CLIMATE CHANGE AND THE AFRICAN ENVIRONMENT

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Abstract

This paper discussed climate change and environment, with special focus on how regular changes in weather can affect the atmosphere in such areas like, health, displacement of people, food /drinks and school environment. It established the fact that issues under consecration must be given adequate attention and awareness should be created among people living in developing countries about how climate change can be detrimental to their health and general well-being. Climate change and environment in this paper is therefore discussed under the following headings-health, displacement of people, food /drinks and school environment.

Keywords: Climate Change, Africa, Environment, Health, Food, Displacement

Introduction

It is quite impressive that human beings can easily adapt to a changing environment. The adaptive capacity of humans has made them to survive climate change through tick and tin. This is not to say that they have always been lucky. When experiencing climate change, it will be noticeably seen that sea levels are rising, glaciers are melting and precipitation patterns are changing. Extreme weather events are becoming more intense and frequent. It should be kept in mind that all populations will be affected by climate change, but some are more vulnerable than others. People living in small island developing countries

and other coastal regions, megacities, and mountainous and polar regions are particularly vulnerable. Children of poor parents in poor countries are among the most vulnerable. It will be more severe for elderly people and people with infirmities especially those already afflicted with malaria, malnutrition, and diarrhea; they tend to be most vulnerable to heat-related illnesses. Crop declines could lead to under-nutrition, hunger and higher food prices. Therefore, Anderson (2011) is of the opinion that   Climate change is a key cause of increased heat waves, flooding, droughts, intense tropical cyclones, rising sea levels, and loss of biodiversity. These hazards increase vulnerability to disasters and result in widespread human, material, economic, and environmental losses, including to education systems.

In connection with the above, Beyani (2014) states that Climate change can affect human beings and their environment through an increase in hunger and water crises, especially in developing countries, health risks through rising air temperatures and heatwaves, increasing spread of pests and pathogens, loss of biodiversity due to limited adaptability and adaptability speed of flora and fauna, ocean acidification due to increased HCO3 concentrations in the water as a consequence of increased CO_2 concentrations and the need for adaptation in all areas for example, agriculture, forestry, energy, infrastructure and tourism. Therefore, there will be difficulty in having access to food, good medical care, better accommodation and education.

Climate Change and Environment

Climate change and environment in this paper is therefore discussed under the following headings-health, displacement of people, food /drinks and school environment. Climate change has great effect on people's health ranging from the water we drink that may be polluted through erosion, especially where people still use erosion as incinerators. Also, in the air we breathe that regular vehicle fumes, unplanned incinerator that in some cases, refused are being packed and accumulated by the road sides, stinks from dirty drainages and poultries that are close to homes are some of the ways that the environment is being fetid. All these contribute a lot to the health situation of those around who constantly inhale them. Their effects on human health can result in any sickness on individuals and community in general. Some may have diarrhea through drinking of dirty water, and the air emitting from dirty environment can result in accumulation of toxins in the body and other air bone diseases. "Air pollution gets worse as temperatures rise, stressing both the heart and lungs. The fossil fuel pollution that causes the climate crisis also is linked with increased

hospitalizations and deaths from cardiovascular disease, and it is connected with more asthma attacks and other breathing problems." Pachauri and Meyer (2014). They are also of the mind that fossil fuel pollution can increase the risk of stroke. Coal combustion also produces mercury a neurotoxin for fetuses. Diseases spread by mosquitoes and ticks increase the chance of neurological problems. Extreme heat is also linked with cerebrovascular disease, a disorder that affects blood supply to the brain.

Gamble (2018) opines that changing water temperatures mean that waterborne Vibrio bacteria and harmful algal toxins will be present in the water or in seafood at different times of the year or in places where they were not previously threats. Runoff and flooding resulting from increases in extreme precipitation, hurricane rainfall, and storm surge will increasingly contaminate water bodies used for recreation (such as lakes and beaches), shellfish harvesting waters, and sources of drinking water. He went further to say that people can become ill if exposed to contaminated drinking or recreational water. Climate change increases the risk of illness through increasing temperature, more frequent heavy rains and runoff, and the effects of storms. Health impacts may include gastrointestinal illness like diarrhea, effects on the bodies nervous and respiratory systems, or liver and kidney damage.

