Community comment and author responses to manuscript bg-2021-69. Community comments are given in normal style and with author responses in blue italic.

Comment: The manuscript "Partitioning carbon sources in a tropical watershed (Nyong River, Cameroon) between wetlands and terrestrial ecosystems – Do CO_2 emissions from tropical rivers offset the terrestrial carbon sink?" by Moustapha et al. discusses CO_2 emissions in tropical rivers and the role of floodplains as organic C importers along with groundwater. Since tropical continental areas are hotspots of C emission, the evaluation of mechanisms associated to C degradation and transport in these regions are essential to determine its implications on C budget. Therefore, it is an important work to the field with unquestionable publication interest. However, part of the experimental design is still not clear. The most downstream tributaries are neglect from the sampling, however a C mass balance of organic C exported to ocean is presented. There is a thesis, Nkoue-ndondo, 2008, embaying that Olama was the most downstream site with representative contribution to C export. However, the argument is not robust enough to support that downstream rivers can be neglected. I would suggest the authors to present a brief description about downstream C deposition and degradation. If the downstream geomorphology and discharge does not favor deposition and C oxidation, downstream tributaries may be neglected. Otherwise, the C mass balance should be adjusted.

Answer: Thank you for your overall positive evaluation of our manuscript and thank you for your comments, we appreciate. Please see the general response for more details. Briefly, we have revised our riverine C budget as we cannot estimate lateral inputs from wetlands and non-flooded forest groundwater in streams higher than 1. Therefore, our revised riverine C budget (drainage of non-flooded forest groundwater and wetland, carbon evasion and carbon export) is established at the scale of the Mengong catchment (first order basin) and not at the whole Nyong watershed scale.

In the revised manuscript, we will keep the estimations of carbon evasion and carbon export at the catchment scale (but we will not estimate drainage of groundwater and wetland at the catchment scale) as described in the previous version of our manuscript.

What you mentioned about downstream C deposition and degradation is true but this part of the river is barely accessible and therefore has been poorly studied, so it is complicated to answer your comment specifically. Nonetheless, Brunet et al (2009) measured both DIC and DOC fluxes from the Nyong River at Olama and also more downstream at Edea (very close to the Nyong river outlet). They showed that the hydrological export of DOC (in t C km-2 yr-1, weighed by catchment surface area drained at Olama or Edea) was similar at Olama (4.2±0.1 *t C km-2 yr-1) and at Edea (3.9±0.2 t C km-2 yr-1). The same is true for the hydrological export of DIC that was 0.8±0.1 t C km-2 yr-1 and 1.1±0.1 t C km-2 yr-1, respectively at Olama and Edea. In addition, we can safely assume that the hydrological export of POC downstream Olama will not drastically change, because we measured an equivalent hydrological POC export weighed by catchment surface area in first and sixth order streams (Nyong at Olama). Therefore, we will keep our estimation of the hydrological export of C weighed by catchment surface area at Olama, as it is. In the revised version, we will cite the study of Brunet et al (2009) to better justify that the hydrological export of C weighed by the catchment surface area is similar at Olama and further downstream.*