



The Impact of Climate Change on the Health of Populations in Cameroon

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Introduction

According to the World Meteorological Organization (WMO), 2024 is projected to be the hottest year in recorded history, primarily due to rising concentrations of greenhouse gases in the atmosphere. Cameroon, like many other countries worldwide, is experiencing the severe effects of climate change, with numerous temperature records already shattered in 2023. For instance, in April 2023, the maximum temperature recorded in the country reached 47°C, significantly higher than the seasonal norms of 30-31°C.

These extreme weather events are occurring with increasing frequency and intensity across the nation. Numerous instances of flooding and landslides linked to major heat waves have been documented in various regions, leaving local communities in a vulnerable situation.



This article examines the direct and indirect effects of climate change on population health in Cameroon. It is primarily based on a review of existing literature on the topic, along with an analysis of available climate and health data.

The objective is to highlight the vulnerability of various regions and socio-economic groups affected by this phenomenon (1) and to propose emergency strategies to mitigate the associated health risks (2).

The Direct Effects of Climate Change on Health

Climate change has significant consequences for the health of populations, particularly in developing countries. According to William Dar, approximately 99% of deaths attributed to climate change occur in these regions. Extreme temperatures and torrential rains adversely affect not only people's morale but also their physical health.

The Effects of Extreme Temperatures

Extreme temperatures can have significant consequences for the environment, human health, and ecosystems. Heatwaves, for example, can lead to health issues such as heat stroke, dehydration, and an increased risk of cardiovascular disease. Additionally, they can impact agricultural productivity by reducing crop yields and exacerbating water stress.

Extremely low temperatures can cause significant damage. They may lead to frostbite, hypothermia, and respiratory complications. Infrastructure, including roads and buildings, can suffer from frost damage, resulting in high repair costs.

Ecosystems are also vulnerable to temperature fluctuations. Plant and animal species may be compelled to alter their habitats or behaviors, which can disrupt food chains and result in ecological imbalances.

Extreme temperatures pose a significant challenge to public health, agriculture, and biodiversity, necessitating adaptation and mitigation strategies to minimize their impact.

According to the World Meteorological Organization (WMO), a comparison of temperature variations over the past 40 years indicates that heat waves recorded from January to February 2024 reached unprecedented levels. In their recent report, it was noted that January 2024 was the hottest month in the intertropical and Gulf of Guinea regions in the last 50 years.

These extreme temperatures, which cause significant thermal discomfort, are particularly harmful to vulnerable populations, including pregnant women, the elderly, children, and individuals with comorbidities such as hypertension or diabetes.

Furthermore, heat waves heighten the risk of dehydration among the elderly and children. Without prompt and effective treatment, these conditions can lead to increased mortality rates. A climate risk profile developed by GIZ GmbH (Deutsche Gesellschaft für Internationale Zusammenarbeit) in collaboration with BMZ (German Federal Ministry for Economic Cooperation and Development) revealed that heat-related mortality in Cameroon rose from 2.5 deaths per 100,000 people in 2000 to an estimated 9.1 deaths per 100,000 people by 2080 (GIZ GmbH, 2022).

It is important to note that extreme temperatures can alter the habitats of disease vectors, such as mosquitoes, significantly increasing the transmission of diseases like dengue fever and malaria. In 2020, Cameroon was among the fifteen countries most affected by malaria, accounting for 2.9% of all malaria cases and deaths worldwide, as well as 2.4% of malaria-related deaths that year. Over time, regions that were once less susceptible to the disease have emerged as new hotspots, particularly in the Far North, North-West, and West regions (Global Fund, 2020-22). This situation underscores the urgent need to strengthen the health system and implement adaptation measures to protect vulnerable populations.

