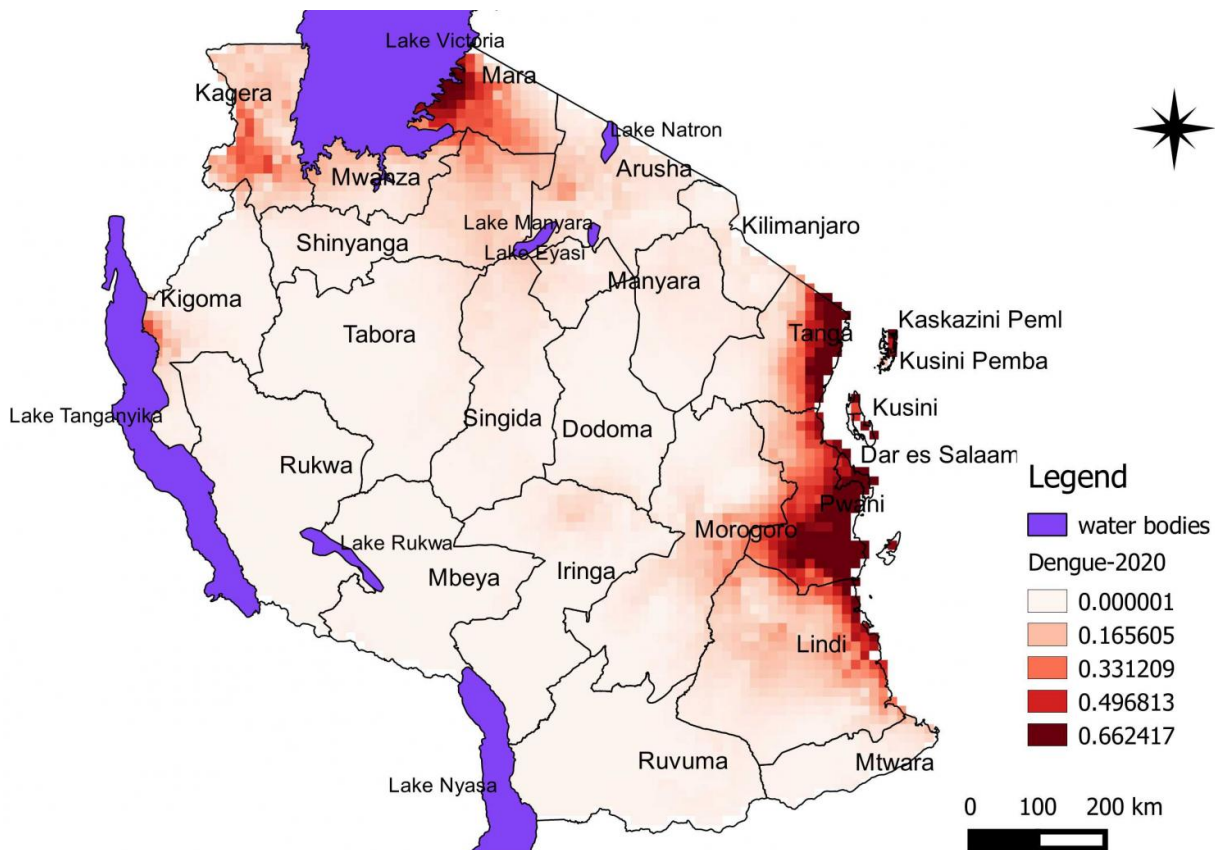


Outbreaks of Dengue may be expected to increase in Tanzania

September 29 2016



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Tanzania has experienced at least four separate dengue virus (DENV) outbreaks in the past six years and more may be expected as climate change continues to alter the ecologic landscape, according to a study

published in *PLOS ONE* by Clement Mweya of the National Institute for Medical Research, Tanzania and colleagues.

The researchers built an Ecological Niche Model to explore how different bioclimatic scenarios may impact the distribution of *Ae. aegypti* mosquitoes and co-occurrence of DENV outbreaks in particular regions of Tanzania. The model was constructed using data from the 2014 outbreak in Dar es Salaam on the reported cases of DENV and the density of DENV among *Ae. aegypti* mosquitoes, as well as 19 bioclimatic variables that predict current and future climate conditions.

The results of the study predict that the current climate scenario is advantageous to infectious *Ae. aegypti* mosquitoes, indicating substantial risk for a DENV epidemic outbreak, particularly in populated coastal areas and areas with previously reported cases. A similar risk pattern was predicted in the 2020 and 2050 climate scenarios, but the model also predicts the risk of a DENV outbreak will likely move further inland toward the center of the country over time, particularly by 2050. However, the authors note that a potential limitation of their study is that the data from the 2014 outbreak in Dar es Salaam are extrapolated to other non-sampled regions in the model.

More information: Clement N. Mweya et al. Climate Change Influences Potential Distribution of Infected *Aedes aegypti* Co-Occurrence with Dengue Epidemics Risk Areas in Tanzania, *PLOS ONE* (2016). [DOI: 10.1371/journal.pone.0162649](https://doi.org/10.1371/journal.pone.0162649)

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