effects of climate change as they lack the knowledge as well as the skills to withstand the climate change effects. As a matter of fact, an article written in Southern Eye Newspaper quotes the 2015 Zimbabwe National Statistics Agency survey as depicting Matabeleland North province to be the area with the highest poverty rate in Zimbabwe. In giving a precise figure, Mthandazo Nyoni, states: “In a report released yesterday, ZimStat said that Matabeleland North and South as well as Mashonaland West and Central were the poorest provinces in the country. But Matabeleland North topped the list with 85.7 percent poverty levels”.¹² Due to the poverty level in Matabeleland North province, the rural dwellers are more vulnerable and lack the intellectual as well as physical tools needed to withstand the effects of any climatic disaster than other parts

of Zimbabwe. These rural settlers become unaware of the climate change concept, partly because most climate writers focus mostly on the urban settlements. For uninformed agrarian communities, in poor places like the rural areas of Matabeleland North province, there is an increased risk of famine if a responsive awareness to climate change is not championed as soon as possible through the education of the people. Apparently, the high poverty rate and the vulnerability of these rural dwellers are due to the insufficiency of climate change awareness for these people to act differently.

As for the adverse effects of climate change caused by the ignorant contributions of the rural settlers in Mokwa local government area of Niger state, these contributions to the depletion of the climate, though little in comparison to the urban areas, have devastating effects when taken cumulatively. For example, some of these rural dwellers practice bush burning and use firewood for their cooking. The result of these is the emission of various greenhouse gasses into the atmosphere, hence, “The build-up of too much Carbon dioxide (CO₂) from fossil fuel burning and other sources now threatens to alter the planet’s climate and disrupt both ecosystems and human communities”.¹³ This CO₂ as well as other greenhouse gasses, goes into the atmosphere and disrupts the ecological flow of the ecosystem, thereby bringing about the negative effects of climate change.

Tree felling around the world, and especially in Niger state, has adverse effects on the climate. It is a common practice, in Mokwa local government area, that people cut down trees in order to make charcoal for trade. Due to the constant felling of trees in Niger, the government has made a move to criminalize the indiscriminate felling of trees. In an interview conducted in August 2018, Lucky Barau, the general manager of The Niger State Environmental Protection Agency states: “We will not fold our arms and watch some people endanger the environment out of ignorance”.¹⁴ This decision by the government makes for a reduction in deforestation within Niger state. The trees play a very important role of absorbing the greenhouse gas emissions that cause global warming. These trees also produce oxygen in exchange to the carbon dioxide, which helps to replenish and nourish the environment. By destroying the trees,

these rural dwellers indirectly destroy their sources of clean and purified air. Unsuspecting rural settlers cut down these trees and use them for cooking while some others cut down the trees in order to extend their farmlands. This practice of cutting down trees eventually results in such communities having fewer trees to absorb the carbon dioxide and other impure gases in the atmosphere. This will lead to a great risk of global warming and changing of the weather patterns in the rural settlements and around the world.

In order to achieve a long-term climate change response to the people of Mokwa local government area of Niger state and in Africa, the governments ought to consider engaging Climate Change education as a high priority. One important move will be the entrenchment of climate change studies into the education system at the primary and secondary school levels in these settlements and in the larger African society. This important step should be employed because, if climate change studies is taught at all levels of education, there will be widespread information about climate change, which will give people the knowledge to care better for the planet in order to prevent further depletion. Fortunately, some climate change scholars have addressed the integration of climate change into the secondary school agricultural science curriculum in Nigeria.¹⁵ In their scholarship, Michael Ikehi et al, see the need to integrate climate change into the school curriculum when they state that “It will keep the students abreast with the challenges and mitigation strategies of climate change”.¹⁶

In regards to the entrenchment of the climate change curriculum into the educational system, there is need to look also at the tertiary institutions in Mokwa local government area of Niger state and Africa as a whole. The concept of climate change needs to be taught at every institution of learning. Due to the better understanding of teenagers as well as adults over pupils, it is even more important that the tertiary institutions of learning be well equipped for the dissemination of the climate change concept. According to the Nigerian universities commission, there are 165 universities in Nigeria, three of which are located within Niger state. Within all the universities in Nigeria, the National Open University of Nigeria is the only university which presently offers ‘Climate Change and Environment’ as a course within the faculty of science. This confirms,

even more, the need for a drastic move to entrench climate change education into the educational curriculum, not just in Nigeria but also in Africa as a whole.

There is never an age limit to the study of climate change just as there is never an age limit to learning. In concern for the integration of the climate change studies into the educational system, the One UN Climate Change Learning Partnership (OUNCCLP) has produced a resource guide. This guide serves as a blueprint for integrating climate change into the education system: “It provides an outline for resources and materials, which would enable for the study of climate change within primary and secondary schools”.¹⁷ In aiming for a sustainable climate change response in Mokwa local government area, Niger state and in Africa, this guide could serve as a step in the right direction. Even though the guide is designed specifically for both formal and informal education programs, at primary and secondary level, it contains useful information for all those who have an interest in a sustainable climate change awareness and response.

