



CLIMATE CHANGE AND HEALTH: MALAWI COUNTRY STUDY REPORT WITH EMPHASIS ON MALARIA AND CHOLERA

by

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Introduction

- Adverse climatic hazards: dry spells, seasonal droughts, intense rainfall, riverine floods and flash floods.
- Droughts and floods, have increased in frequency, intensity and magnitude over the last two decades.
- Impacted on food and water security, water quality, energy and the sustainable livelihoods of rural communities.
- Malawi has developed its National Adaptation Programmes of Action (NAPA) by
- list of fifteen urgent and immediate priority needs for adaptation. The sectors
- that were analyzed are agriculture, water, human health, energy, fisheries, wildlife,
- forestry and gender.

Introduction

Human health sector

- The human health sector is directly affected by climate change, and is especially linked to infant malnutrition and chronic ailments associated with malaria, cholera and diarrhoea as a result of droughts and floods. For example, malaria is expected to increase and spread to previous cool zones as temperatures increase due to global warming.
- The proposed interventions include: (i) improved nutrition for infants and other vulnerable groups, (ii) prevention of diseases, such as malaria through increased distribution of insect treated bed-nets (ITNs), and diarrhoea, (iii) water treatment, (iv) crop diversification and food supplementations for the under-fives.

Introduction

Malaria.

- Malaria is an acute febrile illness caused by parasites that are transmitted by female anopheles mosquito bites and characterized clinically by paroxysms of fever and general body pains.

Cholera.

- Cholera is a secretory diarrhoeal disease that is caused by a bacillus called *vibrio cholerae*. It is acute and usually severe in nature and can cause death within 48 hours due to rapidly progressing dehydration. The disease occurs in many African countries and is said to be endemic in countries like India, Pakistan and Bangladesh. Cholera is transmitted through ingestion of feacally contaminated food and drinks.

Introduction

- Understanding the inter-annual cycles of cholera and other infectious diseases, however, requires the combined analyses of both environmental exposures and intrinsic host immunity to a disease.
- Environmental factors favouring epidemic cholera are; rainy season, areas without safe water as during floods and droughts and gatherings of people.

Introduction

- There may be evidence that malaria is increasing in the highlands of Africa owing to climate change, but Methods used to detect it are still controversial and do not convincingly prove or disapprove the association.
- Some researchers claim that climate change cannot explain the growth of malaria in the highlands of East Africa at the same time giving a warning that drawing simplistic links between global warming and local disease patterns could lead to mistaken policy decisions.

Methodology

- Desk review of malaria, cholera, rainfall and average temperature data from the districts of Blantyre and Chikwawa was carried out.
- The two districts were chosen because they are upland and lowland respectively and neighbouring in terms of geographical location.
- The expectation - rainfall and temperature patterns for the two districts would be different and thus the occurrence of the two disease conditions would be different as well.
- Data on the disease conditions was collected from the respective district Health Management Information Systems (HMIS) and the Integrated Disease Surveillance and Response (IDSR).

Methodology

- Rainfall and Temperature - Meteorological Office in Blantyre and Ngabu for Chikwawa.
- Data over a period of four years, from second half of 2002 through the first half of 2006.
- July in one year to the month June the next year for proper observation of the variations in both the climatic conditions (rainfall and mean temperature) and the disease variability within that period.

Results

- There was a steady increase from the month of November 2002 to the highest number of cases that were reported in April 2003 before a drop to a minimum in the month of May the same year.
- Another increase in the number of cholera cases was reported from the month of June to a peak in September 2003 followed by an immediate drop to a zero in November of the same year.
- Some cases were reported in between January and June 2006 with the highest number of cases reported in the month of April in that year.

Follow up

- Workshop to have input from stakeholders and drawing the final report.
- Dissemination of the report.

**THANK YOU
FOR LISTENING!!**

