

SUPPLEMENTARY TABLE 1 | FLUXNET sites

List of FLUXNET sites used in the analysis. Coordinates (Latitude and Longitude), plant functional type (IGBP class), Köppen Geiger class, Nitrogen content (N%), maximum Leaf Area Index (LAI_{max}), maximum vegetation height (Hc), and aboveground biomass from GlobBiomass dataset (AGB) are reported. The FLUXNET release database from which the sites come from is also indicated: F15 for FLUXNET2015 and LT for the LT database. In bold the sites that have been used for the runs of the land surface models.

Site code	PFT	Köppen-Geiger	Latitude	Longitude	Dataset	N% [gN 100gleaf ⁻¹]	LAI _{max} [m ² m ⁻²]	Hc [m]	AGB [t DM ha ⁻¹]	Ref
AR-Vir	ENF	Cfa	-28.240	-56.189	F15			14.4	196	1
AT-Neu	GRA	Dfc	47.117	11.318	F15	2.906	6.5	0.7	32	2
AU-Ade	SAV	Aw	-13.077	131.118	F15		2.04	12.5		3
AU-ASM	ENF	BSh	-22.283	133.249	F15	1.776	0.47	6.5	0	4
AU-Cpr	SAV	Bsk	-34.002	140.589	F15	1.243	0.782	3	0	5,6
AU-Cum	EBF	Cfa	-33.613	150.723	F15	1.100	2.0332	23	71	7
AU-DaP	GRA	Aw	-14.063	131.318	F15			1	0	7
AU-DaS	SAV	Aw	-14.159	131.388	F15		1.8768	16.4	47	8
AU-Dry	SAV	Aw	-15.259	132.371	F15		1.66	12.3	18	9
AU-Emr	GRA	BSh	-23.859	148.475	F15			0.6	0	10
AU-Fog	WET	Aw	-12.545	131.307	F15		3.4408	1		11
AU-Gin	SAV	Csa	-31.376	115.714	F15		1.4076	6.8	82	
AU-How	SAV	Aw	-12.494	131.152	F15		2.4	16		12
AU-RDF	SAV	Aw	-14.564	132.478	F15			16	32	13
AU-Rig	GRA	Cfb	-36.650	145.576	F15			0.4	0	7
AU-Stp	GRA	BSh	-17.151	133.350	F15			1	0	7
AU-TTE	OSH	BSh	-22.287	133.640	F15		0.4692	5	0	
AU-Wac	EBF	Cfb	-37.426	145.188	F15		5.01	80	348	14
AU-Whr	EBF	Cfb	-36.673	145.029	F15		1.4076	28	138	15
AU-Wom	EBF	Cfb	-37.422	144.094	F15		6.4124	22	223	
AU-Ync	GRA	Bsk	-34.989	146.291	F15			0.5	0	16
BE-Bra	MF	Cfb	51.309	4.521	F15	2.314	2.1	21.7	128	17
BE-Vie	MF	Cfb	50.305	5.998	F15	1.050	5.1	34.6	167	18
BR-Ban	EBF	Aw	-9.824	-50.159	LT			18	143	19
BR-Ma2	EBF	Aw	-2.609	-60.209	LT	4.435	5.16	35	276	20
BR-Sa1	EBF	Am	-2.857	-54.959	F15	2.219	5.18	40	250.5	21
BR-Sa3	EBF	Am	-3.018	-54.971	F15		5.21	30	268	21
BW-Ma1	SAV	BSh	-19.916	23.560	LT		1.1	8	6	22
CA-Ca1	ENF	Cfb	49.867	-125.334	LT	1.350	8.4	32.5	240	23
CA-Ca2	ENF	Cfb	49.870	-125.291	LT	1.000	1.365	1	82	23
CA-Ca3	ENF	Cfb	49.535	-124.900	LT	1.000	4.7	7.57	152.5	23
CA-Gro	MF	Dfb	48.217	-82.156	F15	1.466	4.3	31	98	24
CA-Let	GRA	Dfb	49.709	-112.940	LT	2.025	1.22	0.365	0	25
CA-Mer	WET	Dfb	45.409	-75.519	LT	0.920	1.3	0.25	14	26
CA-NS1	ENF	Dfc	55.879	-98.484	F15	0.675	5.68	16	47	27
CA-NS2	ENF	Dfc	55.906	-98.525	F15	0.657	7.8	16	38	6
CA-NS3	ENF	Dfc	55.912	-98.382	F15	1.110	5.33	4	36	6
CA-NS5	ENF	Dfc	55.863	-98.485	F15	0.915	5.49	5	51	6
CA-NS6	OSH	Dfc	55.917	-98.964	F15	1.950	2.97	2	51	6
CA-NS7	OSH	Dfc	56.636	-99.948	F15	1.360	1.36	1	37	6
CA-Oas	DBF	Dfc	53.629	-106.198	F15	2.376	3.04	21	89	28
CA-Obs	ENF	Dfc	53.987	-105.118	F15	0.843	3.41	11	53	29
CA-Ojp	ENF	Dfc	53.916	-104.692	LT	1.099	2.06	16.7	92	30
CA-Qcu	ENF	Dfc	49.267	-74.036	LT		0.77	2	27	31
CA-Qfo	ENF	Dfc	49.693	-74.342	F15	0.754	3.7	13.8	44	32
CA-SF1	ENF	Dfc	54.485	-105.818	F15	0.950	3.4	6	85	33
CA-SF2	ENF	Dfc	54.254	-105.878	F15	1.070	3	4	57	33
CA-SF3	OSH	Dfc	54.092	-106.005	F15	1.350	1.1	18	57	33
CA-SJ1	ENF	Dfc	53.908	-104.656	LT	1.500	1.14	1.7	61	34
CA-SJ2	ENF	Dfc	53.945	-104.649	LT		0.18	0.19	52	35
CA-TP1	ENF	Dfb	42.661	-80.560	F15	2.130	0.45	6.5	54	36
CA-TP2	ENF	Dfb	42.774	-80.459	F15	1.340	12.8	11.5	112	36
CA-TP3	ENF	Dfb	42.707	-80.348	F15	1.130	5.9	16.2	206	36
CA-TP4	ENF	Dfb	42.710	-80.357	F15	1.385	8	23.4	197	37

