

Interactive comment on “Analytically tractable climate-carbon cycle feedbacks under 21st century anthropogenic forcing” by Steven J. Lade et al.

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I like this model a lot. You may improve its exposition marginally and make it less time-dependent by introducing a fifth state variable, cd = deep ocean carbon stock, and rewrite eq. (8) as two ODEs, one for cd (containing the two integrals) and one for ca . This way the model's remaining time dependency is only on the two "control" variables $E(t)$ and $LUC(t)$ and it may thus be analysed more easily using tools from bifurcation analysis or topology of sustainable management (see this special issue).

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