

Table S1. Site descriptions and woody biomass residence time data for 177 tropical forest plots.

Site	Continent	Country	Cluster	Latitude	Longitude	Plot size (ha)	Min DBH (cm)	Above-ground biomass (Mg DM)	Above-ground wood production (Mg DM year ⁻¹)	Method	Residence Time (years)	Reference
Asenanyo - 02	Africa	Ghana	ASN	6.56	-2.22	0.6	10	307	3.32	Biomass/productivity	92.4	Simon Lewis, Kofi Affum-Boe unpublished
Asenanyo - 04	Africa	Ghana	ASN	6.48	-2.17	0.88	10	254	2.74	Biomass/productivity	113.5	Simon Lewis, Kofi Affum-Boe, unpublished
Banco	Africa	Ivory Coast	BAN	5.33	-4.17	0.3	9.5	510	5.08	Biomass/productivity	100.5	De Angelis 1981, unpublished
Campo Ma'an (Caesalpeasa)	Africa	Cameroon	CAM	2.13	9.82	1	10	250	2.85	Biomass/productivity	87.7	Keeling and Phillips 2007
Campo Ma'an (Casealp)	Africa	Cameroon	CAM	2.13	9.82	1	10	131	2.29	Biomass/productivity	57.2	Djomo et al. 2011
Campo Ma'an (Mixed Evergreen)	Africa	Cameroon	CAM	2.13	9.82	1	10	172	1.78	Biomass/productivity	96.7	Djomo et al. 2011
Cape Three Points 9	Africa	Ghana	CAP	4.85	-2.10	1	10	406	7.84	Biomass/productivity	51.82	Simon Lewis, Kofi Affum-Boe, unpublished
Cape Three Points 10	Africa	Ghana	CAP	4.80	-2.05	1	10	187	5.27	Biomass/productivity	35.48	Simon Lewis, Kofi Affum-Boe, unpublished
Dja National Forest - G1 (DJK-01), Monodominant forest	Africa	Cameroon	DJK	3.33	12.72	1	10	561	8.11	Biomass/productivity	69.1	Peh 2009
Dja National Forest - G2 (DJK-02), Mixed forest	Africa	Cameroon	DJK	3.33	12.72	1	10	555	5.99	Biomass/productivity	92.6	Peh 2009
Dja National Forest - G3 (DJK-03), Monodominant forest	Africa	Cameroon	DJK	3.36	12.72	1	10	543	4.26	Biomass/productivity	127.5	Peh 2009
Dja National Forest - M1 (DJK-04), Mixed forest	Africa	Cameroon	DJK	3.36	12.73	1	10	298	4.93	Biomass/productivity	60.5	Peh 2009
Dja National Forest - M2 (DJK-05), Monodominant forest	Africa	Cameroon	DJK	3.32	12.76	1	10	334	4.02	Biomass/productivity	83.0	Peh 2009
Dja National Forest - M3 (DJK-06), Mixed forest	Africa	Cameroon	DJK	3.33	12.76	1	10	247	4.51	Biomass/productivity	54.8	Peh 2009

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Ituri, Eodoro, Mixed forest	Africa	DRC	ITU	1.6	28.5	10	10	375	6.58	Biomass/productivity	57.0	Chave et al. 2008a
Ituri, Lenda, Monodominant forest	Africa	DRC	ITU	1.3	28.6	10	10	525	5.73	Biomass/productivity	91.6	Chave et al. 2008a
Yapo (Plateau)	Africa	Ivory Coast	YAP	5.38	-4.03	0.2	9.5	450	5.96	Biomass/productivity	75.5	Clark et al. 2003
Budongo	Africa	Uganda	BUD	1.43	31.3	1.86	20	N/A	N/A	1/stem turnover	52.4	Sheil et al. 2000, cited in Lewis et al. 2004
Kade Bekwai	Africa	Ghana	KDE	6.19	-0.55	1	10	N/A	N/A	1/stem turnover	47.9	Swaine et al. 1987, cited in Lewis et al. 2004
Kade Nzima	Africa	Ghana	KDE	6.19	-0.55	1	10	N/A	N/A	1/stem turnover	36.1	Swaine et al. 1987, cited in Lewis et al. 2004
Udagaji (2 plots, UDJ-01,02)	Africa	Tanzania	UDA	-8.59	35.87	0.25	10	N/A	N/A	1/stem turnover	45.0	Phillips et al. 2010
Agua Pudre 01 (AGP-01)	Americas	Colombia	AGP	-3.72	-70.31	1	10	281	6.80	Biomass/productivity	41.3	Jimenez et al. 2009; Aragao et al. 2009
Agua Pudre 02 (AGP-02)	Americas	Colombia	AGP	-3.72	-70.31	1	10	276	7.60	Biomass/productivity	36.3	Jimenez et al. 2009; Aragao et al. 2009
Allpahuayo A, poorly drained (ALP-11)	Americas	Peru	ALP	-3.95	-73.43	0.44	10	270	5.18	Biomass/productivity	52.0	Malhi et al. 2004, Keeling and Phillips 2007
Allpahuayo A, well drained (ALP-12)	Americas	Peru	ALP	-3.95	-73.43	0.4	10	266	6.48	Biomass/productivity	41.1	Malhi et al. 2004, Keeling and Phillips 2007
Allpahuayo B, clayed (ALP-22)	Americas	Peru	ALP	-3.95	-73.43	0.44	10	241	6.22	Biomass/productivity	38.8	Malhi et al. 2004, Keeling and Phillips 2007
Allpahuayo B, sandy (ALP-21)	Americas	Peru	ALP	-3.95	-73.43	0.48	10	288	7.28	Biomass/productivity	39.5	Malhi et al. 2004, Keeling and Phillips 2007
Añangu, A3 (ANN-03)	Americas	Ecuador	ANN	-0.53	-76.43	1	10	322	7.38	Biomass/productivity	43.6	Productivity from Malhi et al. 2004; Malhi et al. 2006
BCI 50 ha	Americas	Panama	BCI	9.17	-79.85	50	10	292	4.72	Biomass/productivity	61.9	Chave et al. 2008
BDFFP; 1101 Gavião (BDF-03)	Americas	Brazil	BDF	-2.4	-59.9	1	10	339	4.40	Biomass/productivity	77.0	Malhi et al. 2004, Keeling and Phillips 2007
BDFFP; 1102 Gavião (BDF-04)	Americas	Brazil	BDF	-2.4	-59.9	1	10	251	3.80	Biomass/productivity	66.0	Malhi et al. 2004, Keeling and Phillips 2007

