

Review round 2 – Publish subject to minor revisions (review by editor)

“Water table driven greenhouse gas emission estimate guides peatland restoration at national scale” – bg-2023-23

[Reviewer/AE comments in *italic blue font*; author replies normal font]

AE decision:

Overall, both reviewers were happy with the changes you made, however, there was still some concern about how you present the uncertainty of your results. Please address the reviewers comments, potentially by adding a range of uncertainty based on your sensitivity analysis.

Reviewer 1:

The authors have done a thorough job of addressing my comments. The new discussion, and adjusted fig. 7, about linear vs Gompertz fits is particularly welcome.

Reviewer 2:

The revisions improved the manuscript substantially and most of my concerns are alleviated. I think the main findings (conclusions and abstract) should be presented more carefully, especially on total peatland emissions and emission reductions. Readers may overlook limitations of the study and assume outcomes are extremely solid. Perhaps the authors can implement ranges that are found within the sensitivity analysis. After improving the conclusions I think the manuscript should be accepted.

Reply: We would like to thank the reviewers for acknowledging that our revisions have led to an improvement of our work. We agree that the results of the sensitivity analysis should be mentioned in the conclusions and abstract to disclose uncertainties related to the emission estimate and the estimated reduction potential. To follow the suggestion made by reviewer 2 to summaries the scenario runs, we calculated the coefficient of variation, which we presented in the discussion section, and results are now presented in abstract and conclusion.