

Interactive comment on “Use and uncertainty evaluation of a process-based model for assessing the methane budgets of global terrestrial ecosystems” by A. Ito and M. Inatomi

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There are very few modelling studies of CH₄ that combine all the sources and the sinks. This study doesn't go all the way but is a step in right direction. In addition, it provides the basis for other modellers to find most of the CH₄ emissions related parameterizations and data sets in one place. I certainly found this discussion paper useful.

I have couple of comments.

1. In section 2.1.2. the Cao et al. (1996) scheme is described. This is a relatively simple scheme which large-scale modellers like me find attractive. So I was happy to
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know that the authors would be comparing this scheme with other more complicated schemes like that of Walter and Heimann (2000). However, in Table 1, I do not see any estimates of CH₄ wetland emissions from the Cao et al. scheme. Is this an omission?

2. On page 7051, lines 13 to 15, it is unclear to me how the carbon climate feedback is calculated and what does it mean when expressed in units of Pg C/yr. Does this mean every one degree Celsius of additional warming will equivalently lead to 0.28 Pg C/yr emissions? Please consider explaining this aspect somewhat more clearly.

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