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 S3

## Motti simulation background data for Northern Ostrobothnia–Kainuu.

**Table S3.** Motti simulation background data for Northern Ostrobothnia–Kainuu. 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 ($N_s$), 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 | $N_s$ ($ha^{-1}$) | BA ($m^2\ ha^{-1}$) | Hg (m) | Dg (cm) | Hdom (m) | Stem volume ($m^3\ ha^{-1}$) | Sawlog volume ($m^3\ ha^{-1}$) | Pulpwood volume ($m^3\ ha^{-1}$) | Residue wood volume ($m^3\ ha^{-1}$) | Total yield ($m^3\ ha^{-1}$) | Stand mortality ($m^3\ ha^{-1}$) | Stem wood ($kg\ ha^{-1}$) | Residue wood ($kg\ ha^{-1}$) | Living branches ($kg\ ha^{-1}$) | Dead branches ($kg\ ha^{-1}$) | Leaves ($kg\ ha^{-1}$) | Stumps ($kg\ ha^{-1}$) | Coarse roots > 2 mm ($kg\ ha^{-1}$) | Fine roots ($kg\ ha^{-1}$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 2 | 0 | 60 | 1420 | 20.0 | 12.7 | 17.8 | 12.7 | 122 | 32.0 | 80.7 | 8.8 | 121.5 | 0 | 43.2 | 3.6 | 15.9 | 2.2 | 11.4 | 4.7 | 19.2 | 0.9 |
| 2 | 2 | 5 | 65 | 1367 | 24.5 | 14.1 | 19.4 | 14.1 | 165 | 70.6 | 84.1 | 10.2 | 165.0 | 0 | 59.3 | 4.2 | 19.5 | 2.9 | 13.5 | 6.1 | 24.2 | 1.2 |
| 2 | 2 | 10 | 70 | 1305 | 28.9 | 15.5 | 20.9 | 15.5 | 213 | 106.8 | 98.1 | 8.4 | 213.3 | 0 | 78.4 | 3.4 | 23.0 | 3.6 | 15.4 | 7.5 | 29.4 | 1.6 |
| 2 | 2 | 15 | 75 | 1238 | 33.1 | 16.8 | 22.4 | 16.8 | 264 | 166.1 | 89.5 | 8.5 | 264.1 | 0 | 97.6 | 3.4 | 26.3 | 4.3 | 17.1 | 9.0 | 34.7 | 1.9 |
| 2 | 2 | 20 | 80 | 1168 | 36.6 | 18.1 | 23.8 | 18.1 | 313 | 207.5 | 99.0 | 6.4 | 312.8 | 0 | 116.8 | 2.6 | 29.1 | 4.9 | 18.4 | 10.4 | 39.3 | 2.2 |
| 2 | 2 | 25 | 85 | 1099 | 39.7 | 19.2 | 25.2 | 19.2 | 361 | 259.5 | 95.3 | 5.8 | 360.6 | 0 | 135.0 | 2.3 | 31.7 | 5.5 | 19.4 | 11.7 | 43.6 | 2.5 |
| 2 | 2 | 30 | 90 | 1032 | 42.5 | 20.3 | 26.5 | 20.3 | 406 | 308.4 | 92.7 | 5.3 | 406.4 | 0 | 152.3 | 2.1 | 34.0 | 6.0 | 20.2 | 13.0 | 47.6 | 2.8 |
| 2 | 2 | 35 | 95 | 970 | 44.9 | 21.4 | 27.8 | 21.4 | 449 | 366.5 | 78.2 | 4.8 | 449.5 | 0 | 168.5 | 1.9 | 36.0 | 6.5 | 20.9 | 14.2 | 51.3 | 3.0 |
| 2 | 2 | 40 | 100 | 912 | 47.0 | 22.3 | 29.0 | 22.3 | 489 | 413.5 | 71.6 | 4.4 | 489.5 | 0 | 183.4 | 1.7 | 37.7 | 6.9 | 21.3 | 15.3 | 54.6 | 3.3 |
