For research article

Response to Reviewer 1 Comments

1. Summary

Hello, Dear Reviewer, Thank you for your valuable comments on my article, I am sorry for the many deficiencies in the article, and please forgive me for the inconvenience caused to you in the review process. I fully combined your suggestions with the article, and made a comprehensive revision of the chapter. I hope to give you a more satisfactory revision. Sincerely look forward to your valuable comments on the article again.

2. Questions for General Evaluation	**Reviewer's Evaluation**	**Response and Revisions**
Does the introduction provide sufficient background and include all relevant references?	Must be improved	Acknowledging the reviewer 's evaluation, I have made a comprehensive revision of the introduction.
Are all the cited references relevant to the research?	Yes	
Is the research design appropriate?	Can be improved	In recognition of the reviewer 's evaluation, I added a correlation analysis between soil properties and plant diversity in the article.
Are the methods adequately described?	Must be improved	Accepting the reviewer 's evaluation, I have revised the materials and methods in the article.
Are the results clearly presented?	Must be improved	Acknowledging the reviewer 's evaluation, I have re-analyzed the results in the article.
Are the conclusions supported by the results?	Must be improved	Acknowledging the reviewer 's evaluation, I have re-analyzed the results and discussion section in the article.

3. **Point-by-point response to Comments and Suggestions for Authors**

Comments 1: *[Abstract: It is not clear how the findings advance knowledge in conservation or plantation management. Some terms, such as "Pisha sandstone," may require brief explanation for general readers. Overall, the abstract is too long and with too many abbreviations that make it somewhat difficult to read at first, diminishing interest in reading the manuscript further. The text could be more direct by eliminating repetitive details.]*

Response 1: Thank you for pointing this out and we agree with this comment. Therefore:*[*According to your suggestion, combined with the abstract part of the relevant literature of your journal, I made a comprehensive revision of the abstract part of the article, deleted the duplicate content, reduced the occurrence of abbreviation content, and refined the text structure. Corresponds to the 10-28 line yellowing field on page 1 of the text. I put the brief introduction of Pisha sandstone in the first part of the introduction. Corresponds to the line 32-37 yellow field on page 1 of the text. This paper wants to study the relationship between forest types, soil nutrients and plant diversity. To determine which forest type is more beneficial to the ecological restoration of the area. At the same time, the differences of soil nutrients and water under different forest forests were explained and defined, which provided a theoretical basis for the next forest management measures.*]*

Comments 2: *[Introduction: The name of the epigraph does not appear. The introduction mixes several topics without a smooth transition or clear hierarchy. For example, the importance of soil is mentioned, but the connection between species diversity and physicochemical properties is not developed cohesively. The ideas are not cohesive. On the other hand, the starting hypothesis does not appear, and the objectives are not well constructed. What do the authors intend with this essay? Why is this area of Pisha interesting? It would also be important to complete the introduction with some notes about how the spatial structure of forests influences the regeneration and plant dynamics in temperate but xeric bioclimates such as the area of study of the authors, works like: - Bioclimatology, Structure, and Conservation Perspectives of Quercus pyrenaica, Acer opalus subsp. Granatensis, and Corylus avellana Deciduous Forests on Mediterranean Bioclimate in the South-Central Part of the Iberian Peninsula. - Research and management of thermophilic cork forests in the central-south of the Iberian peninsula A climatic and bioclimatic context of the study area would also be necessary. It is recommended to contextualize the area using the global bioclimatic model of Rivas-Martinez (2011). There are sentences that lack specificity, such as "rational planting of suitable forests can improve the community structure of these forests," which does not specify what "rational" or "suitable" means."]*

Response 2: Thank you for pointing this out and we agree with this comment. Therefore:*[*Based on your suggestion, I introduced an overview of soil properties and species diversity research in the introduction. Corresponding to the text page 2-3 50-73 line yellow field. I also made a comprehensive deletion and modification of the overall structure and content of the introduction. After consulting the relevant articles in your journal, I know what is the starting hypothesis. By combing the full text, I put forward three starting hypotheses for this article. Corresponding to the 3rd page 81-88 line yellow field. Sandstone is widely distributed in the world and is usually mined as stone, so the ecological restoration of sandstone areas has become a key issue of global concern. Pisha sandstone is one of the most vulnerable sandstones to erosion. If the ecological restoration of artificial forest planting as the main measure in the Pisha sandstone area has achieved significant results, it can provide a strong basis for ecological management and restoration in other sandstone areas.*]*

