



Effects of Reservoir Characteristics on Malaria and its vector Abundance: A Case Study of the Bongo District of Ghana

E. Ofosu, E. Awuah, and F. O. Annor

Civil Engineering Department, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

In the seven (7) administrative zones of the Bongo District of the Upper East Region of Ghana, the occurrences of malaria and relative abundance of the principal malaria vector, *Anopheles* species, were studied as a function of the presence and characteristics of reservoirs during the rainy season. Case studies in the sub-Saharan Africa indicate that malaria transmission may increase decrease or remain largely unchanged as a consequence of reservoir presence. Analysis made, shows that the distance from reservoir to settlement and surface area of reservoirs significantly affected adult *Anopheles* mosquito abundance. Percentage of inhabitants using insecticide treated nets, livestock population density, human population density and *Anopheles* mosquito abundance significantly affected the occurrence of malaria. The results suggest that vector control targeted at reservoir characteristics and larval control, and supplemented by high patronage of insecticide treated nets may be an effective approach for epidemic malaria control in the Bongo District.

Key Words: Bongo District, Reservoir, *Anopheles* species, Malaria, Vector abundance.