

Saari A., Palviainen M., Niemi M.T., Laurén A. (2025). Impacts of reduced ditch network maintenance and ditch shallowing on ecosystem services of peatland forests in Finland. *Silva Fennica* vol. 59 no. 3 article id 25032. <https://doi.org/10.14214/sf.25032>

Supplementary file S2

Motti simulation background data for Central Finland.

**Table S2.** Motti simulation background data for Central Finland. The fertility classes according to Table 2 are: 2 is fertile, 3 is medium-fertile, 4 is medium-poor and 5 is poor. Main tree species are: 1 is Scots pine (*Pinus sylvestris* L.) and 2 is Norway spruce (*Picea abies* (L.) Karst.). Abbreviations for the forest attributes are: stem number (N<sub>s</sub>), basal area (BA), basal area-weighted mean height (Hg), basal area-weighted mean diameter (Dg) and dominant height (Hdom).

| Fertility class | Main species | Year | Age | N <sub>s</sub> (ha <sup>-1</sup> ) | BA (m <sup>2</sup> ha <sup>-1</sup> ) | Hg (m) | Dg (cm) | Hdom (m) | Stem volume (m <sup>3</sup> ha <sup>-1</sup> ) | Sawlog volume (m <sup>3</sup> ha <sup>-1</sup> ) | Pulpwood volume (m <sup>3</sup> ha <sup>-1</sup> ) | Residue wood volume (m <sup>3</sup> ha <sup>-1</sup> ) | Total yield (m <sup>3</sup> ha <sup>-1</sup> ) | Stand mortality (m <sup>3</sup> ha <sup>-1</sup> ) | Stem wood (kg ha <sup>-1</sup> ) | Residue wood (kg ha <sup>-1</sup> ) | Living branches (kg ha <sup>-1</sup> ) | Dead branches (kg ha <sup>-1</sup> ) | Leaves (kg ha <sup>-1</sup> ) | Stumps (kg ha <sup>-1</sup> ) | Coarse roots > 2 mm (kg ha <sup>-1</sup> ) | Fine roots (kg ha <sup>-1</sup> ) |
|-----------------|--------------|------|-----|------------------------------------|---------------------------------------|--------|---------|----------|------------------------------------------------|--------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|------------------------------------------------|----------------------------------------------------|----------------------------------|-------------------------------------|----------------------------------------|--------------------------------------|-------------------------------|-------------------------------|--------------------------------------------|-----------------------------------|
| 2               | 2            | 0    | 60  | 903                                | 21.0                                  | 15.3   | 21.5    | 15.3     | 151                                            | 75.6                                             | 70.1                                               | 5.2                                                    | 151.0                                          | 0                                                  | 54.8                             | 2.1                                 | 17.6                                   | 2.5                                  | 11.6                          | 5.6                           | 21.7                                       | 1.0                               |
| 2               | 2            | 5    | 65  | 889                                | 24.6                                  | 16.9   | 22.9    | 16.9     | 196                                            | 118.5                                            | 71.8                                               | 5.7                                                    | 195.9                                          | 0                                                  | 71.5                             | 2.3                                 | 20.6                                   | 3.1                                  | 13.3                          | 6.8                           | 26.0                                       | 1.3                               |
| 2               | 2            | 10   | 70  | 873                                | 28.2                                  | 18.4   | 24.3    | 18.4     | 244                                            | 161.5                                            | 76.3                                               | 6.2                                                    | 244.0                                          | 0                                                  | 89.3                             | 2.5                                 | 23.6                                   | 3.8                                  | 14.9                          | 8.1                           | 30.5                                       | 1.6                               |
| 2               | 2            | 15   | 75  | 853                                | 31.6                                  | 19.7   | 25.7    | 19.7     | 293                                            | 216.9                                            | 71.9                                               | 4.6                                                    | 293.4                                          | 0                                                  | 108.5                            | 1.8                                 | 26.5                                   | 4.4                                  | 16.3                          | 9.5                           | 35.0                                       | 1.8                               |
| 2               | 2            | 20   | 80  | 832                                | 34.6                                  | 20.9   | 26.9    | 20.9     | 341                                            | 252.7                                            | 83.4                                               | 4.3                                                    | 340.5                                          | 0                                                  | 126.2                            | 1.7                                 | 29.0                                   | 5.0                                  | 17.4                          | 10.7                          | 39.1                                       | 2.1                               |
| 2               | 2            | 25   | 85  | 809                                | 37.4                                  | 22.0   | 28.1    | 22.0     | 386                                            | 313.8                                            | 68.5                                               | 4.1                                                    | 386.4                                          | 0                                                  | 143.4                            | 1.6                                 | 31.3                                   | 5.5                                  | 18.4                          | 11.9                          | 42.9                                       | 2.4                               |
| 2               | 2            | 30   | 90  | 784                                | 40.0                                  | 23.0   | 29.2    | 23.0     | 430                                            | 355.5                                            | 71.0                                               | 3.8                                                    | 430.4                                          | 0                                                  | 159.8                            | 1.5                                 | 33.4                                   | 6.0                                  | 19.2                          | 13.0                          | 46.6                                       | 2.7                               |
