

**Figure S1** Principal component analysis of soil factors influencing N2O emission flux at soil depths 0-100 mm.The loadings of soil factors are shown as vectors. W is soil water content, T soil temperature, NH4-N soil nitrogen as ammonium concentration NH4+-N concentration, nitriterepresents the number of nitrosobacteria and denitrifyingrepresents the number of denitrifying bacteria. (n=27)