Review of: "Stakeholders' Perception of Socioecological Factors Influencing Forest Elephant Crop Depredation in Gabon, Central Africa"

Lauren Redmore[1]

1 United States Department of Agriculture

The paper provides an in-depth look at elephant crop depredation incidents (CDI) in Gabon, using a hybrid qualitative/quantitative approach to examine perceptions of drivers, dynamics, and problem types. The authors argue that to reduce CDI, broader villager and elephant needs must be addressed together. Generally, this paper offers an interesting look at human-elephant interactions in Gabon, but minimally engages with the theoretical, applied, or methodological literature. I would recommend a major rewrite to 1) engage with the wider body of literature on CDI and human-elephant interactions (not just in Central Africa, but across Africa and even in Asia), 2) ensure the findings report back not just on quantitative or schematic linkages but also qualitative descriptions from study participants, 3) ground the reader (before the findings) within the socio-political, economic, and ecological context of the study site, including policies and practices that may influence perceptions of human-elephant interactions and CDI, and 4) ensure the conclusion takes key lessons from this study to advance mitigation of impacts of CDI and human-elephant interactions. Specific comments are below:

Introduction:

This manuscript would benefit from a review of the literature to help frame up the results and discussion more thoroughly and to better situate the manuscript within the wider body of work. There are many aspects of CDIs currently not examined within this manuscript (for example, spatio-temporal partitioning, literature on drivers and consequences of human-elephant interactions), in addition to the Gabon-specific context given the body of literature on human-elephant interactions in Central Africa or the wider context of rural change and land use change, more generally. For instance, loss of natural forest appears to be key in the findings/discussion but is a rich context around the role of bushfoods in sustaining both elephants and people (an important point that also needs clarification in the findings when the authors problematize native fruit loss).

Study site and context:

This could be greatly improved with the addition of a map detailing where these two study villages are located, providing socio-cultural and economic detail around the study villages. Some of the details of Gabon's socio-political context could also be brought up (i.e., ECOFAC, rural out-migration, etc.) to better help readers through the findings.

Methods:

-Given the range of interviews from 15 minutes to an hour and the diversity of participants from villagers to researchers, a summary table could offer additional context for length of interview and type (virtual, in-person), for example. In addition, the interview guide appears to be very specific for villagers. Please add any additional information about how the guide may have changed for non-residents.

-Thematic analysis: This section is a bit hard to follow, and perhaps could be made more clear with a figure or schematic to better show the process. A part of my confusion is that, in looking at your supplementary data, it appears you used a mixed methods survey format (using a fairly structured interview guide with both closed-ended questions (e.g., "do you… yes or no?") and open-ended questions to allow participants to elaborate. This may help explain why I am struggling with the addition of percentages—I would not use percentages for this kind of analysis on semi-structured interviews, but I would with the way some of your questions were asked ("Do you…"). Additionally, the themes were far from emergent given you directly asked questions about the various socioecological factors. I think additional context or schematics could help the reader better follow your process and which questions linked to which aspects of the analysis.

Findings:

To reiterate, I am not convinced it is appropriate to use percentages to report back findings (but again, this may be with how the closed-ended questions were described in the methods). I also am not totally clear on what the "problem types" mean as a category in relation to the drivers; that could perhaps be handled with a more clear working definition for these categories. Globally, I think this section could be improved by integrating qualitative quotes from the discussion into the findings.

Discussion:

All qualitative quotes should be brought in under findings, given that your results are both the quantitative and qualitative data. Some scholars merge findings and discussion to deal with the complexity of mixed methods, as one option.

Conclusion:

The conclusion could be strengthened by returning to the literature to advance theory or practice of the reduction of CDI (for example, scholars who show that these issues must be addressed holistically, or that human-human conflict is a part of CDI through issues related to land use change or rural outmigration).