Supplement of Biogeosciences, 23, 1279–1289, 2026
https://doi.org/10.5194/bg-23-1279-2026-supplement

Biogeosciences Open Access EGU

Supplement of

Vulnerability of soil organic carbon in Amazonian Podsols to changes in environmental conditions

Naoise Nunan et al.

Correspondence to: Naoise Nunan (naoise.nunan@cnrs.fr)

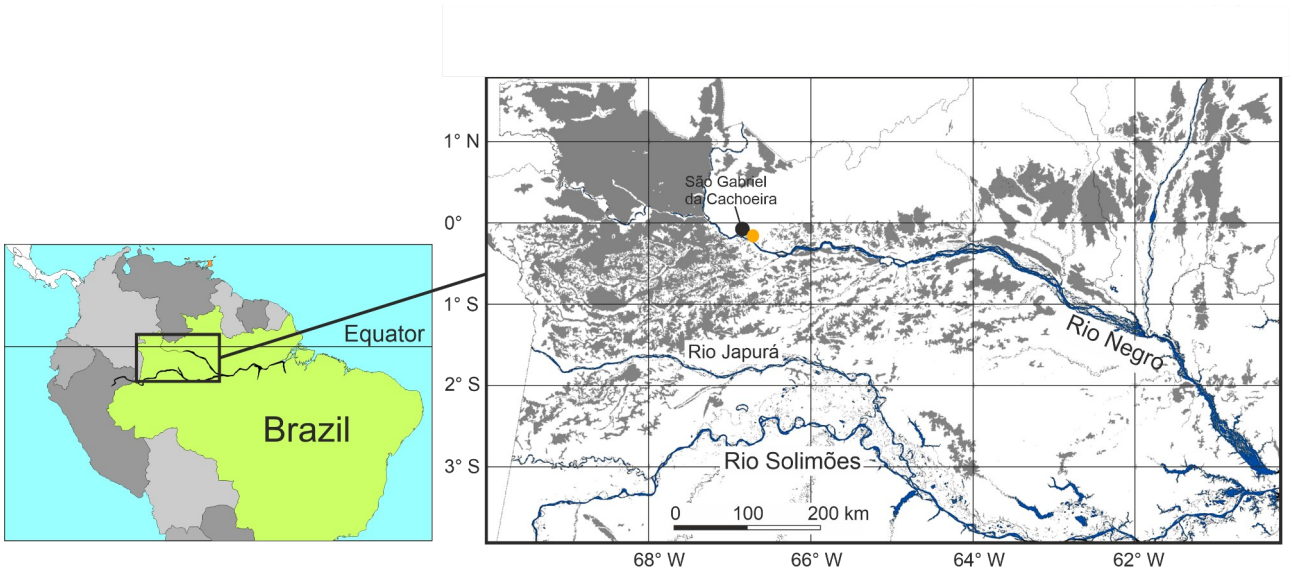

Figure S1. Location of the studied profiles. Grey areas in the detailed map indicate hydromorphic podzol areas. Orange spot indicates area from where samples were taken. Map adapted from Dupoux et al. (2017).