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BDFFP, 1103 Gavião (BDF-05)	Americas	Brazil	BDF	-2.4	-59.9	1	10	304	4.48	Biomass/productivity	67.9	Malhi et al. 2004, Keeling and Phillips 2007
BDFFP, 1109 Gavião (BDF-08)	Americas	Brazil	BDF	-2.4	-59.9	1	10	319	3.36	Biomass/productivity	94.9	Malhi et al. 2004, Keeling and Phillips 2007
BDFFP, 1201 Gavião (BDF-06)	Americas	Brazil	BDF	-2.4	-59.9	3	10	295	4.56	Biomass/productivity	64.7	Malhi et al. 2004, Keeling and Phillips 2007
BDFFP, 1301 Florestal 2=plots 1301.4,5,6 (BDF-11)	Americas	Brazil	BDF	-2.4	-59.9	3	10	355	3.72	Biomass/productivity	95.4	Malhi et al. 2004, Keeling and Phillips 2007
BDFFP, 1301 Florestal 3=plots 1301.7,8 (BDF-12)	Americas	Brazil	BDF	-2.4	-59.9	2	10	349	3.74	Biomass/productivity	93.3	Malhi et al. 2004, Keeling and Phillips 2007
BDFFP, 2303 Faz. Dimona 4-6 (BDF-01)	Americas	Brazil	BDF	-2.4	-60	2	10	379	4.80	Biomass/productivity	78.9	Malhi et al. 2004, Keeling and Phillips 2007
BDFFP, 3304 Porto Alegre (BDF-14)	Americas	Brazil	BDF	-2.4	-60	2	10	356	4.52	Biomass/productivity	78.8	Malhi et al. 2004, Keeling and Phillips 2007
BDFFP, 3402 Cabo Frio (BDF-13)	Americas	Brazil	BDF	-2.4	-60	9	10	342	4.18	Biomass/productivity	81.9	Malhi et al. 2004, Keeling and Phillips 2007
BDFFP, Florestal 1=1301.1 (BDF-10)	Americas	Brazil	BDF	-2.4	-59.9	1	10	327	4.66	Biomass/productivity	70.2	Malhi et al. 2004, Keeling and Phillips 2007
Bionte 1 (BNT-01)	Americas	Brazil	BNT	-2.63	-60.17	1	10	352	5.12	Biomass/productivity	68.7	Malhi et al. 2004, Keeling and Phillips 2007
Bionte 2 (BNT-02)	Americas	Brazil	BNT	-2.63	-60.17	1	10	369	5.28	Biomass/productivity	69.9	Malhi et al. 2004, Keeling and Phillips 2007
Bionte 4 (BNT-04)	Americas	Brazil	BNT	-2.63	-60.17	1	10	328	5.10	Biomass/productivity	64.3	Malhi et al. 2004, Keeling and Phillips 2007
Bionte T4 B1 SB3 (BNT-06)	Americas	Brazil	BNT	-2.63	-60.17	1	10	372	4.92	Biomass/productivity	75.7	Malhi et al. 2004, Keeling and Phillips 2007
Bionte T4 B2 SB1 (BNT-05)	Americas	Brazil	BNT	-2.63	-60.17	1	10	316	5.26	Biomass/productivity	60.1	Malhi et al. 2004, Keeling and Phillips 2007

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Bionte T4 B4 SB4 (BNT-07)	Americas	Brazil	BNT	-2.63	-60.17	1	10	355	5.36	Biomass/productivity	66.3	Malhi et al. 2004, Keeling and Phillips 2007
Bogi 1 (BOG-01)	Americas	Ecuador	BOG	-0.7	-76.48	1	10	289	10.50	Biomass/productivity	27.6	Malhi et al. 2004, Keeling and Phillips 2007
Bogi 2 (BOG-02)	Americas	Ecuador	BOG	-0.7	-76.47	1	10	222	7.86	Biomass/productivity	28.2	Malhi et al. 2004, Keeling and Phillips 2007
Cano Rosalba 1 (CRS-01)	Americas	Venezuela	CRS	9.25	-72	1	10	187	5.80	Biomass/productivity	32.3	Malhi et al. 2004, Keeling and Phillips 2007
Cano Rosalba 2 (CRS-02)	Americas	Venezuela	CRS	9.25	-72	1	10	305	8.28	Biomass/productivity	36.8	Malhi et al. 2004, Keeling and Phillips 2007
Caxiuanã 2 (CAX-02)	Americas	Brazil	CAX	-1.7	-51.53	1	10	365	4.36	Biomass/productivity	83.6	Malhi et al. 2004, Keeling and Phillips 2007
Caxiuanã ESECAFLOR Control (CAX-03)	Americas	Brazil	CAX	-1.72	-51.45	1	10	383	4.3	Biomass/productivity	90.0	Malhi et al. 2004, Keeling and Phillips 2007, da Costa et al., <i>in press</i>
Caxiuanã Tower Plot (CAX-06)	Americas	Brazil	CAX	-1.7	-51.53	1	10	330	4.36	Biomass/productivity	75.7	Doughty et al., <i>in press</i>
Caxiuanã 1 (CAX-01)	Americas	Brazil	CAX	-1.7	-51.53	1	10	379	4.90	Biomass/productivity	77.3	Malhi et al. 2004, Keeling and Phillips 2007
Cerro Pelao 1 (CRP-01)	Americas	Bolivia	CRP	-14.54	-61.48	1	10	214	5.60	Biomass/productivity	38.2	Malhi et al. 2004, Keeling and Phillips 2007
Cerro Pelao 2 (CRP-02)	Americas	Bolivia	CRP	-14.53	-61.48	1	10	234	7.66	Biomass/productivity	30.5	Malhi et al. 2004, Keeling and Phillips 2007
Chore 1 (CHO-01)	Americas	Bolivia	CHO	-14.35	-61.16	1	10	125	5.28	Biomass/productivity	23.6	Malhi et al. 2004, Keeling and Phillips 2007
Cuzco Amazonico, CUZAMIE (CUZ-01)	Americas	Peru	CUZ	-12.5	-68.95	1	10	283	6.60	Biomass/productivity	42.9	Malhi et al. 2004, Keeling and Phillips 2007
Cuzco Amazonico, CUZAMIU (CUZ-02)	Americas	Peru	CUZ	-12.5	-68.95	1	10	249	7.78	Biomass/productivity	32.0	Malhi et al. 2004, Keeling and Phillips 2007

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Site	Continent	Country	Cluster	Latitude	Longitude	Plot size (ha)	Min DBH (cm)	Above-ground biomass (Mg DM)	Above-ground wood production (Mg DM year ⁻¹)	Method	Residence Time (years)	Reference
Cuzco Amazonico, CUZAM2E (CUZ-03)	Americas	Peru	CUZ	-12.49	-69.11	1	10	250	7.68	Biomass/productivity	32.6	Malhi et al. 2004, Keeling and Phillips 2007
Cuzco Amazonico, CUZAM2U (CUZ-04)	Americas	Peru	CUZ	-12.49	-69.11	1	10	289	8.06	Biomass/productivity	36.0	Malhi et al. 2004, Keeling and Phillips 2007
El Dorado, km 91, plotG1 (ELD-01)	Americas	Venezuela	ELD	6.5	-61.5	0.25	10	398	6.10	Biomass/productivity	50.0	Malhi et al. 2004, Keeling and Phillips 2007
El Dorado, km 91, plotG2 (ELD-02)	Americas	Venezuela	ELD	6.5	-61.5	0.25	10	477	5.00	Biomass/productivity	73.3	Malhi et al. 2004, Keeling and Phillips 2007
El Dorado, km 98, plot G4 (ELD-04)	Americas	Venezuela	ELD	6.5	-61.5	0.25	10	297	6.92	Biomass/productivity	34.3	Malhi et al. 2004, Keeling and Phillips 2007
El Dorado, km 98, plotG3 (ELD-03)	Americas	Venezuela	ELD	6.5	-61.5	0.25	10	258	6.54	Biomass/productivity	40.8	Malhi et al. 2004, Keeling and Phillips 2007
El Zafire Varillal (ZAR-01)	Americas	Colombia	ZAR	-4.09	-69.91	1	10	322	5.20	Biomass/productivity	61.9	Jimenez et al. 2009; Aragao et al. 2009
Fortuna, Control Plot	Americas	Panama	FOR	8.75	-82.85	0.64	10	346	4.56	Biomass/productivity	75.8	Adamek et al. 2009; only measured a subset of 40 trees
Huanchaca Dos, plot 1 (HCC-21)	Americas	Bolivia	HCC	-14.56	-60.75	1	10	249	8.32	Biomass/productivity	30.0	Malhi et al. 2004, Keeling and Phillips 2007
Huanchaca Dos, plot 2 (HCC-22)	Americas	Bolivia	HCC	-14.56	-60.74	1	10	271	6.06	Biomass/productivity	44.7	Malhi et al. 2004, Keeling and Phillips 2007
Jacaranda 1 (JAC-01)	Americas	Brazil	JAC	-2.63	-60.17	5	10	301	4.42	Biomass/productivity	68.0	Malhi et al. 2004, Keeling and Phillips 2007
Jacaranda 2 (JAC-02)	Americas	Brazil	JAC	-2.63	-60.17	5	10	291	4.04	Biomass/productivity	72.0	Malhi et al. 2004, Keeling and Phillips 2007
Jari 1 (JRI-01)	Americas	Brazil	JRI	-1	-52.05	1	10	387	4.96	Biomass/productivity	78.0	Malhi et al. 2004, Keeling and Phillips 2007
Jatun Sacha 2 (JAS-02)	Americas	Ecuador	JAS	-1.07	-77.6	1	10	248	7.18	Biomass/productivity	34.5	Malhi et al. 2004, Keeling and Phillips 2007

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Site	Continent	Country	Cluster	Latitude	Longitude	Plot size (ha)	Min DBH (cm)	Above-ground biomass (Mg DM)	Above-ground wood production (Mg DM year ⁻¹)	Method	Residence Time (years)	Reference
Jatun Sacha 3 (JAS-03)	Americas	Ecuador	JAS	-1.07	-77.67	1	10	263	8.42	Biomass/productivity	31.2	Malhi et al. 2004, Keeling and Phillips 2007
Jatun Sacha 4 (JAS-04)	Americas	Ecuador	JAS	-1.07	-77.67	1	10	319	8.70	Biomass/productivity	36.6	Malhi et al. 2004, Keeling and Phillips 2007
Jatun Sacha 5 (JAS-05)	Americas	Ecuador	JAS	-1.07	-77.67	0.92	10	287	8.46	Biomass/productivity	33.9	Malhi et al. 2004, Keeling and Phillips 2007
Jenaro High Restinga Plot 3 (JEN-03)	Americas	Peru	JEN	-4.92	-73.73	1	10	237	10.18	Biomass/productivity	27.5	Malhi et al. 2004, Keeling and Phillips 2007
Jenaro Low Restinga, plot 6 (JEN-06)	Americas	Peru	JEN	-4.92	-73.73	1	10	245	10.86	Biomass/productivity	35.5	Malhi et al. 2004, Keeling and Phillips 2007
Jenaro Tahuampa plot 9 (JEN-09)	Americas	Peru	JEN	-4.92	-73.73	1	10	288	10.18	Biomass/productivity	29.8	Malhi et al. 2004, Keeling and Phillips 2007
Kenia - Plot A	Americas	Bolivia	KEN	-16.0	-62.7	1	10	127	5.4	Biomass/productivity	23.4	Araujo et al., <i>in press</i>
Kenia - Plot B	Americas	Bolivia	KEN	-16.0	-62.7	1	10	130	4.2	Biomass/productivity	31.1	Araujo et al., <i>in press</i>
La Planada	Americas	Colombia	LAP	1.16	-77.99	25	10	160	4.43	Biomass/productivity	36.2	Chave et al. 2008
Las Londras, plot 1 (LSL-01)	Americas	Bolivia	LSL	-14.4	-61.13	1	10	173	4.90	Biomass/productivity	35.4	Malhi et al. 2004, Keeling and Phillips 2007
Las Londras, plot 2 (LSL-02)	Americas	Bolivia	LSL	-14.4	-61.13	1	10	204	6.86	Biomass/productivity	29.7	Malhi et al. 2004, Keeling and Phillips 2007
Linhares	Americas	Brazil	LIN	-19.2	-40.03	2.5	10	335	5.35	Biomass/productivity	62.5	Rolim et al. 2005
Los Fierros Bosque I (LFB-01)	Americas	Bolivia	LFB	-14.61	-60.87	1	10	240	4.96	Biomass/productivity	48.4	Malhi et al. 2004, Keeling and Phillips 2007
Los Fierros Bosque II (LFB-02)	Americas	Bolivia	LFB	-14.6	-60.85	1	10	285	5.36	Biomass/productivity	53.2	Malhi et al. 2004, Keeling and Phillips 2007
Manu, M1 (MNU-01)	Americas	Peru	MNU	-11.88	-71.35	0.97	10	299	6.02	Biomass/productivity	49.6	Malhi et al. 2004, Keeling and Phillips 2007
Manu, M3 (MNU-03)	Americas	Peru	MNU	-11.88	-71.35	2	10	267	7.08	Biomass/productivity	37.7	Malhi et al. 2004, Keeling and Phillips 2007
Manu, M4 (MNU-04)	Americas	Peru	MNU	-11.88	-71.35	2	10	288	8.24	Biomass/productivity	34.9	Malhi et al. 2004, Keeling and Phillips 2007

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Marabá, plot 1 (MAR-01)	Americas	Brazil	MAR	-5.73	-49.05	2	10	214	6.02	Biomass/productivity	35.5	Malhi et al. 2004, Keeling and Phillips 2007
Marabá, plot 2 (MAR-02)	Americas	Brazil	MAR	-5.7	-49.03	2	10	299	5.68	Biomass/productivity	52.6	Malhi et al. 2004, Keeling and Phillips 2007
Marabá, plot 3 (MAR-03)	Americas	Brazil	MAR	-5.7	-49	2	10	327	5.26	Biomass/productivity	62.1	Malhi et al. 2004, Keeling and Phillips 2007
Mishana (MSH-01)	Americas	Peru	MSH	-3.78	-73.5	1	10	296	5.22	Biomass/productivity	56.6	Malhi et al. 2004, Keeling and Phillips 2007
Mocambo (MBO-01)	Americas	Brazil	MBO	-1.45	-48.45	2	10	286	5.06	Biomass/productivity	56.5	Malhi et al. 2004, Keeling and Phillips 2007
Nouragues GP (NOR-02)	Americas	French Guiana	NOR	4.08	-52.67	10	10	356	8.66	Biomass/productivity	41.1	Chave et al. 2008a
Nouragues PP (NOR-01)	Americas	French Guiana	NOR	4.08	-52.67	12	10	384	8.04	Biomass/productivity	47.8	Chave et al. 2008a
Pakiza, plot1 (PAK-01)	Americas	Peru	PAK	-11.93	-71.25	1	10	263	7.58	Biomass/productivity	34.7	Malhi et al. 2004, Keeling and Phillips 2007
Paracou - Plot 1	Americas	French Guiana	PAR	5.25	-52.83	6	10	392	4.51	Biomass/productivity	86.8	Rutishauser et al. 2011
Paracou - Plot 11	Americas	French Guiana	PAR	5.25	-52.83	6	10	417	4.27	Biomass/productivity	97.7	Rutishauser et al. 2011
Paracou - Plot 13	Americas	French Guiana	PAR	5.25	-52.83	6	10	415	4.31	Biomass/productivity	96.2	Rutishauser et al. 2011
Paracou - Plot 14	Americas	French Guiana	PAR	5.25	-52.83	6	10	427	4.14	Biomass/productivity	103.0	Rutishauser et al. 2011
Paracou - Plot 15	Americas	French Guiana	PAR	5.25	-52.83	6	10	415	4.15	Biomass/productivity	99.9	Rutishauser et al. 2011
Paracou - Plot 6	Americas	French Guiana	PAR	5.25	-52.83	6	10	435	4.51	Biomass/productivity	96.5	Rutishauser et al. 2011
Pena Roja - lowland	Americas	Colombia	PEN	-0.65	-72.07	1.8	10	417	10.10	Biomass/productivity	41.3	Vega 2011
Pena Roja - upland	Americas	Colombia	PEN	-0.65	-72.07	1.8	10	618	7.29	Biomass/productivity	84.8	Vega 2011
Piste de Saint Helie, Transect 1	Americas	French Guiana	PSH	5.25	-53	0.78	5	324	7.04	Biomass/productivity	46.0	Chave et al. 2001
Piste de Saint Helie, Transect 2	Americas	French Guiana	PSH	5.25	-53	1	5	342	6.15	Biomass/productivity	55.5	Chave et al. 2001
Porce	Americas	Colombia	PRC	6.75	-75.1	3.3	1	258	11.30	Biomass/productivity	22.8	Sierra et al. 2007
Rio Grande, plotDA1 (RIO-01)	Americas	Venezuela	RIO	8	-61.75	0.25	10	N/A	5.80	Biomass/productivity	56.7	Malhi et al. 2004

