

Table S1. Correlation coefficients between the first two PCs and the variables included in PCAcon, PCAiws, and PCAsws

| | PCAcon | PCAiws | PCAsws | | | | | | | | | |
|-------------------------------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | PC1 | PC2 | PC1 | PC2 | PC1 | PC2 | | | | | | |
| | R | p | R | p | R | p | R | p | R | p | R | p |
| <i>Quantitative variables</i> | | | | | | | | | | | | |
| Caro | 0.69 | 0.000 | 0.59 | 0.001 | 0.29 | 0.114 | 0.68 | 0.000 | 0.16 | 0.399 | -0.36 | 0.048 |
| Chl a | 0.61 | 0.000 | 0.66 | 0.000 | 0.28 | 0.132 | 0.90 | 0.000 | 0.71 | 0.000 | -0.56 | 0.001 |
| Chl b | 0.61 | 0.000 | 0.60 | 0.000 | 0.32 | 0.088 | 0.78 | 0.000 | 0.62 | 0.000 | -0.64 | 0.000 |
| DW_r | -0.23 | 0.226 | 0.63 | 0.000 | 0.80 | 0.000 | -0.28 | 0.135 | 0.40 | 0.029 | 0.51 | 0.004 |
| DW_s | -0.69 | 0.000 | 0.58 | 0.001 | 0.80 | 0.000 | -0.33 | 0.076 | 0.05 | 0.778 | 0.42 | 0.019 |
| FW_r | -0.01 | 0.975 | 0.42 | 0.022 | 0.76 | 0.000 | -0.33 | 0.074 | 0.73 | 0.000 | 0.27 | 0.153 |
| FW_s | -0.54 | 0.002 | 0.38 | 0.041 | 0.83 | 0.000 | 0.32 | 0.083 | 0.81 | 0.000 | 0.42 | 0.021 |
| Ln | 0.08 | 0.691 | 0.05 | 0.801 | 0.60 | 0.000 | -0.06 | 0.765 | 0.32 | 0.083 | 0.07 | 0.730 |
| MDA | 0.25 | 0.190 | 0.03 | 0.893 | 0.08 | 0.677 | 0.64 | 0.000 | 0.40 | 0.027 | -0.37 | 0.044 |
| PRO | 0.06 | 0.754 | 0.48 | 0.008 | 0.45 | 0.013 | -0.42 | 0.021 | 0.49 | 0.006 | -0.26 | 0.160 |
| RL | -0.36 | 0.054 | -0.02 | 0.924 | 0.10 | 0.588 | -0.20 | 0.294 | 0.59 | 0.001 | 0.52 | 0.003 |
| SL | -0.45 | 0.013 | 0.36 | 0.051 | 0.54 | 0.002 | 0.33 | 0.071 | -0.08 | 0.690 | 0.52 | 0.003 |
| TDW | -0.61 | 0.000 | 0.73 | 0.000 | 0.92 | 0.000 | -0.30 | 0.110 | 0.47 | 0.010 | 0.66 | 0.000 |
| TF | 0.30 | 0.113 | 0.48 | 0.007 | -0.41 | 0.025 | -0.09 | 0.644 | 0.54 | 0.002 | -0.04 | 0.825 |
| TPC | 0.65 | 0.000 | 0.10 | 0.614 | -0.24 | 0.206 | 0.33 | 0.071 | 0.37 | 0.042 | -0.56 | 0.001 |
| WCr | 0.52 | 0.003 | -0.17 | 0.377 | -0.02 | 0.936 | 0.14 | 0.455 | 0.45 | 0.013 | 0.00 | 0.990 |
| WC_s | 0.19 | 0.307 | 0.10 | 0.609 | 0.24 | 0.197 | 0.42 | 0.022 | 0.82 | 0.000 | 0.01 | 0.963 |
| <i>Categorical variables</i> | | | | | | | | | | | | |
| <i>Ageratum houstonianum</i> | 1.28 | 0.108 | 0.03 | 0.967 | 1.14 | 0.215 | -1.84 | 0.014 | 0.73 | 0.426 | 0.06 | 0.938 |
| <i>Calendula officinalis</i> | -2.19 | 0.004 | 0.24 | 0.757 | -0.33 | 0.720 | -0.38 | 0.631 | 0.84 | 0.357 | -0.91 | 0.212 |
| <i>Callistephus chinensis</i> | -0.25 | 0.759 | -1.28 | 0.094 | -0.95 | 0.306 | 1.12 | 0.148 | -1.15 | 0.203 | -0.44 | 0.556 |
| <i>Glebionis carinata</i> | 0.02 | 0.984 | -0.92 | 0.232 | 0.52 | 0.578 | 0.34 | 0.667 | 2.53 | 0.003 | 1.58 | 0.026 |
| <i>Leucanthemum vulgare</i> | 0.36 | 0.657 | -0.37 | 0.638 | 0.85 | 0.363 | 0.70 | 0.369 | -0.07 | 0.942 | 0.61 | 0.411 |
| <i>Xerochrysum bracteatum</i> | 0.79 | 0.328 | 2.29 | 0.001 | -1.22 | 0.184 | 0.06 | 0.942 | -2.88 | 0.000 | -0.90 | 0.222 |

