

|                                | Simulated  | Mosquitos  | Eucalypts  | Frogs  | Fungi   | Aravo  | Mites  |
|--------------------------------|--|--|--|--|---|--|--|
| data type                      | presence-absence   | presence-absence   | presence-absence   | presence-absence   | presence-absence  | abundance  | abundance  |
| distribution                   | bernoulli  | bernoulli  | bernoulli  | bernoulli  | bernoulli   | poisson  | poisson  |
| n.sites                        | 300  | 167  | 455  | 104  | 438   | 75   | 70   |
| n.species                      | 100  | 16   | 12   | 9  | 11  | 65   | 30   |
| n.latent                       | 2  | 2  | 2  | 2  | 2   | 2  | 2  |
| n.col.X                        | 3  | 14   | 8  | 4  | 13  | 3  | 12   |
| n.traits                       | 0  | 0  | 0  | 0  | 0   | 1  | 0  |
| n.obs                          | 30000  | 2672   | 5460   | 936  | 4818  | 4875   | 2100   |
| n.param                        | 1099   | 589  | 1029   | 261  | 1040  | 480  | 559  |
| n.mcmc                         | 20000  | 20000  | 20000  | 20000  | 20000   | 20000  | 20000  |
| Computation<br>time (secondes) |  |  |  |  |   |  |  |
| boral                          | 51405  | 3285   | 1806   | 93   | 2736  | 218  | 363  |
| Hmsc                           | 264  | 62   | 77   | 42   | 87  | 275  | 187  |
| jSDM                           | 117  | 15   | 28   | 6  | 28  | 131  | 126  |
| Deviance                       |  |  |  |  |   |  |  |
| boral                          | 25210  | 1385   | 2134   | 318  | 1847  | 5034   | 7036   |
| Hmsc                           | 25392  | 1768   | 2632   | 376  | 1836  | 5653   | 7059   |
| jSDM                           | 25275  | 1423   | 2159   | 296  | 1603  | 5028   | 6857   |
| RMSE                           |  |  |  |  |   |  |  |
| boral                          | 0.081  |  |  |  |   |  |  |
| Hmsc                           | 0.079  |  |  |  |   |  |  |
| jSDM                           | 0.08   |  |  |  |   |  |  |
| Sensitivity                    |  |  |  |  |   |  |  |
| boral                          | 0.8  | 0.73   | 0.8  | 0.61   | 0.76  | 0.72   | 0.84   |
| Hmsc                           | 0.8  | 0.69   | 0.71   | 0.61   | 0.79  | 0.66   | 0.84   |
| jSDM                           | 0.8  | 0.73   | 0.84   | 0.64   | 0.85  | 0.73   | 0.85   |
| Specificity                    |  |  |  |  |   |  |  |
| boral                          | 0.8  | 0.93   | 0.96   | 0.94   | 0.96  | 0.9  | 0.85   |
| Hmsc                           | 0.8  | 0.9  | 0.94   | 0.95   | 0.96  | 0.88   | 0.84   |
| jSDM                           | 0.8  | 0.93   | 0.97   | 0.96   | 0.97  | 0.91   | 0.85   |
| TSS                            |  |  |  |  |   |  |  |
| boral                          | 0.6  | 0.65   | 0.77   | 0.55   | 0.72  | 0.63   | 0.69   |
| Hmsc                           | 0.6  | 0.59   | 0.65   | 0.55   | 0.75  | 0.55   | 0.68   |
| jSDM                           | 0.6  | 0.66   | 0.81   | 0.61   | 0.82  | 0.63   | 0.69   |
|                                |  |  |  |  |  |  |  |