| 2               | 2            | 35   | 95  | 757                                | 42.4                                  | 23.9   | 30.4    | 23.9     | 472                                            | 401.2                                            | 67.0                                               | 3.6                                                    | 471.9                                          | 0                                                  | 175.3                            | 1.4                                 | 35.2                                   | 6.5                                  | 19.8                          | 14.1                          | 50.0                                       | 3.0                               |
| 2               | 2            | 40   | 100 | 731                                | 44.5                                  | 24.8   | 31.4    | 24.8     | 511                                            | 444.7                                            | 62.6                                               | 3.4                                                    | 510.6                                          | 0                                                  | 189.7                            | 1.3                                 | 36.9                                   | 6.9                                  | 20.3                          | 15.2                          | 53.1                                       | 3.2                               |
| 2               | 2            | 45   | 105 | 704                                | 46.3                                  | 25.6   | 32.5    | 25.6     | 546                                            | 490.5                                            | 52.7                                               | 3.2                                                    | 546.4                                          | 0                                                  | 202.9                            | 1.2                                 | 38.4                                   | 7.2                                  | 20.7                          | 16.1                          | 56.0                                       | 3.5                               |
| 2               | 2            | 50   | 110 | 678                                | 48.0                                  | 26.4   | 33.4    | 26.4     | 579                                            | 526.2                                            | 50.1                                               | 3.0                                                    | 579.2                                          | 0                                                  | 215.0                            | 1.2                                 | 39.7                                   | 7.5                                  | 21.0                          | 17.0                          | 58.5                                       | 3.7                               |
| 3               | 2            | 0    | 60  | 1100                               | 18.8                                  | 16.1   | 18.4    | 16.1     | 151                                            | 66.7                                             | 76.0                                               | 8.6                                                    | 151.3                                          | 0                                                  | 54.2                             | 3.5                                 | 14.1                                   | 2.6                                  | 10.8                          | 4.5                           | 18.2                                       | 0.8                               |
| 3               | 2            | 5    | 65  | 1083                               | 21.9                                  | 17.7   | 19.6    | 17.7     | 194                                            | 103.9                                            | 83.2                                               | 7.2                                                    | 194.3                                          | 0                                                  | 71.3                             | 2.9                                 | 16.6                                   | 3.2                                  | 12.4                          | 5.5                           | 21.8                                       | 1.1                               |
| 3               | 2            | 10   | 70  | 1063                               | 24.9                                  | 19.1   | 20.8    | 19.1     | 239                                            | 131.0                                            | 100.7                                              | 7.3                                                    | 239.0                                          | 0                                                  | 88.3                             | 3.0                                 | 19.0                                   | 3.9                                  | 13.9                          | 6.5                           | 25.4                                       | 1.3                               |
| 3               | 2            | 15   | 75  | 1040                               | 27.9                                  | 20.4   | 22.0    | 20.4     | 284                                            | 178.2                                            | 98.6                                               | 7.4                                                    | 284.3                                          | 0                                                  | 105.6                            | 3.0                                 | 21.3                                   | 4.5                                  | 15.3                          | 7.5                           | 29.0                                       | 1.6                               |
| 3               | 2            | 20   | 80  | 1015                               | 30.4                                  | 21.5   | 23.1    | 21.5     | 327                                            | 224.4                                            | 95.0                                               | 7.5                                                    | 326.9                                          | 0                                                  | 121.8                            | 3.0                                 | 23.4                                   | 5.0                                  | 16.4                          | 8.5                           | 32.3                                       | 1.9                               |
