

Interactive comment on “An assessment of natural methane fluxes simulated by the CLASS-CTEM model” by Vivek K. et al.

Anonymous Referee #1

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This is a well-written and interesting model description and evaluation of CLASS-CTEM. The application of the 1-box model is helpful as a benchmark. I have just a couple of minor comments for helping improve the manuscript.

1. Please mention how the inland water flux is or is not included in the CLASS-CTEM wetland emissions estimate, referencing Bastviken, and Thornton GRL where appropriate.
2. A couple of sentences on how the 1-box model equilibrium is calculated is needed to understand how 708 ppb was estimated. Is there a spinup for this, how many years etc...
3. Does EDGAR 'agricultural soils' include rice cultivation ?

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4. Main criticism is that the parameter and forcing uncertainties are not explored for CLASS-CTEM. These would affect absolute estimates as well as interannual variability and trends of estimates of CH₄. Some references to ancillary CLASS-CTEM studies on uncertainties would be helpful to address this shortcoming.

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