Geophysical Research Abstracts Vol. 20, EGU2018-18107, 2018 EGU General Assembly 2018 © Author(s) 2018. CC Attribution 4.0 license.



## Comparison of carbon balances between continuous-cover and clear-cut forestry in Sweden

Tomas Lundmark

SLU, Umeå, Sweden (tomas.lundmark@slu.se)

Continuous-cover forestry (CCF) has been recognized for the production of multiple ecosystem services, and is seen as an alternative to clear-cut forestry (CF). Despite the increasing interest, it is still not well described how CCF would affect the carbon balance and the resulting climate benefit from the forest in relation to CF. This study compares carbon balances of CF and CCF, applied as two alternative land-use strategies for a heterogeneous Norway spruce (Picea abies) stand. We use a set of models to analyze the long-term effects of different forest management and wood use strategies in Sweden on carbon dioxide emissions and carbon stock changes. The results show that biomass growth and yield is more important than the choice of silvicultural system per se. When comparing CF and CCF assuming similar growth, extraction and product use, only minor differences in long-term climate benefit were found between the two principally different silvicultural systems.