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Discussions

Interactive comment on "CO_2, CH_4 and N_2O fluxes along an altitudinal gradient in the northern Ecuadorean Andes: N_2O consumption at higher altitudes" *by* Paula Alejandra Lamprea Pineda et al.

Anonymous Referee #2

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In this study, the authors quantified soil fluxes of CO2, CH4) and N2O of four tropical forest sites located along an altitudinal gradient in northern Ecuador. This is an interesting study and we definitively need such dataset to complete our understanding of GHGs balance in tropical forest. Yet the spatial (one plot with 5 measurement points at each elevation and 4 different elevations : 20 measurement points) as well as the temporal coverage (one measurement per day during 5 consecutive days repeated twice : 10 measurements per sampling points only during the dry season) of the study are low. Moreover, collar insertion was done only 12h before the measurement. A longer

period between collar insertion and measurement is generally recommended in order to avoid effect of root death on CO2 effluxes. These limitations are not mentioned in the abstract nor in the conclusion and can give the false impression that this study is presenting a larger dataset. Moreover, the review that is included in the last part of the paper is not complete, including only paper published before 2016 (see supplementary table). This review needs to be completed and the period of measurement (dry vs. wet) need to be specified. My conclusion is therefore that this paper is not suitable for publication in its current form. I nonetheless think that these data are worth being published but rather more as a short note presenting preliminary data.

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