| 3               | 2            | 25   | 85  | 987                                | 32.8                                  | 22.5   | 24.1    | 22.5     | 368                                            | 262.9                                            | 99.5                                               | 5.8                                                    | 368.3                                          | 0                                                  | 138.3                            | 2.3                                 | 25.3                                   | 5.5                                  | 17.4                          | 9.4                           | 35.4                                       | 2.1                               |
| 3               | 2            | 30   | 90  | 958                                | 35.0                                  | 23.5   | 25.1    | 23.5     | 408                                            | 311.6                                            | 90.7                                               | 5.5                                                    | 407.8                                          | 0                                                  | 153.5                            | 2.2                                 | 27.1                                   | 6.0                                  | 18.2                          | 10.3                          | 38.4                                       | 2.4                               |
| 3               | 2            | 35   | 95  | 927                                | 37.0                                  | 24.4   | 26.0    | 24.4     | 445                                            | 347.1                                            | 93.1                                               | 5.1                                                    | 445.3                                          | 0                                                  | 167.9                            | 2.0                                 | 28.8                                   | 6.4                                  | 18.8                          | 11.2                          | 41.2                                       | 2.6                               |
| 3               | 2            | 40   | 100 | 896                                | 38.8                                  | 25.2   | 26.9    | 25.2     | 480                                            | 387.7                                            | 87.9                                               | 4.8                                                    | 480.5                                          | 0                                                  | 181.4                            | 1.9                                 | 30.2                                   | 6.8                                  | 19.4                          | 12.0                          | 43.8                                       | 2.9                               |
| 3               | 2            | 45   | 105 | 865                                | 40.5                                  | 25.9   | 27.8    | 25.9     | 513                                            | 426.2                                            | 82.5                                               | 4.5                                                    | 513.2                                          | 0                                                  | 193.8                            | 1.8                                 | 31.6                                   | 7.1                                  | 19.8                          | 12.8                          | 46.3                                       | 3.1                               |
| 3               | 1            | 0    | 60  | 1391                               | 20.5                                  | 14.7   | 17.1    | 14.7     | 152                                            | 43.9                                             | 99.9                                               | 7.7                                                    | 151.5                                          | 0                                                  | 56.9                             | 3.1                                 | 11.0                                   | 3.2                                  | 4.6                           | 4.5                           | 12.5                                       | 0.4                               |
| 3               | 1            | 5    | 65  | 1351                               | 23.8                                  | 16.0   | 18.4    | 16.0     | 189                                            | 59.1                                             | 124.4                                              | 6.0                                                    | 189.5                                          | 0                                                  | 72.8                             | 2.4                                 | 12.4                                   | 3.8                                  | 5.0                           | 5.4                           | 15.5                                       | 0.5                               |
| 3               | 1            | 10   | 70  | 1306                               | 26.9                                  | 17.3   | 19.7    | 17.3     | 228                                            | 84.8                                             | 137.1                                              | 5.7                                                    | 227.6                                          | 0                                                  | 88.2                             | 2.3                                 | 13.5                                   | 4.4                                  | 5.3                           | 6.4                           | 18.5                                       | 0.5                               |
| 3               | 1            | 15   | 75  | 1257                               | 29.4                                  | 18.4   | 20.8    | 18.4     | 262                                            | 114.0                                            | 142.1                                              | 5.6                                                    | 261.7                                          | 0                                                  | 102.1                            | 2.3                                 | 14.3                                   | 4.9                                  | 5.5                           | 7.1                           | 21.2                                       | 0.6                               |
| 3               | 1            | 20   | 80  | 1155                               | 30.3                                  | 19.5   | 21.9    | 19.5     | 282                                            | 140.8                                            | 135.8                                              | 5.2                                                    | 281.8                                          | 0                                                  | 110.5                            | 2.1                                 | 14.7                                   | 5.1                                  | 5.5                           | 7.5                           | 22.7                                       | 0.7                               |
