Table 0.1: Importance of components, from Principal Components Analysis of the set of 18 hydrological metrics used as explanatory variables in this study.

|                        | PC1   | PC2   | PC3   | PC4   | PC5   |  |
|------------------------|-------|-------|-------|-------|-------|--|
| Standard deviation     | 2.787 | 1.995 | 1.273 | 1.079 | 0.996 |  |
| Proportion of variance | 0.431 | 0.221 | 0.090 | 0.065 | 0.042 |  |
| Cumulative proportion  | 0.431 | 0.653 | 0.743 | 0.807 | 0.862 |  |

Table 0.2: Loadings across principal components for the set of 18 hydrological metrics used as explanatory variables in this study.

| metric         | PC1    | PC2    | PC3    | PC4    | PC5    |
|----------------|--------|--------|--------|--------|--------|
| MDFMDFWet      | -0.068 | 0.127  | -0.647 | -0.183 | 0.210  |
| MDFMDFDry      | 0.261  | -0.226 | -0.132 | -0.141 | 0.243  |
| CVMDFWet       | -0.300 | -0.102 | 0.242  | -0.194 | 0.210  |
| CVMDFDry       | -0.331 | -0.134 | 0.043  | 0.125  | -0.046 |
| HSPeak         | -0.307 | -0.001 | -0.272 | 0.190  | -0.018 |
| HSMeanDur      | 0.261  | -0.313 | -0.046 | 0.068  | -0.016 |
| CVAnnHSPeak    | -0.296 | 0.063  | -0.210 | 0.082  | 0.131  |
| CVAnnHSMeanDur | 0.141  | -0.367 | 0.150  | 0.312  | 0.029  |
| LSPeak         | -0.137 | 0.384  | -0.023 | 0.314  | 0.257  |
| LSMeanDur      | -0.283 | -0.193 | -0.067 | -0.336 | 0.205  |
| CVAnnLSPeak    | 0.095  | -0.342 | 0.069  | -0.350 | 0.330  |
| CVAnnLSMeanDur | -0.121 | -0.242 | -0.199 | 0.130  | 0.311  |
| BFI            | 0.334  | -0.020 | -0.026 | 0.205  | 0.215  |
| CVAnnBFI       | -0.250 | -0.286 | -0.139 | 0.160  | -0.235 |
| $C_MinM$       | 0.200  | -0.225 | -0.403 | 0.394  | -0.045 |
| $M_{-}MinM$    | 0.172  | 0.159  | -0.211 | -0.233 | -0.451 |
| $C_MaxM$       | -0.154 | -0.345 | -0.155 | -0.202 | -0.456 |
| $M_{-}MaxM$    | 0.259  | 0.175  | -0.246 | -0.283 | 0.066  |

Table 0.3: Summary statistics for trait data.

| trait                             | mean   | SD     |  |
|-----------------------------------|--------|--------|--|
|                                   |        |        |  |
| flowering duration (months)       | 4.72   | 2.58   |  |
| leaf area $(cm^2)$                | 28.61  | 28.05  |  |
| maximum height (m)                | 19.79  | 13.98  |  |
| seed mass (mg)                    | 365.99 | 2078.8 |  |
| $SLA (cm^2/g)$                    | 15.3   | 7.42   |  |
| wood density (g/cm <sup>3</sup> ) | 0.609  | 0.13   |  |

Table 0.4: Proportional abundance of plants represented in the functional diversity analysis at each site.

| site | Total cover (individuals Ha <sup>-1</sup> ) | Represented cover<br>(individuals Ha <sup>-1</sup> ) | Proportion represented |  |
|------|---|--|------------------------|--|
| 1    | 8365  | 8219   | 0.983                  |  |
| 2    | 13698                                       | 13643  | 0.996                  |  |
| 3    | 28142                                       | 22487  | 0.799                  |  |
| 4    | 9567  | 8177   | 0.855                  |  |
| 5    | 3193  | 3179   | 0.996                  |  |
| 6    | 25237                                       | 25140  | 0.996                  |  |
| 7    | 14409                                       | 12887  | 0.894                  |  |
| 8    | 9458  | 9384   | 0.992                  |  |
| 9    | 16578                                       | 15068  | 0.909                  |  |
| 10   | 12505                                       | 11118  | 0.889                  |  |
| 11   | 42275                                       | 35464  | 0.839                  |  |
| 12   | 9320  | 9320   | 1.000                  |  |
| 13   | 25981                                       | 23881  | 0.919                  |  |
| 14   | 12954                                       | 12007  | 0.927                  |  |
| 15   | 11103                                       | 10882  | 0.980                  |  |
| 16   | 20669                                       | 16540  | 0.800                  |  |
| 17   | 25177                                       | 18199  | 0.723                  |  |
| 18   | 4613  | 4219   | 0.915                  |  |
| 19   | 3657  | 3443   | 0.942                  |  |
| 20   | 27249                                       | 23889  | 0.877                  |  |
| 21   | 23301                                       | 23008  | 0.987                  |  |
| 22   | 15639                                       | 13730  | 0.878                  |  |
| 23   | 10855                                       | 6067   | 0.559                  |  |
| 24   | 17888                                       | 15538  | 0.869                  |  |
| 25   | 3869  | 2603   | 0.673                  |  |
| 26   | 14070                                       | 11862  | 0.843                  |  |
| 27   | 17238                                       | 14213  | 0.825                  |  |
| 28   | 13756                                       | 9638   | 0.701                  |  |
| 29   | 7249  | 7208   | 0.994                  |  |
| 30   | 21555                                       | 21483  | 0.997                  |  |
| 31   | 7296  | 7227   | 0.991                  |  |
| 32   | 5307  | 5307   | 1.000                  |  |
| 33   | 19417                                       | 19046  | 0.981                  |  |
| 34   | 9942  | 9782   | 0.984                  |  |
| 35   | 8202  | 8185   | 0.998                  |  |
| 36   | 3745  | 3607   | 0.963                  |  |
| 37   | 13851                                       | 13535  | 0.977                  |  |
| 38   | 18326                                       | 15187  | 0.829                  |  |
| 39   | 8410  | 5840   | 0.694                  |  |
| 40   | 5360  | 5283   | 0.986                  |  |

Table 0.5: Proportion of species included in the functional diversity analysis for which trait values were available.

| trait              | data density |  |
|--------------------|--------------|--|
| flowering duration | 0.891        |  |
| growth form        | 1            |  |
| leaf area          | 0.983        |  |
| maximum height     | 0.971        |  |
| seed mass          | 0.868        |  |
| SLA                | 0.661        |  |
| wood density       | 0.672        |  |