

Making a case for
**Planetary
Health**
in sub-Saharan Africa

Information Pack



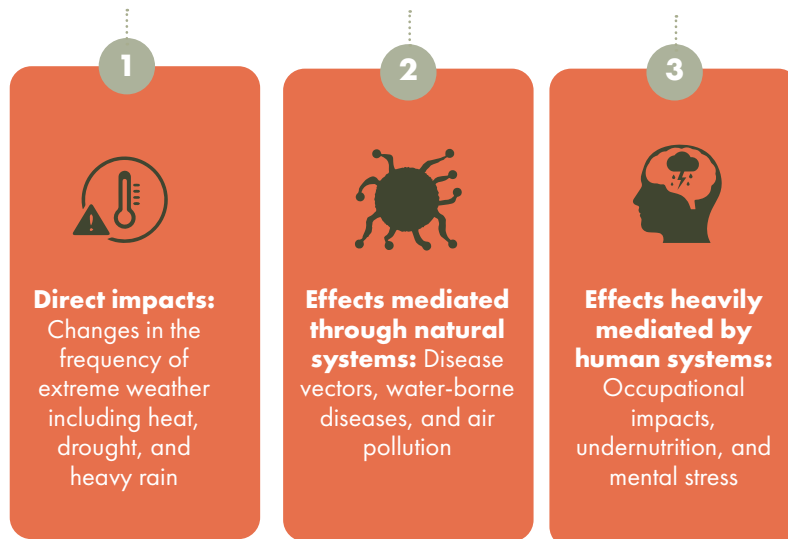
The pathways between climate change and health outcomes are often complex and indirect, making attribution challenging. Climate change may not be the most important driver of climate-sensitive health outcomes over the next few decades but could be significant past the middle of this century. Climate change is a stress multiplier, putting pressure on vulnerable systems, populations, and regions.

Human health is profoundly affected by weather and climate. Climate change threatens to exacerbate today's health problems – deaths from extreme weather events, cardiovascular and respiratory diseases, infectious diseases and malnutrition – whilst undermining water and food supplies, infrastructure, health systems and social protection systems.

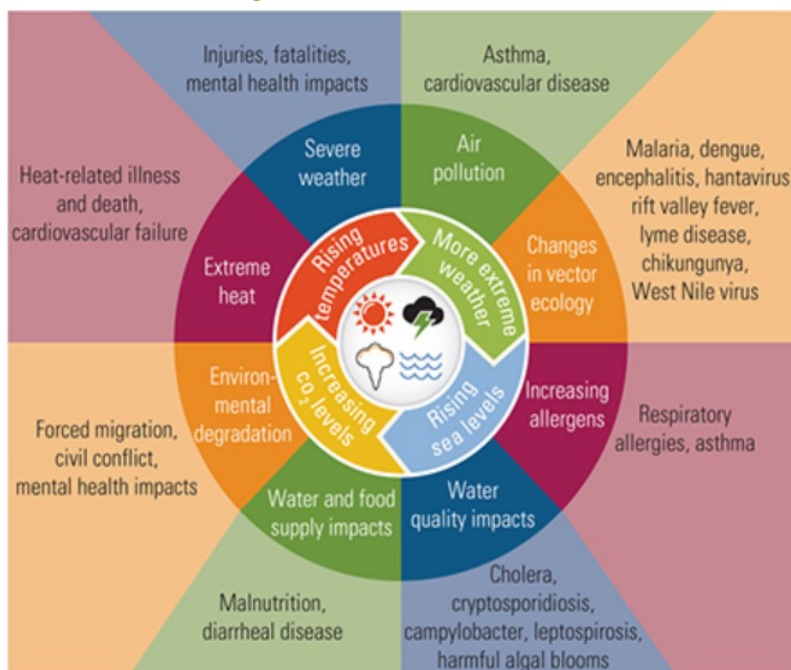
- The health consequences of climate variability and change are diverse, potentially affecting the burden of a wide range of health outcomes. Changing weather patterns can affect the magnitude and pattern of morbidity and mortality from extreme weather and climate events, and from changing concentrations of ozone, particulate matter, and aeroallergens (Smith et al. 2014).
- Changing weather patterns and climatic shifts may also create environmental conditions that facilitate alterations in the geographic range, seasonality, and incidence of some infectious diseases in some regions, such as the spread of malaria into highland areas in Kenya. Changes in water availability and agricultural productivity could also affect undernutrition.
- Failure to mitigate the health impacts of climate change will be detrimental for health and well-being, due to the higher burdens of climate sensitive health outcomes.

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There are three basic pathways by which climate change affects health:



