# The Concerns and Impacts of Zoonoses to Livestock Owners in Rural Ethiopia

## An Investigation Using Participatory Appraisal Techniques.

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**Aim.** To use participatory appraisal techniques to identify zoonoses volunteered by livestock owners, to prioritise them relative to one another according to three criteria and to compare results between livestock owners in high and lowland areas to assess any topographical differences in result.

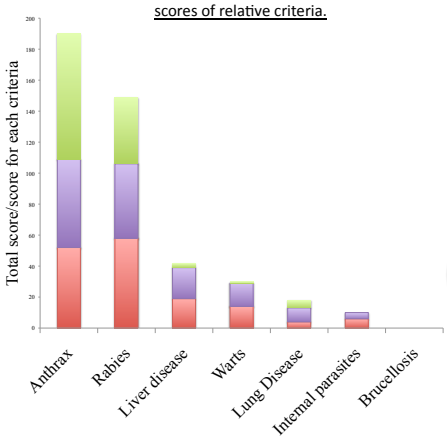
*Figure 1: Typical group participation in proportion piling.*

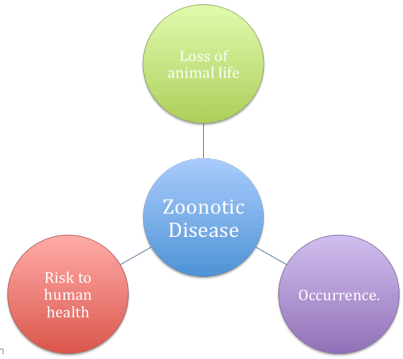
**Methods.**

•196 participants were recruited from ten highland sites (>2000m) and ten lowland sites (<2000m) in the Oromia region of Ethiopia- according to OSSREA definition.
•Using a facilitator previously trained in participatory techniques, participants created a Three –Way Venn diagram to order zoonoses they had volunteered according to three criteria;
•Relative risk to human health
•Relative proportion of animal loss.
•Relative rate of occurrence.
•Methods included ranking and proportion piling.
•Ranks were subsequently assigned scores and the sum of all three criteria was used as a total score of concern.

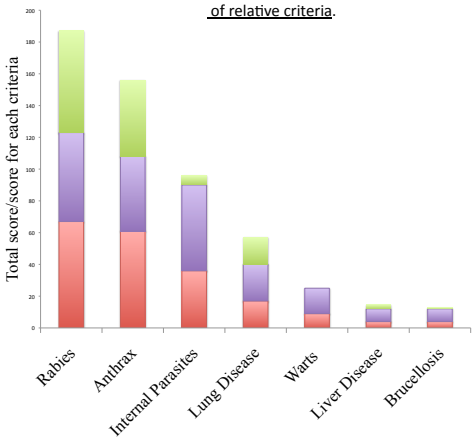
*Figure 2: A 3 way venn diagram showing risk to human health (size of pink circle) loss of animal life (yellow marker) and rate of occurrence (distance from central mark).*

Zoonoses identified in lowland areas and total scores of relative criteria.




Zoonoses identified in highland areas and total scores of relative criteria.




**Results.**

- A total of seven zoonotic diseases and disease entities were recognised by participants.
- Rabies and anthrax were the only zoonoses to be mentioned by *all* participants.
- There was a difference in the relative occurrence rate and subsequent order of concern of zoonotic diseases between high and lowland areas.
- All groups thought that rabies posed the greatest risk to human health
- Internal parasites were volunteered as a zoonosis by over 80% of highland groups and were the zoonosis of highest occurrence rate, but volunteered by just 20% of lowland groups.
- Brucellosis was mentioned in highland areas only.
- The disease entities of 'lung disease' and 'liver disease' were identified by the author as tuberculosis and tuberculous lymphangitis respectively.

**Conclusions;**

- Livestock owners knowledge of zoonoses that affected them on a daily basis was high. There was a topographical difference in the relative occurrence rate, and subsequent significance, of anthrax, rabies and internal parasites. This could be due to differences in population density, climate and host species contact., However there is very little available literature to compare these findings suggesting the need for further research in this area.
- Livestock owners are affected by a large number of zoonoses that not only threaten human health but have large financial implications in terms of decreasing livestock productivity and loss of livestock life.

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