



## PREPAREDNESS FOR EMERGING ZONOTIC INFECTIONS IN KENYA

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The changing climate, environment and globalization have profound effects to human and animal health. This has become evident as an increase and emergence of outbreaks of zoonotic diseases that originate from wildlife. The pathogens that can shift from animal to human hosts arise from regions where rich diversity of fauna lives in close vicinity to humans. Many of these pathogens originate from Africa, where also new infectious diseases can arise in the future. For developing preparedness and early warning systems in Africa, capacity building is needed. This project arises from previously established and now even stronger collaboration between University of Helsinki (UH) and University of Nairobi (UoN), Kenya.

The aims of this study are to build a surveillance network for zoonotic diseases and early warning preparedness in selected areas of Kenya. We will focus in Taita Taveta (UH Taita research station) and Busia Counties, and Kibera informal settlement in Nairobi, representing areas with different environmental settings.

The capacity building will include training and support for laboratory strengthening, and establishment of diagnostic platforms to enable detection and characterization of zoonotic infections in human and animal specimens in Kenya. This will include training of UoN researchers in UH and UH researchers visiting UoN and participating to fieldwork in Kenya. We will collect human, wild and domestic animal samples and teach Kenyan researchers to study them for zoonotic pathogens using both traditional and newest next generation sequencing technologies. The project aims in producing data and tools for risk assessment and prevention by determining the prevalence of zoonotic infections in animal reservoirs in selected counties in Kenya. These are prerequisite for preparedness and further control the possible outbreaks. The key outcome is capacity building in Kenya for disease detection allowing limited resources to be used more efficiently.



### MAIN PUBLICATIONS

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- Uusitalo, R. J., Siljander, M., Culverwell, C. L., Mutai, N., Forbes, K. M., Vapalahti, O. & Pellikka, P. K. E. (2019). Predictive mapping of mosquito distribution based on environmental and anthropogenic factors in Taita Hills, Kenya. In : *International Journal of Applied Earth Observation and Geoinformation*. 76, p. 84-92 9 p.

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<https://www.helsinki.fi/en/researchgroups/viral-zoonoses-research-unit/research#section-57394>