Table S3: Effect of added fixed effects on LMM for DOM concentration (mg/L). For pairs that are significantly different (p < 0.05), the greater value is in **bold**; this is determined by the difference between the estimated marginal means (“estimate” column).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Fixed effect | contrast | estimate | SE | df | t.ratio | p.value |
| Vegetation type | **beech**-grass | 0.956 | 0.149 | 7.96 | 6.427 | 0.0009 |
| **beech**-oak | 1.271 | 0.149 | 7.9 | 8.554 | 0.0001 |
| beech-pine | 0.059 | 0.149 | 8.04 | 0.396 | 0.9776 |
| grass-oak | 0.314 | 0.149 | 7.96 | 2.112 | 0.228 |
| grass-**pine** | -0.897 | 0.149 | 8.1 | -6.003 | 0.0014 |
| oak-**pine** | -1.212 | 0.149 | 8.04 | -8.12 | 0.0002 |
| Period | **Dry**-Moist | 0.1019 | 0.0256 | 944 | 3.981 | 0.0002 |
| Dry-**Rewetting** | -0.0778 | 0.0308 | 944 | -2.525 | 0.0315 |
| Moist-**Rewetting** | -0.1797 | 0.0259 | 944 | -6.936 | <.0001 |
| Year | (2017/2018)-**(2019/2020)** | -0.1485 | 0.0237 | 942 | -6.252 | <.0001 |
| (2017/2018)-(2018/2019) | 0.0192 | 0.0259 | 942 | 0.74 | 0.740 |
| **(2019/2020)**-(2018/2019) | 0.1677 | 0.0282 | 942 | 5.944 | <.0001 |
| Vegetation type \* period(within periods) | **beech Dry** - grass Dry | 0.8182 | 0.1617 | 25.3 | 5.06 | 0.0015 |
| **beech Dry** - oak Dry | 1.3887 | 0.1569 | 21.4 | 8.85 | <.0001 |
| beech Dry - pine Dry | 0.0219 | 0.1641 | 27.2 | 0.134 | 1 |
| grass Dry - oak Dry | 0.5704 | 0.1616 | 25.2 | 3.529 | 0.0569 |
| grass Dry - **pine Dry** | -0.7963 | 0.1685 | 31.3 | -4.725 | 0.0023 |
| oak Dry - **pine Dry** | -1.3668 | 0.164 | 27.1 | -8.333 | <.0001 |
| **beech Moist** - grass Moist | 1.1238 | 0.1542 | 19.2 | 7.289 | <.0001 |
| **beech Moist** - oak Moist | 1.2498 | 0.1542 | 19.3 | 8.108 | <.0001 |
| beech Moist - pine Moist | 0.0971 | 0.1545 | 19.3 | 0.628 | 0.9999 |
| grass Moist - oak Moist | 0.126 | 0.1543 | 19.4 | 0.817 | 0.9993 |
| grass Moist - **pine Moist** | -1.0267 | 0.1547 | 19.4 | -6.636 | 0.0001 |
| oak Moist - **pine Moist** | -1.1527 | 0.1547 | 19.4 | -7.452 | <.0001 |
| beech Rewetting - grass Rewetting | 0.5687 | 0.1603 | 24.1 | 3.548 | 0.0565 |
| beech Rewetting - **oak Rewetting** | 1.1293 | 0.1608 | 24.6 | 7.022 | <.0001 |
| beech Rewetting - pine Rewetting | -0.1255 | 0.1622 | 25.5 | -0.773 | 0.9996 |
| grass Rewetting - oak Rewetting | 0.5606 | 0.1596 | 23.5 | 3.512 | 0.062 |
| grass Rewetting - **pine Rewetting** | -0.6942 | 0.1611 | 24.4 | -4.309 | 0.0099 |
| oak Rewetting - **pine Rewetting** | -1.2548 | 0.1616 | 25 | -7.764 | <.0001 |
