

## PERFORMING CLIMATE CHANGE, FARMERS/HERDERS CRISIS AND FOOD INSECURITY IN AFRICA

**Olusola FOSUDO**

Department of Theatre and Film Arts, Faculty of Arts  
Lagos State University, Ojo, Nigeria  
Email: [olusolafosudo@gmail.com](mailto:olusolafosudo@gmail.com)  
ORCID: <https://orcid.org/0009-0003-1284-5094>

### **Abstract**

The reality of climate change has become a great concern to various parts of the world, including Africa. The emission of various greenhouse gases into the atmosphere as a result of global industrialization and increasing consumption has resulted in a gradual increase in global temperatures leading to massive floods, and the destruction of human lives, animals, and farmlands. Coupled with the incessant Farmers/Herders crisis in parts of West Africa, particularly Nigeria, food insecurity has also become a worrisome issue that needs to be frontally addressed. Given the foregoing, global and local measures need to be practically taken to mitigate these threats to human life and existence. This article interrogates the dangers of climate change and farmers/herders' clashes to food insecurity and proposes how theatre and the performing arts could be utilized in sensitising the populace to achieve peaceful coexistence, food security, human survival and safety on planet earth.

**Keywords:** Climate change, Farmers/herders crisis, Food security, Human survival, Performing arts.

### **Introduction**

As the demand for natural resources and energy continues to rise globally, the balance between natural and human activities continues to degenerate. A foremost consequence of this growing imbalance is the change in climate conditions. Global warming has been in existence for over a century, but only became a major world concern in the last forty (40) years. This phenomenon, experts say, is attributed to population growth, carbon dioxide emissions, indiscriminate burning of bushes, armed violence and nuclear activities, gas flaring, deforestation and so on. All of these activities contribute to the devastation of our environment and have the potential to directly or indirectly affect our standard of living and quality of life. Barrack Obama, the former President of the United States of America, once warned: climate change is no longer a problem of the future, but rather, a challenge that will define the contours of this century more dramatically than any other (*Straits Times* 7). To appreciate the gravity of the situation and implement measures to reverse the trend, Obama advised that every effort to promote climate control awareness, must be universally embraced and that all hands must be on deck by engaging not only scientific or political options but also, creative and socio-cultural products and presentations.

### **Climate Change – Definition and Overview**

The United Nations defines climate change as “a long-term shift in weather patterns and temperatures” (1). This shift, according to Stocker et al...manifests itself in changing precipitation patterns, changing intensity, frequency and duration of extreme weather events such as drought, wildfires and extreme rainfall, increasing sea level, acidity and ocean temperatures, melting glaciers and alterations in the ecosystem (12). The problem of Climate Change is one of the fall-outs of environmental degradation. Nda et al., climate change as “a long-term change in the statistical distribution of weather patterns over periods of time that range from decades to thousands of years”. It may be a change in the average weather conditions or a change in the distribution of weather events concerning an average, for example, greater or fewer extreme weather events (13). It may be limited to a specific region or across the whole earth. Climate change according to Saidul Islam is the change in the state of the climate that can be identified, using statistical tests, by changes in the mean or variability of its properties, which persists for an extended period (18). In other words, it is the change in climate conditions over time, whether due to variability or as a result of human activity. Climate change has not only resulted an increase in global-averaged mean annual in temperatures, but also, the increased amount of atmospheric greenhouse gases (GHGs).

### **Causes of Climate Change**

It could rightly be said that Climate change is a product of numerous acts of environmental irresponsibility by man. It is an outcome of man’s unfriendly treatment of the environment and the careless consumption and utilization of facilities of nature. According to the National Academy of Sciences, climate change can have natural drivers such as volcanic eruptions, however, human activity has been the primary cause since the 1800s (40). These human activities include transportation, agriculture, industry, land use, electricity production, space heating, and refrigeration to mention a few. The foregoing activities contribute to the generation of greenhouse gases such as carbon dioxide, nitrous oxide, methane, F-gases, and aerosols which are in turn mostly responsible for the global warming associated with climate change. The underlying science of the cause of climate change is therefore not complex.