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Rio Grande, plotDA2, (RIO-02)	Americas	Venezuela	RIO	8	-61.75	0.25	10	N/A	5.56	Biomass/productivity	70.0	Malhi et al. 2004
San Carlos de Rio Negro, SCI, Uhl (SCR-01)	Americas	Venezuela	SCR	1.93	-67.05	0.25	10	296	4.66	Biomass/productivity	63.6	Malhi et al. 2004
San Carlos de Rio Negro, SC3, MAB site (SCR-03)	Americas	Venezuela	SCR	1.75	-67	0.25	10	253	4.17	Biomass/productivity	60.6	Malhi et al. 2004
San Pedro	Americas	Peru	SPE	-13.05	-71.55	1	10	206	3.27	Biomass/productivity	62.9	Girardin et al. 2010
Sucusari A (SUC-01)	Americas	Peru	SUC	-3.23	-72.9	1	10	279	6.24	Biomass/productivity	44.6	Malhi et al. 2004
Sucusari B (SUC-02)	Americas	Peru	SUC	-3.23	-72.9	1	10	287	6.78	Biomass/productivity	42.4	Malhi et al. 2004
Tambopata plot four (TAM-06)	Americas	Peru	TAM	-12.83	-69.3	0.96	10	282	7.10	Biomass/productivity	39.7	Malhi et al. 2004
Tambopata plot one (TAM-02)	Americas	Peru	TAM	-12.83	-69.28	1	10	260	5.20	Biomass/productivity	50.0	Malhi et al. 2004
Tambopata plot six (TAM-07)	Americas	Peru	TAM	-12.83	-69.27	1	10	257	6.16	Biomass/productivity	41.8	Malhi et al. 2004
Tambopata plot three (TAM-05)	Americas	Peru	TAM	-12.83	-69.28	1	10	266	5.40	Biomass/productivity	49.3	Malhi et al. 2004
Tambopata plot two swamp edge (TAM-04)	Americas	Peru	TAM	-12.83	-69.28	0.42	10	289	7.54	Biomass/productivity	38.3	Malhi et al. 2004
Tambopata plot zero (TAM-01)	Americas	Peru	TAM	-12.85	-69.28	1	10	260	6.98	Biomass/productivity	37.3	Malhi et al. 2004
Tanguro	Americas	Brazil	TAN	-13.04	-52.23	1	10	150	5.26	Biomass/productivity	28.6	Rocha et al., <i>in press</i>
Tapajos Seca Floresta Control	Americas	Brazil	TAP	-2.9	-54.95	1	10	290	6.24	Biomass/productivity	46.5	Brando et al. 2008
Tapajos, RP014, 1-4 (TAP-01)	Americas	Brazil	TAP	-2.75	-55	1	10	296	5.16	Biomass/productivity	57.4	Malhi et al. 2004
Tapajos, RP014, 5-8 (TAP-02)	Americas	Brazil	TAP	-2.75	-55	1	10	374	5.46	Biomass/productivity	68.5	Malhi et al. 2004
Tapajos, RP014, 9-12 (TAP-03)	Americas	Brazil	TAP	-2.75	-55	1	10	377	5.00	Biomass/productivity	75.5	Malhi et al. 2004
Tiputini 2 (TIP-02)	Americas	Ecuador	TIP	-0.63	-76.14	0.8	10	261	6.84	Biomass/productivity	38.1	Malhi et al. 2004
Tiputini 3 (TIP-03)	Americas	Ecuador	TIP	-0.64	-76.15	1	10	255	5.26	Biomass/productivity	48.5	Malhi et al. 2004
Tono	Americas	Peru	TON	-12.95	-71.53	1	10	159	2.70	Biomass/productivity	58.9	Girardin et al. 2010
Trocha Union 3	Americas	Peru	TRU	-13.1	-71.58	1	10	94	2.01	Biomass/productivity	46.8	Girardin et al. 2010
Trocha Union 4	Americas	Peru	TRU	-13.1	-71.58	1	10	132	3.17	Biomass/productivity	41.6	Girardin et al. 2010
Trocha Union 7	Americas	Peru	TRU	-13.07	-71.55	1	10	77	1.58	Biomass/productivity	48.7	Girardin et al. 2010
Trocha Union 8	Americas	Peru	TRU	-13.07	-71.55	1	10	111	1.58	Biomass/productivity	70.2	Girardin et al. 2010
Wayqecha	Americas	Peru	WAY	-13.18	-71.58	1	10	130	2.42	Biomass/productivity	53.8	Girardin et al. 2010

Table S1. (Continued)

Site	Continent	Country	Cluster	Latitude	Longitude	Plot size (ha)	Min DBH (cm)	Above-ground biomass (Mg DM)	Above-ground wood production (Mg DM year ⁻¹)	Method	Residence Time (years)	Reference
Yanamono A (YAN-01)	Americas	Peru	YAN	-3.43	-72.85	1	10	299	7.82	Biomass/productivity	38.3	Malhi et al. 2004
Yasuni	Americas	Ecuador	YAS	-0.69	-76.4	24	10	263	6.59	Biomass/productivity	39.9	Chave et al. 2008
BEE (2 plots, BEE-01,02)	Americas	Bolivia	BEE	-16.53	-64.58	1	10	N/A	N/A	1/stem turnover	39.2	Phillips et al. 2010
Dois Irmaos (2 plots, DOI-01,02)	Americas	Brazil	DOI	-10.57	-68.31	1	10	N/A	N/A	1/stem turnover	30.7	Phillips et al. 2010
Lorena (2 plots, LOR-01,LOR-02)	Americas	Colombia	LOR	-3.06	-70	1	10	N/A	N/A	1/stem turnover	33.1	Phillips et al. 2010
Maraca Island FWP	Americas	Brazil	MRC	3.25	-61.37	0.75	10	321	2.73	Biomass/productivity	117.6	Nascimento et al. 2007
Maraca Island PPF	Americas	Brazil	MRC	3.25	-61.37	0.75	10	374	3.23	Biomass/productivity	115.8	Nascimento et al. 2007
Maraca Island PRF	Americas	Brazil	MRC	3.25	-61.37	0.75	10	360	3.39	Biomass/productivity	106.1	Nascimento et al. 2007
Porongaba (2 plots, POR-01,02)	Americas	Brazil	POR	-10.82	-68.78	1	10	N/A	N/A	1/stem turnover	36.2	Phillips et al. 2010
Sacta (2 plots, SCT-01,02)	Americas	Bolivia	SAC	-17	-64.77	1	10	N/A	N/A	1/stem turnover	36.2	Phillips et al. 2010
Huai Kha Khaeng	Asia	Thailand	HKK	16.82	101.29	50	10	203	3.51	Biomass/productivity	57.8	Chave et al. 2008
Jiangfengling, Hainan Island	Asia	China	JIA	18.62	108.75	1.3	5	229	4.80	Biomass/productivity	47.7	Li et al. 1998, cited in Tan et al. 2010
Kampong Thom	Asia	Cambodia	KAM	12.7	104.9	23.04	10	256	5.35	Biomass/productivity	47.9	Top et al. 2004
Lambir	Asia	Malaysia	LAM	4.19	114.02	52	10	479	7.05	Biomass/productivity	68.0	Chave et al. 2008
Menglung Nature Reserve, Xishuangbanna	Asia	China	MEG	21.92	101.25	1	2	295	8.48	Biomass/productivity	34.8	Tan et al. 2010
Mount Kinabalu, Sedimentary Rock	Asia	Indonesia	KIN	6.5	116.5	1	4.8	437	8.14	Biomass/productivity	53.7	Kitayama and Aiba 2002, Takyu et al. 2003
Mount Kinabalu, Ultrabasic Rock	Asia	Indonesia	KIN	6.5	116.5	1	4.8	554	16.51	Biomass/productivity	33.6	Kitayama and Aiba 2002, Takyu et al. 2003
Mount Kinabalu, Tertiary Lower Slope	Asia	Indonesia	KIN	6.08	116.55	1	4.8	309	2.71	Biomass/productivity	113.9	Kitayama and Aiba 2002, Takyu et al. 2003
Mount Kinabalu, Lower Slope	Asia	Indonesia	KIN	6.08	116.55	0.2	4.8	246	1.90	Biomass/productivity	129.0	Kitayama and Aiba 2002, Takyu et al. 2003
Mount Kinabalu, Lower Montane	Asia	Indonesia	KIN	6.08	116.55	0.5	4.8	294	4.26	Biomass/productivity	69.0	Kitayama and Aiba 2002, Takyu et al. 2003