The Effects of Irregular Rainfall and Flooding

The irregular rainfall and flooding observed during the rainy seasons in Cameroon have serious health consequences. Since the beginning of 2024, the Far North region of Cameroon has experienced flooding that has affected more than 19,000 households, impacting approximately 159,000 people (OCHA, 2024). The material and human damage caused by this disaster is immense. Furthermore, the inadequacy of the responses implemented and the logistical challenges, particularly the difficult access to disaster zones, exacerbate the risk of epidemics and the spread of various diseases. These include diarrheal diseases, vector-borne diseases, respiratory and skin infections, leptospirosis, and malnutrition resulting from the destruction of crops and food supplies.

Irregular rainfall and flooding also lead to the contamination of drinking water sources, increasing the risk of spreading waterborne diseases such as typhoid and cholera (African Development Bank, 2021). Increased humidity and precarious living conditions in displaced persons' camps can promote respiratory diseases. Furthermore, the stagnant water created by flooding serves as a breeding ground for mosquitoes, thereby increasing the transmission rate of vector-borne diseases such as malaria. Additionally, there is a risk of drowning and injury from debris that accumulates in rainwater. Given the resurgence of these factors across the country, it is imperative for state authorities to develop a rapid response to these disasters in order to minimize health risks.

Adaptation and Response

In Cameroon, the government is implementing numerous measures to combat natural disasters resulting from climate change. The efforts of various non-governmental organizations and local communities bolster the state's commitment. However, these efforts remain insufficient. Therefore, all stakeholders need to establish a range of effective adaptive measures, including:

- **Strengthening health systems:** This involves enhancing health infrastructure to make it more resilient to climate-related disasters. The use of materials that can withstand extreme climatic conditions and the design of buildings capable of enduring floods, storms, and heat waves are urgent measures that must be implemented. Additionally, it is essential to install renewable energy sources, such as solar panels, to ensure a continuous power supply, even during disasters.
- **Optimize water resource management:** Ensuring access to drinking water and sanitation facilities for communities helps prevent waterborne diseases during floods.

- Monitor and prevent diseases associated with climate change: It is essential to establish an effective surveillance system for the early detection of climate-related diseases, such as cholera and malaria, and to enhance awareness-raising and vaccination campaigns.
- Promoting sustainable and resilient agricultural practices: In at-risk areas, such as the far north of Cameroon, farmers need support to adopt sustainable, climate-resilient agricultural methods to ensure food security.
- The government must implement effective urban planning to develop appropriate infrastructure that mitigates the risks of flooding and extreme heat.
- Inform and Sensitize the Population: Educating and raising awareness among the population about climate risks equips them with the necessary tools to respond effectively to these disasters and safeguard their health.
- As heatwaves and, in particular, floods associated with climate change have a detrimental impact on the mental health of affected populations, due to material and human losses, as well as the challenging living conditions that ensue, it is crucial to establish a psychological monitoring unit for communities in regions severely impacted by climate change.



Conclusion

This paper aimed to analyze the direct and indirect effects of climate change on the health of populations in Cameroon. An in-depth examination of these effects revealed that they pose a growing threat to the country's sustainable and inclusive development. Variations in rainfall patterns and elevated temperatures facilitate the spread of numerous diseases, with serious repercussions for vulnerable groups, particularly children, women, the elderly, and individuals with co-morbidities. Therefore, it is urgent to adopt an integrated approach to combating climate change in the country, considering perspectives from climatology, epidemiology, and public health. The primary recommendations focus on strengthening the healthcare system, promoting sustainable environmental practices, and raising public awareness about the dangers of climate change.

About CEFRES

The Centre for Economic Freedom and Resilience (CEFRES) is a prominent think tank in Cameroon committed to providing evidence-based insights aimed at enhancing economic resilience and alleviating poverty throughout the nation. We believe that fostering economic freedom in Cameroon can pave the way for sustainable and inclusive development, thereby reducing the country's susceptibility to various economic shocks. Our vision encompasses a Cameroonian and African economy that is robust enough to withstand any crisis, grounded in the principles of economic freedom. We firmly advocate for the notion that all citizens should have equal opportunities to realize their full potential, which is essential for bolstering their country's resilience against diverse challenges.