

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

Anonymous Referee #1

Received and published: 3 May 2014

This paper by M. Scherstjanoi et al. sufficiently describes the modeling study using a computationally efficient method of forest dynamics.

Here I have several comments for you to consider:

First, we should note that there are 3 types of terrestrial vegetation models: (type 1) big leaf models, (type 2) truly individual-based models, and (type 3) approximated models for a truly individual-based models. Each model has own strength and weakness. Type 1 models are the most computationally efficient. Since your model is type 3, what is your strength over type 1? You evaluated your results based solely on carbon balance. However, a well-parameterized big leaf model can reproduce carbon balance

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like this (or better). So, you must provide some aspects of your results that show the uniqueness of type 3 models over type 1 models. I suggest to show a map that describe plant type distributions.

[p.1538 l.21] Comparing against ED, you said “GAPPARD has a higher computational efficiency but on the cost of less precision on smaller time scales.” I am very interested to see differences between your results and ED. Can you show us a case study?

What is the ultimate goal of your model? A regional model only for Switzerland? Or for the entire Europe? Or to cover the whole globe? If so, what do you need to fulfill your intension in the future studies?

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