CA-TPD	DBF	Dfb	42.635	-80.558	F15		3.98	25.7	190	37
CA-WP1	WET	Dfc	54.954	-112.467	LT	1.150	2.61	3.4	56	38
CG-Tch	SAV	Aw	-4.289	11.656	F15			2	4	
CH-Cha	GRA	Cfb	47.210	8.410	F15	2.626		0.5	15	39
CH-Dav	ENF	ET	46.815	9.856	F15	1.130	5.5	25	102	40,41
CH-Fru	GRA	Cfb	47.116	8.538	F15	2.135		0.4	42	42
CH-Oe1	GRA	Cfb	47.286	7.732	F15		4.85	0.55	0	43
CN-Cha	MF	Dwb	42.403	128.096	F15	1.910	6	32	117	44
CN-Cng	GRA	Dwa	44.593	123.509	F15			0.75	0	
CN-Din	EBF	Cfa	23.173	112.536	F15	1.720	4	17	91	
CN-Du2	GRA	Dwb	42.047	116.284	F15			0.5	0	45
CN-Ha2	WET	ET	37.609	101.327	F15		2.8	0.65	0	
CN-HaM	GRA	ET	37.370	101.180	F15	2.938	2.8	0.3	0	46
CN-Qia	ENF	Cfa	26.741	115.058	F15	1.230	3.5	11	88	
CZ-BK2	GRA	Dfb	49.494	18.543	F15			0.1	169	
CZ-wet	WET	Cfb	49.025	14.770	F15			1	22	
DE-Akm	WET	Cfb	53.866	13.683	F15			4	49	
DE-Bay	ENF	Cfb	50.142	11.867	LT		5.6	25	163	47
DE-Gri	GRA	Cfb	50.950	13.513	F15			0.82	142	48
DE-Hai	DBF	Cfb	51.079	10.453	F15	2.317	6.6	35	185	49
DE-Lkb	ENF	Cfb	49.100	13.305	F15			2	70	50
DE-Lnf	DBF	Cfb	51.328	10.368	F15		4.2	35	142	51
DE-Meh	MF	Cfb	51.275	10.656	LT	1.410	2.9	0.5	0	52
DE-Obe	ENF	Cfb	50.784	13.720	F15			20.5	163	
DE-SfN	WET	Cfb	47.806	11.328	F15			2	65	
DE-Spw	WET	Cfb	51.892	14.034	F15			23.8	141	
DE-Tha	ENF	Cfb	50.964	13.567	F15	1.400	7.6	29.4	188	53
DE-Wet	ENF	Cfb	50.453	11.458	LT	1.400	7.7	22	214.5	51
DK-NuF	WET	ET	64.131	-51.386	F15			0.1		54
DK-Sor	DBF	Cfb	55.486	11.645	F15	2.270	5	29.2	123	55
DK-ZaH	GRA	ET	74.473	-20.550	F15			0.1		56
ES-ES1	ENF	Csa	39.346	-0.319	LT		3.63	10		57
ES-LgS	OSH	Csa	37.098	-2.966	F15			0.2		58
ES-LJu	OSH	Csa	36.927	-2.752	F15			0.5		59
ES-LMa	SAV	Csa	39.942	-5.773	LT	1.320	2	8		60
ES-VDA	GRA	Cfb	42.152	1.449	LT		1.4	0.1	96	
FI-Hyy	ENF	Dfc	61.848	24.295	F15	1.258	6.7	18.45	105	61
FI-Kaa	WET	Dfc	69.141	27.295	LT		0.7	0.5	19	62
FI-Let	ENF	Dfc	60.642	23.960	F15			19.2	123	63
FI-Lom	WET	Dfc	67.997	24.209	F15		1	0.58	40	64
FI-Sod	ENF	Dfc	67.362	26.638	F15	1.050	1.2	13.5	56	65
FR-Fon	DBF	Cfb	48.476	2.780	F15	2.400	5.2	27.7	132	66
FR-Hes	DBF	Cfb	48.674	7.065	LT	2.300	4.6	16	127	67
FR-LBr	ENF	Cfb	44.717	-0.769	F15	1.260	3.2	21.9775	71	68
FR-Pue	EBF	Csa	43.741	3.596	F15	1.230	2.9	6.3684	96	69
GF-Guy	EBF	Am	5.279	-52.925	F15	1.590	6.74	35	275.5	70
GH-Ank	EBF	Aw	5.269	-2.694	F15			27	184	71
HU-Bug	GRA	Cfb	46.691	19.601	LT	2.150	4.7	0.5	0	
HU-Mat	GRA	Cfb	47.847	19.726	LT			0.2	110	
IE-Dri	GRA	Cfb	51.987	-8.752	LT				5	
IL-Yat	ENF	BSh	31.345	35.051	LT	0.974	2.5	10	0	72
IS-Gun	DBF	Cfb	63.833	-20.217	LT				0	
IT-Amp	GRA	Cfa	41.904	13.605	LT	1.599	2.5	0.4	36	73
IT-CA1	DBF	Csa	42.380	12.027	F15			5.5013	0	74
IT-CA3	DBF	Csa	42.380	12.022	F15			7.5	0	74
IT-Col	DBF	Csa	41.849	13.588	F15	2.503	6.6	22.5	168	75
IT-Cp2	EBF	Csa	41.704	12.357	F15			12.8	115	76
IT-Cpz	EBF	Csa	41.705	12.376	F15	1.500	3.5	15	139	77
IT-La2	ENF	Cfb	45.954	11.285	F15			28	180	78
IT-Mal	GRA	Cfb	46.117	11.703	LT			0.2	157	73
IT-MBo	GRA	Dfb	46.015	11.046	F15	2.139	2.5	0.3	30	79
IT-Noe	CSH	Csa	40.606	8.152	F15		2.1	1.2	97	80
IT-Non	MF	Cfa	44.690	11.089	LT		1.7	7	0	81
IT-PT1	DBF	Cfa	45.201	9.061	F15		4.45	26.6	28	82
IT-Ren	ENF	Dfc	46.587	11.434	F15	1.237	5.11	29	144.5	83
IT-Ro1	DBF	Csa	42.408	11.930	F15		4.3	8	77	84
IT-Ro2	DBF	Csa	42.390	11.921	F15		4.08	16	94	85
IT-Tor	GRA	Dfc	45.844	7.578	F15	1.130	2.2	0.2	70	86
JP-Tef	MF	Cfa	45.056	142.106	LT	1.630	7.4	25	111	
JP-Tom	MF	Cfa	42.739	141.515	LT		9.2	15	55	87
MY-PSO	EBF	Af	2.973	102.306	F15	2.099	6.52	35	315	88

