

# Chapter 9

## Climate Change Effects on Human Health with a Particular Focus on Vector–Borne Diseases and Malaria in Africa

### A Case Study from Kano State, Nigeria Investigating Perceptions about Links between Malaria Epidemics, Weather Variables, and Climate Change

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## **ABSTRACT**

*Malaria is currently affecting more people in the world than any other disease. On average, two members of each household suffered from malaria fever monthly, with females and children being most vulnerable to malaria attacks. This chapter assessed communities' perception about malaria epidemic, weather variable and climate change in metropolitan Kano. Information was extracted related to communities' perception about malaria epidemic and climate change. Socio demographic characteristics of respondents in the study areas were extracted and analyzed. 75% of the participants were males, while 25% were females, malaria disease affected 79.66% and 59.66% respondent perceived that heavy rainfall, floods and high temperature are better conditions to the breeding and spread of malaria vectors. Hospital records revealed that Month of March and April (2677 and 2464, respectively) has highest number of malaria cases recorded between December 2010 to June 2011. Further research is recommended for in-depth information from health officials related to raising awareness.*

## **INTRODUCTION**

This chapter covers the effect of climate change on human health with a particular emphasis on vector-borne diseases and malaria with focus in Kano metropolitan Nigeria with a view to investigate community perceptions about links between malaria epidemics, weather variables and climate change.

## **BACKGROUND**

Malaria is currently affecting more people in the world than any other disease. It is currently endemic in over 100 countries and one of the 10 most prevalent and deadly diseases in the world (WHO, 2002). Apart from being one of the world's dreaded killer diseases, its prevalence has become a local and an international public problem. Malaria causes about 273 million clinical cases and 1.12 million deaths annually. More than 40% of the global population (> 2.1 billion people) are exposed to the malaria (Toure and Oduola, 2004). Malaria is caused by five distinct species of plasmodium parasite (*Plasmodium falciparum*, *Plasmodium vivax*, *Plasmodium malariae*, *Plasmodium ovale*, *Plasmodium knowlesi*) and is transmitted by Anopheline mosquitoes. (IPCC WGII AR5, 2013)

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