| 2 | 2 | 45 | 105 | 858 | 48.9 | 23.3 | 30.2 | 23.3 | 526 | 452.4 | 69.8 | 4.0 | 526.3 | 0 | 197.1 | 1.6 | 39.2 | 7.3 | 21.6 | 16.3 | 57.6 | 3.5 |
| 2 | 2 | 50 | 110 | 810 | 50.4 | 24.1 | 31.3 | 24.1 | 560 | 489.6 | 66.6 | 3.7 | 559.9 | 0 | 209.5 | 1.4 | 40.5 | 7.6 | 21.9 | 17.2 | 60.2 | 3.8 |
| 3 | 2 | 0 | 60 | 1328 | 19.1 | 14.1 | 17.6 | 14.1 | 132 | 50.3 | 71.4 | 10.0 | 131.7 | 0 | 46.0 | 4.1 | 14.4 | 2.4 | 10.7 | 4.5 | 18.3 | 0.8 |
| 3 | 2 | 5 | 65 | 1293 | 22.6 | 15.3 | 18.9 | 15.3 | 169 | 74.5 | 86.2 | 8.7 | 169.4 | 0 | 60.9 | 3.5 | 17.1 | 2.9 | 12.4 | 5.5 | 22.2 | 1.0 |
| 3 | 2 | 10 | 70 | 1253 | 26.0 | 16.5 | 20.2 | 16.5 | 210 | 105.7 | 94.8 | 9.1 | 209.6 | 0 | 76.1 | 3.7 | 19.7 | 3.5 | 13.9 | 6.6 | 26.2 | 1.2 |
| 3 | 2 | 15 | 75 | 1208 | 29.3 | 17.6 | 21.4 | 17.6 | 251 | 137.5 | 106.3 | 7.3 | 251.1 | 0 | 92.7 | 2.9 | 22.2 | 4.1 | 15.2 | 7.8 | 30.1 | 1.5 |
| 3 | 2 | 20 | 80 | 1161 | 32.0 | 18.7 | 22.6 | 18.7 | 291 | 177.8 | 106.0 | 6.9 | 290.7 | 0 | 108.0 | 2.8 | 24.4 | 4.6 | 16.3 | 8.8 | 33.6 | 1.7 |
| 3 | 2 | 25 | 85 | 1112 | 34.5 | 19.7 | 23.7 | 19.7 | 330 | 227.6 | 95.4 | 6.5 | 329.6 | 0 | 122.9 | 2.6 | 26.3 | 5.1 | 17.2 | 9.8 | 37.0 | 2.0 |
| 3 | 2 | 30 | 90 | 1062 | 36.8 | 20.7 | 24.7 | 20.7 | 367 | 256.9 | 104.1 | 6.1 | 367.2 | 0 | 137.4 | 2.4 | 28.1 | 5.5 | 17.9 | 10.7 | 40.1 | 2.2 |
| 3 | 2 | 35 | 95 | 1014 | 38.8 | 21.6 | 25.7 | 21.6 | 403 | 309.3 | 88.0 | 5.7 | 403.0 | 0 | 151.2 | 2.3 | 29.7 | 5.9 | 18.5 | 11.6 | 43.0 | 2.5 |
| 3 | 2 | 40 | 100 | 967 | 40.6 | 22.4 | 26.7 | 22.4 | 437 | 342.9 | 88.6 | 5.3 | 436.9 | 0 | 164.1 | 2.1 | 31.1 | 6.3 | 19.0 | 12.5 | 45.7 | 2.7 |
| 3 | 2 | 45 | 105 | 922 | 42.2 | 23.2 | 27.7 | 23.2 | 469 | 381.6 | 82.1 | 4.9 | 468.6 | 0 | 176.2 | 2.0 | 32.4 | 6.7 | 19.4 | 13.3 | 48.1 | 2.9 |
| 3 | 2 | 50 | 110 | 880 | 43.6 | 24.0 | 28.6 | 24.0 | 498 | 411.2 | 82.3 | 4.6 | 498.1 | 0 | 187.5 | 1.8 | 33.6 | 7.0 | 19.7 | 14.0 | 50.3 | 3.2 |
| 3 | 1 | 0 | 60 | 1296 | 19.0 | 14.1 | 17.0 | 14.1 | 135 | 38.4 | 89.8 | 7.1 | 135.3 | 0 | 50.1 | 2.9 | 10.7 | 2.9 | 4.4 | 4.2 | 11.6 | 0.4 |
| 3 | 1 | 5 | 65 | 1264 | 21.8 | 15.2 | 18.2 | 15.2 | 165 | 50.6 | 109.2 | 5.4 | 165.2 | 0 | 62.6 | 2.2 | 11.9 | 3.5 | 4.8 | 5.0 | 14.1 | 0.4 |