The accumulation of these greenhouse gases and aerosols causes a blanket effect in the earth’s atmosphere. This “blanket” keeps the heat radiated from the sun to the earth from leaving the Earth, thereby causing the temperature on the earth to increase over time (United States Congress, Committee on Science and Technology 81). Carbon dioxide is the most important greenhouse gas and the primary contributor to recent climate change. The biggest contributor to carbon dioxide in the atmosphere is the burning of fossil fuels used predominantly in transportation. On the other hand, the depletion of natural vegetation (known to consume carbon dioxide) and associated with land use, contributes significantly to increasing carbon dioxide concentrations in the atmosphere. Oyebanjo argues that agriculture and fossil fuel use, also contribute to methane emissions which have about 25 times the global warming potential of carbon dioxide, but abound in far smaller amounts in the atmosphere (1).

### **Impacts of Climate Change**

Some of the very real impacts of these greenhouse gases can be seen in the more frequent occurrences of heat waves, droughts, worsening air and water quality, changes in rainfall patterns, floods, etc. (<https://www.epa.gov> 17). Another serious impact is that global sea levels have risen by over 10 centimetres in the past thirty (30) years (NASA 17). The rise in sea level according to Lall et al., has had devastating effects in several instances across the decades and has shaped city planning, farming practices, and settlement habits. New health and safety concerns are developing as a result of this changing terrain and its effects on critical infrastructures (42). In addition, famine and food shortage is also a direct consequence, as coastal areas that depend on aquatic life, have had to adjust, as nature reacts to the changing ecosystem. There has been some debate as to the human contribution to climate change. Some argue that the problems are entirely natural, that is, an act of God, having no human contribution, and would therefore demand no human effort in the process of controlling it. To such a school of thought, it could be God's visitation on the sins of mankind or a mere happenstance that will correct itself as God deems fit. But scientific explanations have cast aspersions on such argument, and have rightly viewed the occurrence for what it is: a result of the careless habits of man that can only be ameliorated by man through God's guidance.

Regardless of the symptoms or impact of these climate conditions, the key to halting this damage is "immediate action". Humanity must develop healthier habits in the use of nature's resources and tailor consumption around conservation and efficiency. The United Nations claims that: cutting emissions, financial adjustments, and adapting to climate impacts are the three general actions that are required to address this global threat. In practical terms, the adoption of renewable energy technologies, a conscious effort to protect infrastructure, lives, and natural ecosystems, the influx of huge financial investments and policies that streamline these actions, are the solution. Ross Garnaut puts forward five main policy themes required for the mitigation of climate change; policies must be practical, equitable, and global, they must align with economic growth, and that good governance is critical. In the end, the tools and resilience we need to mitigate and weather these climate changes are constantly being improved upon and it behoves on every field of human endeavour including the creative arts, to contribute meaningfully to this unified goal of restoring balance to our climate system (102).

### **Climate Change and Africa**

It is erroneous to hold the view that since Africa is not as industrialized as America and Europe, it needs not to worry about the adverse effects of climate change. It is a bitter irony that Africa which contributes least of all continents to climate change, will probably suffer most from its consequences. (Earthlab 91). In many African communities today, bush burning in agricultural farmlands is still a common occurrence. Apart from bush burning, the wasteful gas flaring going on in Nigeria's Niger-Delta and some other African oil-producing locations, are major contributions to the problem of global warming. Relatively recently, on Monday 22 May 2023, the 650,000 barrels per day Dangote refinery was officially opened by former President

Muhammadu Buhari with four Presidents of other African countries including Ghana, Togo, Niger, and Senegal in attendance. Experts have been reeling out the massive business and economic benefits derivable from this huge investment, but they have also touched emphatically on the amounts and implications of the greenhouse gas emissions that the refinery will be releasing into the atmosphere daily. Dr Segun Adaju (an Energy Consultant) speaking on Global Business Report on Arise News on Tuesday 23 May 2023, averred that the Dangote refinery can be described as “a paradox of blessing and danger”, given both its economic benefits and environmental risks.