Effects of climate change and health

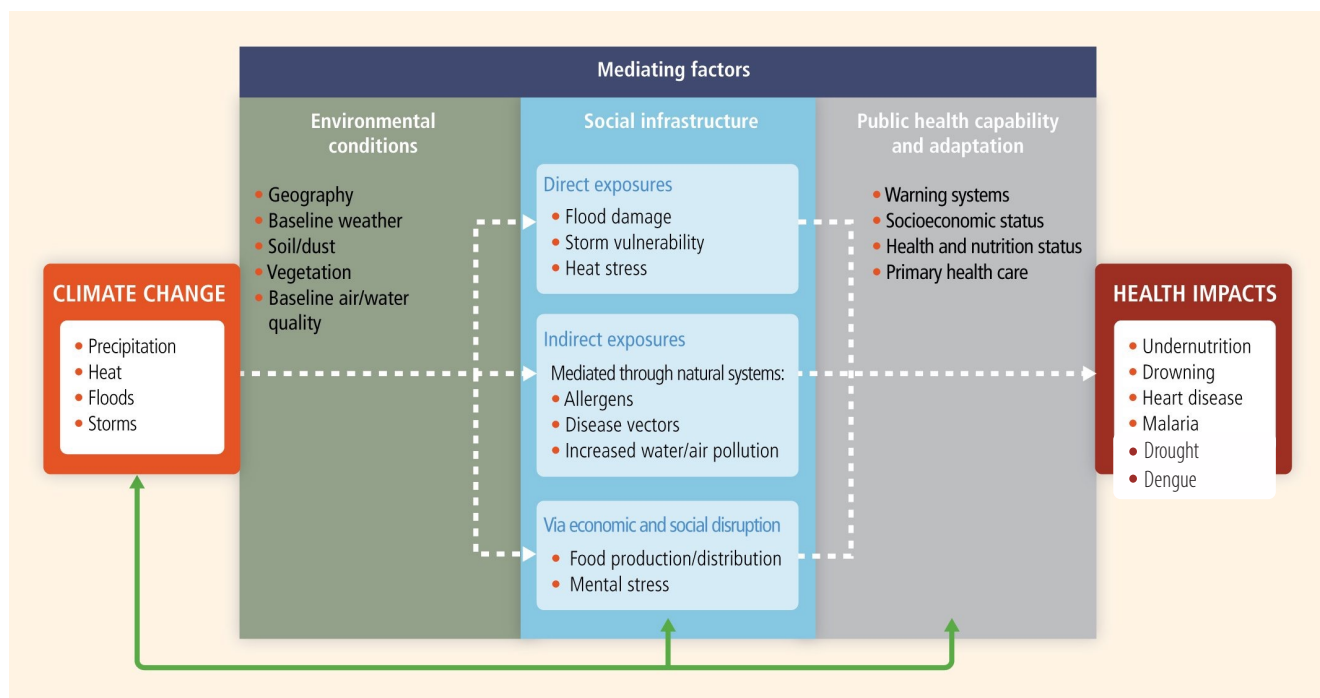


Source: George Luber CDC

- The health of human populations is sensitive to shifts in weather patterns and other aspects of climate change. The effects occur directly, because of changes in temperature and precipitation and because of the occurrence of extreme weather and climate events (heatwaves, floods, droughts, and wildfires).

Climate change can lead to ecological disruptions that indirectly affect health (for example, by reducing crop yields and altering the habitat of disease vectors). Social responses to climate change, such as migration, also can affect human health.

Conceptual Diagram of the Health Risks of Climate Change



Source: IPCC, 2014

The major concerns with climate change include:

1. Morbidity and mortality from higher ambient temperatures and intense heatwaves;
 2. Higher risk of undernutrition from reduced food production in poor regions;
 3. Health consequences of lost work capacity and reduced labor productivity; and
 4. Higher risks of food, water, and vector-borne diseases.
- The magnitude and pattern of risks from climate change are due to the characteristics of the hazards created by changing weather patterns including:
 - Extent of exposure (for example, reducing the presence or effectiveness of coastal barriers)
 - Susceptibility of exposed human and natural systems (for example, making individuals and communities more or less susceptible by affecting their access to and the functioning of health care facilities or the proportion of the population vulnerable to an event)
 - Ability of organisations and institutions to prepare for and manage events effectively and efficiently.

Cost of inaction

In Kenya, the Stockholm Environment Institute used a malaria risk model based on altitude to assess the national impact of future climate change. The model projected that, by 2055, as a result of average climate warming of 4.3°F (2.3°C) across the projections, the population annually affected by malaria in rural areas above 1,000 meters (63 percent of the population) would increase as much as 74 percent (in the absence of adaptation). It also presented results for scenarios with average temperature increases of 2.2°F (1.2°C) and 5.6°F (3°C).

The 10 model projections used a range of average climate warming increases from 36 to 89 percent. The additional economic burden of endemic malaria disease in the 2050s was estimated to be more than US\$92 million annually (with a range of US\$51 million to US\$106 million annually across the temperature projections) based on the clinical and economic burden of malaria.

The estimated welfare costs increased to a range of between US\$154 million and US\$197 million annually when disutility costs (discomfort, pain, and inconvenience measured by survey-based willingness-to-pay estimates) were considered (SEI 2009).

- Understanding the magnitude and pattern of impacts and the factors that increase or decrease susceptibility and coping abilities is vital to modifying current policies and to implementing new policies and programs to increase resilience to climate change.



Way Forward

It is therefore important to:

- Build the resilience of health systems in the face of climate change, providing an agenda for action to mainstream the public health response to climate change within the health sector and other relevant sectors.
- Bridge the gap between policies and practice through legislation and guidelines, appropriate planning, including relevant vulnerability assessments, programmatic support and multi-sectoral and participatory processes that are gender sensitive.
- Support the establishment of an integrated health surveillance, climate observation and processing systems.
- Integrate climate health risk management into cross-sector planning and practice for adaptation to climate variability and change by developing climate services and products that address disease prevention at end-user level.
- Ensure that climate change mitigation and adaptation strategies are informed by multidisciplinary research.

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