

Supplementary material

Spectral and soil quality index for monitoring environmental rehabilitation and soil carbon stock in an Amazonian sandstone mine

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Table S1. Geographic location of the studied areas

Area	Onset activities	Latitude	Longitude
NR	-	-6,09634	-50,2279
NR	-	-6,09677	-50,2274
NR	-	-6,0971	-50,2279
Ini	2014	-6,09711	-50,2286
Ini	2014	-6,09732	-50,229
Ini	2014	-6,09761	-50,2284
Int	2006	-6,09613	-50,2288
Int	2006	-6,09629	-50,2285
Int	2006	-6,09631	-50,2287
Adv	2004	-6,09821	-50,2303
Adv	2004	-6,09887	-50,2303
Adv	2004	-6,09832	-50,23
RefA	-	-6,09821	-50,2308
RefA	-	-6,09881	-50,2316
RefA	-	-6,09929	-50,229177
RefB	-	-6,09673	-50,226963
RefB	-	-6,09782	-50,227338
RefB	-	-6,09825	-50,227186

NR = nonrehabilitated; Ini = initial; Int = intermediate; Adv = advanced; RefA and Ref B = reference forest.

Table S2. Slope of the tangent to the curve at the point corresponding to the critical value of the indicator (Sl) was specific for each curve

Curve	SB	Zn	ACP	SOC	Mn	P	S
More is better	1.6210	4.8784	0.0023	0.1687	0.1113	1.8108	0.3006
Less is better	1.5227	5.0506	0.0027	0.1588	0.1443	2.0080	0.5030

SB = sum of bases, ACP = acid phosphatase, SOC = soil organic carbon.

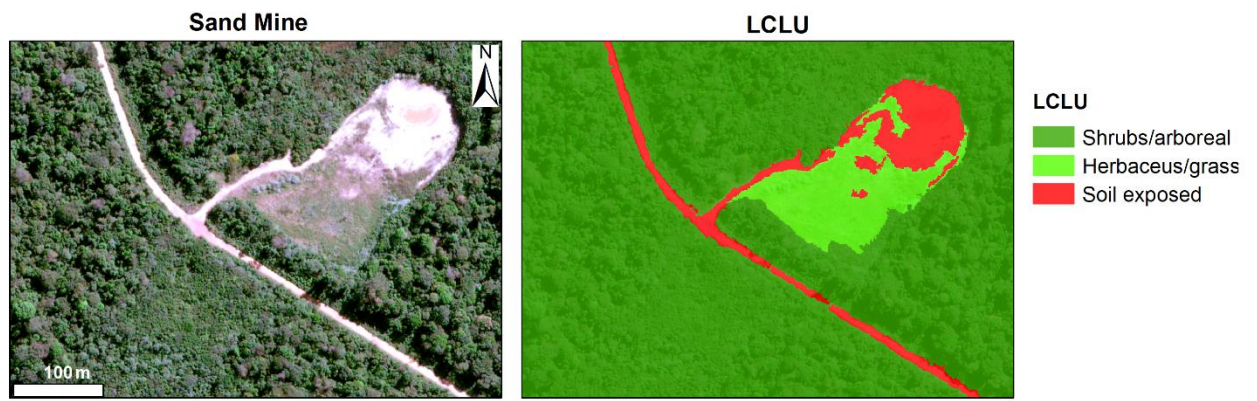


Figure S1. Digital maps of Land Cover and Land Use (LCLU)

