

Interactive comment on “Multiple steady-states in the terrestrial atmosphere-biosphere system: a result of a discrete vegetation classification?” by A. Kleidon et al.

A. Kleidon et al.

Received and published: 23 August 2007

1. We have added references to the two papers in the revised version and rewritten text to make it clearer that the discrete vegetation classification is the purpose and novel aspect of this paper.
2. We agree that some of the more recent dynamic vegetation models do not use discrete vegetation mappings, but earlier studies did (for instance those that used the BIOME model, which treated vegetation in terms of 16 discrete biomes). Yet these models do not necessarily allow all of its vegetation parameters to adapt to altered climatic conditions, whereas real vegetation exhibits a great ability to adapt. This factor would also support the notion that the concept of multiple steady states may be too

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

limit to describe vegetation, but this would require further investigation. We altered text in the conclusions section to clarify these points.

3. As mentioned in point 2 above, model studies that coupled climate models with the BIOME model of Prentice et al. (1992) would seem to effectively implement a discrete vegetation classification. We added text and references in the revision to explain this.

4. minor comments: Yes, we agree that there is the possibility of multiple steady states in the continuous representation. We added text in the revision to address this aspect.

Interactive comment on Biogeosciences Discuss., 4, 687, 2007.

BGD

4, S1253–S1254, 2007

Interactive
Comment

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper