

Table S1. Data summary of biodiversity values in all forest management models (FMMs), site indexes (SI1, SI3, SI5) and shrub regeneration (shrub seed regeneration, shrub resprouting regeneration) over 90 years.

| Summary of biodiversity | Seed | | | Resprouting | | |
|-------------------------|--------|--------|--------|--------------------|--------|--------|
| | SI1 | SI3 | SI5 | SI1 | SI3 | SI5 |
| | | | | <u>FMM1</u> | | |
| Min. | 5.004 | 5.558 | 5.696 | 8.597 | 9.928 | 10.04 |
| Median | 17.240 | 20.673 | 22.816 | 25.202 | 28.379 | 30.54 |
| Mean | 16.838 | 20.102 | 22.408 | 24.810 | 27.854 | 29.85 |
| Max. | 22.128 | 27.626 | 30.442 | 33.288 | 37.626 | 41.24 |
| | | | | <u>FMM2</u> | | |
| Min. | 6.28 | 6.694 | 12.86 | 11.84 | 12.21 | 12.51 |
| Median | 16.96 | 19.345 | 24.05 | 25.00 | 27.36 | 28.56 |
| Mean | 16.50 | 18.681 | 23.53 | 24.34 | 26.29 | 27.63 |
| Max. | 21.29 | 24.433 | 33.46 | 33.23 | 35.99 | 37.53 |
| | | | | <u>FMM3</u> | | |
| Min. | 1.435 | 1.435 | 8.101 | 5.031 | 5.031 | 5.031 |
| Median | 14.666 | 17.699 | 21.982 | 23.089 | 26.057 | 29.007 |
| Mean | 14.659 | 17.834 | 21.398 | 22.702 | 25.604 | 28.595 |
| Max. | 23.341 | 30.754 | 35.288 | 34.310 | 41.728 | 45.705 |
| | | | | <u>FMM4</u> | | |
| Min. | 1.432 | 1.432 | 1.432 | 5.025 | 5.012 | 5.012 |
| Median | 10.590 | 12.515 | 13.006 | 17.994 | 19.355 | 19.728 |
| Mean | 10.132 | 11.579 | 11.999 | 17.735 | 18.957 | 19.303 |
| Max. | 15.377 | 17.265 | 17.747 | 27.414 | 28.833 | 29.154 |

Table S2. Multiple pairwise-comparison of biodiversity values between three site indexes (SI1, SI3, SI5) and two resprouting types (seed/resprouting) of each forest management model (FMM) with Wilcoxon signed-rank

| | Seed | | | Resprouting | |
|--------------------|---------|---------|---------|-------------|---------|
| | SI1 | SI3 | SI5 | SI1 | SI3 |
| <u>FMM1</u> | | | | | |
| SI3/seed | 1.2e-08 | - | - | - | - |
| SI5/seed | 3.2e-15 | 0.00049 | - | - | - |
| SI1/resp. | < 2e-16 | 1.3e-10 | 0.00077 | - | - |
| SI3/resp. | < 2e-16 | < 2e-16 | 1.1e-10 | 7.5e-05 | - |
| SI5/resp. | < 2e-16 | < 2e-16 | 1.7e-15 | 1.2e-09 | 0.01544 |
| <u>FMM2</u> | | | | | |
| SI3/seed | 4.6e-07 | - | - | - | - |
| SI5/seed | < 2e-16 | 7.2e-11 | - | - | - |
| SI1/resp. | < 2e-16 | 3.5e-14 | 0.22077 | - | - |
| SI3/resp. | < 2e-16 | < 2e-16 | 0.00028 | 0.00855 | - |
| SI5/resp. | < 2e-16 | < 2e-16 | 3.1e-07 | 2.0e-05 | 0.07445 |
| <u>FMM3</u> | | | | | |
| SI3/seed | 9e-11 | - | - | - | - |
| SI5/seed | 7.4e-11 | < 2e-16 | - | - | - |
| SI1/resp. | 1.0e-08 | < 2e-16 | 0.01890 | - | - |
| SI3/resp. | < 2e-16 | < 2e-16 | 0.00037 | 1.3e-09 | - |
| SI5/resp. | < 2e-16 | < 2e-16 | 7.8e-09 | 4.5e-15 | 0.00804 |
| <u>FMM4</u> | | | | | |
| SI3/seed | 0.0017 | - | - | - | - |
| SI5/seed | 9.4e-05 | 0.3042 | - | - | - |
| SI1/resp. | 3.4e-15 | 5.1e-11 | 5.0e-10 | - | - |
| SI3/resp. | < 2e-16 | 1.9e-14 | 2.7e-13 | 0.1284 | - |
| SI5/resp. | < 2e-16 | 3.4e-15 | 2.8e-14 | 0.0735 | 0.5779 |