| 3               | 1            | 25   | 85  | 1049                               | 30.7                                  | 20.5   | 23.0    | 20.5     | 296                                            | 156.0                                            | 134.8                                              | 4.8                                                    | 295.5                                          | 0                                                  | 116.3                            | 2.0                                 | 15.0                                   | 5.2                                  | 5.5                           | 7.8                           | 23.8                                       | 0.7                               |
| 3               | 1            | 30   | 90  | 961                                | 31.0                                  | 21.4   | 24.0    | 21.4     | 309                                            | 170.7                                            | 133.4                                              | 4.4                                                    | 308.5                                          | 0                                                  | 121.8                            | 1.8                                 | 15.2                                   | 5.3                                  | 5.4                           | 8.0                           | 24.9                                       | 0.8                               |
| 3               | 1            | 35   | 95  | 884                                | 31.3                                  | 22.3   | 25.1    | 22.3     | 320                                            | 199.1                                            | 117.0                                              | 4.1                                                    | 320.2                                          | 0                                                  | 126.8                            | 1.7                                 | 15.4                                   | 5.4                                  | 5.4                           | 8.2                           | 25.9                                       | 0.8                               |
| 3               | 1            | 40   | 100 | 816                                | 31.6                                  | 23.1   | 26.1    | 23.1     | 331                                            | 212.7                                            | 114.9                                              | 3.1                                                    | 330.7                                          | 0                                                  | 131.6                            | 1.3                                 | 15.5                                   | 5.5                                  | 5.3                           | 8.4                           | 26.9                                       | 0.8                               |
| 3               | 1            | 45   | 105 | 758                                | 31.9                                  | 23.8   | 27.1    | 23.8     | 340                                            | 224.2                                            | 113.3                                              | 2.8                                                    | 340.3                                          | 0                                                  | 135.7                            | 1.1                                 | 15.6                                   | 5.6                                  | 5.2                           | 8.5                           | 27.8                                       | 0.9                               |
| 3               | 1            | 50   | 110 | 705                                | 32.1                                  | 24.5   | 28.1    | 24.5     | 349                                            | 241.1                                            | 105.4                                              | 2.5                                                    | 349.0                                          | 0                                                  | 139.5                            | 1.0                                 | 15.7                                   | 5.7                                  | 5.1                           | 8.6                           | 28.6                                       | 0.9                               |
| 4               | 1            | 0    | 60  | 872                                | 16.1                                  | 14.1   | 17.3    | 14.1     | 114                                            | 28.4                                             | 82.6                                               | 3.2                                                    | 114.2                                          | 0                                                  | 44.2                             | 1.3                                 | 9.7                                    | 2.5                                  | 4.0                           | 3.6                           | 10.0                                       | 0.4                               |
| 4               | 1            | 5    | 65  | 860                                | 18.7                                  | 15.4   | 18.6    | 15.4     | 143                                            | 42.9                                             | 97.2                                               | 3.0                                                    | 143.0                                          | 0                                                  | 55.8                             | 1.2                                 | 11.1                                   | 3.0                                  | 4.4                           | 4.4                           | 12.4                                       | 0.4                               |
| 4               | 1            | 10   | 70  | 847                                | 21.4                                  | 16.6   | 19.9    | 16.6     | 174                                            | 69.9                                             | 101.6                                              | 2.8                                                    | 174.3                                          | 0                                                  | 68.5                             | 1.1                                 | 12.3                                   | 3.5                                  | 4.8                           | 5.2                           | 15.0                                       | 0.5                               |
