

**Title: Optimal continuous cover forest management:  
- Economic and environmental effects and legal considerations**

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***Abstract***

Forest management can be performed in many different ways. Decisions in forestry affect economic results, the flow of bioenergy raw materials, the CO<sub>2</sub> balance of the world, species diversity, recreation options for humans and much more. Technological development sequentially and rapidly changes most of the parameters of relevance to forestry. Some of the fundamental decision problems concern: Continuous Cover Forestry (CCF) or Plantation Forestry (PF), the Stand Density (SD), the Harvest Interval (HI), Single Species Forestry (SSF) or Multi Species Forestry (MSF). With present prices, costs, technology and initial forest conditions in many dominating forest countries, CCF is often a better choice than PF when we optimize the economic present values. CCF is also a better choice than PF from several environmental perspectives. The optimal levels of SD and HI are affected by all parameters. MSF can give environmental benefits in relation to SSF. MSF can also give economically valuable options to sequentially adjust forest production to future market changes. MSF is less sensitive to species specific damages and is more flexible to changing environmental conditions. Therefore, the expected present value of MSF is often higher than the expected present value of SSF. The forest laws in different countries, also neighbour countries such as Finland and Sweden, with almost the same prices, costs, technology and forest conditions, are very different with respect to the fundamental decisions: CCF or PF, SD, HI and SSF or MSF. The economic and environmental development of the world would benefit from more rational forest management. Several forest laws need to be adjusted in order to make rational decisions legal.

***Biography***

Peter Lohmander obtained MSc exam with thesis in mathematical statistics, in 1981. He defended his doctor of forestry thesis in forest economics, SLU, 1987, and became acting professor in forest economics, SLU, 1990. He was declared as competent, and as the most competent of three competent applicants, for professorship (by all the three referees) in forest economics, SLU, 1990. He became associate professor of forest economics, SLU, 1995 and was declared competent for professorship (by all the three referees) in forest planning, forest management, SLU, 1995. Peter Lohmander was appointed professor of forest management and economic optimization, SLU, faculty of forest sciences, 2000. Furthermore, he was declared competent (by all the three referees) for professorship in industrial economics, SLU, 2009. Peter Lohmander has chaired several international conferences. References: <http://www.lohmander.com/Information/Ref.htm>