**Table S6.** Correlation between the Shannon index and each main functional category by Spearman’s correlation test.

|  |  |  |
| --- | --- | --- |
| Functional categories | r | *P* |
| C degradation | -0.01 | 0.98 |
| C fixation | -0.05 | 0.87 |
| N Cycling | -0.71 | 0.01\* |
| P Cycling | -0.30 | 0.34 |
| S Cycling | -0.23 | 0.46 |
| CNPS | -0.20 | 0.53 |

*P* ＜0.05 considered significant.