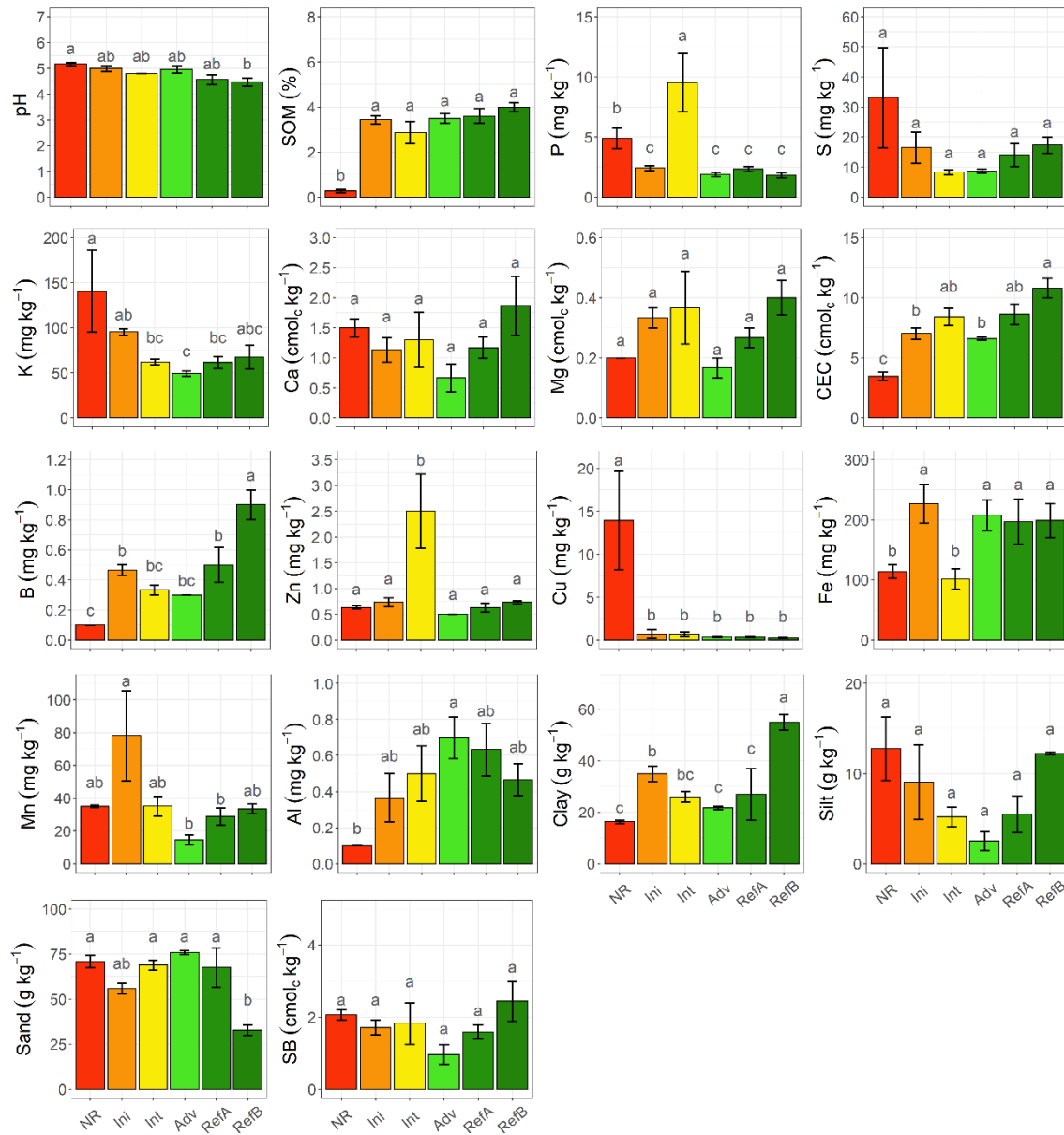


Figure S2. Chemical and physical soil attributes of chronosequences and reference forests. Different letters for each soil attribute indicate significant differences between means according to Tukey's test ($p \leq 0.05$). NR = nonrehabilitated; Ini = initial; Int = intermediate; Adv = advanced; RefA and RefC = reference forest. Some of the variables presented are already shown in Rodríguez-Rodríguez et al. [1].

