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Climate Change and Epidemics Report show that the world is becoming sicker with unusual pathogens spreading at fast rate in multiple countries

An international group of 100s of scientists release the second edition of this global Climate Change and Epidemics report at the WHO pavilion at the last day of the COP29. On the hottest year in history, the report demonstrate how multiple pathogens and epidemics are being amplified by climate change.

22 November 2024, Baku, Azerbaijan - Today, on the last day at the COP29, the 2024 report on climate change and epidemics is being released at the WHO main pavilion at the COP29 by international leading scientists. This report, which was compiled by over one hundred scientists and policy makers, highlights how climate change is fuelling new record epidemics across the world in 2024.

This year, the world saw the highest number of Dengue virus cases with over 13 million diagnosed cases. It was in 2024, that the highest number of countries to detect West Nile Virus, with 19 countries in Europe alone detecting West Nile and, worrisome, of rapid increase of antimicrobial resistance cases of Malaria in East Africa and a new pathogen, Oropouche, emerging in South America

“We are walking blindsided to an era of epidemics, where global warming and pathogens enter an amplification cycle. It will become clear in the next few years, that if we do not drastically reduce carbon emissions, that we, our children and grandchildren will become sicker, with more and more unusual diseases”. Commented Prof. Tulio de Oliveira, who is the main author of the report and a global leading medical researcher.

The report highlight that exacerbation of infectious diseases due to climate hazards can be attributed to both direct and indirect factors. The three main factors identified in the report, including: 1) Gradual temperature rise : The slow but relentless increase in global temperatures creates a conducive environment for disease vectors such as mosquitoes, rodents, and ticks to proliferate. 2) Extreme events: Sudden and more frequent occurrences of extreme events, such as floods, further compound the problem and 3) Climate Migration: Changes in temperature and precipitation patterns can also impact food and water availability and impact livelihoods.

Extreme temperatures, droughts, floods and cyclones cause death directly and indirectly through outbreaks of bacterial diseases such as vibrio cholera. In 2023 and 2024, the world saw the largest outbreaks of cholera in the 20th century. For example, 17 African countries had large cholera outbreak and Haiti, which had been free of Cholera for 5 years, saw a very large outbreak in 2023 that it is still causing infections and deaths.

In addition to highlighting multiple diseases and outbreaks, the Climate Change and Epidemics 2024 report also identifies the main actions that can be taken to decrease epidemics. The report urges

governments, academic institutions, public health officials, private sector industries and health organizations to work together to address the urgent and interconnected challenges of climate-amplified diseases and epidemics through their diverse expertise, and resources.

The report authors call on the world to act now by:

1. **Reporting outbreaks timeously** - Immediate and transparent reporting of infectious disease outbreaks is paramount. Governments and health organizations should commit to reporting outbreaks promptly and openly, sharing crucial data with relevant stakeholders. This transparency is essential for global preparedness and response efforts.
2. **Strengthen Genomic Surveillance** - Governments, academic institutions, and health organizations must invest in and expand genomic surveillance capabilities to monitor the spread and evolution of infectious diseases. This will enable early detection and response to emerging threats, allowing us to prevent outbreaks before they escalate.
3. **Prioritizing Vulnerable Populations** - The most vulnerable communities are disproportionately affected by the intersection of climate change and infectious diseases. Governments and private sector industries must prioritize these populations by investing in resilient healthcare systems, infrastructure, and disaster preparedness measures.
4. **Promoting Climate Resilience** - Academic institutions and private sector industries should collaborate to develop innovative solutions that enhance climate resilience within healthcare systems. This includes designing infrastructure to withstand extreme weather events and ensuring the availability of essential medical supplies during crises.
5. **Committing Sustainable Funding** - Governments, private sector industries, and health organizations must commit to sustainable funding dedicated to the fight against climate change related infectious diseases. This funding should support research, capacity-building, and community engagement to create a robust defence against these converging threats.

“Brazilian scientists and government were very fast in the report and response to Oropouche virus. This allowed diagnostics to be developed rapidly and the outbreak to be identified and contained”
Comment Prof. Luiz Carlos Alcantara, from FioCruz Foundation, Brazil.

“I am particularly worried about the failure of the USA to control the Influenza H5N1 outbreak in animals. As this outbreak keep spreading in hundreds of herds, and recently in swine, it give the chance that it can cause a pandemic” Prof. Tulio de Oliveira further comments “It is important that the USA provides transparency and report cases and produce genomics in real-time so medical countermeasures, such as vaccines and therapeutics can be developed”.

The report is being launched at a COP29 in the Blue Zone in the WHO Pavillion on November 21, 2024 at 9am, where multiple authors will be present. The report, call to action, summary presentation and introductory video is available for journalists and media personnel at <https://climade.health/cop29-report/>

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Prof. Tulio de Oliveira and Prof. Luiz Carlos Alcantara will attend the COP29 UEA summit and will be available for interviews after the Climate and Infectious Diseases Report 2024 Launch, which will take place at the WHO Pavillion, Blue Zone, November 21, 2024, 9am-10:30am.

About CLIMADE

The CLIMADE (**C**limate **A**mplified **D**iseases & **E**pidemics) initiative is a global consortium of leading global scientists and public health officials. CLIMADE focuses on bridging knowledge gaps, improving surveillance tools and expanding adequate interventions to decrease the impact of climate amplified diseases and epidemics. The overarching long-term goal of CLIMADE is to predict, track and control diseases and epidemics that are amplified by climate change in some of the most affected countries in the world. www.climade.health

About Centre for Epidemic Response and Innovation (CERI), Stellenbosch University, South Africa.

The Centre for Epidemic Response and Innovation (CERI) is a leading academic research centre focused on epidemic preparedness and response. CERI hosts the largest genomics facility on the Africa continent and it is a specialized genomics facility of the WHO AFRO and Africa CDC. CERI is based at Stellenbosch University in South Africa. Connect with us at www.ceri.org.za and on Twitter: @ceri_news