Table S1. (Continued)

Site	Continent	Country	Cluster	Latitude	Longitude	Plot size (ha)	Min DBH (cm)	Above-ground biomass (Mg DM)	Above-ground wood production (Mg DM year ⁻¹)	Method	Residence Time (years)	Reference
Mount Kinabalu, Upper Montane	Asia	Indonesia	KIN	6.08	116.55	0.25	4.8	308	2.49	Biomass/productivity	123.8	Kitayama and Aiba 2002, Takyu et al. 2003
Mount Kinabalu, Sedimentary Subalpine	Asia	Indonesia	KIN	6.08	116.55	0.2	4.8	215	1.85	Biomass/productivity	116.0	Kitayama and Aiba 2002, Takyu et al. 2003
Mount Kinabalu, Ultrabasic Lower Montane	Asia	Indonesia	KIN	6.08	116.55	0.2	4.8	238	1.85	Biomass/productivity	128.4	Kitayama and Aiba 2002, Takyu et al. 2003
Mount Kinabalu, Ultrabasic Upper Montane	Asia	Indonesia	KIN	6.08	116.55	0.2	4.8	122	1.31	Biomass/productivity	93.0	Kitayama and Aiba 2002, Takyu et al. 2003
Pasoh	Asia	Malaysia	PAS	2.35	102.19	50	10	320	6.86	Biomass/productivity	46.7	Chave et al. 2008
Sinhareja	Asia	Sri Lanka	SIN	6.4	80.4	25	10	337	7.33	Biomass/productivity	46.0	Chave et al. 2008
Western Ghats, Site 1	Asia	India	WGH1	12.42	75.42	0.32	30	379	6.87	Biomass/productivity	55.1	Swamy et al. 2010
Western Ghats, Site 2	Asia	India	WGH1	12.42	75.42	0.32	30	425	6.99	Biomass/productivity	60.8	Swamy et al. 2010
Western Ghats, Site 3	Asia	India	WGH1	12.42	75.42	0.32	30	348	4.61	Biomass/productivity	75.6	Swamy et al. 2010
Western Ghats, Site 4	Asia	India	WGH1	12.42	75.42	0.32	30	502	7.33	Biomass/productivity	68.5	Swamy et al. 2010
Bukit Lagong	Asia	Malaysia	BKL	-3.42	101.7	2	10	N/A	N/A	1/stem turnover	54.7	Lewis et al. 2004
Danum Valley (2 plots)	Asia	Malaysia	DAN	4.97	117.8	4	10	N/A	N/A	1/stem turnover	51.1	Newberry et al. 1999
Devimane	Asia	India	WGH2	14.27	74.42	2.7	10	N/A	N/A	1/stem turnover	64.8	Phillips et al. 1996
Gunung Silam (2 plots)	Asia	Malaysia	GUN	5	119	0.6-2.0	10	N/A	N/A	1/stem turnover	74.2	Phillips et al. 1996
Katlekan	Asia	India	WGH2	14.16	74.42	1.09	10	N/A	N/A	1/stem turnover	64.8	Rai et al. 1981, cited in Lewis et al. 2004
Malimane	Asia	India	WGH2	14.17	74.44	2.7	10	N/A	N/A	1/stem turnover	48.3	Rai et al. 1981, cited in Lewis et al. 2004
Sepilok (2 plots)	Asia	Malaysia	SEP	5.17	117.93	1-1.81	10	N/A	N/A	1/stem turnover	57.1	Phillips et al. 1996
Sumatra (2 plots)	Asia	Indonesia	SUM	-0.83	100.33	0.91-1	10	N/A	N/A	1/stem turnover	34.1	Phillips et al. 1996
Sungei Menyala	Asia	Malaysia	SUN	2.47	101.92	2	10	N/A	N/A	1/stem turnover	54.9	Lewis et al. 2004
Queensland (several plots)	Australia	Australia	QUE	-17.1	145.6	0.2-1.68	10	N/A	N/A	1/stem turnover	83.6	Vanclay 1991, Lewis et al. 2004
Mt. Haig	Australia	Australia	MTH	-16.52	145.1	0.5	10	N/A	N/A	1/stem turnover	121.1	Lewis et al. 2004
Mt. Lewis	Australia	Australia	MTL	-17.08	145.3	0.5	10	N/A	N/A	1/stem turnover	106.6	Lewis et al. 2004

Table S2. Climate and soil characteristics for 177 tropical forest plots for which woody biomass residence time data were available. The soil order information is presented according to the WRB classification. In some instances, the soil order information has been inferred from general descriptions of the soil in the original papers. These are denoted by an asterisk.

Site	Elevation (m)	Highland/lowland	Annual rainfall	Mean annual temperature	Soil order/description	Soil pedogenesis category	Soil fertility category	Source of soil data
Asenanyo - 02	270	LOWLAND	1412	26.7*	N/A	N/A	2	Fauset et al., 2012
Asenanyo - 04	230	LOWLAND	1432	26.7*	N/A	N/A	2	Fauset et al., 2012
Banco	50	LOWLAND	2095	26.2	Ferralsol	3	3	Bernhard-Reversat et al. (1978), cited in Mackensen (2000)
Campo Ma'an (Caesalpeasa)	100	LOWLAND	2401*	25	Ferralsol/Acrisol	3	3	Djomo et al. 2011
Campo Ma'an (Casealp)	100	LOWLAND	2401*	25	Ferralsol/Acrisol	3	3	Djomo et al. 2011
Campo Ma'an (Mixed Evergreen)	100	LOWLAND	2401*	25	Ferralsol/Acrisol	3	3	Djomo et al. 2011
Cape Three Points - 09	126	LOWLAND	1733	26.8*	N/A	N/A	2	Fauset et al. 2012
Cape Three Points - 10	68	LOWLAND	1689	26.8*	N/A	N/A	2	Fauset et al. 2012
Dja National Forest - G1	647	HIGHLAND	1512	23.3	Ferralsol	3	3	Peh et al. 2011
Dja National Forest - G2	742	HIGHLAND	1512	23.3	Ferralsol	3	3	Peh et al. 2011
Dja National Forest - G3	639	HIGHLAND	1512	23.3	Gleysol	1	3	Peh et al. 2011
Dja National Forest - M1	639	HIGHLAND	1512	23.3	Ferralsol	3	3	Peh et al. 2011
Dja National Forest - M2	779	HIGHLAND	1512	23.3	Ferralsol	3	3	Peh et al. 2011
Dja National Forest - M3	639	HIGHLAND	1512	23.3	Gleysol	1	3	Peh et al. 2011
Ituri, Eodoro	750	HIGHLAND	1793	21.7	Ferralsol	3	3	Makana et al. 2004
Ituri, Lenda	750	HIGHLAND	1721	23.05	Ferralsol	3	3	Makana et al. 2004
Yapo (Plateau)	100	LOWLAND	1739	26.2	Ferralsol	3	3	Bernhard-Reversat et al. 1978, cited in Mackensen 2000
Budongo	1000	HIGHLAND	1638	22.2	Ferralsol	3	3	Nangendo 2005
Kade Bekwai	170	LOWLAND	1640	28	Acrisol	2	22	Owusu-Benoah et al. 2000
Kade Nzima	150	LOWLAND	1640	28	Acrisol	2	2	Owusu-Benoah et al. 2000
Udagaji (2 plots, UDJ-01,02)	600	HIGHLAND	1195*	24.0*	N/A	N/A	N/A	N/A
Agua Pudre 01 (AGP-01)	109	LOWLAND	2723	25.5	Plinthosol	2	2	Quesada et al. 2010
Agua Pudre 02 (AGP-02)	104	LOWLAND	2723	25.5	Plinthosol	2	2	Quesada et al. 2010
Allpahuayo A, poorly drained (ALP-11)	114	LOWLAND	2763	26.34	Gleysol	1	2	Quesada et al. 2010
Allpahuayo A, well drained (ALP-12)	114	LOWLAND	2763	26.34	Alisol	2	2	Quesada et al. 2010
Allpahuayo B, clayed (ALP-22)	114	LOWLAND	2763	26.34	Plinthosol	2	2	Quesada et al. 2010
Allpahuayo B, sandy (ALP-21)	114	LOWLAND	2763	26.34	Arenosol	3	3	Quesada et al. 2010
Añangu, A3 (ANN-03)	370	LOWLAND	3252	25.77	Alisol ou Acrisol	2	2	Phillips et al. 2004

(Continued)

Table S2. (Continued)

Site	Elevation (m)	Highland/lowland	Annual rainfall	Mean annual temperature	Soil order/description	Soil pedogenesis category	Soil fertility category	Source of soil data
BCI 50 ha	130	LOWLAND	2635	26.11	Ferralsol	3	2	Leigh et al. 2004
BDFFP, 1101 Gavião (BDF-03)	100	LOWLAND	2167	26.88	Ferralsol	3	3	Laurance et al. 1999
BDFFP, 1102 Gavião (BDF-04)	100	LOWLAND	2167	26.88	Ferralsol	3	3	Laurance et al. 1999
BDFFP, 1103 Gavião (BDF-05)	100	LOWLAND	2167	26.88	Ferralsol	3	3	Laurance et al. 1999
BDFFP, 1109 Gavião (BDF-08)	100	LOWLAND	2167	26.88	Ferralsol	3	3	Laurance et al. 1999
BDFFP, 1201 Gavião (BDF-06)	100	LOWLAND	2167	26.88	Ferralsol	3	3	Laurance et al. 1999
BDFFP, 1301 Florestal 2=plots 1301.4,5,6 (BDF-11)	100	LOWLAND	2167	26.88	Ferralsol	3	3	Laurance et al. 1999
BDFFP, 1301 Florestal 3=plots 1301.7,8 (BDF-12)	100	LOWLAND	2167	26.88	Ferralsol	3	3	Laurance et al. 1999
BDFFP, 2303 Faz. Dimona 4-6 (BDF-01)	100	LOWLAND	2167	26.88	Ferralsol	3	3	Laurance et al. 1999
BDFFP, 3304 Porto Alegre (BDF-14)	100	LOWLAND	2167	26.88	Ferralsol	3	3	Laurance et al. 1999
BDFFP, 3402 Cabo Frio (BDF-13)	100	LOWLAND	2167	26.88	Ferralsol	3	3	Laurance et al. 1999
BDFFP, Florestal 1=1301.1 (BDF-10)	100	LOWLAND	2167	26.88	Ferralsol	3	3	Laurance et al. 1999
Bionte 1 (BNT-01)	73	LOWLAND	2272	27.08	Ferralsol	3	3	Phillips et al. 2004
Bionte 2 (BNT-02)	73	LOWLAND	2272	27.08	Ferralsol	3	3	Phillips et al. 2004
Bionte 4 (BNT-04)	73	LOWLAND	2272	27.08	Ferralsol	3	3	Quesada et al. 2010
Bionte T4 B1 SB3 (BNT-06)	73	LOWLAND	2272	27.08	Ferralsol	3	3	Phillips et al. 2004
Bionte T4 B2 SB1 (BNT-05)	73	LOWLAND	2272	27.08	Ferralsol	3	3	Phillips et al. 2004
Bionte T4 B4 SB4 (BNT-07)	73	LOWLAND	2272	27.08	Ferralsol	3	3	Phillips et al. 2004
Bogi 1 (BOG-01)	271	LOWLAND	3252	25.67	Cambisol	1	1	Quesada et al. 2010
Bogi 2 (BOG-02)	270	LOWLAND	3252	25.67	Cambisol	1	1	Quesada et al. 2010
Cano Rosalba 1 (CRS-01)	60	LOWLAND	1324	27.9	Ferralsol	3	3	Phillips et al. 2004
Cano Rosalba 2 (CRS-02)	35	LOWLAND	1324	28.03	Cambisol	1	1	Phillips et al. 2004
Caxiuanã 2 (CAX-02)	15	LOWLAND	2314	26.9	Acrisol	2	3	Quesada et al. 2010

Table S2. (Continued)

Site	Elevation (m)	Highland/lowland	Annual rainfall	Mean annual temperature	Soil order/description	Soil pedogenesis category	Soil fertility category	Source of soil data
Caxiuanã ESECAFLOR Control (CAX-04)	15	LOWLAND	2314	26.9	Acrisol	2	3	Quesada et al. 2010
Caxiuanã Tower Plot (CAX-06)	15	LOWLAND	2314	26.9	Ferralsol	3	3	Quesada et al. 2010
Caxiuanã 1 (CAX-01)	15	LOWLAND	2314	26.9	Acrisol	2	3	Quesada et al. 2010
Cerro Pelao 1 (CRP-01)	350	LOWLAND	1297	25.16	Cambisol	1	1	Quesada et al. 2010
Cerro Pelao 2 (CRP-02)	350	LOWLAND	1297	25.16	Cambisol	1	1	Quesada et al. 2010
Chore 1 (CHO-01)	170	LOWLAND	1357	26.17	Ferralsol	3	2	Quesada et al. 2010
Cuzco Amazonico, CUZAMIE (CUZ-01)	200	LOWLAND	2417	25.54	Cambisol	1	1	Quesada, pers. Comm.
Cuzco Amazonico, CUZAM1U (CUZ-02)	200	LOWLAND	2417	25.54	Cambisol	1	1	Quesada, pers. Comm.
Cuzco Amazonico, CUZAM2E (CUZ-03)	200	LOWLAND	2417	25.56	Cambisol	1	1	Quesada et al. 2010
Cuzco Amazonico, CUZAM2U (CUZ-04)	200	LOWLAND	2417	25.56	Cambisol	1	1	Quesada, pers. Comm.
El Dorado, km 91, plotG1 (ELD-01)	210	LOWLAND	1977	26.62	Acrisol	2	3	Quesada et al. 2010
El Dorado, km 91, plotG2 (ELD-02)	180	LOWLAND	1977	26.77	Cambisol	1	3	Quesada et al. 2010
El Dorado, km 98, plot G4 (ELD-04)	350	LOWLAND	1977	25.77	Leptosol	1	3	Quesada et al. 2010
El Dorado, km 98, plotG3 (ELD-03)	380	LOWLAND	1977	25.92	Leptosol	1	3	Quesada et al. 2010
El Zafire Varillal (ZAR-01)	130	LOWLAND	2723	25.5	Podzol	3	3	Quesada et al. 2010
Fortuna, Control Plot	1200	HIGHLAND	5545	20	Andosol	1	1	Adamek et al. 2009
Huanchaca Dos, plot 1 (HCC-21)	615	HIGHLAND	1332	23.53	Cambisol	1	1	Quesada et al. 2010
Huanchaca Dos, plot 2 (HCC-22)	615	HIGHLAND	1332	23.53	Nitisol	2	1	Quesada et al. 2010
Jacaranda 1 (JAC-01)	73	LOWLAND	2272	27.08	Podzol/Ferralsol	3	3	Quesada et al. 2010
Jacaranda 2 (JAC-02)	73	LOWLAND	2272	27.08	Podzol/Ferralsol	3	3	Quesada et al. 2010
Jari 1 (JRI-01)	82	LOWLAND	2346	26.59	Ferralsol	3	3	Quesada et al. 2010
Jatun Sacha 2 (JAS-02)	450	LOWLAND	4013	23.38	Alisol	2	2	Quesada et al. 2010
Jatun Sacha 3 (JAS-03)	450	LOWLAND	4013	23.38	Alisol	2	2	Quesada et al. 2010
Jatun Sacha 4 (JAS-04)	450	LOWLAND	4013	23.38	Alisol	2	2	Quesada et al. 2010
Jatun Sacha 5 (JAS-05)	450	LOWLAND	4013	23.38	Fluvisol	1	1	Quesada et al. 2010
Jenaro High Restinga Plot 3 (JEN-03)	116	LOWLAND	2715	26.69	Gleysol	1	1	Nebel et al. 2001

