

Response to referee

Page 11, line 235-242: We agree that we should give a better argument for keeping fluxes within the MDF interval. A clarification is added to the material and method section, which you can read below. Sorting out data within the MDF interval would have very little effect on the results in our study since only the small fluxes would be removed. The mean CH₄ exchange for the plots after removal of fluxes within the MDF interval for a single measurement ($\pm 2.8 \mu\text{mol m}^{-2} \text{h}^{-1}$) would be $-10 \mu\text{mol m}^{-2} \text{h}^{-1}$, $-5.2 \mu\text{mol m}^{-2} \text{h}^{-1}$, $14.2 \mu\text{mol m}^{-2} \text{h}^{-1}$ and $17.2 \mu\text{mol m}^{-2} \text{h}^{-1}$ for the undisturbed, thinned, clear-cut and stump harvested plots respectively. If we consider the MDF limit ($\pm 1 \mu\text{mol m}^{-2} \text{h}^{-1}$), which should be used for daily mean values, less than 1 % of the data would be removed.

The following is added to the material and method section:

“It is important to reflect on that while fluxes below the MDF cannot be securely detected, they must still be considered. For example, consider time series where fluxes decrease smoothly from an emission peak to an uptake. In the transition phase from net emissions to net uptake, fluxes will be close to zero. Removing fluxes $< \text{MDF}$ could possible bias the result towards a stronger sink or source than what times series from the individual chambers give support for. Therefore also the fluxes within the MDF interval will be kept in the analyses. Sorting out fluxes within the MDF interval for a single measurement ($\pm 2.8 \mu\text{mol m}^{-2} \text{h}^{-1}$) would lead to a decrease in the number of flux measurements with 0%, 16%, 13% and 30 % for the undisturbed, thinned, clear-cut and stump harvested plots respectively and not change the mean exchange of CH₄ at any of the plots with more than $0.6 \mu\text{mol m}^{-2} \text{h}^{-1}$. Nonetheless, the MDF is a valuable tool for determining how large portion of the data that is uncertain in a statistical sense.”

Page 12, line 257: There is no missing word in the sentence but the word “with” should be changed to “by”. We also split the sentence to make it clearer. The following is now in the manuscript.

“The coefficients are the numbers that the variables would be multiplied by if CH₄ exchange were to be modeled. A variable with a larger coefficient has a higher impact on the CH₄ exchange”

Page 16, line 357: “the” is inserted before “water table”

Table captions

Table 2: Following is added to the figure caption

“The correlation analyses are based on data from the entire measurement period”

Figure Captions

Fig. 3: We have changed “Fig. 3a” to “Fig. 3” and included the abbreviations for the different treatments in the caption.