

Table S1: Total variability of response variables explained by each environmental factor (Explains %) and contribution of each environmental factor to the total explained variability based on redundancy analysis. “ * ” represents the variation explained by a factor is significant ($p < 0.05$), tested using Monte-Carlo test.

| Name | Explains % | Contribution % | pseudo-F | <i>p</i> |
|-------------|-------------------|-----------------------|-----------------|-----------------|
| PAR | 22.0 | 33.6 | 11.3 | 0.002* |
| EC | 17.3 | 26.4 | 11.1 | 0.002* |
| Si | 16.1 | 24.6 | 13.7 | 0.002* |
| pH | 3.6 | 5.5 | 3.2 | 0.032* |
| T | 3.1 | 4.7 | 3.0 | 0.036* |
| P | 1.6 | 2.5 | 1.6 | 0.166 |
| ORP | 1.3 | 1.9 | 1.2 | 0.274 |
| N | 0.5 | 0.8 | 0.5 | 0.660 |