Reviewer’s report

Title: Analysis of risk factors for T. brucei rhodesiense sleeping sickness within villages in SE-Uganda

Version: 2 Date: 3 October 2007

Reviewer: Florence Fournet

Reviewer’s report:

General
In this study, the authors have looked at behavioral and spatial risk factors of sleeping sickness in SE-Uganda.

The determinants of the disease have been previously identified at the district level as the presence of the tsetse fly and this of the cattle, and also anthropogenic factors which determine the intensity of the man-fly contact. Thus the objectives of the authors were to valid these risk factors at a village scale. These objectives are important as sleeping sickness still remains a problem. Geographical approach is pertinent because it takes into account both the environment and its management by human populations.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Methods
Methods used are not really applied at a village scale, but at the scale of a part of the Tororo district.

Then more details are needed describing the sampling strategy to help the reader to understand.

- Why do authors choose a 3 years period before the study to select the villages (limiting the size of the cases sample)?

- Distribution of the HAT cases has to be studied in the whole district and then hypothesis have to justify the choice of only certain villages. The criterions upon which these villages have been chosen have to be clarified.

- A map of all the villages of the Tororo district would be useful to better understand the geographical situation. It may be interesting to give also a prevalence map of the HAT at the village scale for the whole district. The map may explain better why the authors have chosen the 17 villages of the study and then the 4 other ones.

- Why cases detection was only passive?

- Why do they chose villages for the spatial analysis upon the basis of 5 to 8 cases? It would be important to give first the number of the cases within each of
the 17 villages and to justify this choice.
- The authors must explain why do they choose a radius range from 400 m to 5000 m between the wetland and the homestead? Presence of the wetland appears at a risk factor but is distance the only determinant of HAT to be considered?
- Are entomological data available which may be included the regression model?
- Why spatial data like villages localization, demographic data (population density) were not included into the regression model as well as the villages?

Results
Some results have to be detailed or discussed.
- Differences between males and females are not slight as they are significant for the majority of the tested variables.
- What proximity to homestead means for cassava crops? Is cassava consumed by the homestead or is it sold on the market, inducing an increase of the displacements to the markets?
- The authors should link the behavioral risk factors to the spatial risk factors and should give hypothesis to explain why there is a positive correlation between the positive status of the homestead and the wetland.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
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Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests