Supporting information to:
Iron oxides control sorption and mobilisation of iodine in a tropical rainforest catchment

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Classification of soils in the Alberto Manuel Brenes Biological Reserve

We classified all sampled soils in the study area as Cambisols, detailed characteristics are compiled in Table S1 for soil profiles on the left hand side of the catchment (L1-L4) and in Table S2 for soil profiles on the right hand side of the catchment. At all sites the bedrock was not found by testing to 1.5 m. Coarser skeleton (> 2 mm) was rare (< 10 %) and the top 10 cm of all profiles were highly penetrated by fine roots. The soil texture was determined by Roland Prietz (Thünen Institute of Climate-Smart Agriculture, Braunschweig, Germany) using finger texturing. Finger texturing was shown to be an appropriate alternative to laboratory texture analysis methods (Vos et al., 2016). Carbon and nitrogen contents in solid samples were measured using an elemental analyzer (EuroEA 3000).

Table S1: Soil characteristics for profiles L1-L4 according to the WRB classification system.

Profile Soil type[1]	Horizon[2]	Depth [cm]	Texture	C [g kg^{-1}]	C/N [-]	pH (CaCl$_2$)	Grav. water content [%]	Munsell colour
L1 Colluvic Cambisol	Ah			112	10			10YR-2/2
		0-10	Silt loam			-	-	
	AhBw	> 10	Silt loam	58	16	-	-	10YR-3/4
L2 Haplic Cambisol	Ah	0-12		338	17			10YR-2/2
			Silt loam			4.1	18	
	AhBw	12-30	Silt loam	119	12	4.6	14	10YR-3/2
	Bw	30-70	Silt loam	30	7	4.9	13	10YR-3/4
	2Bw	> 70	Silt loam	16	7	4.4	11	10YR-3/4
L3 Colluvic Cambisol	Ah	0-7	Silt loam	192	14			10YR-2/1
						-	-	
	AhBw	7-26	Silt loam	117	12			10YR-2/2
	2Bw	> 26	Silty clay loam	23	6			10YR-4/3
						-	-	
L4 Colluvic Cambisol	Ah	0-10	Silt loam	187	12			10YR-2/1
						-	-	
	AhBw	10-35	Silt loam	60	9	-	-	10YR-2/2
	2Bw	> 35	Silt loam	42	7	-	-	10YR-3/4

1 Soil types according to WRB classification: Food and Agriculture Organization (FAO, 2014),

2 Soil horizons according to FAO (2006): Guidelines for Soil Description

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Table S2: Soil characteristics for profiles R1-R5 according to the WRB classification system.

Profile Soil type[1]	Horizon[2]	Depth [cm]	Texture	C [g kg^{-1}]	C/N [-]	pH (CaCl$_2$)	Grav. water content [%]	Munsell colour
R1								
Cambisol	Ah	0-8	Sandy loam	129	12	-	-	-
	Bw	> 8	Sandy loam	33	7	-	-	-
R2								
Haplic			Silt loam			4.7	14	
Cambisol	Ah	0-10		100	11			10YR-2/1
	AhBw	10-30	Silt loam	64	9	4.8	14	10YR-2/2
	Bw	> 30	Silt loam	25	6	4.4	13	10YR-3/4
R3								
Cambisol	Ah	0-13	Silt loam	112	12	-	-	10YR-2/2
	Bw	13-32	Silt loam	47	8	-	-	10YR-3/4
	2Bw	> 32	Silty clay loam	27	6	-	-	10YR-3/4
R4								
Dystric						4.3	-	
Cambisol	Ah	0-15	Silt loam	132	12			10YR-2/2
	Bw	> 15	Silt loam	29	7	4.4	-	10YR-3/4
R5								
Cambisol	Ah	0-8	Silt loam	109	11	-	-	10YR-2/2
	Bw	> 8	Silt loam	42	7	-	-	10YR-3/4

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1 Soil types according to WRB classification: Food and Agriculture Organization (FAO, 2014),

2 Soil horizons according to FAO (2006): Guidelines for Soil Description

References

Vos, C., Don, A., Prietz, R., Heidkamp, A., and Freibauer, A.: Field-based soil-texture estimates could replace laboratory
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