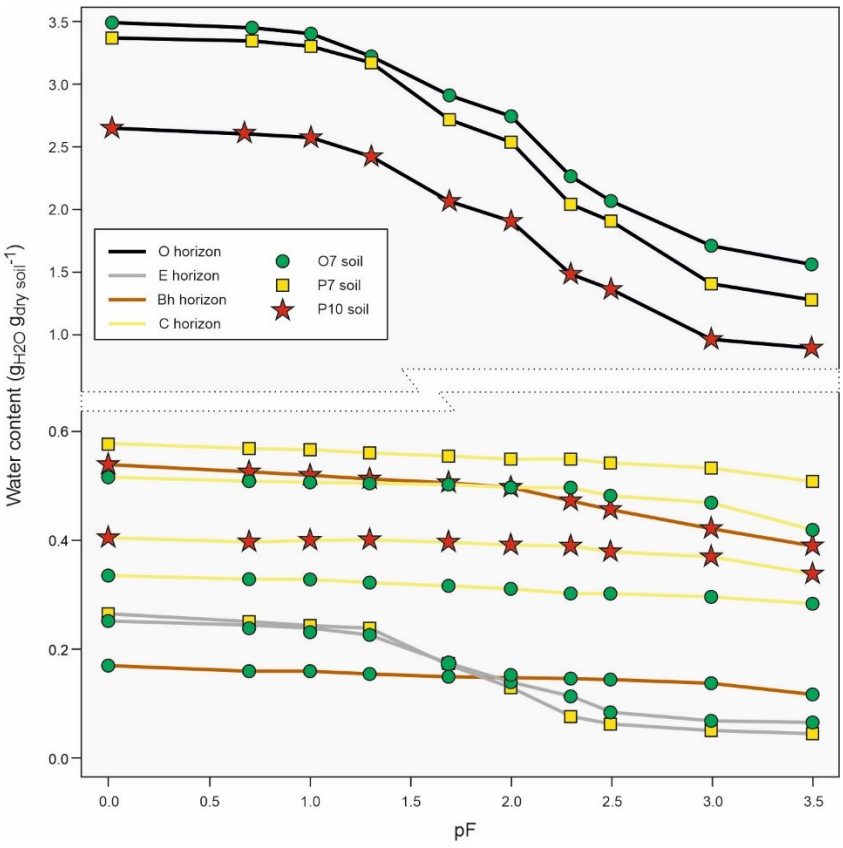

Figure S2. Moisture retention curves of the different horizons of the Amazonian Podzols.

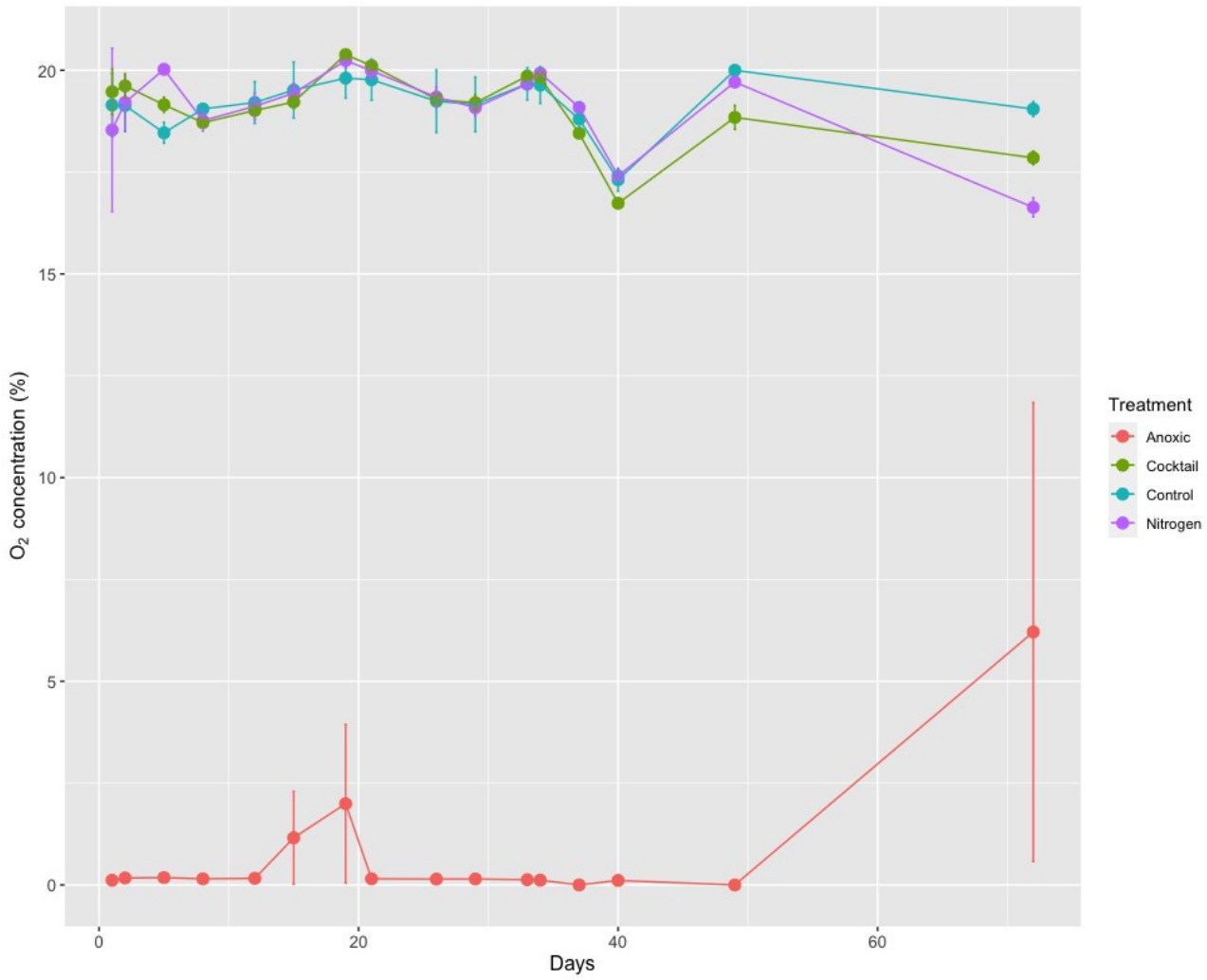

Figure S3. Oxygen concentrations in the microcosm headspaces.

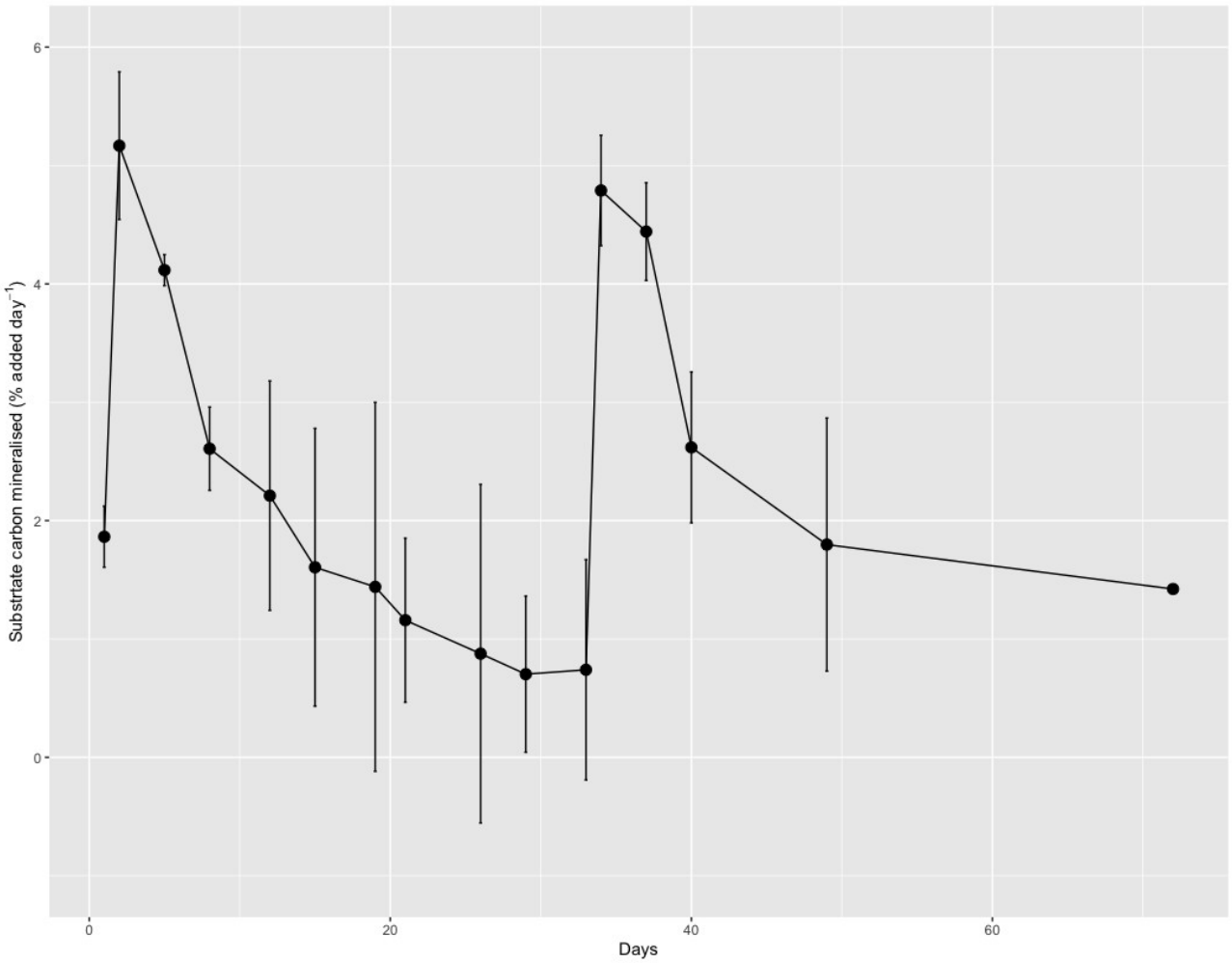

Figure S4. Mineralisation of organic C in substrate cocktail as a percentage of the C added. The two peaks occurred immediately after the addition of the cocktail, on the first and 34th days of the incubation. The bars indicate the standard error of the mean.