| 4               | 1            | 15   | 75  | 832                                | 23.7                                  | 17.7   | 21.0    | 17.7     | 204                                            | 94.9                                             | 106.1                                              | 2.7                                                    | 203.6                                          | 0                                                  | 80.4                             | 1.1                                 | 13.3                                   | 4.0                                  | 5.0                           | 5.9                           | 17.4                                       | 0.6                               |
| 4               | 1            | 20   | 80  | 817                                | 25.9                                  | 18.7   | 22.1    | 18.7     | 233                                            | 120.5                                            | 109.5                                              | 2.6                                                    | 232.6                                          | 0                                                  | 92.1                             | 1.0                                 | 14.1                                   | 4.4                                  | 5.2                           | 6.5                           | 19.7                                       | 0.7                               |
| 4               | 1            | 25   | 85  | 800                                | 27.9                                  | 19.7   | 23.2    | 19.7     | 261                                            | 146.4                                            | 111.6                                              | 2.5                                                    | 260.5                                          | 0                                                  | 103.5                            | 1.0                                 | 14.8                                   | 4.8                                  | 5.3                           | 7.2                           | 22.0                                       | 0.7                               |
| 4               | 1            | 30   | 90  | 782                                | 29.8                                  | 20.6   | 24.2    | 20.6     | 287                                            | 179.1                                            | 105.8                                              | 2.4                                                    | 287.2                                          | 0                                                  | 114.4                            | 1.0                                 | 15.4                                   | 5.2                                  | 5.4                           | 7.8                           | 24.2                                       | 0.8                               |
| 4               | 1            | 35   | 95  | 764                                | 31.5                                  | 21.4   | 25.1    | 21.4     | 312                                            | 201.8                                            | 108.3                                              | 2.3                                                    | 312.3                                          | 0                                                  | 124.7                            | 0.9                                 | 15.8                                   | 5.5                                  | 5.4                           | 8.3                           | 26.4                                       | 0.8                               |
| 4               | 1            | 40   | 100 | 744                                | 33.0                                  | 22.2   | 26.0    | 22.2     | 336                                            | 222.7                                            | 110.8                                              | 2.2                                                    | 335.8                                          | 0                                                  | 134.3                            | 0.9                                 | 16.2                                   | 5.8                                  | 5.4                           | 8.8                           | 28.3                                       | 0.9                               |
| 4               | 1            | 45   | 105 | 724                                | 34.4                                  | 22.9   | 26.9    | 22.9     | 358                                            | 246.7                                            | 108.7                                              | 2.1                                                    | 357.5                                          | 0                                                  | 143.3                            | 0.9                                 | 16.4                                   | 6.1                                  | 5.4                           | 9.3                           | 30.2                                       | 0.9                               |
| 4               | 1            | 50   | 110 | 704                                | 35.7                                  | 23.5   | 27.8    | 23.5     | 378                                            | 256.5                                            | 118.9                                              | 2.1                                                    | 377.5                                          | 0                                                  | 151.6                            | 0.8                                 | 16.6                                   | 6.4                                  | 5.3                           | 9.7                           | 31.9                                       | 1.0                               |
| 5               | 1            | 0    | 60  | 1025                               | 13.6                                  | 12.2   | 15.5    | 12.2     | 85                                             | 13.3                                             | 67.7                                               | 4.2                                                    | 85.2                                           | 0                                                  | 32.4                             | 1.7                                 | 7.6                                    | 2.1                                  | 3.2                           | 2.8                           | 7.7                                        | 0.3                               |
| 5               | 1            | 5    | 65  | 1009                               | 14.9                                  | 13.2   | 16.3    | 13.2     | 100                                            | 16.6                                             | 79.3                                               | 4.3                                                    | 100.1                                          | 0                                                  | 38.5                             | 1.7                                 | 8.2                                    | 2.3                                  | 3.5                           | 3.2                           | 8.7                                        | 0.3                               |
