

***Interactive comment on* “Estimation of Coarse Woody Debris Stocks in Intact and Degraded Forests in the Brazilian Amazon Using Airborne Lidar” by Marcos A. S. Scaranello et al.**

Anonymous Referee #2

Received and published: 7 June 2019

General:

This is a good paper in that it represents a substantive advance in the mapping of dead wood in tropical forests, using remote sensing data, such that the dead wood estimates can be mapped. The paper also goes so far as to map the estimates. Such methods are needed as standing and downed dead wood carbon stores are a sizeable component of the total carbon loads. The estimates presented also make sense given the disturbance history of these sites and I like that the authors included models that account for disturbance history, in addition to lidar-only models.

Major comments:

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I don't like the term "standing CWD" because it sounds like an oxymoron. The terms "standing dead wood" or "fallen dead wood" make sense, but the word "debris" strongly implies that the dead wood has already fallen. Similarly, to say "fallen CWD" sounds redundant. Alternatively, call the "standing CWD" snags, and the "fallen CWD" simply "CWD".

Reading the methods on the spatial layout of the sample plots and transects, I couldn't quite work out whether all the locations sampled were wholly contained within the extent that lidar metrics were calculated. Clarifying the description would help, as would improvements to Fig. 1 to also show the area within which the lidar metrics were calculated.

Fig. 5 caption. The predicted versus observed means are already shown in the figures themselves and do not need to be cluttering up the caption. Just add the +/- standard errors to the figures as well, below the means.

Minor comments:

Introduction

L5. Delete the "and" before "burned", and add a comma after "burned", so this sentence makes sense.

L10. Do you mean to say "tree" or "live" aboveground biomass? Because the CWD pool could be considered part of aboveground biomass.

L13. Here and elsewhere, more commas are advised. If a list, add commas to the item preceding the "and". In this case, commas are advised after "17%", after the first "burning", and before "respectively".

L26. The second "the" should be deleted. So also could be the first "the". L31. Enclose the phrase "and based on a recent comprehensive review (Marchi et al., 2018)" in commas.

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Methods

L10. Data “were” not “was”.

Next page, L11. The two citations should not be followed by commas before the year published. L20. Either “at” or “with” but not “at with”.

Next page, L29. Change “median of age” to “median age”.

Discussion

Section 4.2, L15. Need the verb “are” before “similar”.

Last paragraph, L7. Need a comma before “and”, which separates two complete sentences.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2019-75>, 2019.

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