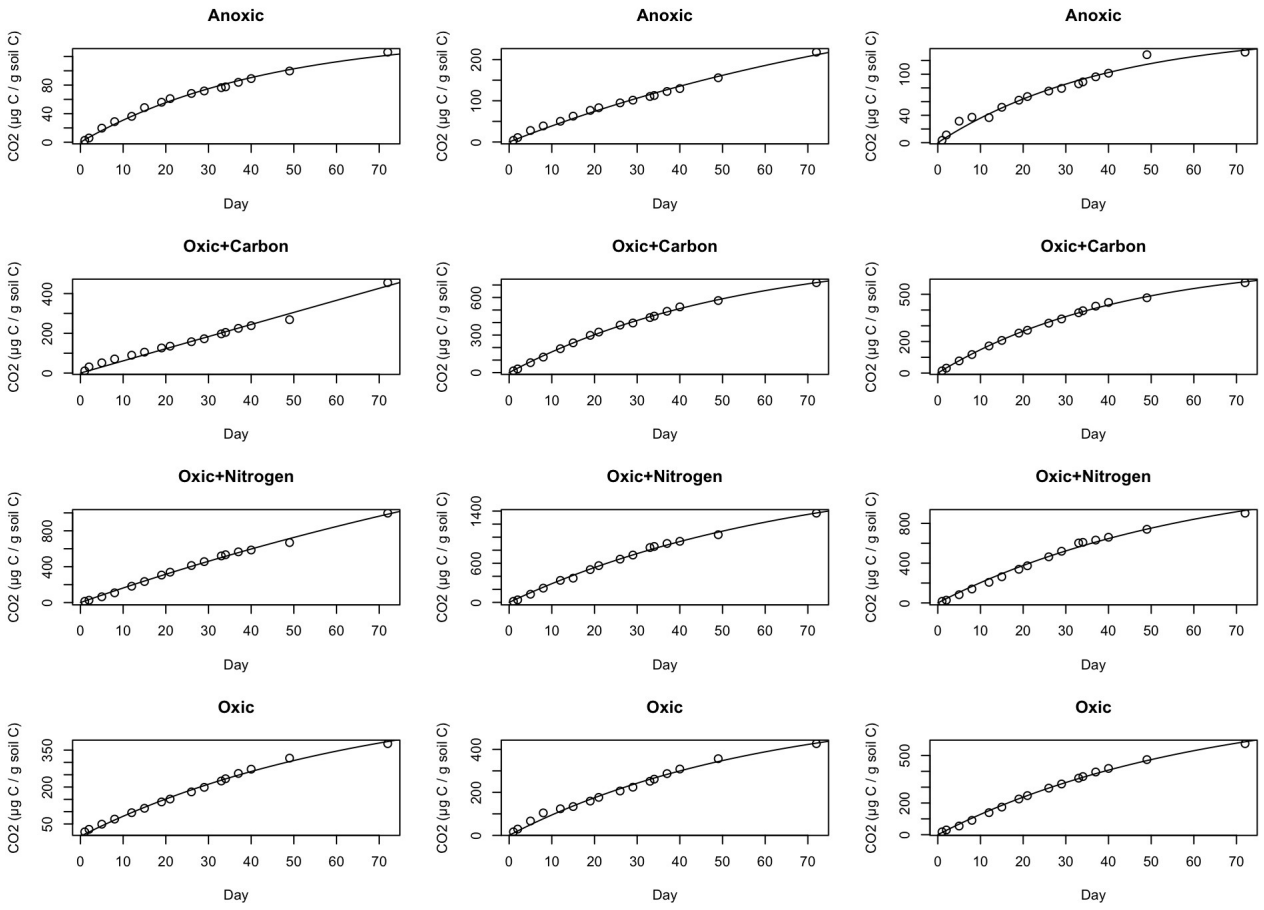

Figure S5. Soil organic C mineralisation in Podzol Bh horizons after imposition of treatments and fitted first-order decay models. Note the differences in scale along the y-axes.

Table S1 First order decay model parameters a (size of C pool mineralised) and α (decomposition rate). Different letters within the same column indicate significant differences (P<0.01)

Treatment	a	Standard error	α	Standard error
Anoxic	244[a]	88	0.019[a]	0.005
Oxic	677[ab]	83	0.016[a]	0.001
Oxic + nitrogen	2119[b]	458	0.012[a]	0.003
Oxic + carbon	843[ab]	132	0.021[a]	0.002

Reference

Doupoux, C., Merdy, P., Montes, C. R., Nunan, N., Melfi, A. J., Pereira, O. J. R., and Lucas, Y.: Modelling the genesis of equatorial podzols: age and implications for carbon fluxes, Biogeosciences, 14, 2429–2440, https://doi.org/10.5194/bg-14-2429-2017, 2017.