Dear Prof. Paul Stoy (Co-editor-in-chief of *Biogeosciences*), Dear Prof. Petr Kuneš (Associate editor of *Biogeosciences*),

Many thanks for being willing to reconsider the manuscript titled "*Rates of palaeoecological change can inform ecosystem restoration*" after major revisions.

Here, we submit to your and the reviewers' judgement our revised version of the manuscript.

To revise the manuscript, we have followed our replies to the referees comments (see AC1 and AC2 at <u>https://egusphere.copernicus.org/preprints/2023/egusphere-2023-</u>2623/#discussion).

In addition to the changes outlined in our replies, we:

- slightly shortened some of the sentences. As the reviewers suggested to move some parts from the Appendix to the main text, we tried keeping the length of the main text within the 2500-words limit. However, despite our efforts, the main text of the revised manuscript is slightly longer than what is recommended for BG Letters (~2600 words rather than 2500 words). We hope you may still consider it for final publication as BG Letters;
- replaced the terms "baseline level" and "baseline period" with the terms "reference level" and "reference period", respectively. As of the Oxford Dictionary of English, the term *baseline* refers to "*a minimum or starting point used for comparisons*". This term does not match well, as in the manuscript we do not necessarily refer to a minimum or starting point. We thought the terms *reference* [point], or *reference period*, which refers to "*a basis or standard for evaluation, assessment, or comparison; a criterion*", may be more suitable;
- revised one of the R functions we used to perform some of the analyses, in keeping with a suggestion made by a referee (specifically Prof. Alistair W.R. Seddon). Given the changes made to the computer codes, we have replaced Figure 3 as well as Figure A2. In addition, we have completed the documentation of the computer codes and the functions we devised for the analyses. An updated set of computer codes has been uploaded to GitHub and to the Zenodo repositories, where the data and codes are publicly available (https://zenodo.org/records/10075146).

Looking forward to the further evaluation of our manuscript.

Yours sincerely,

(on behalf of all co-authors)