

Biogeosciences Discuss., referee comment RC1
<https://doi.org/10.5194/bg-2021-159-RC1>, 2021
© Author(s) 2021. This work is distributed under
the Creative Commons Attribution 4.0 License.

Comment on bg-2021-159

Anonymous Referee #1

Referee comment on "Mangrove sediment organic carbon storage and sources in relation to forest age and position along a deltaic salinity gradient" by Rey Harvey Suello et al., Biogeosciences Discuss., <https://doi.org/10.5194/bg-2021-159-RC1>, 2021

This is an interesting study highlighting the importance of allochthonous organic carbon contributions to mangrove soil carbon stocks. I recommend its publication in this journal. The study could be greatly improved if the authors provided a sensitivity analysis for their mixing-model calculations. Specifically, the degree to which $\delta^{13}\text{C}$ signatures vary between different plant materials remains unclear. In case there is large variability, the authors should use different plant ^{13}C endmembers and demonstrate how estimates of allochthonous OC contributions change accordingly. This is needed because the authors do not know the relative contributions of different plant materials to the SOC pool. More specific comments are provided in the pdf file attached.

Please also note the supplement to this comment:

<https://bg.copernicus.org/preprints/bg-2021-159/bg-2021-159-RC1-supplement.pdf>