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Vegetation composition and dynamics of forested mires  
in Finland during 1985–2006

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Understorey vegetation on the large-scale forest monitoring plots in Finland has been surveyed three times (1985-86, 1995 and 2006) on the same monitoring plots by Finnish Forest Research Institute. The first two surveys were carried out on c.a. 3000 plots in connection of national forest inventories. Whereas in 2006 the survey was conducted as a part of so called BioSoil-project on 630 plots (an European wide Forest Focus demonstration project). In this study the changes in the understorey vegetation that have taken place in a subset of BioSoil plots (ca.100 plots of forested mires) during 21 years (1985-2006) are examined. Composition and percentage covers of plant species were identified on four sampling units (squares of size 2 m<sup>2</sup>) positioned exactly on the same locations in each three times. Most of the sites represents the intermediate (e.g. *Vaccinium myrtillus* -type spruce swamps) and lower nutrient level (paludified pine forests and spruce-pine mires) sites characterized with hummock and dwarf shrub vegetation.

As compared to the early 1950s inventories only c.a. 20% of the area of forested mires have remained undrained in southern and central Finland. In addition to the general features of forest drainage effects on mire vegetation, special attention is focused in undrained forested mires where the overall lower abundance of understorey vegetation, and especially the lower cover values of sedges compared to earlier surveys was found. Possible signs of climate change are also examined by using site level and other available environmental variables as explanatory variables in the analysis.