Soil moisture control of NO turnover and N_2O release in nitrogen-saturated subtropical forest soils

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Supplementary Materials

Figures S1-S4

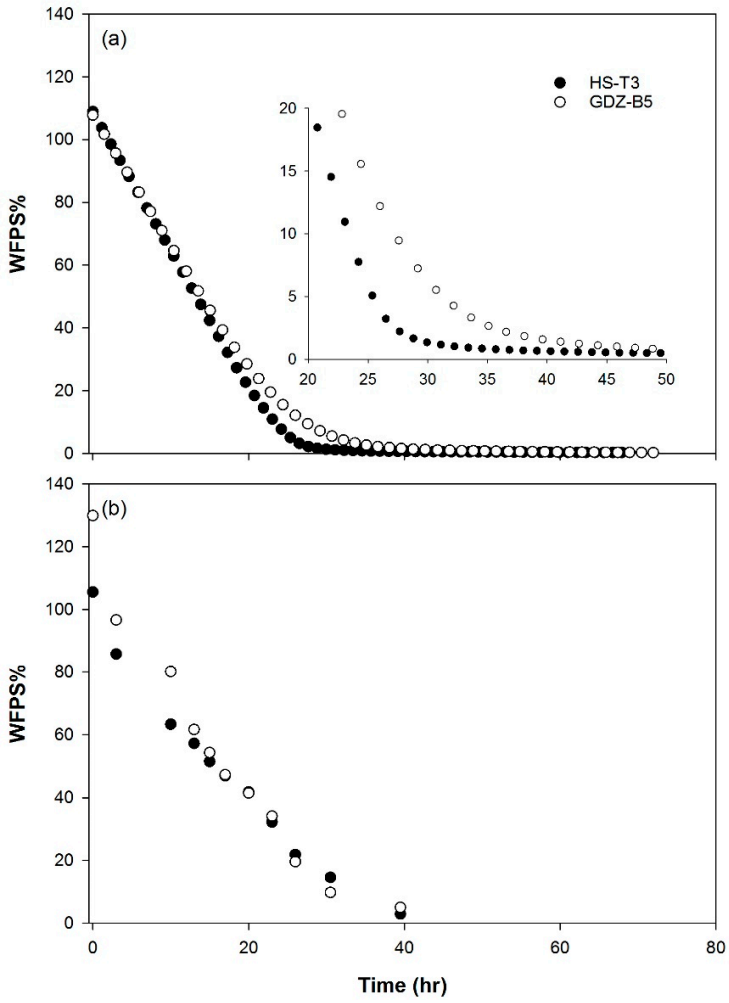

Figure S1. Dry-out curves at 30ºC for soils HS-T3 (filled circles) and GDZ-B5 (open circles) in (a) the NO experiment conducted at MPI Mainz and (b) the N_2O experiment conducted in Norway.

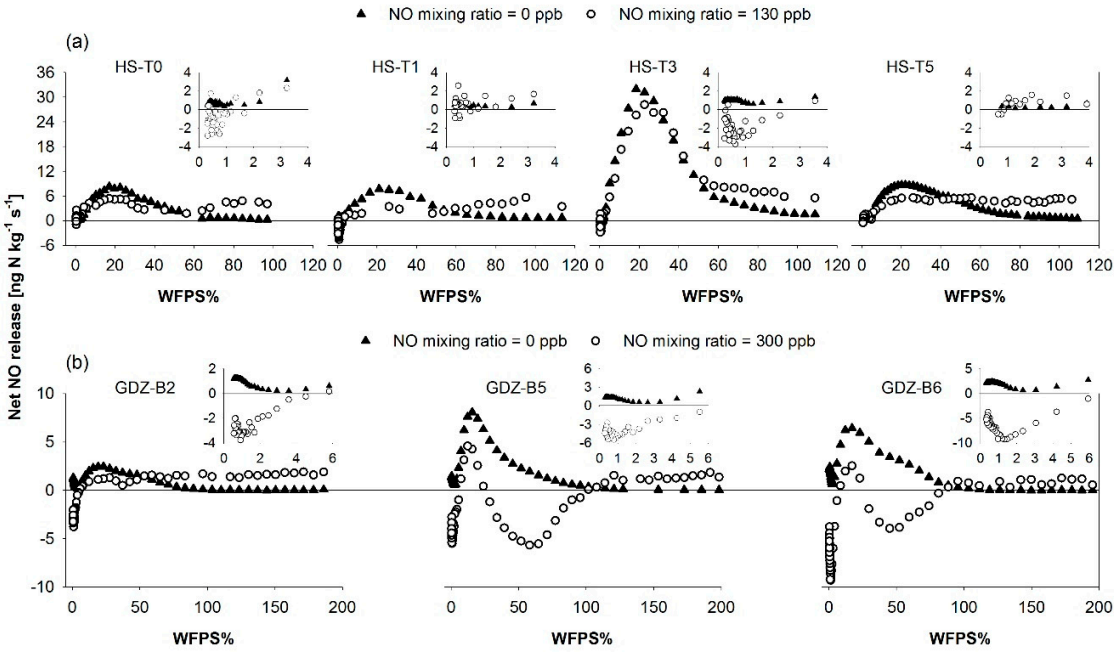

Figure S2. Net NO-N release rates in (a) HS-T0, HS-T1, HS-T3, HS-T5 and (b) GDZ-B2, GDZ-B5 and GDZ-B6 as a function of WFPS in the dry-out experiment with zero-NO flushing (filled triangles) and elevated NO flushing (at 130 ppb and 300 ppb in HS and GDZ soils, respectively; open circles). Inserts show NO release and uptake rates at WFPS < 6%. The temperature was 30ºC. Note different scales of x and y-axes.

