



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	Journal of Agriculture and Ecology Research International
Manuscript Number:	Ms_JAERI_30953
Title of the Manuscript:	Effect of Environmental factors on the frequency and density of three functional groups of woody species in Ghana
Type of Article:	Original Research Article

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
Abstract Line 6 Page 1: Is this the format of the journal, i.e. having subheadings in the abstract? Abstract Line 9 page 1: What about replacing with, 'We aim to assess the environmental range, frequency and density of three plant functional groups (i.e. Pioneer, non-pioneer light demanding and shade tolerant) in Ghanaian tropical forests.' Abstract Line 14 page 1: How many plots were sampled for each of these diameter categories? There is only mention of the diameter categories like trees ≥ 30 cm diameter at breast height (DBH) sampled in 1ha plot, trees 10–30 cm DBH in 0.1-ha subplots and trees 5–10 cm DBH in 0.05-ha subplots, but the sample size, in terms of the number of plots for each diameter category is not mentioned!!! Abstract Line 15 page 1: Is the frequency the numbers of plots with some tree species or the number of tree species present in the plots? Here the reader may want to see the important value indexes (IVI) if still possible. Abstract Line 9 pages 14-15: Maybe one can say, 'The following variables were recorded and calculated; frequency (the number of plots in which the species is present!!!), the average density (the average number of trees per plot, for the plot in which the species is present), and environmental range (i.e. rain fall range and soil fertility) of each species' Introduction Line 42 page 2: What 'appropriate intervention options' are need here considering that 'environmental gradient determines the commonness and rarity of woody species', a natural phenomenon? Introduction Line 44 page 2: Delete the question 'What is rare species?' !! Introduction, Line 50 page 2: Do 'Environmental variables' not include climatic elements, edaphic factors and light availability?' if so rephrase Introduction Lines 52-54 page 2: This is relevant in the methods section!!! Introduction Line 59 page 2: Review!!!, not making sense!!! e.g. what is being referred to	We appreciated the final evaluator's for the insightful and constructive comments. The comments were relevant and important to improve our manuscript. Hence, we provided responses accordingly (below). Response1. The comment is accepted and corrected accordingly. Please page 1 the abstract section. Response 2. The comment is accepted and corrected accordingly. Please see page 1 line 8 in the revised manuscript. Response 3. Thank you for this comment. The number of plots were stated. Please see page 1 line 11. Response 4. Thank you for this comment. First, we collected the number of tree species in the plot then we encoding for each species present, absent (0 and 1) from the established plot. Finally, we calculated their frequency (the number of plots in which the species is present) Response 5. The comment accepted and corrected accordingly. Please see page 1 line 13-14 in the revised manuscript. Response 6. Thank you for this comment. In this case we were talked about for temporary environment gradient. By using different management intervention we can conserve and maintain the existing population. Therefore, rain forests are needed intervention option to maintain the existing population. Please see page 2 lines 38-42 for more detail explanation. Response 7. The comment is accepted and corrected accordingly. Please see page 2 line 43 in the revised manuscript. Response 8. The comment is accepted and corrected accordingly. Please see page 2 line 49 in the revised manuscript Response 9. The comment is accepted and corrected accordingly. This also performed in the method section. Please see page 4 lines 100-102 in the revised manuscript



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as locally abundant?

Introduction Lines 73-74 page 3: What about 'A species with a wider range of environmental tolerance has higher frequency and higher density.'

Study site Line 79 page 3: Capitalise 'm'

Data sources Lines 99-100 page 4: Is there any specific reason for doing this type of sampling? Justify and include references if any!!!

Data sources Line 100-101 page 4: I think in the criteria for categorising species into three functional groups, one aspect is not being mentioned i.e. tree height. Did you consider this or it was not relevant in this study?

Data analysis Line 119 page 5: Check spelling, is it not 'Kruskal-Wallis'?!