African roads are filled with vehicles that are not in compliance with the more recent on-road emissions standard targeted at tackling this climate problem and these vehicles continue to ooze greenhouse gases as well as other criteria pollutants recklessly into the atmosphere. There was a time in Nigeria when such vehicles were banned from plying the roads, but, not anymore. Also, the high population has caused a great strain on land resources making people cultivate on communal reserves or erect buildings on drainage paths, on top of canals and erosion-prone sites. This is very common in Lagos, Nigeria, and other urban cities in Africa. Population growth has been cited as one of the causes of the stress on the environment (Ekong et al. 16). Many African cities are also very poor in refuse disposal and waste management. Oftentimes, the public drains are so stuffed with refuse that rainwater finds it difficult to go through, thereby flowing unto the roads and sometimes into people’s homes. Most urban dwellers after waiting in vain for public refuse disposal compactors, resort to burning their wastes, thereby releasing carbon gases into the atmosphere which negatively impacts the environment. Rather than continue to contribute to aggravation of the situation, Africa should be at the forefront in terms of environmental advocacy, as it does not possess the technology to take care of its citizens, in case of disaster.

### **The Concept of Food Security**

Food security as a broad concept, cuts across many dimensions. It means access to sufficient food for healthy living. United States Agency for International Development USAID Bureau for Africa, (cited in Eme, Onyishi and Uche) defines food security as a situation when all people at all times have physical, social, and economic access to sufficient food to meet their dietary needs for a healthy and productive life (14). Food security is a three-dimensional concept, namely; food availability, affordability, and accessibility. Availability means ensuring sufficient food for households through production; accessibility depends on distribution and distinct factors such as the functionality of food markets and affordability refers to the ability of families to pay the upmarket prices for food.

According to the Food and Agricultural Organisation of the United Nations, (FAO, 2021:24), there are about 828 million people who are undernourished globally, with poor nutrition accounting for nearly 55% of deaths in children below the age of 5 annually. A further 20.5% of the population in developing countries is undernourished due to lack of food availability and economic access to food. These findings may further be exacerbated due to the rise in world population projected by the United Nations to

increase by 2.6 billion by 2050. The rise in population coupled with growing urbanization and increasing environmental problems such as climate change, pollution, and deforestation would have detrimental effects on food production, distribution, and consumption. In addition, the inability of food producers to meet the demands of the population would cause food prices to escalate and worsen the problem of food security faced by the already-at-risk populations of the global community, particularly in Africa.

### **Connection between Climate Change and Food Insecurity**

Food shortage can be caused by climate change and climate-related disasters, such as: Rise in average global temperature: This leads to drying up of water bodies which affects crop production and livestock rearing. Sea level rise: This leads to increased flooding, erosion, and saltwater intrusion into the soil which results in salinization and waterlogging. The impoverished soil causes a reduction in the quality and quantity of crops, thereby lowering the availability of food for the population. Increased concentration of Greenhouse gas emissions in the atmosphere: This traps more heat on earth which causes drought and affects farmlands, livestock, and animal husbandry. The effects of climate change are unequal between developing African nations and the rich and developed economies of the world. Poor countries are more affected by changes in climate conditions and crop failure due to a lack of knowledge, technology, and skills to deal with such changes and also the inability to stockpile sufficient food for their people when crises strike.