Figure S1. Eigen analysis of PCAcon, PCAiws, and PCAsws

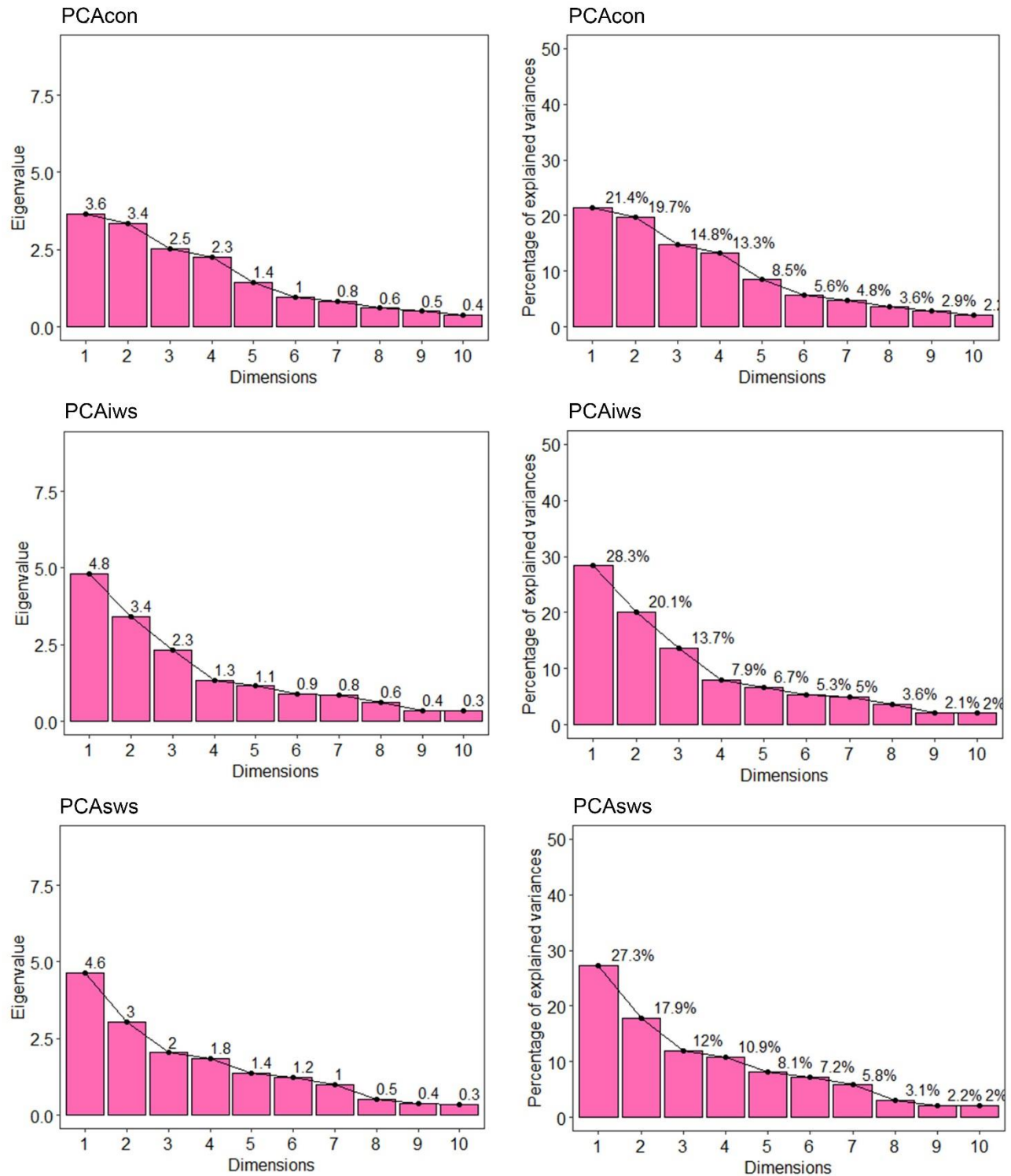


Table S2. Coefficients of linear discriminants for CVAcon, CVAiws, and CVAsws

| | CVAcon | | CVAiws | | CVAsws | |
|--------------|---------------|------------|---------------|------------|---------------|------------|
| | LD1 | LD2 | LD1 | LD2 | LD1 | LD2 |
| LN | 0.037 | -0.022 | -0.005 | -0.068 | 0.034 | -0.074 |
| SL | -0.069 | 0.400 | -0.061 | 0.031 | -0.031 | -0.070 |
| RL | 0.043 | -0.017 | -0.010 | -0.046 | 0.028 | 0.019 |
| FWr | 0.384 | -0.041 | 0.143 | 0.038 | -0.269 | 0.132 |
| FWs | 0.262 | -0.158 | -0.024 | 0.022 | 0.168 | 0.029 |
| DWr | -3.295 | -0.511 | -0.116 | 0.026 | -0.136 | -0.044 |
| DWs | 0.580 | 0.463 | 0.014 | 0.032 | -0.181 | 0.017 |
| WCr | 0.124 | -0.008 | 0.028 | -0.052 | 0.316 | 0.071 |
| WCs | -0.011 | 0.006 | -0.564 | -0.078 | -0.002 | 0.024 |
| TDW | -0.586 | 0.060 | 0.037 | -0.018 | -0.057 | -0.066 |
| Chl a | -1.231 | -0.207 | -0.025 | 0.014 | 0.005 | 0.009 |
| Chl b | 1.800 | -0.808 | 0.023 | 0.020 | 0.000 | -0.012 |
| Caro | 3.336 | 5.611 | 0.002 | -0.010 | 0.002 | 0.000 |
| PRO | 0.192 | -0.002 | 0.001 | -0.010 | -0.003 | 0.006 |
| MDA | -0.001 | -0.007 | 0.022 | -0.009 | 0.000 | 0.017 |
| TF | 0.074 | 0.022 | -0.002 | 0.019 | 0.009 | 0.027 |
| TPC | 0.029 | 0.031 | -0.002 | 0.020 | -0.004 | -0.038 |