In the same vain, Balbus (2016) is of the opinion that hotter days, more rain, and higher humidity will produce more ticks, which spread infectious diseases like Lyme disease. Occupational hazards such as risk of heatstroke will rise, especially among farmers and construction workers. During this period, diseases carrying insects are out. Trauma from floods, droughts, and heat waves can lead to mental health issues like anxiety, depression, and suicide.

Discussing climate change and its impacts on health further, concentrating on indoor air quality as a priority, Potera (2011) is of the opinion that attention must be paid to the following: caulking and sealing leaks in buildings may alter airflow and concentrate indoor pollutants such as tobacco smoke, radon, and chemical emissions from building materials. He added that when generators are not used properly or when they are too close to homes or living rooms, people end up in inhaling fumes that are dangerous to health. Supporting this, Holden (2019) says that as temperatures increase, plants produce more pollen for longer periods of time, intensifying the allergy seasons. Increased concentrations of carbon dioxide in the atmosphere can make plants grow more and cause more grass pollen, which causes allergies in about 20% of people. Carbon dioxide can also increase the allergy-causing effects of pollen.   Although Ridley (2013)

argued against this, he feels climate change has some benefits to the environment in this assertion. "The greatest benefit from climate change comes not from temperature change but from carbon dioxide itself. It is not pollution, but the raw material from which plants make carbohydrates and thence proteins and fats. As it is an extremely rare trace gas in the air less than 0.04 per cent of the air on average plants struggles to absorb enough of it. On a windless, sunny day, a field of corn can suck half the carbon dioxide out of the air. Commercial greenhouse operators therefore pump carbon dioxide into their greenhouses to raise plant growth rates."

Although, World Health Organization notified in 2018 that over the last 50 years, human activities particularly the burning of fossil fuels have released sufficient quantities of carbon dioxide and other greenhouse gases to trap additional heat in the lower atmosphere and affect the global climate. In another version of WHO report, the opinion is that "global warming may bring some localized benefits, such as fewer winter deaths in temperate climates and increased food production in certain areas, the overall health effects of a changing climate are likely to be overwhelmingly negative.

Climate change affects social and environmental determinants of health clean air, safe drinking water, sufficient food and secure shelter." In 2019 then, World Health Organization affirms that Climate change can affect human health directly for example, impacts of thermal stress, death and injury in floods and storms. It can also affect indirectly through changes in the ranges of disease vectors for example, mosquitoes, water-borne deceases, water quality, air quality, and food availability and quality.

In summarizing the ideas of Pachauri and Meyer (2014) on how climate change affects human health, they assert that much hotter days make it harder to stay hydrated. They are linked with electrolyte imbalances, kidney stones and kidney failure. Higher temperatures and the depletion of the ozone layer increase the risk of skin cancer. Heat is linked with higher risks for salmonella and campylobacter outbreaks. Extreme rains can contaminate drinking water. Harmful algae blooms that thrive in higher temperatures can cause gastrointestinal problems.

Considering displacement of people, climate change in relation to too much rain and heavy erosion can destroy houses and even farm lands. We have seen cases where floods have destroyed property and left the people homeless. In some cases too, floods demolish buildings and even break bridges therefore making

accessibility to good roads impossible for people and transportation of farm produce becomes tight making life expensive for the masses. Reflecting on people becoming homeless soon due to climate change, Ashton (2007) says emphatically that the developing world will be particularly badly hit, with many people left homeless in their own countries and deprived of all their rights. To him, the number of people forced to move could be more than all those who ended up as refugees after the Second World War. "While many climate refugees would cross national borders - becoming an international problem - many millions more would be unable to leave their countries and would remain largely invisible to outsiders. Climate change could even cause forced migration he added; because it is the most urgent threat facing poor people in the developing world." Therefore, extreme weather events, including hurricanes, floods and wildfires, often cause physical injuries. Extreme heat is also linked with aggression and violence, and the climate crisis globally is connected with violent conflict and forced migration.

Internally displaced persons (IDPs) are not leaving in a favorable environment while new ones are adding. In line with this, Beyani (2014) asserts that over the past five years, an average of nearly 27 million people have been displaced annually by natural hazard-related disasters. It has long been recognized that the effects of climate change will displace people and that most of this displacement will be within national borders. This may even lead to death as World Health Organization (WHO) predicted in 2018 "Between 2030 and 2050, climate change is expected to cause approximately 250 000 additional deaths per year, from malnutrition, malaria, diarrhea and heat stress."