### **Connection between Farmers/Herders Crisis and Food Insecurity**

The second reason for food shortage which makes food crisis and insecurity more devastating is the dangerous but needless clashes between farmers and herders particularly in some African countries. The term farmer denotes in modern times, a person engaged in planting, grooming, and producing crops, seafoods, or livestock on land or in water. By this definition, all farming, inclusive of livestock (which has adopted ranching in advanced nations worldwide) has an identified location in which the activity takes place. On the other hand, a Herder is actually, also a farmer by the definition above. Herders engage in livestock farming, such as cattle rearing, sheep and goat herding. In this paper, the term is applied specifically to groups of livestock farmers who engage in migratory farming and have no permanent location. These herders according to Gordon (2000:19), prefer traveling around a vast geographical area with their livestock, on a largely unmapped route they refer to as “grazing route”. This primitive mode of livestock farming is mostly still found in Africa, particularly amongst the Maasai ethnic nationality of Kenya and Northern Tanzania in East Africa and the Fulani of North and West Africa, that span from Algeria, Morocco, Niger, Mali, Northern parts of Nigeria, Senegal, Cote d'Ivoire, Chad, and more recently, Benin, Cameroon and Ghana.

It is this kind of migration, particularly by the Fulani, that in recent times has seen these herders migrating away from the southern fringes of the Sahara Desert, into areas inhabited by the buyers of their livestock in the middle belt savannah areas and even the rain forests, South-East, South-West and South-south of Nigeria. This

movement has however given rise to clashes between crop farmers resident on these lands and the livestock migrating farmers, known as herders. According to Udosen, the crisis between Farmers and Herders can be understood as the problem of access to land for economic survival (26). In his words: “The principal driver of conflicts between farmers and herders is economic in nature, with land-related issues at the centre, especially issues of accessibility and use of land and water resources”.

Since the Sahelian drought of the 1970s and 80s, increased migration of herders into the humid forest zone of West Africa has caused a massive increase in the frequency of farmer-herder conflict. Land and water resources are now under increasing stress especially due to the prevailing situation of climate change, leading to fierce competition and violent conflict over their use (Udosen 26). To better understand this phenomenon, we shall apply the resource access theory (RAT), propounded by Jeffrey Pfeffer and Gerald Salancik. They believe that man’s access and control over resources define man’s basis of power and success. Jeffrey and Gerald (1978:16), observe that; resource ownership and utilization have defined the dimensions of most conflicts involving man since time immemorial. Buttressing this point, Sikor and Lund assert that: “access to natural resources is often contested, and rife with conflicts at many levels”. Therefore, the need for people to legitimize their rights and access to natural resources has remained central in competition and contestation for national resources” (1).

The resource access theory helps in giving a better understanding of the prevalent farmers and herders crisis. The inability of the Fulani herdsmen to have unhindered access to grazing areas is to a significant extent responsible for the conflict between the herders and farmers. While climate change was not a precursor to the migration of herders to Southern Nigeria, it has increased their migration to the Southern Forest zone from areas with increased frequency of drought and lower availability of natural resources into areas with better resources for their livestock. The constant migration from the Sahel areas into the humid forest zones has continued to cause clashes with farmers who complain that the herders do not stick to the uncultivated areas thereby destroying their crops and livelihoods.

On the other hand, the rising population has been putting pressure on farmers to increase food production. They have thus, begun to use lands that are traditionally pasture paths for cattle ...known as the Burti System. Under this system, the Pastoralists were given a tract of land, linked together in a pattern of migratory routes, to feed their cattle in a way that eased tensions between herders and farmers. Old Nigerian maps once had these tracts delineated for cattle migrations, but as the population continued to grow, farmers began to encroach on these lands for pasture, forcing the herders to crush crops cultivated by the farmers, thereby amplifying tensions. The north central states of Benue, Plateau, and Nasarawa and other states in the south and middle belt for example, have experienced crises that have led to thousands of deaths and displacement of persons as a result of clashes between herders and local farmers in several communities.

