



Modelling the effects of grassland management on the carbon cycle

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Management of grassland is assumed to have a substantial impact on the global carbon cycle and large potential for carbon sequestration. There are few global assessments of the respective fluxes. Within the well-established dynamic global vegetation model LPJmL, we implemented four major options for the management and harvest regimes of grasslands. This approach enables to study the feedbacks of biomass removal through harvest and grazing on grassland productivity. We demonstrate sensitivity of carbon fluxes and stocks under different grassland management options. This opens the possibility for the integration of observation-based estimates of carbon sequestration in global models.