

Interactive comment on “Longitudinal discontinuities in riverine greenhouse gas dynamics generated by dams and urban wastewater” by Hyojin Jin et al.

Anonymous Referee #2

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I forgot to put the references that I used in my comments.

References are the following

Abril, G., Borges, A.V., 2018. Carbon leaks from flooded land: do we need to re-plumb the inland water active pipe? *Biogeosciences Discuss.* 2018, 1–46. <https://doi.org/10.5194/bg-2018-239> Abril, G., Bouillon, S., Darchambeau, F., Teodoru, C.R., Marwick, T.R., Tamooh, F., Ochieng Omengo, F., Geeraert, N., Deirmendjian, L., Polsenaere, P., Borges, A.V., 2015. Technical Note: Large overestimation of pCO₂ calculated from pH and alkalinity in acidic, organic-rich freshwaters. *Biogeosciences* 12, 67–78. <https://doi.org/10.5194/bg-12-67-2015> Abril, G., Martinez, J.-M., Artigas, L.F.,

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Moreira-Turcq, P., Benedetti, M.F., Vidal, L., Meziane, T., Kim, J.-H., Bernardes, M.C., Savoye, N., Deborde, J., Souza, E.L., Albéric, P., Landim de Souza, M.F., Roland, F., 2014. Amazon River carbon dioxide outgassing fuelled by wetlands. *Nature* 505, 395–398. <https://doi.org/10.1038/nature12797> Amundson, R., Stern, L., Baisden, T., Wang, Y., 1998. The isotopic composition of soil and soil-respired CO₂. *Geoderma* 82, 83–114. Deirmendjian, L., Abril, G., 2018. Carbon dioxide degassing at the groundwater-stream-atmosphere interface: isotopic equilibration and hydrological mass balance in a sandy watershed. *J. Hydrol. Gran, G., 1952. Determination of the equivalence point in potentiometric titrations of seawater with hydrochloric acid. Ocean. Acta* 5, 209–218. Hartmann, J., Lauerwald, R., Moosdorf, N., 2014. A brief overview of the GLObal River CHemistry Database, GLORICH. *Procedia Earth Planet. Sci.* 10, 23–27. Hotchkiss, E.R., Hall Jr, R.O., Sponseller, R.A., Butman, D., Klaminder, J., Laudon, H., Rosvall, M., Karlsson, J., 2015. Sources of and processes controlling CO₂ emissions change with the size of streams and rivers. *Nat. Geosci.* 8, 696–699. Morana, C., Borges, A.V., Roland, F.A.E., Darchambeau, F., Descy, J.-P., Bouillon, S., 2015. Methanotrophy within the water column of a large meromictic tropical lake (Lake Kivu, East Africa). *Biogeosciences* 12, 2077–2088. Polsenaere, P., Abril, G., 2012. Modelling CO₂ degassing from small acidic rivers using water pCO₂, DIC and δ¹³C-DIC data. *Geochim. Cosmochim. Acta* 91, 220–239. <https://doi.org/10.1016/j.gca.2012.05.030> Roland, F.A., Darchambeau, F., Morana, C., Bouillon, S., Borges, A.V., 2017. Emission and oxidation of methane in a meromictic, eutrophic and temperate lake (Dendre, Belgium). *Chemosphere* 168, 756–764. Teodoru, C.R., Nyoni, F.C., Borges, A.V., Darchambeau, F., Nyambe, I., Bouillon, S., 2015. Dynamics of greenhouse gases (CO₂, CH₄, N₂O) along the Zambezi River and major tributaries, and their importance in the riverine carbon budget. *Biogeosciences* 12, 2431–2453. Vannote, R.L., Minshall, G.W., Cummins, K.W., Sedell, J.R., Cushing, C.E., 1980. The river continuum concept. *Can. J. Fish. Aquat. Sci.* 37, 130–137.

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