#### CLIMATE CHANGE AND HEALTH: KANO STATE IN VIEW

In our world today, we are battling with a crisis that we inadvertently created – Climate Change. Burning of fossil fuels, felling of trees and unsustainable agricultural practices, have become the order of the day. These acts increases the concentration of greenhouse gases that trap heat in the atmosphere. As a result, nature has punished us with extreme temperatures, floods, unpredictable weather and more diseases.

The streets of Kano State are no strangers to grief, like many other cities around the world. Every rainy season, as floodwaters rise, so does the death toll from cholera and diarrheal diseases. The relationship between climate change and public health, once an ignored global crisis, is now manifesting in our communities.

### **Climate Change War on Health:**

There are many ways climate change links to health challenges, which often intersect with one another. The changes in rainfall patterns contribute to droughts, flooding, food insecurity and malnutrition. It also leads to poor water quality and water scarcity, triggering water-borne diseases. There is increased spread of vector-borne diseases such as malaria due to expansion of mosquito habitats. Extreme heat waves lead to dehydration, heat strokes and heat related illnesses.



It is estimated by the World Health Organization that between 2030 and 2050, climate change will cause about 250,000 additional deaths per year from malnutrition, diarrhea and heat stress. [1]. The World Resources Institute report on climate change and health highlights that flooding, worsened by climate change, significantly increases exposure to waterborne pathogens, particularly in regions with inadequate sanitation and waste management. Kano, with its dense population and fragile health infrastructure is a prime example of this crisis.

#### Cholera and Diarrheal Diseases in Kano:

The prevalence of cholera is higher during flooding and drought due to contaminated water and inadequate sanitation and this has been an annual nightmare in Kano. In 2021, Nigeria experienced one of its worst cholera outbreaks, with over 110,000 reported cases and more than 3,600 deaths. [2]. Kano was among the worst hit states. The floods submerged entire communities, contaminating water sources and overwhelming an already struggling healthcare system.

I still remember the sadness on the face of Hadiza, a mother of three, when she recounted how she lost her youngest child to cholera last year. She said "He was fine in the morning, playing with his brothers, by evening, he was gone. The hospital was too far, the roads were flooded, and we had no clean water to rehydrate him". Her story is one of the many and without urgent intervention, these numbers will rise.

#### Fighting Back Against Climate-Induced Water Diseases:

Addressing this crisis requires more than short-term emergency responses, it demands sustainable, innovative, cost-efficient, climate-resilient solutions. I propose four key interventions that will improve this situation:

- 1. **Project Ruwa-Guard:** At the core of cholera is unsafe water and this project will tackle it by providing solar-powered water purification centers in flood-prone areas. The basic principle involves harnessing the power of the sun to generate heat and electricity, which is then used to remove contaminants and pathogens from water, ensuring access to clean drinking water even during floods. Communities will no longer have to rely on contaminated wells and rivers.
- 2. **Project EcoDefenders Bayan Gida:** Open defecation and poor sanitation fuel the spread of cholera. This consists of two types of toilets: a raised composting toilet that is built above ground to prevent contamination of groundwater with a ventilation pipe. Dry soil can be sprinkled after usage to absorb moisture, water is not needed. The chamber is emptied after 6 months. The second toilet is a water-efficient, self-cleaning toilet. These toilets will use biodigesters to convert waste into biogas, reducing contamination while providing an alternative energy source for local communities.
- 3. **Project WANKE:** This will be a taskforce consisting of volunteers, especially the youths. They will be tasked with educating households on safe water and hygienic practices, monitoring water quality and responding to outbreaks. They will work closely with health workers to ensure early detection and intervention, preventing minor infections from turning into deadly epidemics.
- 4. **Project Gona:** This is basically a large-scale afforestation and drainage project to mitigate flooding. The planting of trees will slow down surface water runoff, absorb excess water and reduce soil erosion. In addition, the trees will absorb atmospheric carbon dioxide, which is the most significant greenhouse gas.

# Challenges:

While these solutions offer hope, their success is not guaranteed. Several challenges threaten their implementation. Starting with is the funding and political will as this will be a large-scale project and will require significant funding. The lack of skilled man power and infrastructural deficient will also be a hindrance as well as institutional weakness in governance and corruption, which can delay project execution. Lastly, resistance to change should be anticipated and this will slow adoption.

# **Overcoming the Challenges:**

The solutions to these challenges lie in strategic partnerships, policy reforms and community engagement. Firstly, there is a need for Public-Private partnerships, with NGOs, businesses and international agencies co-funding and implementing these projects. The Government should rise to the occasion by investing in infrastructures, especially in healthcare and promotion of research. Lastly, mass orientation on climate change and health should be carried out by involving local influencers, religious and tribal leaders.

Bangladesh, a country that once suffered frequent cholera outbreaks has been able to reduce cholera-related deaths by 90% in the last three decades through investments in clean water, sanitation and community health programs. We can learn from them.

### **Call to Action:**

While we join the global concerted effort to reduce greenhouse gas emission and to repair our planet, we must ensure that we put a leash on cholera and diarrheal disease spikes cause by climate change in Kano. With these bold actions, innovative solutions and unwavering commitment, we can turn the tide. The time to act is now

# **References:**

1. "Climate Change". World Health Organization. Available: <u>Https://www.who.int/health-topics/climate-change</u>

2. Oluigbo T. "Cholera and Climate Change: An Old Enemy in a Modern world". Available: <u>Https://articles.nigeriahealthwatch.com/cholera-and-climate-in-nigeria-an-old-enemy-in-a-modern-world</u>