| 5               | 1            | 10   | 70  | 993                                | 16.0                                  | 14.2   | 16.9    | 14.2     | 115                                            | 28.0                                             | 82.3                                               | 4.3                                                    | 114.7                                          | 0                                                  | 44.4                             | 1.8                                 | 8.8                                    | 2.5                                  | 3.7                           | 3.5                           | 9.7                                        | 0.4                               |
| 5               | 1            | 15   | 75  | 977                                | 16.9                                  | 15.1   | 17.5    | 15.1     | 128                                            | 37.5                                             | 85.7                                               | 4.4                                                    | 127.6                                          | 0                                                  | 49.7                             | 1.8                                 | 9.2                                    | 2.7                                  | 3.8                           | 3.8                           | 10.6                                       | 0.4                               |
| 5               | 1            | 20   | 80  | 961                                | 17.7                                  | 15.9   | 18.0    | 15.9     | 140                                            | 44.2                                             | 91.6                                               | 4.4                                                    | 140.3                                          | 0                                                  | 55.0                             | 1.8                                 | 9.6                                    | 2.8                                  | 4.0                           | 4.0                           | 11.4                                       | 0.5                               |
| 5               | 1            | 25   | 85  | 944                                | 18.5                                  | 16.6   | 18.5    | 16.6     | 152                                            | 48.7                                             | 99.0                                               | 4.4                                                    | 152.1                                          | 0                                                  | 59.9                             | 1.8                                 | 10.0                                   | 3.0                                  | 4.1                           | 4.3                           | 12.2                                       | 0.5                               |
| 5               | 1            | 30   | 90  | 928                                | 19.2                                  | 17.3   | 19.0    | 17.3     | 163                                            | 57.2                                             | 101.4                                              | 4.4                                                    | 163.0                                          | 0                                                  | 64.4                             | 1.8                                 | 10.3                                   | 3.1                                  | 4.2                           | 4.5                           | 12.9                                       | 0.6                               |
| 5               | 1            | 35   | 95  | 912                                | 19.7                                  | 18.0   | 19.4    | 18.0     | 173                                            | 68.4                                             | 100.1                                              | 4.3                                                    | 172.9                                          | 0                                                  | 68.6                             | 1.8                                 | 10.6                                   | 3.2                                  | 4.3                           | 4.7                           | 13.5                                       | 0.7                               |
| 5               | 1            | 40   | 100 | 896                                | 20.2                                  | 18.6   | 19.8    | 18.6     | 182                                            | 74.7                                             | 103.0                                              | 4.3                                                    | 181.9                                          | 0                                                  | 72.5                             | 1.8                                 | 10.8                                   | 3.3                                  | 4.4                           | 4.8                           | 14.1                                       | 0.7                               |
| 5               | 1            | 45   | 105 | 881                                | 20.7                                  | 19.1   | 20.2    | 19.1     | 190                                            | 81.2                                             | 104.7                                              | 4.2                                                    | 190.2                                          | 0                                                  | 76.0                             | 1.7                                 | 11.0                                   | 3.4                                  | 4.5                           | 5.0                           | 14.6                                       | 0.8                               |
| 5               | 1            | 50   | 110 | 865                                | 21.1                                  | 19.6   | 20.5    | 19.6     | 198                                            | 87.1                                             | 106.4                                              | 4.2                                                    | 197.6                                          | 0                                                  | 79.1                             | 1.7                                 | 11.2                                   | 3.5                                  | 4.5                           | 5.1                           | 15.1                                       | 0.8                               |