**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.