602 MAPPING *LOA LOA* IN WEST AND CENTRAL AFRICA. Thomson MC, Obsomer V, Boussinesq M, Remme H, Diggle P, Christensen O, Kamgno J, Molyneux D. International Institute for Climate Prediction, NY; Institut de Recherche pour le Développement, Yaounde, Cameroun; TDR, WHO, Geneva, Switzerland; Medical Statistics Unit, Lancaster University, UK; Centre Pasteur, Yaounde, Cameroun; Liverpool School of Tropical Medicine, Liverpool, UK.

*Loa loa* has recently emerged as a filarial worm of significant public health importance as a consequence of its impact on the African Programme for Onchocerciasis Control. Severe, sometimes fatal, encephalopathic reactions to ivermectin (the drug of choice for onchocerciasis control) have occurred in some individuals with high Loa loa microfilarial counts. High density of *Loa loa* microfilariae is known to be associated with high prevalence rates. There is consequently an urgent need for a method to rapidly identify communities that are highly endemic for loiasis (prevalence >=20%) and are, therefore, at high risk of severe adverse reactions following mass treatment with ivermectin for the control of onchocerciasis or lymphatic filariasis. Two different approaches have been developed to address this problem. A collaborative project between the Liverpool School of Tropical Medicine and the IRD/Centre Pasteur, Cameroon, has produced a risk map of loiasis in Africa that predicts the prevalence of loiasis as a function of vegetation Îgreenessì and elevation. The Special Programme for Research and Training in Tropical Diseases of WHO) has developed a rapid assessment method to determine the level of loiasis endemicity at the community level using a simple questionnaire on the history of eye worm. Both methods have been validated against parasitological data from sample communities in Cameroon and Nigeria, and the results are very promising. Given the different strengths and limitations of the two methods, it has been suggested to develop a combined method of the two approaches, using the environmental risk map as the first level prediction, followed by RAPLOA in a spatial sample of villages to validate and refine the initial risk map. Issues of spatial correlation in the epidemiological data and the levels of uncertainty attached to model predictions was identified as the next step in terms of environmental model development.

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