**Appendix S1** (.docx, 14 Ko)

Details of stands selection criteria and model parameters settings for simulation in FVS.

**Table S1** (.pdf, 94.0 KB)

Table of environmental, regeneration and initial structural parameters for the 11 Forest Inventory and Analysis (FIA) plots used in the FVS model for scenario management simulation.

**Table S2** (.pdf, 87.4 KB)

Table of the regeneration inputs (seedlings per hectare) used for the simulations of sugar maple-beech and shade-intolerant deciduous stands, applied for each species and prescription (adapted from Nunery & Keeton 2010).

**Table S3** (.pdf, 85.9 KB)

Table of values of total harvested volume, mean aboveground live tree carbon and habitat suitability index (HSI) results of the 70-year simulation run for SM, SID and WSP stands (*n*=5 each) under three single-management scenarios. \* No harvest was scheduled in No-management.

**Figure S1** (.tiff, 2034 KB)

Results of the 70-year simulation (2012-2082) at a 10-year time-step, averaged over (1) five sugar maple-beech stands, (2) five shade-intolerant deciduous stands and (3) five white spruce plantations for three management scenarios. Measurements shown are the a) aboveground carbon in live trees and b) available merchantable volume, calculated after harvesting activities if scheduled. Values in 2002 for (1) and (2) were calculated using the predicted 70-year rate of change in the No-management scenario. The null values in 2002 for (3) represent the stand after a clearcut, at the beginning of the next rotation. These 2002 values are for visual purposes and are not used in subsequent analyses.

**Figure S2** (.tiff, 1253 KB)

Figure of the habitat suitability index (HSI) for a) sugar maple-beech stands, b) shade-intolerant deciduous stands and c) white spruce plantations under three management scenarios. HSI is the sum of three mean sub-utility scores; Gini index, the density of large trees (DBH>=40 cm) and of large snags (DBH>=30.5 cm).