Agbedo argues that: ...the seeming and unending crisis has led many communities to create self-defence forces and ethnic militias which have engaged in

further violence and consequently, this has greatly affected the Nation's stability and food security. Federal and state governments have made several attempts to quell this problem, but the crisis has continued to escalate. This has forced many farmers to abandon their farmlands rendering several communities deserted, while those who resist invasion have lost their lives. The unfortunate situation according to Nweze (2015), has led to a decline in the productivity of crops and herds which has become a threat to National food security. Given the above, the solution to food insecurity in Africa, particularly Nigeria, does not appear to be in sight yet, and in a press release by UNICEF (for every child) in Abuja on 16 January 2023, it was projected that more than 25 million Nigerians are at risk of facing hunger and suffering, from acute malnutrition between June and August 2023 (<https://www.unicef.org>). The Federal Government needs to exercise political will in solving this problem of food shortage, and the mindless carnage by herders to save lives, preserve our farmlands, and forestall the crisis of food availability. Without beating about the bush, cattle herding and livestock production must be treated as every other business whereby the owners establish permanent ranches on land acquired legitimately, far away from crop farming communities. Local and international investors should be sourced and encouraged to provide funding interventions to boost production in the sector. In addition, the bandits terrorising communities, burning houses, and killing innocent people must be stopped in their tracks. They must be fished out and dealt with according to the law.

It is hoped that the current administration of President Bola Ahmed Tinubu (barely two months in the saddle), will frontally attend to this aberration not only for peace to reign but also to avert the crisis of food insecurity, hunger, and malnutrition in the country. Thankfully, during his inaugural address on May 29 2023 at the Eagle Square in Abuja, he hinted at some of the policy thrusts of his administration and declared that... Agric hubs would be created throughout the Nation to increase food production and engage in value-added processing. The Livestock Sector will be introduced to world best practices and food will become surplus and less costly. (Arise News, DSTV Channel 416). Also, concerning insecurity, he announced that "security shall be the top priority of his administration because neither prosperity nor justice can prevail amidst insecurity and violence". He assured that steps will be taken to minimise the perennial conflict over land and water resources. These are heart-warming declarations. We hope however that in terms of implementation, President Tinubu will be able to match "words" with "actions", in the coming months and years.

### **Performing Arts and the Quest for Solutions to Climate Change and Food Insecurity**

The last part of this presentation will be used to examine the role of performing arts in creating awareness and supporting Government actions in addressing the issues of climate change and food insecurity. Imagination, not just science has seen humanity scale all the obstacles it has encountered and move civilization forward through the ages. Renata et al. argue that fusing more culturally rooted elements into the creation and demonstration of climate change would enhance processes of future thinking (27). Yousoff corroborates that: imaginative practices captured in Literary, Filmic, and

Creative arts can play a very important role in proffering strategies for improving environmental consciousness ranging from metaphorical investigations to scenario building and creating tangible representations of change (19). For example, Burke et al (2018:33), analysed how “participatory, climate change-based arts interventions could birth more engaging and effective approaches towards sustainable climate behaviour change.

Roosen et al. claim that “art can utilize vectors such as analogies, narratives, and metaphors that make climate communication more approachable. According to them: art has the power to provide visual visualization, allow a more personal experience of a seemingly impersonal, indirect threat to climate change and give people a sense of belonging and group identity as they come together to tackle this collective problem (26). All these arguments have found their voices echoed to various extents in films and documentaries like Davis Guggenheim’s award-winning documentary, *An Inconvenient Truth* (USA, 2006), David Attenborough’s *A Life on Our Planet* (USA, 2020), Bong Joon Ho’s *Snowpiercer* (TV Series, USA, 2013); and movies such as Adam McKay’s *Don’t look up* (USA, 2021), Umanu Elijah’s *A place called Forward* (Nigeria, 2022), Apolline Traore’s *Sira* (Burkina Faso, 2023), Yar’Adua Foundation’s *Swallow* (Nigeria, 2021), Angelique Kidjo’s *Mother Nature* (Benin, 2021) to mention a few. For instance, the 2021 movie *Don’t Look Up* tells the story of a science Professor and his younger student discovering a fast-approaching comet that is set to reach the Earth and will likely destroy it. Together, they need to convince the government as well as the public of the existential threat and the catastrophic consequences it may have on humanity. However, the task is more difficult than they think when no one takes them seriously. The team struggles to break through the craziness of social networks, political inactions, and the lack of media attention. Indeed, the comet approaching the planet is an ambivalent metaphor for climate change and its disastrous effects. The film also serves as a reminder that politicians are not doing enough and if they do not act quickly, it will be too late to save our planet.