Comments 3: *[Material and Methods. The description of methods does not detail how plots were chosen, which affects replicability. There is no explanation of why these four forest stand types were chosen or their ecological relevance. The selection of variables (nitrogen, phosphorus, potassium) is not explicitly linked to the objectives of the study. The procedure for statistical analysis is not clearly described. For example, it is not explained how the conditions necessary to apply ANOVA or PCA were ensured. Although the vegetation and soil measurements are described, it is not explained how these data will relate to the objectives of the study.This section, is undoubtedly, the one that needs the most improvement, since the subsequent results, depend on how a clear and robust methodology has been applied.]*

Response 3: Thank you for pointing this out and we agree with this comment. Therefore:*[* Based on your suggestion, I added the reason why I chose these four forest types, corresponding to the line 112-115 yellow field on page 4 of the text. Because the main forest types in Pisha sandstone area are PT, PA and AA, followed by shrub communities such as Salix psammophila and Caragana korshinskii. The relationship between variables N, P, K and research objectives I have introduced in the introduction part, corresponding to the text on page 2-3 line 50-73 yellow field. I added the conditions for using these methods in the statistical analysis section, and also explained the purpose of using the methods. Corresponding to the 6th page 157-165 line yellow field.*]*

Comments 4: *[Results: The section combines descriptions and statistical analyses without differentiating them. Although the data are complete, the relevance of the findings is not sufficiently discussed, nor are they related to the objectives of the study]*

Response 4: Thank you for pointing this out and we agree with this comment. Therefore:*[*This section combines description and statistical analysis, but does not distinguish them. Although the data are complete, the correlation of the results is not fully discussed and is not related to the research objectives. According to your opinions, I combine these contents with the research objectives by analyzing the relationship between the growth characteristics of undergrowth plants, soil characteristics and plant diversity in different forest types in the result analysis. Corresponding to the 6th page 176-182 lines, the 7th page 194-197 lines, the 8th page 212-217 lines and other yellow fields.*]*

Comments 5: *[Discussion: The discussion often merely reiterates the results without elaborating on their theoretical or practical implications. There is no clear organization by subtopics, which makes navigation difficult. Topics such as diversity, soil properties, and management recommendations are treated in a fragmented manner. It is not clear how findings specific to this region (Pisha sandstone) contribute to global knowledge. Although relevant studies are cited, how they relate to the results of the present study is not sufficiently discussed. Limitations of the study, such as the limited duration of the experiment or the absence of seasonal analyses, are not addressed. Although recommendations are mentioned, they are vague and do not include specific details on planting densities or management strategies. Nor are clear lines of future research proposed to delve deeper into long-term impact or other relevant variables.Conclusions: The conclusions in general are vague and lack practical details for implementation. They do not connect how the findings contribute to general knowledge in forest ecology or management. There is no concluding commentary summarizing the importance of the study or suggesting future research.]*

Response 5: Thank you for pointing this out and we agree with this comment. Therefore:*[*According to your suggestion, I combined the conclusion and discussion, added the

discussion of soil characteristics and plant diversity, and re-combed the part of plant growth characteristics, soil characteristics and plant diversity. What is the significance of the discovery of the Pisha sandstone area I will explain it in the introduction. Corresponding to the 3rd page 74-88 line yellow field. I combined planting density and management strategies, and gave some planting strategies and prevention measures at the end of the article, and made a prospect for the future research route. Corresponding to the 15-16 page 357-369 line yellow field.*]*

4. Response to Comments on the Quality of English Language

Point 1:

Response 1: (in red)

5. Additional clarifications

[Here, mention any other clarifications you would like to provide to the journal editor/reviewer.]