

Dear Reviewers,

We sincerely appreciate your constructive comments, which have aided us in enhancing the quality and clarity of the manuscript. Below, please find our responses to your specific suggestions:

Reviewer 1:

Comment: The figure 6 caption states that this is a box plot; however, the figure itself seems to be a bar chart instead of a box plot. Please revise the caption to accurately describe the type of figure.

Response: Thank you for pointing this out. We have revised the caption of Figure 6 to accurately describe the figure as a bar chart, rather than a box plot.

Reviewer 2:

Comment: I would like to see explicit annotation of which specific fluxes are not significantly different from equilibrium in the figure.

Response: Thank you for your suggestion. When analyzing individual FN_2O flux measurements, all observations were found to be not significantly different from zero ($p > 0.05$) at all stations and sampling dates. This indicates that, although the mean fluxes per station were statistically different from zero, individual flux measurements exhibited high variability and were indistinguishable from null fluxes during the sampling periods. This information has been included in the caption of Figure 6, the Abstract, the Results section, and the Conclusions to clarify this point.

We trust that these revisions satisfactorily address your concerns. Thank you once more for your valuable feedback.

Sincerely,

Susana Flecha

On behalf of all co-authors