

November 8th, 2021

Re: Response to Manuscript ID: bg-2020-401 comments to resubmission

Dear Dr. Brüggemann
Associate Editor Biogeoscience

Thank you very much for recommending our paper for publication. We appreciate your time and expertise to help us improve the paper.

Based on your latest comments and suggestions, we will address in Time New Roman font in blue to each of your suggestions (Italics-Verdana font).

Sincerely,

Dr. Laura Meredith
Corresponding author

Comments to the author by Dr. Nicolas Brüggemann Associate Editor decision

p. 4, L117: I stumbled across "translatability for" (I am not a native speaker, though). Maybe "transferability to" fits better here? Or "...approach that is robust, flexible, and transferable to..."?

Dr. Brüggemann we used the word "translatability" to describe that information obtained by the integration of the system can be used to reflect or understand microbial activity in soil. However, we appreciate your comment and we changed the word to "transferability" to describe that the method can be used for other scientific questions while keeping the embedded value into another application.

p. 10, L257: Please add the information on mixing ratio and averaging time to the precision values (e.g., for N₂O you specified 325 ppb and 2 min in your response letter).

Based on your suggestion we edited the phrase to read in p. 10, L257-258 "Measured instrumental precisions with an averaging time of 2 minutes were 0.9‰ and 1.6‰ for N₂O bulk 15N and site preference, respectively, at 325 ppb N₂O, and 0.2‰ for 13CH₄

p. 29, L625: "subsurface processing producing": it's probably "subsurface processes producing"

Thank you very much for noticing this typo. The word "processing" was changed to "processes" as suggested now in **p.29 L622**