

Response to Editor and Reviewer Comments

We thank the editor and the referees for their careful reading of the revised manuscript and for their final comments. We have addressed all points raised, as detailed below.

Clarification of the 15% Litter C proportion selection

We have revised the passage describing the sensitivity analysis (~L164–176) to make explicit that, for both control and litter-addition soils, the proportions yielding the lowest AIC and MSE values (20% and 30%, respectively) were not selected because they produced biologically unrealistic decomposition rates. We clarified that 15% was instead chosen as it offered the best balance between model performance and biologically realistic decomposition rates.

Streamlining and typographical corrections

We have streamlined the passage in the abstract (L29–34) and made general corrections throughout the manuscript, including typographical errors and duplicated terms. We also carefully re-checked the manuscript for similar issues and corrected an incorrect table reference, changing "Table S2" to "Table S4" in Sect. 2.3. In addition, we found that the figure displayed as Fig. 2 in the previous version of the manuscript was a duplicate of Fig. 1; we have now corrected it with the actual Fig. 2. We clarify that this correction only affects the figure displayed, and does not alter the reported results, discussion, or conclusions, which remain correct.

We thank the editor and reviewers again for their guidance throughout the review process, which has substantially improved the manuscript.