Looking at closely at the effect of climate change on food and drinks, if farm harvests are not regular, may be through too much rain or harsh weather, we may experience famine. Famine is a problem on its own when considering climate change. It results easily in massive deaths and illness. Changes in temperature can also affect fruits appearance, size and taste and, ultimately, render them less valuable to farmers trying to sell them. "Our warming planet is making coffee more difficult to grow in traditional coffee-producing regions as well as putting many different types of wild coffee at risk of extinction. Additionally, rising temperatures have caused an invasive fungus that renders coffee plants inedible and harvests poor." Bethany (2019).

Carbon dioxide emissions can lower the nutritional density of food crops, reducing plant levels of protein, zinc and iron and leading to more nutritional deficiencies. Food supplies are also disrupted by drought, societal instability and

inequity linked with climate change. However, Food and drink companies are calling for action on climate change, warning that rising temperatures threaten global food supplies. The research of Beament (2015) on Companies Calling for Climate Change Action; environment- revealed this assertion. "By 2050, it is estimated that the world's population will exceed nine billion, with two-thirds of all people living in urban areas. This increase in population and urbanization will require more water, energy and food, all of which are compromised by warming temperatures." In the same vain, Schlesinger (2019) advises that more than ever, investors need to pay attention to what was once considered a niche segment of investing. They should view investments through an environmental, social and governance (ESG) lens and ask advisers about these investment options. If not; their money will be more at risk. "While environmental risk is top of mind for many investors, all three considerations are deeply connected, because what is good for society and corporate governance is now often equally so for the planet."

Climate change in school environment may not be related to changes in weather. It comes in relation to school pattern, school heads, and quality of teachers, population of students and other school activities. In the mind of Slade (2014), stories like bullying both within school walls and on the Internet, violence, and harassment in schools, coupled with school personnel combating low morale and increased stress levels affect school climate. He defines school climate as "the quality and character of school life" and acknowledged four critical elements to school climate: engagement, empowerment and autonomy, inclusivity and equity and environment. By implication, school climate is based on patterns of students', parents,' and school personnel's experience of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures.

Effects of good or positive school climate change fosters youth development and learning necessary for a productive, contributing, and satisfying life in a democratic society. This climate includes Norms, values, and expectations that support people feeling socially, emotionally, and physically safe. People are engaged and respected. Students, families, and educators work together to develop, live, and contribute to a shared school vision. Slade (2014). However, for a school climate to be pleasing, it must be supportive, protective, nurturing, and conducive to effective teaching and learning. Students' art and writing samples that tell creative stories must be welcoming and make schools a place where both students and teachers including parents would like to go.

Classrooms must be well ventilated and have bright electricity with open doors and students interacting with their teachers. Although, every school has a climate; it is either developed, planned with intent or it is adopted by proxy. The major responsibility of School in relation to climate change is to include in their curriculum the awareness that climate change is real and to teach the ways and manner of adapting into a situation like this. Meanwhile, Anderson (2011) opines that this is already in practice in some schools. "Despite being threatened by climate change, the education sector offers an untapped opportunity to reduce disaster risk and combat climate change. There is a clear education agenda in adopting strategies to deal with global warming. Such strategies include learning new knowledge and skills, and changing behaviors to reduce greenhouse gas emissions through sustainable consumption patterns in lifestyles, livelihoods, economies, and social structures." Other schools that are yet to inculcate this can borrow this idea and make it their practice.

Conclusion

Climate change is one of the greatest challenges we face today. Identifying complex public health issues that connect global climate change and indoor air environments can lead to sound policy decisions that could save lives. If attention is shifted from this, Climate change will result in large scale movements of people and that developing countries will bear the greatest costs. Rising sea levels and increasingly extreme weather events will destroy homes, medical facilities and other essential services. Even though the interactions among school stakeholders are important, the environment itself, that is, the physical and social-emotional environment also plays a part.

Finally, climate change has consequences on people and its environment from time to time. These effects comes in form of trauma, infections, nutrition and others, that occur in demoralized and displaced populations in the wake of climate-induced situations.

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