| **Min sample size** | **Response** | **Fixed effects** | **n** | **n\_RB** | **Marginal R2** | **AIC** | **deltaAIC** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | LogRichness | LandUse:RegionalBiome | 21,248 | 46 | 0.08 | 28,674 | 0.00 |
| LogRichness | LandUse:Biome | 21,248 | 46 | 0.05 | 29,032 | 357.61 |
| LogRichness | LandUse:Realm | 21,248 | 46 | 0.03 | 29,449 | 775.24 |
| LogRichness | LandUse | 21,248 | 46 | 0.01 | 29,887 | 1,213.17 |
| LogAbund | LandUse:RegionalBiome | 18,286 | 46 | 0.09 | 47,059 | 0.00 |
| LogAbund | LandUse:Biome | 18,286 | 46 | 0.03 | 47,388 | 328.67 |
| LogAbund | LandUse:Realm | 18,286 | 46 | 0.03 | 47,532 | 473.24 |
| LogAbund | LandUse | 18,286 | 46 | 0.00 | 47,901 | 842.04 |
| 1 | LogRichness | LandUse:RegionalBiome | 20,555 | 30 | 0.07 | 27,919 | 0.00 |
| LogRichness | LandUse:Biome | 20,555 | 30 | 0.06 | 28,259 | 339.94 |
| LogRichness | LandUse:Realm | 20,555 | 30 | 0.03 | 28,685 | 765.97 |
| LogRichness | LandUse | 20,555 | 30 | 0.01 | 29,125 | 1,206.71 |
| LogAbund | LandUse:RegionalBiome | 17,737 | 30 | 0.08 | 45,681 | 0.00 |
| LogAbund | LandUse:Biome | 17,737 | 30 | 0.04 | 45,988 | 306.95 |
| LogAbund | LandUse:Realm | 17,737 | 30 | 0.03 | 46,160 | 478.91 |
| LogAbund | LandUse | 17,737 | 30 | 0.00 | 46,523 | 841.90 |
| 5 | LogRichness | LandUse:RegionalBiome | 20,477 | 27 | 0.07 | 27,774 | 0.00 |
| LogRichness | LandUse:Biome | 20,477 | 27 | 0.06 | 28,121 | 347.16 |
| LogRichness | LandUse:Realm | 20,477 | 27 | 0.03 | 28,555 | 781.10 |
| LogRichness | LandUse | 20,477 | 27 | 0.01 | 28,996 | 1,221.93 |
| LogAbund | LandUse:RegionalBiome | 17,659 | 27 | 0.08 | 45,474 | 0.00 |
| LogAbund | LandUse:Biome | 17,659 | 27 | 0.04 | 45,756 | 282.08 |
| LogAbund | LandUse:Realm | 17,659 | 27 | 0.03 | 45,944 | 470.12 |
| LogAbund | LandUse | 17,659 | 27 | 0.00 | 46,307 | 832.56 |
| 25 | LogRichness | LandUse:RegionalBiome | 19,048 | 20 | 0.06 | 26,337 | 0.00 |
| LogRichness | LandUse:Biome | 19,048 | 20 | 0.06 | 26,559 | 221.96 |
| LogRichness | LandUse:Realm | 19,048 | 20 | 0.03 | 26,988 | 651.08 |
| LogRichness | LandUse | 19,048 | 20 | 0.01 | 27,387 | 1,050.10 |
| LogAbund | LandUse:RegionalBiome | 16,520 | 20 | 0.07 | 42,901 | 0.00 |
| LogAbund | LandUse:Biome | 16,520 | 20 | 0.04 | 43,110 | 209.58 |
| LogAbund | LandUse:Realm | 16,520 | 20 | 0.04 | 43,305 | 404.34 |
| LogAbund | LandUse | 16,520 | 20 | 0.00 | 43,643 | 742.34 |
| 50 | LogRichness | LandUse:RegionalBiome | 17,686 | 16 | 0.06 | 24,555 | 0.00 |
| LogRichness | LandUse:Biome | 17,686 | 16 | 0.05 | 24,774 | 219.10 |
| LogRichness | LandUse:Realm | 17,686 | 16 | 0.02 | 25,118 | 563.27 |
| LogRichness | LandUse | 17,686 | 16 | 0.01 | 25,498 | 942.84 |
| LogAbund | LandUse:RegionalBiome | 15,158 | 16 | 0.07 | 39,323 | 0.00 |
| LogAbund | LandUse:Biome | 15,158 | 16 | 0.03 | 39,531 | 208.68 |
| LogAbund | LandUse:Realm | 15,158 | 16 | 0.03 | 39,648 | 325.45 |
| LogAbund | LandUse | 15,158 | 16 | 0.00 | 39,969 | 646.32 |