The creation of an awareness and response to climate change should not be limited only to education within the classrooms. This is because there are various other means through which we can create a widespread awareness of climate change especially to those people who may not be able to access the institutionalized educational system. One very efficient way this can be done is through the use of the social media platforms and other media outlets at our disposal. As is seen in the above awareness survey of climate change in Zambia, the report, which shows a greater access to the climate change information from the radio, supports the competency of media outlets in the dissemination of climate change information and awareness. The airing of news and awareness programs on the radio as well as the television and other media apparatuses go a long way to reach out to most people especially those who live within the rural areas with the radio or the television as their only means to information accessibility.

Putting up of billboards and signs can also be a very practicable way of climate change awareness dissemination. The use of these roadside adverts can be very helpful as they serve as constant reminders of the

climate change discussion and concerns even when the media outlets do not constantly do so. These posters and signs can be carried out especially in remote areas where the access to the radios or televisions, by the people, are limited due to poverty, lack of electricity or other social amenities, and other reasons. Billboards and posters are even more helpful than the use of media outlets because of the consistency it has above the media in informing the people on certain issues and notices. It is also a better means of the climate change awareness campaign as it is more cost saving than almost any other means. Thus, the governments should see the creation of climate change awareness through this means as more of a priority if a long-term awareness and response of climate change is to be achieved.

Climate change should be seen as a global problem and treated as such. Thus, it might be foolhardy for one to focus the awareness and response to climate change only on one part of the globe without an attempt to take such awareness outside these rural communities and to the rest of the world. As such, the governments of Africa can take this campaign outside the shores of Africa by defining its climate change policies to the other governments of the world. One reason why the climate change problem remains persistent, especially in Africa, is because some poor African nations sign deals with multinational companies and industries who come in and set up these highly anti-ecological companies, emitting huge amounts of toxic gas into the atmosphere. As a result of these signed deals and the economic benefits, these African countries become unable to protect their climate by sending these companies out of their soil. In 2017, "The Carbon Majors Database" published a report, authored by Dr. Paul Griffin, where they investigated companies which had the most emission of the greenhouse gases and fuel fossils.¹⁸ Among the top 50 emitters of fossil fuels were companies like Chevron, Total, ExxonMobil, Shell, etc. most of these companies mentioned can be found operating in most African oil producing countries. The operations of these companies add up, negatively to the depletion of the atmosphere through their fuel fossil emission. As such the poor people in the rural areas tend to be affected by these emissions from these companies and because of the low adaptability of the rural settlers to the adverse effects

of climate change, they become very vulnerable to these climatic effects. Therefore, the inability of some of these African governments to refuse such economic deals is also a disadvantage to the climate. These African governments need to clearly define their fight against climate change by refusing such anti-climactic economic deals from these multinational companies.

Finally, it is worth noting that the climate change threat is one which the global community has very little or no time speculating. This is because every second that passes without a curative action brings mother earth closer and closer to extinction. Pope Francis, in his encyclical, *Laudato si'* rightly pointed out that "If present trends continue, this century may well witness extraordinary climate change and an unprecedented destruction of ecosystems, with serious consequences for all of us".¹⁹ Thus, Pope Francis acknowledges the steady decline of the earth as a result of our damaging actions as well as the "effects of our ill-advised delays" in the implementation of the climate change policies.²⁰ In this encyclical, the Holy Father speaks directly to everyone to get involved in the salvaging of mother earth. To achieve this, he calls on a global conversion towards our earth; an internal conversion that is backed with action. Hence, the mitigation strategies towards climate change have to start from within us all living on the face of the planet. It is a process that has been long delayed, thereby giving us very little time to keep on debating on.

In conclusion, the problem of climate change in our present world is one that requires the conscious awareness and response of everyone living on the face of the planet. It is so sad that even with the perceptible depletion of our earth, some people still do not get the seriousness of a global fight to save our world. Nevertheless, without being crestfallen by the unbelief of climate change sceptics, it is necessary that we all rise up and get involved in salvaging what is still left of mother earth; this can be efficiently done by supporting the call for climate change education to be entrenched within all our institutions of learning as well as becoming agents of climate change education. This can only be achieved through a strong response and awareness campaign towards climate change by all of us; but more especially by the rural dwellers in various parts of the

African continent, particularly in Mokwa local government area of Niger state. We need to act swiftly against the climate change threat because it is like a cancer, eating fast into mother earth. The longer we keep up our arguments and scepticisms, the harder the possibility of its control; the harder the possibility of its control, the nearer the earth reaches its annihilation and when it finally does, where will you and I go?

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