*Snowpiercer* is a commentary on our global socioeconomic structure as well as a statement regarding our futility against the powers of nature. More than anything, however, the film has an even more radical underlying message. Not only do most of the train’s inhabitants die before the avalanche occurs, but the train itself is already on its way out. The engine is failing, the system is corrupt, and extinction is imminent. No matter how our heroes fight to get to the front, they are hopeless in fixing the train’s inherent problems. The *Snowpiercer* was never really going to last forever and neither were we. *Snowpiercer* suggests that a hard reset can solve society’s woes. Our civilization needs to be buried beneath the snow before new structures can be built. Due to attempts to segregate the elites from the poor inside the train, the journey runs into problems, leading to a bloody rebellion that ends in the destruction of the train and the death of most of the occupants. With only Yona and Timmy escaping the final explosion that triggered an avalanche, seeing a polar bear in the distance after surviving the explosion indicated that life still existed outside the train, indicating the possibilities of a new start for humanity.



David Attenborough's *A Life on Our Planet*, released in 2020 was described by the *New York Times* as a map of how steeply the planet's biodiversity has diminished. The documentary features provoking imagery from all over the world that isolates and presents the destructive effect human beings have had on nature and the ecosystem over time. The documentary, which Attenborough himself describes as a "witness statement", is an example of the performing arts serving as a memory for the world, a strong visual reminder of where we were, where we are now and where we are headed if action is not taken. In Nigeria and other African countries, the desire to join the fight against climate change using the performing arts is also catching on as filmmakers, musicians, animators, and theatre artists now play active roles in the advocacy for a better environment. In a recent attempt by Umanu Elijah in the film, *A Place Called Forward*, he treats the issue of soot that has recently become a major environmental issue in the once beautiful city of Port-Harcourt. In the Republic of Benin, the singing Diva, Angélique Kidjo joined forces with French Director Yann Arthus-Bertrand to make a short film titled, *Mother Nature*, a committed, transgenerational musical film centred on the protection of the planet earth. In Burkina Faso, Appoline Traore's film *Sira*, first presented at the 2022 Pan-African Film and Television Festival (FESPACO), in Ouagadougou, addresses the problem of access to drinking water, sanitation and hygiene for women and girls in a context marked by climate change. Added to this are the abuses suffered by the girls, kidnapped by terrorists while fetching water.

Another Nigerian movie titled *Swallow* by Yar'Adua Foundation treats the grave challenges posed by climate change, inadequate infrastructure, and poor agricultural practices to food insecurity in Nigeria. According to a Premium Times review of the movie; ...it decries the alarming decline in the number of fish in the Niger Delta as well as underweight cattle, insufficient rice, wheat, and vegetables in the Northern part of Nigeria. In the movie, a large number of farmers and investors made vivid descriptions of how agricultural farming has moved from better to worse over the years while exposing governments' abysmal response to the challenges. As much as these films are predictive in their representations of the attitude of man to the issues of global warming and the resultant climate change that has led to major food insecurity across the world, especially in Africa, it becomes imperative for world leaders to realize that the continent of Africa does not exist in isolation from the rest of the cyclic Earth. It is predictable that if global warming remains unchecked and the climate change denials continue to gain ground, it won't be long before the gloomy predictions in some of these films begin to manifest.