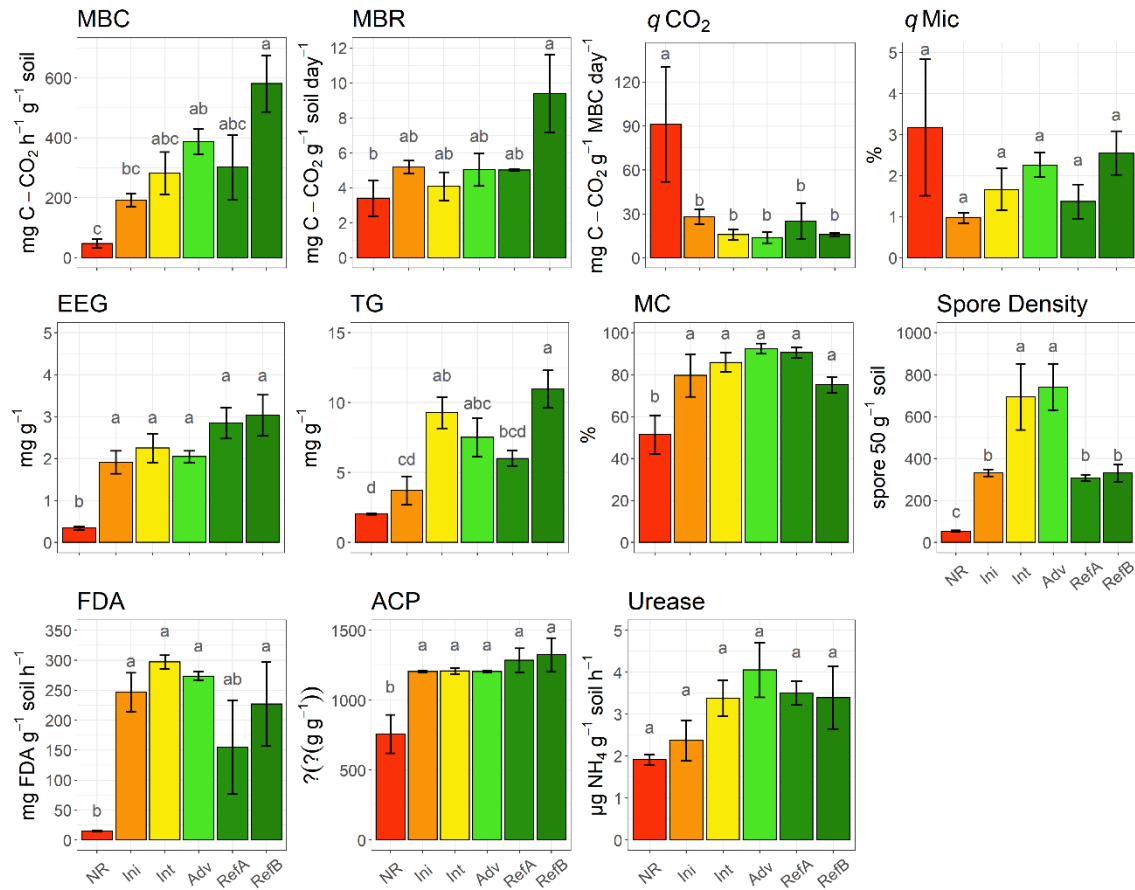


Figure S3. Biological and biochemical attributes of chronosequences and reference forests.

Different letters for each variable indicate significant differences between means according to a Tukey's test ($p \leq 0.05$). NR = nonrehabilitated; Ini = initial; Int = intermediate; Adv = advanced; RefA and RefC = reference forest; MBC = microbial biomass carbon; MBR = microbial basal respiration, qCO_2 = metabolic coefficient, $qMic$ = microbial coefficient, EEG = extractable glomaline, TG = total glomaline, MC = micorrizal colonization, FDA = fluorescein diacetate analysis; ACP = acid phosphatase.

Some of the variables presented are already shown in Rodríguez-Rodríguez et al. [1].

References

- [1] Rodríguez-Rodríguez, R.M.; Kemmelmeier, K.; Pedroso, D. de F.; Pinto, F.A.; dos Santos, J.V.; Gastauer, M.; Caldeira, C.F.; Ramos, S.J.; Siqueira, J.O.; Carneiro, M.A.C. Native arbuscular mycorrhizal fungi respond to rehabilitation in iron ore mining areas from the Eastern Brazilian Amazon. *Pedobiologia* **2021**, *89*, 150768. <https://doi.org/10.1016/j.pedobi.2021.150768>