

Responses to comments <egusphere-2022-1286>

Thank you very much for revising the manuscript and addressing all referee comments. Below are just a few minor formal issues that need to be addressed before publication.

We sincerely appreciate your valuable suggestions and the time you have taken to help improve our manuscript. Please find our responses to your specific comments provided below in blue.

Page 2: As the GMD manuscript composition does not provide for a list of highlights before the abstract, please remove the list from the main document.

We have removed the highlights.

Page 4: To avoid three different abstracts/summaries, I suggest aligning the "Plain Language Summary" with the "Short Summary" and removing this section from the main document.

We have aligned the "Plain Language Summary" with the "Short Summary", and removed this section from the main document.

Page 15, Fig. 2: In box P2, the "i" in "Xi" is not subscripted. Also, since the index i is not used elsewhere in the figure, I suggest omitting it and just using "X" and "Y".

Updated.

Page 16: Although you have added a reference to Table 1 for the parameter definitions, for better readability please put the variable names before the symbols, at least the first time they are mentioned, e.g.:

Line 294: "the maximum carboxylation rate V_{cmax} "

Line 296: "leaf longevity L_{leaf} and wood density WD"

Line 297: "the specific leaf area SLA"

Thank you for your valuable suggestions. We have made the necessary updates to provide the full names of parameter symbols when they first appear in the text. Specifically, M_{bk} in L270, V_{cmax} in L271, L_{leaf} in L273, WD and SLA in L274, and CR_{s2t} in L282.

Page 18, line 327: Please expand "SHAP" here.

Since Section 2.5 already provides detailed explanations of SHAP, it would be repetitive to expand on SHAP here, and therefore, we removed the mention of SHAP here. Then, a slight modification is made to the last sentence to ensure clarity: "The ML models were trained, tested, and subsequently utilized to perform the parameter sensitivity analysis, as described in Section 2.5."

Page 28, line 496: "Figure 6" should read "Figure 7".

Modified.