In the area of Live theatre, the Climate Change Theatre Action, founded by Elaine Ávila et al, is a global series of performances and readings of short plays centred on climate change. Every two years since 2015, 50 playwrights from diverse backgrounds are commissioned to write five-minute plays on a select climate crisis facet. (<http://www.climatechangetheatreaction.com/about/>). It has since evolved into a U.S Canadian collaboration between the Arts Climate Initiative (ACI) and the Centre for Sustainable Practice in the Arts (CSPA). It uses storytelling and live performances to foster dialogue about the global climate crisis, create an empowering vision of the

future, and inspire people to take action. Events can be in-house readings, radio shows, podcasts, or film adaptations.

In Nigeria, not much has been done actively in the area of live theatrical interventions on climate change, although, there are some published plays that address the issues of the environment. For instance, Bode Sowande's *Mammy Water's Wedding* is an advocacy about keeping the sea pure. Sowande frowns at the illicit business of Adagunodo which uses the sea as a dump site for toxic waste. Ahmed Yerimah's *Hard Ground*, though, is about militancy and youth restiveness in the Niger Delta, the genesis of the whole crisis stems from the poverty and degradation of the environment through oil spillage which affects farming and fishing and directly impacts their livelihoods. Other plays that subtly address the unique link between maintaining nature to balance climate and our existence and survival as humans include Soyinka's *Swamp Dwellers* and Osofisan's *Another Raft* and *Twingle Twangle – A Twinning Tale*.

Also, in an article titled, "Communicating Change in Africa through the Theatre for Development Process", Nda S.U and Ekong F.U (2012:10), report a community theatre project successfully used to create awareness of the state of the environment in Ikot Ayam Itam, Itu local government area of Akwa Ibom State, Nigeria. In addition, Greg Mbajiorgu's eco-drama, *Wake Up Everyone* was performed at the Alexandria Auditorium, University of Nigeria Nsukka as reported by Norbert Oyibo Eze in an article titled "Drama and the Politics of Climate Change in Nigeria." Also, in 2017, students of St Mary's International School, Ilorin performed, *The Last Tree* by Shahid Nadeem and an environmental poem titled *Gaia* by Hiro Kanagawa (www.climatechangeaction (13). Certainly, more of these need to be done across the country and in Africa, to keep the awareness of the dangers of climate change sustained.

Furthermore, in an article titled "Deepening Theatre's Role in Tackling Climate Crisis" (Pg. 4), Ben Tomoloju, author, theatre director, and critic lamented the horrific situation Nigerians are experiencing, particularly in Ondo State including Rivers, Delta, Jigawa, Cross Rivers, Anambra and Bayelsa through the ocean surge anytime the rains come – the entire beach is covered by sludge, roads are cut off by storm and buildings shattered by the bellowing storm. According to him, it was this kind of horror that J.M Synge, the Irish dramatist depicted in his classic, *Riders to the Sea*; where Maurya, an old woman lost her husband and all her six sons to virulent waves. Tomoloju retorts: I don't know how the Irish eventually overcame theirs that we no longer hear of it even in this period of climate change, but no responsible individual or leader of thought can afford to ignore the horrendous assault of nature on hapless citizens (24).

In the same article, Jerry Adesemo, Artistic Director, Arojah Theatre Abuja, believes that the theatre could be a powerful tool for raising awareness and promoting action on climate change in Nigeria. He noted that the world is investing in climate science, straightening resilience, and advancing environmental justice, however, new initiatives on the theatre stage will improve understanding of the changing climate. According to him: theatre performances can be used to educate audiences on causes

and effects of climate change in Nigeria. Theatre can also be used to highlight the impacts of climate change on vulnerable communities and how individuals can take action to reduce their carbon footprint (16). He added that: the theatre could be used to engage communities in discussions about renewable energy, sustainable agriculture, and the protection of Natural resources. These performances can be followed by workshops and discussions on how communities can take action to reduce their carbon footprint and adapt to the impact of climate change, while also, promoting behavioural change among individuals, encouraging them to adopt sustainable practices such as recycling, reducing energy consumption and using public transportation (17).