Table S2. (Continued)

Site	Elevation (m)	Highland/lowland	Annual rainfall	Mean annual temperature	Soil order/description	Soil pedogenesis category	Soil fertility category	Source of soil data
Jenaro Low Restinga, plot 6 (JEN-06)	116	LOWLAND	2715	26.69	Gleysol	1	1	Nebel et al. 2001
Jenaro Tahuampa plot 9 (JEN-09)	116	LOWLAND	2715	26.69	Gleysol	1	1	Nebel et al. 2001
Kenia - A	375	LOWLAND	1310	23.4	Inceptisol	1	1	Araujo et al., in press
Kenia - B	375	LOWLAND	1310	23.4	Inceptisol	1	1	Araujo et al., in press
La Planada	1718-1844	HIGHLAND	4087	19	Andosol	1	1	Vallejo et al. 2004
Las Londras, plot 1 (LSL-01)	170	LOWLAND	1424	25.7	Umbrisol	1	1	Quesada et al. 2010
Las Londras, plot 2 (LSL-02)	170	LOWLAND	1424	25.7	Umbrisol	1	1	Quesada et al. 2010
Linhares	43	LOWLAND	1183	24.47	Podzol	3	3	Rolim et al. 2005
Los Fierros Bosque I (LFB-01)	225	LOWLAND	1313	25.96	Ferralsol	3	3	Quesada et al. 2010
Los Fierros Bosque II (LFB-02)	225	LOWLAND	1313	25.96	Ferralsol	3	3	Quesada et al. 2010
Manu, M1 (MNU-01)	312	LOWLAND	3043	24.77	Fluvisol	1	1	Quesada et al., pers. Comm
Manu, M3 (MNU-03)	312	LOWLAND	3043	24.77	Cambisol	1	1	Quesada et al., pers. Comm
Manu, M4 (MNU-04)	312	LOWLAND	3043	24.77	Fluvisol	1	1	Quesada et al., pers. Comm
Marabá, plot 1 (MAR-01)	90	LOWLAND	1956	26.54	Ferralsol	3	3	Malhi et al. 2004
Marabá, plot 2 (MAR-02)	90	LOWLAND	1956	26.54	Ferralsol	3	3	Malhi et al. 2004
Marabá, plot 3 (MAR-03)	90	LOWLAND	1956	26.54	Ferralsol	3	3	Malhi et al. 2004
Mishana (MSH-01)	114	LOWLAND	2763	26.34	Podzol/Acrisol	3	3	Phillips et al. 2004
Mocambo (MBO-01)	24	LOWLAND	2933	26.63	Ferralsol	3	3	Quesada et al. 2010
Nouragues GP (NOR-02)	110	LOWLAND	2757	25.8	Ferralsol	3	2	Chave et al. 2010
Nouragues PP (NOR-01)	110	LOWLAND	2757	25.8	Ferralsol/Leptosol	3	2	Chave et al. 2010
Pakitza, plot1 (PAK-01)	313	LOWLAND	3403	24.76	Acrisol	2	2	Phillips et al. 2004
Paracou - Plot 1	25	LOWLAND	3041	25.5	Acrisol	2	2	Fanin et al. 2011
Paracou - Plot 11	25	LOWLAND	3041	25.5	Acrisol	2	2	Fanin et al. 2011
Paracou - Plot 13	25	LOWLAND	3041	25.5	Acrisol	2	2	Fanin et al. 2011
Paracou - Plot 14	25	LOWLAND	3041	25.5	Acrisol	2	2	Fanin et al. 2011
Paracou - Plot 15	25	LOWLAND	3041	25.5	Acrisol	2	2	Fanin et al. 2011
Paracou - Plot 6	25	LOWLAND	3041	25.5	Acrisol	2	2	Fanin et al. 2011
Pena Roja - lowland	155	LOWLAND	3100	25	Cambisol	1	1	Vega 2011
Pena Roja - upland	210	LOWLAND	3100	25	Acrisol	2	2	Vega 2011
Piste de Saint Elie, Transect 1	100	LOWLAND	~3000	25.8	Ferralsol	3	3	Chave et al. 2010
Piste de Saint Elie, Transect 2	100	LOWLAND	~3000	25.8	Ferralsol	3	3	Chave et al. 2010
Porce	900	HIGHLAND	2078	23	Leptosol or Regosol/Acrisol*	2	2	Sierra et al. 2007

Table S2. (Continued)

Site	Elevation (m)	Highland/lowland	Annual rainfall	Mean annual temperature	Soil order/description	Soil pedogenesis category	Soil fertility category	Source of soil data
Rio Grande, plotDA1 (RIO-01)	270	LOWLAND	1239	25.62	Lixisol	2	3	Quesada et al. 2010
Rio Grande, plotDA2, (RIO-02)	270	LOWLAND	1239	25.62	Lixisol	2	3	Quesada et al. 2010
San Carlos de Rio Negro, SC1, Uhl (SCR-01)	122	LOWLAND	3093	25.98	Acrisol	2	3	Quesada et al. 2010
San Carlos de Rio Negro, SC3, MAB site (SCR-03)	117	LOWLAND	3093	25.91	Spodosol	3	3	Phillips et al. 2004
San Pedro	1500	HIGHLAND	2631	18.8	Cambisol	1	1	Quesada et al. Pers. com.
Sucusari A (SUC-01)	107	LOWLAND	2671	26.29	Plinthosol	2	2	Quesada et al. 2010
Sucusari B (SUC-02)	107	LOWLAND	2671	26.29	Acrisol	2	2	Quesada et al. 2010
Tambopata plot four (TAM-06)	214	LOWLAND	2417	25.16	Alisol	2	1	Quesada et al. 2010
Tambopata plot one (TAM-02)	207	LOWLAND	2417	25.2	Alisol	2	1	Quesada et al. 2010
Tambopata plot six (TAM-07)	209	LOWLAND	2417	25.19	Cambisol	1	2	Quesada et al. 2010
Tambopata plot three (TAM-05)	207	LOWLAND	2417	25.2	Cambisol	1	2	Quesada et al. 2010
Tambopata plot two swamp edge (TAM-04)	207	LOWLAND	2417	25.2	Gleysol	1	1	Quesada et al. 2010
Tambopata plot zero (TAM-01)	239	LOWLAND	2417	25.2	Alisol	2	1	Quesada et al. 2010
Tanguro - Control	353	LOWLAND	1770	25.0	Ferralsol	3	3	Rocha et al., in press
Tapajos Seca Floresta Control	100	LOWLAND	1968	26.13	Ferralsol	3	2	Brando et al. 2008
Tapajos, RP014, 1-4 (TAP-01)	100	LOWLAND	1968	26.13	Ferralsol	3	2	Quesada et al. 2010
Tapajos, RP014, 5-8 (TAP-02)	100	LOWLAND	1968	26.13	Ferralsol	3	2	Quesada et al. 2010
Tapajos, RP014, 9-12 (TAP-03)	100	LOWLAND	1968	26.13	Ferralsol	3	2	Quesada et al. 2010
Tiputini 2 (TIP-02)	246	LOWLAND	3252	25.79	Cambisol	1	1	Phillips et al. 2004
Tiputini 3 (TIP-03)	248	LOWLAND	3252	25.79	Gleysol	1	1	Quesada et al. 2010
Tono	1000	HIGHLAND	3087	20.7	Gleysol	1	1	Quesada et al. pers. comm.
Trocha Union 3	3020	HIGHLAND	1776	11.8	Umbrisol	1	1	Quesada et al. pers. comm.
Trocha Union 4	2720	HIGHLAND	2318	13.5	Umbrisol	1	1	Quesada et al. pers. comm.
Trocha Union 7	2020	HIGHLAND	1827	17.4	Umbrisol	1	1	Quesada et al., pers. Comm.
Trocha Union 8	1855	HIGHLAND	2472	18	Cambisol	1	1	Quesada et al., pers. comm.

