



RESEARCH SUMMARY

Assessment of tsetse fly invasion on Social Ecological Resilience of the people of Northern Karamoja

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INTRODUCTION

Tsetse fly infestation are associated with enormous disease burden in Africa. They live by feeding on the blood of vertebrate animals and are biological vectors of trypanosomes, which cause Sleeping Sickness and Trypanosomiasis (Nagana) in humans and animals respectively. Tsetse occurs in approximately 70% of Uganda. The prevalence of the vector has affected the resilience of many livestock communities in Uganda.

METHODOLOGY

A mixed approach involving GIS based entomological data collection and spatial analysis and cross sectional household survey were used. Tsetse trap data were overlaid with rainfall, elevation, land cover maps and NDVI to characterize tsetse distribution. Probit regression model was used to determine factors influencing tsetse prevalence and the social ecological resilience determined through computation of Resilience Index (RI).

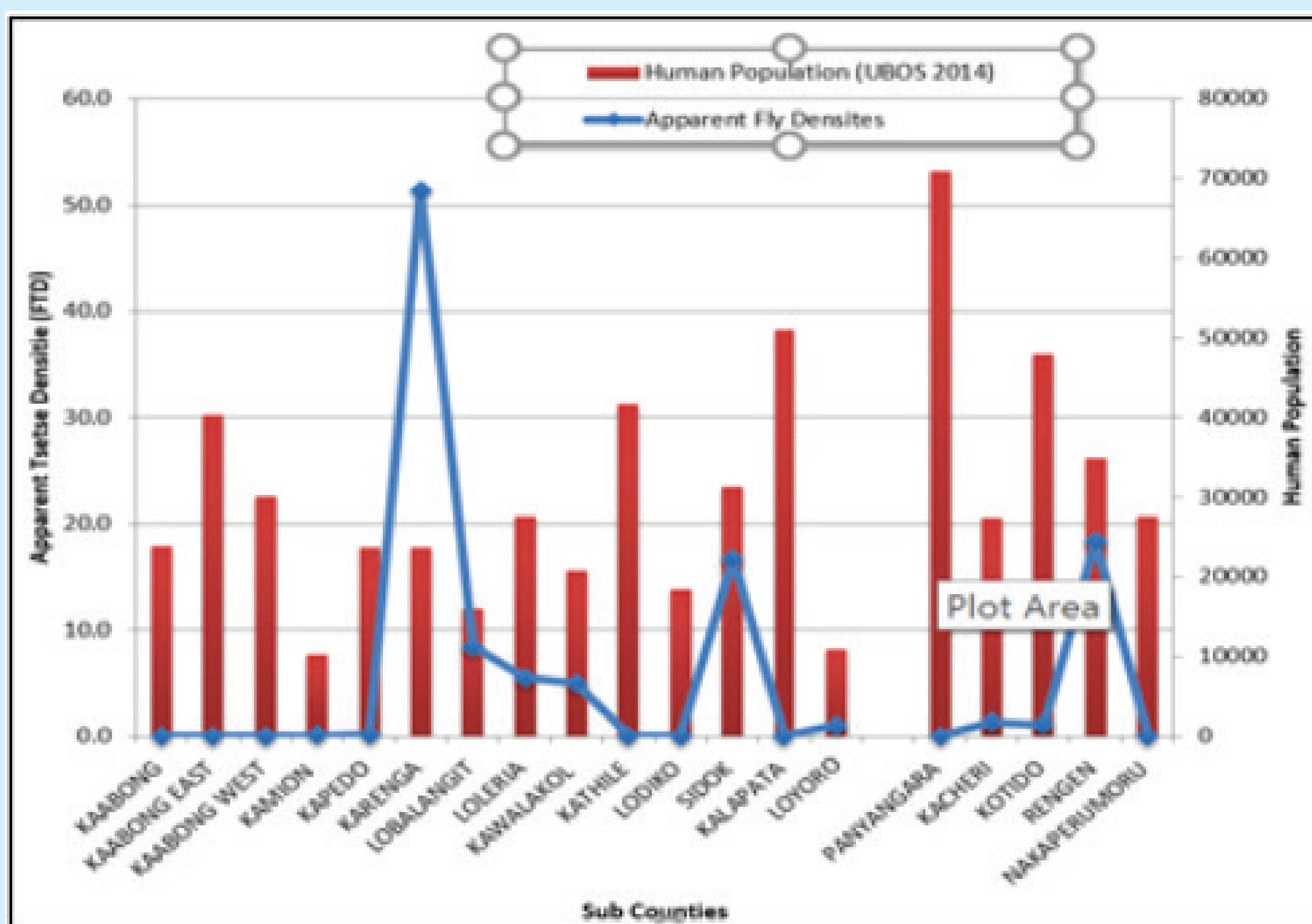


Figure 1: Apparent tsetse fly density with human population

Glossina Morsitans



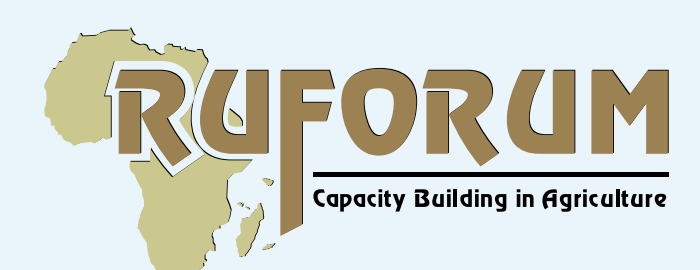
RESULTS

Results showed high tsetse prevalence in areas proximity to Kidepo Valley National Game Park. Tsetse distribution patterns varied with location, altitude, human population settlements, land cover/vegetation types and rainfall gradients.

Perceived increase in rainfall total, a high vegetation cover density and livestock (cattle) density positively influenced tsetse prevalence ($p \leq 0.05$). Conversely, increase in human population and distance from the Kidepo game park reduced tsetse prevalence. The social ecological resilience of the tsetse affected communities was 20.5 percent and indicated the low resilience against the effect of tsetse fly infestation.

CONCLUSIONS

The shows that the presence of wildlife conservation areas and other biophysical factors including altitude and livelihood activities affect distribution and prevalence of tsetse flies in Karamoja. Approaches that combine both conventional and traditional measures of should be integrated into tsetse fly control in Karamoja region .



Reference:

MAAIF 2014

National Policy for the Eradication of Tsetse Flies and Elimination of Trypanosomosis, Entebbe Uganda, p.14