Challenges in Forest Management Planning

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Assessment of forest naturalness is integrated to forest management planning as a complex issue including forest dynamics, large-scale disturbances, adaptation to changing environment and human influence. As almost all forests are human influenced, only certain levels of naturalness of an ecosystem may be estimated [5]. However, our ability to assess forest naturalness is important for supporting forest management and conservation decisions in practical forestry. Level of naturalness of a forest stand is difficult to evaluate by routine forest data assessment and therefore this is usually skipped or extremely simplified methods are used [6]. Definitions of forest naturalness are very different. Accumulation of standing and downed deadwood and forest structural properties are often important indicators in these definitions. Large variation of deadwood properties is characteristic to forests in the Baltic countries. Structural properties of a stand and its dynamics are becoming more important in forest management planning. Similar forest ecosystems may have large structural diversity. Assessment of individual tree mortality (rate, spatial pattern and causes) enhances evaluation of naturalness, succession stage and recent disturbances in a stand. As recent disturbances are almost always present at landscape level we expect a variety of tree mortality patterns and constant deadwood flow even on a landscape dominated by old-growth forests.

References