| 3 | 1 | 10 | 70 | 1229 | 24.5 | 16.2 | 19.3 | 16.2 | 196 | 67.2 | 123.1 | 5.3 | 195.6 | 0 | 74.8 | 2.1 | 13.0 | 4.0 | 5.1 | 5.7 | 16.6 | 0.5 |
| 3 | 1 | 15 | 75 | 1191 | 26.7 | 17.1 | 20.3 | 17.1 | 224 | 93.2 | 125.2 | 5.2 | 223.6 | 0 | 86.0 | 2.1 | 13.8 | 4.4 | 5.3 | 6.4 | 18.9 | 0.6 |
| 3 | 1 | 20 | 80 | 1151 | 28.8 | 18.0 | 21.3 | 18.0 | 251 | 116.7 | 128.9 | 5.1 | 250.7 | 0 | 96.9 | 2.1 | 14.5 | 4.8 | 5.4 | 7.1 | 21.1 | 0.7 |
| 3 | 1 | 25 | 85 | 1109 | 30.6 | 18.8 | 22.2 | 18.8 | 276 | 140.8 | 130.6 | 5.0 | 276.4 | 0 | 107.3 | 2.0 | 15.1 | 5.2 | 5.5 | 7.7 | 23.2 | 0.7 |
| 3 | 1 | 30 | 90 | 1022 | 30.9 | 19.6 | 23.1 | 19.6 | 288 | 153.2 | 130.2 | 4.7 | 288.1 | 0 | 112.3 | 1.9 | 15.3 | 5.3 | 5.4 | 7.9 | 24.2 | 0.8 |
| 3 | 1 | 35 | 95 | 948 | 31.3 | 20.4 | 24.1 | 20.4 | 299 | 176.0 | 119.1 | 4.4 | 299.4 | 0 | 117.1 | 1.8 | 15.4 | 5.4 | 5.4 | 8.1 | 25.2 | 0.8 |
| 3 | 1 | 40 | 100 | 882 | 31.6 | 21.1 | 25.0 | 21.1 | 310 | 193.3 | 113.2 | 3.3 | 309.8 | 0 | 121.8 | 1.3 | 15.6 | 5.5 | 5.3 | 8.2 | 26.1 | 0.8 |
| 3 | 1 | 45 | 105 | 824 | 31.8 | 21.7 | 25.8 | 21.7 | 319 | 204.8 | 111.7 | 3.0 | 319.4 | 0 | 125.9 | 1.2 | 15.7 | 5.6 | 5.3 | 8.4 | 26.9 | 0.9 |
| 3 | 1 | 50 | 110 | 772 | 32.1 | 22.4 | 26.7 | 22.4 | 328 | 215.0 | 110.6 | 2.7 | 328.3 | 0 | 129.7 | 1.1 | 15.8 | 5.6 | 5.2 | 8.5 | 27.7 | 0.9 |
| 4 | 1 | 0 | 60 | 1131 | 16.0 | 12.9 | 16.2 | 12.9 | 105 | 18.9 | 81.9 | 4.8 | 105.5 | 0 | 39.6 | 1.9 | 9.5 | 2.4 | 4.0 | 3.4 | 9.4 | 0.4 |
| 4 | 1 | 5 | 65 | 1110 | 18.3 | 13.9 | 17.3 | 13.9 | 129 | 36.1 | 88.1 | 4.8 | 128.9 | 0 | 49.0 | 1.9 | 10.7 | 2.9 | 4.4 | 4.1 | 11.3 | 0.4 |
| 4 | 1 | 10 | 70 | 1087 | 20.7 | 14.9 | 18.4 | 14.9 | 155 | 47.4 | 102.3 | 4.9 | 154.5 | 0 | 59.1 | 2.0 | 11.9 | 3.3 | 4.7 | 4.8 | 13.5 | 0.5 |
| 4 | 1 | 15 | 75 | 1063 | 22.8 | 15.8 | 19.3 | 15.8 | 179 | 66.1 | 107.5 | 5.0 | 178.6 | 0 | 68.7 | 2.0 | 12.8 | 3.7 | 5.0 | 5.4 | 15.5 | 0.6 |
| 4 | 1 | 20 | 80 | 1038 | 24.8 | 16.7 | 20.3 | 16.7 | 203 | 85.1 | 112.3 | 5.2 | 202.6 | 0 | 78.3 | 2.1 | 13.6 | 4.1 | 5.1 | 6.0 | 17.5 | 0.6 |
| 4 | 1 | 25 | 85 | 1011 | 26.6 | 17.5 | 21.1 | 17.5 | 226 | 101.5 | 120.5 | 3.8 | 225.9 | 0 | 88.3 | 1.5 | 14.3 | 4.4 | 5.3 | 6.5 | 19.5 | 0.7 |
| 4 | 1 | 30 | 90 | 984 | 28.2 | 18.2 | 22.0 | 18.2 | 248 | 127.1 | 117.7 | 3.6 | 248.4 | 0 | 97.4 | 1.5 | 14.9 | 4.8 | 5.4 | 7.1 | 21.4 | 0.8 |
