

Supplementary Table S5 The roles of all factors (including geographical distance, environmental variables and N-addition) on the ratio of $\text{N}_2\text{O}/(\text{N}_2\text{O} + \text{N}_2)$ rate evaluated by stepwise multiple regression modeling at the regional scale (all regions) and sub-regional scales (LP, IMP and XP).

Sites	Explanatory variable	Standardization coefficient	<i>P</i>	Full model (Adj. R^2)
All	N addition	0.472	0.000	0.57
	TN	0.613	0.000	
	Geographical distance	-0.22	0.000	
	DOC	-0.308	0.000	
LP	N addition	0.422	0.000	0.59
	TN	-0.498	0.000	
	DC	-0.290	0.000	
	Geographical distance	-0.216	0.000	
IMP	N addition	0.417	0.000	0.68
	pH	-1.048	0.000	
	Geographical distance	0.791	0.000	
	NO_3^- -N	0.297	0.001	
TP	N addition	0.485	0.000	0.87
	TC	0.455	0.000	
	DIC	-0.276	0.004	
	Geographical distance	0.279	0.017	