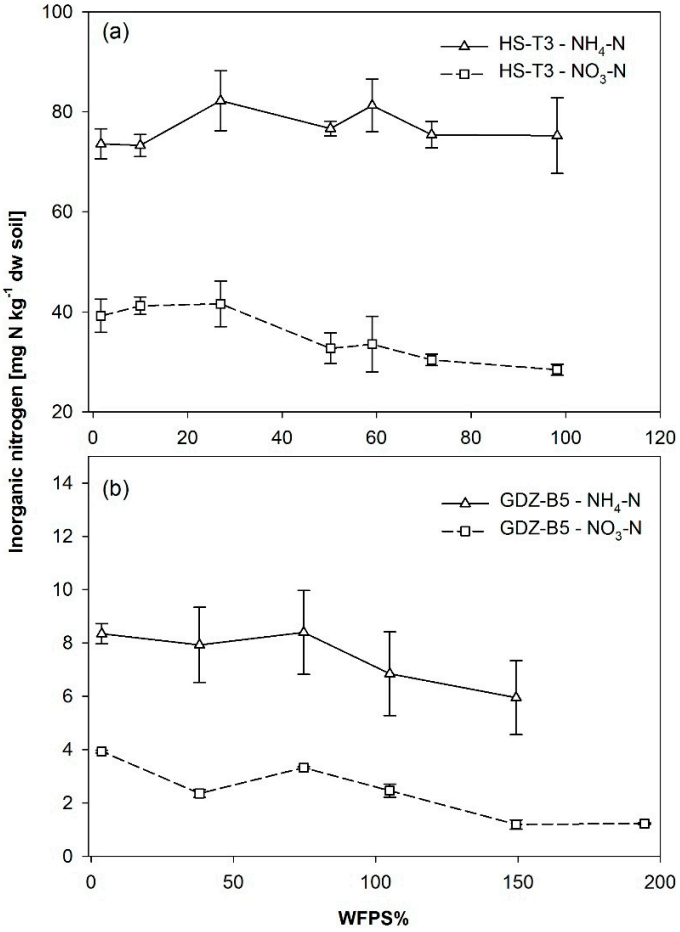

Figure S3. 2M KCl extractable NH_4^+ and NO_3^- in the dry-out experiment with soils from (a) HS-T3 and (b) GDZ-B5. Values are means and standard deviations (n=3). Note different scales of x- and y-axes in (a) and (b).

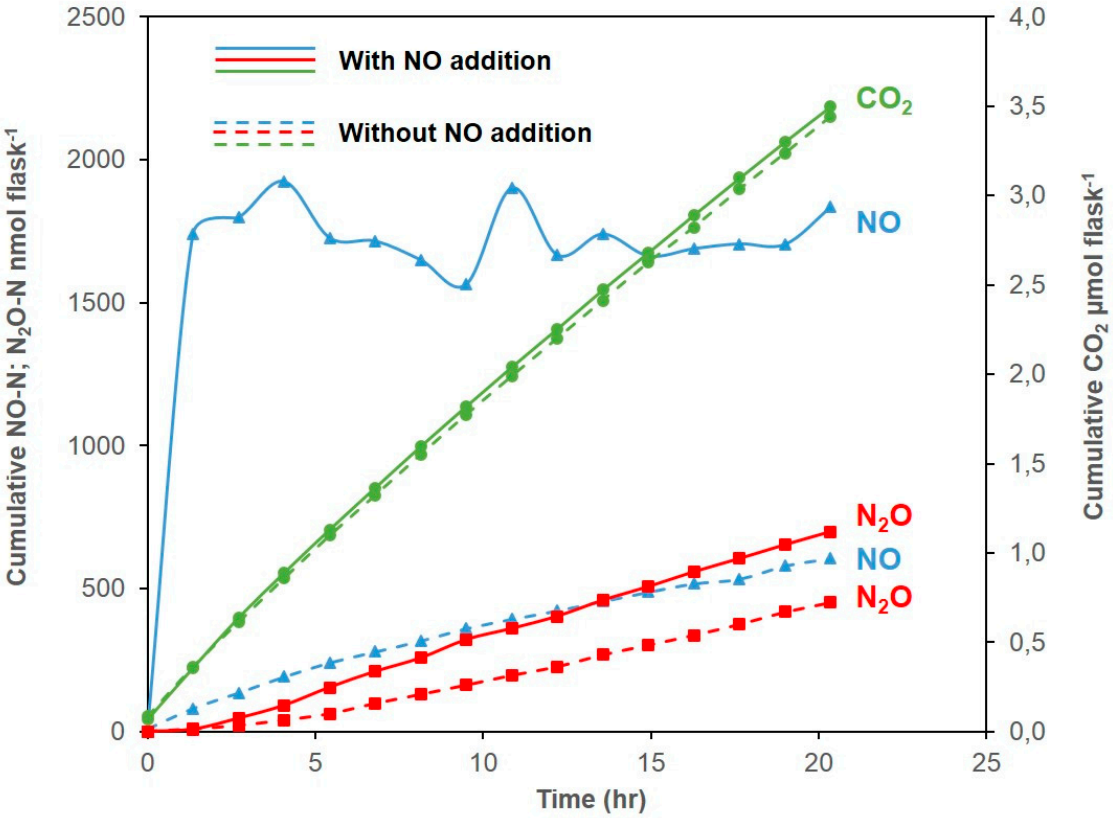

Figure S4. N_2O-N, NO-N and CO_2-C accumulation with and without spiking 10 g of moist mixed HS soil (60% WFPS) with 350 ppm NO. The soil was incubated anoxically in a crimp-sealed 120 ml serum bottle in a He-atmosphere. Solid lines indicate the treatment with NO addition, whereas dashed lines are the control without NO addition.