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Downstream contribution to C mass balance

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Community comment on "Partitioning carbon sources between wetland and well-drained ecosystems to a tropical first-order stream - Implications to carbon cycling in the whole watershed (Nyong, Cameroon)" by Moussa Moustapha et al., Biogeosciences Discuss., https://doi.org/10.5194/bg-2021-69-CC1, 2021

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.