Table S2. (Continued)

Site	Elevation (m)	Highland/lowland	Annual rainfall	Mean annual temperature	Soil order/description	Soil pedogenesis category	Soil fertility category	Source of soil data
Wayqecha	3025	HIGHLAND	1706	12.5	Lithosol	1	1	Girardin et al. 2009
Yanamono A (YAN-01)	104	LOWLAND	2671	26.31	Alisol	2	1	Quesada et al. 2010
Yasuni	230	LOWLAND	3111	25.5	Alisol/Acrisol*	2	2	Valencia et al. 2004
BEEEM (2 plots, BEE-01,02)	N/A	LOWLAND	3300	24.6*	Cambisol	1	1	Oliver Phillips, pers. comm.
Dois Irmaos (2 plots, DOI-01,02))	198–208	LOWLAND	1875	25	Plinthosol	2	2	Quesada et al. 2010
Lorena (2 plots, LOR-01,LOR-02)	94	LOWLAND	2803	25.5	Plinthosol	2	2	Quesada et al. 2010
Maraca Island FWP	<100	LOWLAND	1783	27.4	Acrisol	2	3	Nascimento et al. 2007
Maraca Island PPF	<100	LOWLAND	1783	27.4	Acrisol	2	3	Nascimento et al. 2007
Maraca Island PRF	<100	LOWLAND	1783	27.4	Acrisol	2	3	Nascimento et al. 2007
Porongaba (2 plots, POR-01,02)	269–275	LOWLAND	1805	25	Plinthosol	2	2	Quesada et al. 2010
Sacta (2 plots, SCT-01,02)	N/A	LOWLAND	3204	24.6*	Alisol	2	2	Beto Quesada, pers. comm.
Huai Kha Khaeng	549–638	HIGHLAND	1355	25.0*	Acrisol	2	2	Bunyavechewin et al. 2004
Jiangfengling, Hainan Island	867–893	HIGHLAND	1977*	24.7*	N/A	N/A	N/A	N/A
Kampong Thom	9–273	LOWLAND	1700	28	N/A	N/A	N/A	N/A
Lambir	<100	LOWLAND	2921	27	Acrisol	2	2	Lee et al. 2004
Menglun Nature Reserve, Xishuangbanna	756	HIGHLAND	1487	21.7	Acrisol*	2	2	Tan et al. 2010
Mount Kinabalu, Sedimentary Rock, Hill	650	HIGHLAND	2509	23.925	Ferralsol	3	3	Kitayama 1992
Dipterocarp Forest								
Mount Kinabalu, Ultrabasic Rock, Hill	700	HIGHLAND	2509	23.65	Ferralsol	3	3	Kitayama 1992
Dipterocarp Forest								
Mount Kinabalu, Tertiary Sedimentary Lower Slope	1560	HIGHLAND	2714	18.92	Histosol/Podzol	3	3	Kitayama 1992
Mount Kinabalu, Ultrabasic Lower Slope	1860	HIGHLAND	2714	17.27	Histosol/Podzol	3	3	Kitayama 1992
Mount Kinabalu Sedimentary, Lower Montane Forest	1560	HIGHLAND	2714	18.92	Histosol/Podzol	3	3	Kitayama 1992
Mount Kinabalu Sedimentary, Upper Montane Forest	2590	HIGHLAND	2085	13.255	Histosol/Podzol	3	3	Kitayama 1992

Table S2. (Continued)

Site	Elevation (m)	Highland/lowland	Annual rainfall	Mean annual temperature	Soil order/description	Soil pedogenesis category	Soil fertility category	Source of soil data
Mount Kinabalu, Sedimentary Subalpine Forest	3080	HIGHLAND	3285	10.56	Cambisol	1	3	Kitayama 1992
Mount Kinabalu, Ultrabasic Lower Montane Forest	1860	HIGHLAND	2714	17.27	Histosol/Podzol	3	3	Kitayama 1992
Mount Kinabalu, Ultrabasic Upper Montane Forest	2700	HIGHLAND	2085	12.65	Histosol/Podzol	3	3	Kitayama 1992
Pasoh	90	LOWLAND	1973	25	Arenosol/Acrisol	2	2	Manokaran et al. 2004
Sinharaja	424–575	LOWLAND	3379	22.5	Acrisol	2	2	Gunatilleke et al. 2004
Western Ghats, Site 1	1000	HIGHLAND	2800	26.6	Ferralsol	3	3	Swamy et al. 2010
Western Ghats, Site 2	1500	HIGHLAND	3200	24.6	Ferralsol	3	3	Swamy et al. 2010
Western Ghats, Site 3	1100	HIGHLAND	2800	26.6	Ferralsol	3	3	Swamy et al. 2010
Western Ghats, Site 4	1300	HIGHLAND	3000	25.6	Ferralsol	3	3	Swamy et al. 2010
Bukit Lagong	500	LOWLAND	2650	26.2	Acrisol*	2	3	Phillips et al. 1994
Danum Valley (2 plots)	208	LOWLAND	2822	26.8	Acrisol/Cambisol	2	2	Newbery et al. 1992
Devimane	274	LOWLAND	3800	27.5*	N/A	N/A	N/A	N/A
Gunung Silam (2 plots)	280–870	LOWLAND, HIGHLAND	2011	27.1*	Cambisol	1	3	Proctor 1988
Katlekan	579	HIGHLAND	5000	27.5*	N/A	N/A	N/A	N/A
Malimane	143	LOWLAND	4600	27.5*	N/A	N/A	N/A	N/A
Sepilok (2 plots)	15–40	LOWLAND	2975	27	Alisol*	2	2	Dent et al. 2006
Sumatra (2 plots)	605–613	HIGHLAND	5900	26.7*	Cambisol	1	1	Wakatsuki et al. 1986
Sungei Menyala	30	LOWLAND	2376	28	Fluvisol	1	1	Manokaran et al. 1987
Queensland (several plots)	380–850	HIGHLAND, LOWLAND	1800	21.7*	N/A	N/A	N/A	N/A
Mt. Haig	1100	HIGHLAND	2884	18.7	Acrisol/Ferralsol*	3	3	Graham et al. 2006
Mt. Lewis	1200	HIGHLAND	2676	19.2	Acrisol/Ferralsol*	3	3	Graham et al. 2006

Table S3. Correlations (Kendall's tau, Spearman's rho and Pearson's product-moment) between τ_w and environmental variables (total annual rainfall, average annual temperature and elevation). Negative values indicate inverse correlations.

Dependent, independent variable	Kendall's tau		Spearman's rho	
	τ	p	r	p
τ_w , Elevation [Neotropics, n = 71]	-0.13	0.12	-0.17	0.16
τ_w , Total annual rainfall [Neotropics, n = 71]	-0.04	0.65	-0.03	0.82
τ_w , Mean annual temperature [Neotropics, n=71]	0.13	0.10	0.17	0.15
τ_w , Elevation [Paleotropics, n= 34]	0.15	0.22	0.21	0.24
τ_w , Total annual rainfall [Paleotropics, n=34]	-0.06	0.61	-0.08	0.65
τ_w , Mean annual temperature [Paleotropics, n=34]	-0.20	0.10	-0.27	0.13
τ_w , Elevation [All, n=105]	-0.03	0.66	-0.03	0.81
τ_w , Total annual rainfall [All, n=105]	-0.02	0.77	-0.01	0.90
τ_w , Mean annual temperature [All, n=105]	0.06	0.35	0.07	0.45

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