Data analysis Line 119 page 5 what does using 'species as data points' mean??

RESULTS Table 1 page 6: Has this method been done by anyone, if so include the source in the Table caption. E.g. what does <1 mean for species density? This should be briefly explained.

RESULTS Table 2 page 6: Some critical information is lacking here, e.g. in which plots were certain species found and their density. This Table is not informative enough, e.g. do the species assessed appear in different soil types, rainfall range as depicted by the Table? Perhaps authors need to include some notes explaining what the figures in the Table mean and what the letters a, b, c stand for

RESULTS Table 2 page 6: What test was done resulting in the p values in the Table?

Section 3.3. Line 166 page 8: What is meant by '...the minimum or maximum of soil...?'

Section 3.3. Table 3 page 8: What are p.plots? Also is the Table format correct in terms of border lines???

Section 3.3. Line 174 page 8: What is this? Explain these terms as they are not common!!! E.g. what is meant by minimum and maximum soil?

DISCUSSION: Line 192 page 10: I suggest 'widest' instead of 'largest'

DISCUSSION: Line 193 page 10: I suggest this be presented as 'narrowest' range instead of lowest range

DISCUSSION: Lines 233-235 page 11: What is needed is for authors to discuss their result in relation to the results of Pitman et al rather than present this part like literature review!!

Response 10. The comment is accepted and corrected accordingly. Please see page 2 line 58 in the revised manuscript

Response 11. The comment is accepted and corrected accordingly. Please see page 3 lines 72-73 in the revised manuscript

Response12. The comment is accepted and corrected accordingly. Please see page 3 lines 78 in the revised manuscript

Response 13. The comment is accepted and corrected accordingly. Please see page 4 line 99

Response 14. Thank you for this comment. Tree height was not relevant for this study.

Response 15. The comment is accepted and corrected accordingly. Please see page 5 line 118.

Response 15. Thank you for this comment. We mean that all recorded species were used for this study for data analysis

Response16. The comment is accepted and corrected accordingly. Please see page 6 lines 135-138 in the revised manuscript. This method also briefly explained in lines 106-108

Response17. The comment is accepted and corrected accordingly. Please see page 6 lines 140-144 in the revised manuscript

Response18. Thank you for this comment. The p-value was obtained from the Kruskal-Wallis test.

Response19. The comment is accepted and corrected accordingly. Sorry for type error we mean minimum or maximum soil fertility. Minimum soil fertility means the average of 10 plots with the lowest SOILPC of the reserve. Maximum means the average of 10 plots with the highest SOILPC of the reserve. Please see page 8 line 171.

Response 20. The comment is accepted and corrected accordingly. Please see table 3 at page 8 and 9 in the revised manuscript

Response 21. The comment is accepted and corrected accordingly. Minimum soil fertility mean the average of 10 plots with the lowest SOILPC of the reserve. Maximum means the average of 10 plots with the highest SOILPC of the reserve. Please see page 9 line 179 in the revised manuscript

Response 22. The comment is accepted and corrected accordingly. Please see page 10 line 196 in the revised manuscript

Response 23. The comment is accepted and corrected accordingly. Please see page 10 lines 197.

Response 24. Thank you for this comment. Our study was similar to Pitman et al study and he was concluded the distribution of tropical rain forest in relation to environmental gradient. But, our result contradicts his conclusion. So we want to show his generalised conclusion and we want to suggest it is difficult to conclude about the tropical forest with a specific site study.



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DISCUSSION: Line 238 page 11: re-state the hypothesis rather than just say 'We hypothesized....' !!

IMPLICATION FOR CONSERVATION Line 254 page 12: Revise!!! Perhaps it should read like 'We also found which functional group was common and which one was rare.'

Response 25. The comment is accepted and corrected accordingly. Please see page 12 lines 243 in the revised manuscript.

Response 26. The comment is accepted and corrected accordingly. Please see page 12 lines 257 in the revised manuscript.