He is, however, surprised that on the Nigerian stage, we are not doing much of theatrical projects, deliberately designed to address these issues. He laments that this may be because of funding fatigue because educational and advocacy theatre cost quite a lot. Concluding, he said, one or two persons may be doing something, but not giving it the right projection. Apart from the fact that our playwrights in Nigeria, and indeed the entire African continent need to write more on the subject of climate change, we also call on our theatre for development experts to consider the utilization of theatre for development methodology in communicating the perils of climate change and environmental deterioration in the African continent. The TfD methodology makes provision for communal participation in the performances, discussions on the problems put forward through the plays, and communal agreement to implement the provisions. According to Zakes quoted from Nda and Ekong, the TfD methodology is “the most democratic of the media of communication open to man” and if effectively employed and deployed, it has the potential of mobilizing for a change from the attitudes that cause climate change, environmental degradation and food insecurity in the African society (8).

### **Conclusion**

Global warming is a severe challenge for the environment and human well-being, which has often resulted in excessive heat, crop failures, food shortage and famine, rising sea levels, severe flooding, and tropical cyclones. As a response, the world has been in search of solutions to this troubling phenomenon and some of the major recommendations are the advocacy to focus on alternative energy sources rather than fossil fuel-based energy. The Alternative energy sources include wind, solar, biomass, geothermal, and hydro. These alternative sources of energy are environmentally friendly and pose no threat to ecological balance. It has been established that food production and climate change are all interlinked and changes in one factor would have a negative or positive impact on the other. For instance, the reduction of climate change effects will help improve food security problems as it reduces the likelihood of crop failure or deaths of livestock due to natural disasters. The following are some immediate and long-term recommendations to combat the challenge and danger of changes in climate conditions. The use of cars and automobiles that can run on cleaner alternative fuels, such as Compressed Natural Gas (CNG), Hydrogen, and electricity should be encouraged globally. Reforestation schemes must be prioritized to grow a large number of trees. Forest degradation and deforestation must be seriously

discouraged. There is a need to invest in National orientation programmes to educate the citizenry about attitudes toward the environment, the essence of social interaction, and the value of life. For instance, the public must be educated on the environmental hazards caused by pollutants such as nylons and papers, plastic containers, bottles, cans, used cars, broken electronics, broken furniture, and hospital wastes. Awareness can be created through radio jingles, TV adverts, posters, flyers, and other out-of-home (OOM) and below-the-line (BTL) advertising materials.

There is a need to modernize agricultural practices through the use of technologies and promote implementation of climate-smart and conservation agriculture, such as irrigation-fed agriculture rather than rain-fed agriculture. In Nigeria, the government must exercise political will in resolving the farmers-herders crisis. For instance, the ranching method of cattle rearing should be firmly adopted across the states of the federation, while livestock farmers, including herdsmen, could be given needed training for efficient management of the ranches. As a matter of urgency, the government needs to strengthen the security apparatus of the Nation, while law enforcement agencies must rise to their responsibilities, by prohibiting, arresting, and prosecuting those in possession of illegal arms and ammunition to forestall violence, destruction of farms and killings of farmers. Climate change education should be introduced in Nigerian schools' curriculum as it is already being done in South Africa. There is a need for more research on the subject of climate change and food insecurity. And finally, there is a need to organise an all-encompassing climate summit to engage tech organisations, climate organisations, food and nutrition experts, agriculturists, the media, Artists, filmmakers, individuals, government officials, and other key influencers. The summit will bring forth an avenue for all stakeholders to collaborate and develop sustainable policies and other solutions to make climate actions more effective across the globe.

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