| 4 | 1 | 35 | 95 | 955 | 29.7 | 19.0 | 22.9 | 19.0 | 270 | 149.4 | 117.0 | 3.4 | 269.8 | 0 | 106.2 | 1.4 | 15.3 | 5.1 | 5.4 | 7.6 | 23.2 | 0.8 |
| 4 | 1 | 40 | 100 | 926 | 31.1 | 19.6 | 23.7 | 19.6 | 290 | 166.8 | 120.0 | 3.2 | 289.9 | 0 | 114.4 | 1.3 | 15.7 | 5.3 | 5.5 | 8.0 | 24.9 | 0.9 |
| 4 | 1 | 45 | 105 | 896 | 32.4 | 20.3 | 24.5 | 20.3 | 309 | 191.8 | 114.0 | 3.0 | 308.8 | 0 | 122.2 | 1.2 | 16.0 | 5.6 | 5.5 | 8.4 | 26.5 | 0.9 |
| 4 | 1 | 50 | 110 | 851 | 32.9 | 20.9 | 25.3 | 20.9 | 321 | 205.4 | 112.5 | 2.8 | 320.7 | 0 | 127.2 | 1.1 | 16.2 | 5.7 | 5.4 | 8.7 | 27.5 | 1.0 |
| 5 | 1 | 0 | 60 | 1266 | 12.9 | 10.5 | 13.8 | 10.5 | 71 | 6.0 | 59.3 | 5.7 | 71.0 | 0 | 25.9 | 2.3 | 7.1 | 1.9 | 3.2 | 2.5 | 6.5 | 0.3 |
| 5 | 1 | 5 | 65 | 1242 | 14.2 | 11.4 | 14.5 | 11.4 | 84 | 8.7 | 69.3 | 6.0 | 84.1 | 0 | 31.1 | 2.5 | 7.8 | 2.1 | 3.4 | 2.8 | 7.5 | 0.3 |
| 5 | 1 | 10 | 70 | 1217 | 15.4 | 12.3 | 15.1 | 12.3 | 97 | 12.3 | 78.6 | 6.4 | 97.2 | 0 | 36.3 | 2.6 | 8.4 | 2.3 | 3.6 | 3.2 | 8.5 | 0.4 |
| 5 | 1 | 15 | 75 | 1193 | 16.4 | 13.0 | 15.7 | 13.0 | 109 | 16.1 | 88.0 | 5.0 | 109.1 | 0 | 41.7 | 2.0 | 8.8 | 2.5 | 3.8 | 3.4 | 9.3 | 0.4 |
| 5 | 1 | 20 | 80 | 1168 | 17.2 | 13.8 | 16.2 | 13.8 | 121 | 18.6 | 97.1 | 5.0 | 120.6 | 0 | 46.4 | 2.0 | 9.3 | 2.6 | 4.0 | 3.7 | 10.1 | 0.5 |
| 5 | 1 | 25 | 85 | 1144 | 18.0 | 14.5 | 16.7 | 14.5 | 131 | 30.7 | 96.0 | 4.9 | 131.5 | 0 | 50.9 | 2.0 | 9.6 | 2.8 | 4.1 | 3.9 | 10.8 | 0.5 |
| 5 | 1 | 30 | 90 | 1120 | 18.7 | 15.1 | 17.2 | 15.1 | 142 | 36.9 | 100.7 | 4.8 | 142.4 | 0 | 55.4 | 1.9 | 10.0 | 2.9 | 4.2 | 4.2 | 11.5 | 0.6 |
| 5 | 1 | 35 | 95 | 1096 | 19.4 | 15.8 | 17.6 | 15.8 | 152 | 45.0 | 102.7 | 4.7 | 152.4 | 0 | 59.6 | 1.9 | 10.3 | 3.1 | 4.3 | 4.4 | 12.2 | 0.7 |
| 5 | 1 | 40 | 100 | 1072 | 20.0 | 16.3 | 18.0 | 16.3 | 162 | 49.4 | 107.9 | 4.6 | 161.8 | 0 | 63.6 | 1.9 | 10.6 | 3.2 | 4.4 | 4.6 | 12.8 | 0.7 |
| 5 | 1 | 45 | 105 | 1049 | 20.5 | 16.9 | 18.4 | 16.9 | 170 | 52.6 | 113.4 | 4.5 | 170.5 | 0 | 67.2 | 1.8 | 10.8 | 3.3 | 4.5 | 4.7 | 13.4 | 0.8 |
| 5 | 1 | 50 | 110 | 1027 | 20.9 | 17.4 | 18.8 | 17.4 | 178 | 62.4 | 111.6 | 4.4 | 178.4 | 0 | 70.5 | 1.8 | 11.0 | 3.4 | 4.6 | 4.9 | 13.9 | 0.8 |