| Vegetation type \* period(within vegetation types) | (beech Dry) - (beech Moist) | 0.1087 | 0.0412 | 958.6 | 2.635 | 0.2618 |
| (beech Dry) - (beech Rewetting) | 0.1589 | 0.0536 | 958.3 | 2.963 | 0.1214 |
| **(grass Dry)** - (grass Moist) | 0.4142 | 0.0572 | 958.4 | 7.247 | <.0001 |
| (grass Dry) - (grass Rewetting) | -0.0906 | 0.0632 | 958.2 | -1.433 | 0.9568 |
| (oak Dry) - (oak Moist) | -0.0302 | 0.041 | 958.2 | -0.736 | 0.9999 |
| (oak Dry) - (oak Rewetting) | -0.1005 | 0.051 | 958.2 | -1.968 | 0.7149 |
| (pine Dry) - (pine Moist) | 0.1838 | 0.0644 | 958.8 | 2.853 | 0.1598 |
| (pine Dry) - (pine Rewetting) | 0.0116 | 0.0737 | 958.8 | 0.157 | 1 |
| (beech Moist) - (beech Rewetting) | 0.0503 | 0.0487 | 958.3 | 1.033 | 0.9969 |
| (grass Moist) - **(grass Rewetting)** | -0.5048 | 0.0454 | 958.3 | -11.13 | <.0001 |
| (oak Moist) - (oak Rewetting) | -0.0703 | 0.0471 | 958.2 | -1.491 | 0.943 |
| (pine Moist) - (pine Rewetting) | -0.1723 | 0.0526 | 958.3 | -3.275 | 0.0502 |
| Year \* period (Within years) | **(2017/2018 Dry)**-(2017/2018 Moist) | 0.290479 | 0.0311 | 930 | 9.338 | <.0001 |
| (2017/2018 Dry)-(2017/2018 Rewetting) | 0.038175 | 0.0396 | 930 | 0.965 | 0.9888 |
| (2019/2020 Dry)-**(2019/2020 Moist)** | -0.2038 | 0.0574 | 930 | -3.549 | 0.0121 |
| (2019/2020 Dry)-**(2019/2020 Rewetting)** | -0.32393 | 0.0636 | 930 | -5.09 | <.0001 |
| (2018/2019 Dry)-(2018/2019 Moist) | 0.083641 | 0.0521 | 930 | 1.604 | 0.8025 |
| (2018/2019 Dry)-(2018/2019 Rewetting) | -0.02762 | 0.0592 | 930 | -0.467 | 0.9999 |
| (2017/2018 Moist)-**(2017/2018 Rewetting)** | -0.2523 | 0.0362 | 930 | -6.979 | <.0001 |
| (2019/2020 Moist)-(2019/2020 Rewetting) | -0.12013 | 0.0402 | 930 | -2.986 | 0.0711 |
| (2018/2019 Moist)-(2018/2019 Rewetting) | -0.11127 | 0.0477 | 930 | -2.335 | 0.3223 |
| Year \* period (Between years) | **(2017/2018 Dry)**-(2019/2020 Dry) | 0.223591 | 0.0565 | 930 | 3.956 | 0.0026 |
| (2017/2018 Dry)-(2018/2019 Dry) | 0.139153 | 0.0487 | 930 | 2.858 | 0.1005 |
| (2019/2020 Dry)-(2018/2019 Dry) | -0.08444 | 0.0656 | 930 | -1.287 | 0.9352 |
| (2017/2018 Moist)-**(2019/2020 Moist)** | -0.27069 | 0.028 | 930 | -9.658 | <.0001 |
| (2017/2018 Moist)-(2018/2019 Moist) | -0.06768 | 0.0332 | 930 | -2.042 | 0.5145 |
| **(2019/2020 Moist)**-(2018/2019 Moist) | 0.203002 | 0.0343 | 930 | 5.924 | <.0001 |
| (2017/2018 Rewetting)-(2019/2020 Rewetting) | -0.13851 | 0.0464 | 930 | -2.988 | 0.0708 |
| (2017/2018 Rewetting)-(2018/2019 Rewetting) | 0.073354 | 0.0495 | 930 | 1.483 | 0.8634 |
| **(2019/2020 Rewetting)**-(2018/2019 Rewetting) | 0.211864 | 0.0522 | 930 | 4.058 | 0.0018 |
