

## ***Interactive comment on “Application of a computationally efficient method to approximate gap model results with a probabilistic approach” by M. Scherstjanoi et al.***

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*text of referee in italics*

reply from authors in plain text

*(1) P1552, L20, "to forest" What do you mean?*

Changed the formulation

"Still we favored these distributions to forest compositions derived from..."

C862

to

"Still we tend to favor these distributions over forest compositions derived from..."

*(2) P1552, L23\_24, "the spatial representation of the plot based NFI-data is challenging" How challenging? Why it can be a reason to employ the data?*

Changed the formulation

"the spatial representation of the plot based NFI-data is challenging."

to

"it would be challenging to extrapolate the plot based NFI-data in space."

*(3) P1552, L24\_27 I cannot follow the logic of this sentence.*

Changed the formulation

"Furthermore, since the existing LPJ-GUESS parameterization was built to simulate a PNV, it would mean more substantial changes to LPJ-GUESS if actual forest dynamics were modeled (e.g. changed effects of seedling chilling parameters if trees are planted)."

to

"Furthermore, the existing LPJ-GUESS parameterization is according to a PNV. Hence, a comparison to actual forest dynamics would require to take into account management effects and would most probably cause additional changes to the LPJ-GUESS parameterization (e.g. reduced sensitivity of seedlings to chilling if trees are planted, i.e. surpass the seedling stage)."

C863

(4) P1555, L6, "und" It should be replaced by "and".

Changed that!

(5) P1557\_1558, Appendix A Please refer tables A8 and A9.

Added

"A summary of all used parameters is given in Tables A8 - A10."

to the end of Appendix A

(6) P1557, L23 "However" I think this is not an appropriate conjunction here.

Replaced

"However, Migliavacca et al. (2008) also found that..."

with

"This is also in accordance with the findings of Migliavacca et al. (2008) who reported that"

(7) P1558, L3, "pheno(t)" For reader's convenience, I request some more explanations for this variable. Such as "It becomes nearly and 1.0, respectively, when 'tls' is 0.0 and 'dls'".

Added after the equation

"so that phen(t) is close to 1 when the ratio of tils to dls is approaching 0, and close to 0 when the ratio is close to 1."

C864

(8) P1558, L11\_16 Why you changed the establishment function? I want to know the brief reason with some related citations ideally.

I had to change the establishment function, because the original threshold function of the seedling chilling prevented certain boreal species from growing in temperate stands. For two reasons, we found this threshold character not be an adequate way to include seedling chilling: First, the Swiss boreal species grow in temperate stands if you plant them. Second, Swiss boreal species also naturally appear in temperate regions, although with reduced success. Unfortunately I cannot give any citation that favors a sigmoid curve over a threshold function.

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Interactive comment on Geosci. Model Dev. Discuss., 7, 1535, 2014.

C865