

Role of the Environment in Shaping Malaria Transmission in Africa

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Abstract. Environmental determinants of malaria transmission in Africa will be discussed. A new class of computational models that are capable of simulating the hydrological and entomological processes that lead to malaria transmission will be described. Extensive data sets from satellite platforms as well as intensive field campaigns will be presented to describe observed hydrological and entomological processes and to test the skill of the models in simulating these same processes. Examples will be presented to illustrate how this new class of models is used to test and refine environmental management interventions against malaria, as well as in prediction of the impact of future climate change on malaria transmission in Africa.