| Year \* vegetation type(within vegetation types) | **(2017/2018 beech)**-(2019/2020 beech) | 0.2112 | 0.04 | 922.1 | 5.286 | <.0001 |
| (2017/2018 beech)-(2018/2019 beech) | 0.1318 | 0.0433 | 922.04 | 3.042 | 0.0983 |
| (2019/2020 beech)-(2018/2019 beech) | -0.0794 | 0.0473 | 922.02 | -1.677 | 0.8784 |
| (2017/2018 grass)-**(2019/2020 grass)** | -0.2135 | 0.0484 | 922.19 | -4.408 | 0.0007 |
| (2017/2018 grass)-(2018/2019 grass) | 0.0176 | 0.0461 | 922.05 | 0.383 | 1 |
| **(2019/2020 grass)**-(2018/2019 grass) | 0.2311 | 0.0547 | 922.1 | 4.222 | 0.0016 |
| (2017/2018 oak)-**(2019/2020 oak)** | -0.3028 | 0.0389 | 922.1 | -7.791 | <.0001 |
| (2017/2018 oak)-**(2018/2019 oak)** | -0.1476 | 0.0416 | 922.01 | -3.545 | 0.021 |
| **(2019/2020 oak)**-(2018/2019 oak) | 0.1552 | 0.0455 | 922.05 | 3.411 | 0.0327 |
| (2017/2018 pine)-(2019/2020 pine) | 0.072 | 0.0502 | 922.14 | 1.434 | 0.9566 |
| **(2017/2018 pine)**-(2018/2019 pine) | 0.3072 | 0.0565 | 922.56 | 5.436 | <.0001 |
| **(2019/2020 pine)**-(2018/2019 pine) | 0.2352 | 0.0619 | 922.27 | 3.8 | 0.0085 |
| Year \* vegetation type(within vegetation types) | **(2017/2018 beech)** - (2017/2018 grass) | 0.9972 | 0.1565 | 8.48 | 6.372 | 0.0044 |
| **(2017/2018 beech)** - (2017/2018 oak) | 1.469 | 0.1562 | 8.41 | 9.405 | 0.0003 |
| (2017/2018 beech) - (2017/2018 pine) | 0.039 | 0.157 | 8.59 | 0.249 | 1 |
| (2019/2020 beech) - (2019/2020 grass) | 0.5725 | 0.1601 | 9.29 | 3.575 | 0.1148 |
| **(2019/2020 beech)** - (2019/2020 oak) | 0.955 | 0.1581 | 8.84 | 6.039 | 0.0056 |
| (2019/2020 beech) - (2019/2020 pine) | -0.1002 | 0.1605 | 9.39 | -0.624 | 0.9999 |
| **(2018/2019 beech)** - (2018/2019 grass) | 0.883 | 0.1612 | 9.54 | 5.478 | 0.0089 |
| **(2018/2019 beech)** - (2018/2019 oak) | 1.1896 | 0.16 | 9.26 | 7.434 | 0.001 |
| (2018/2019 beech) - (2018/2019 pine) | 0.2144 | 0.1642 | 10.27 | 1.306 | 0.9601 |
| (2017/2018 grass) - (2017/2018 oak) | 0.4718 | 0.1564 | 8.45 | 3.017 | 0.2461 |
| (2017/2018 grass) - **(2017/2018 pine)** | -0.9581 | 0.1572 | 8.63 | -6.095 | 0.0057 |
| (2019/2020 grass) - (2019/2020 oak) | 0.3825 | 0.1606 | 9.4 | 2.382 | 0.4884 |
| (2019/2020 grass) - **(2019/2020 pine)** | -0.6727 | 0.1623 | 9.8 | -4.145 | 0.0499 |
| (2018/2019 grass) - (2018/2019 oak) | 0.3066 | 0.1607 | 9.42 | 1.908 | 0.735 |
| (2018/2019 grass) - (2018/2019 pine) | -0.6686 | 0.1643 | 10.31 | -4.068 | 0.0521 |
| (2017/2018 oak) - **(2017/2018 pine)** | -1.4299 | 0.1569 | 8.57 | -9.112 | 0.0003 |
| **(2019/2020 oak)** - (2019/2020 pine) | -1.0552 | 0.1609 | 9.47 | -6.559 | 0.0025 |
| (2018/2019 oak) - **(2018/2019 pine)** | -0.9752 | 0.1637 | 10.16 | -5.956 | 0.004 |