NL-Ca1	GRA	Cfb	51.971	4.927	LT		3	1	3	89
NL-Loo	ENF	Cfb	52.167	5.744	F15	1.992	2.1	18.7	154	90
NO-Adv	WET	ET	78.186	15.923	F15			0.4		
PA-SPn	DBF	Am	9.318	-79.635	F15	1.555	5.4	12	24	91
PA-SPs	GRA	Am	9.314	-79.631	F15			0.09	27	91
PT-Esp	EBF	Csa	38.639	-8.602	LT		4.5	20	0	92
PT-Mi1	EBF	Csa	38.541	-8.000	LT	1.500	2.3	8	0	93
PT-Mi2	GRA	Csa	38.477	-8.025	LT		2.5	0.5	0	93
RU-Che	WET	Dfc	68.613	161.341	F15			0.675	0	94
RU-Cok	OSH	Dsc	70.829	147.494	F15		1.5	0.5	0	95
RU-Fyo	ENF	Dfb	56.462	32.922	F15	1.260	3	27.5	141	96
RU-Ha1	GRA	Dwc	54.725	90.002	F15			0.5	0	97
RU-SkP	DNF	Dfb	62.255	129.168	F15		1	18	17	
RU-Zot	ENF	Dfc	60.801	89.351	LT	0.990	1.5	15	82	98
SD-Dem	SAV	BWh	13.283	30.478	F15		1.4	5	0	99
SE-Deg	WET	Dfc	64.183	19.550	LT		0.9	0.05	26	100
SE-Fla	ENF	Dfc	64.113	19.457	LT	1.150	3.4	12.7	88	47
SE-St1	WET	ET	68.354	19.050	F15			0.05	34	101
SN-Dhr	SAV	BWh	15.403	-15.432	F15			1.58	0	102
UK-EBu	GRA	Cfb	55.866	-3.206	LT		3.9	0.4	18	
UK-Gri	ENF	Cfb	56.607	-3.798	LT	0.900	7	12	186	103
US-AR1	GRA	Cfa	36.427	-99.420	F15			0.5	0	104
US-AR2	GRA	Cfa	36.636	-99.598	F15			0.5	0	105
US-Atq	WET	ET	70.470	-157.409	F15		1.1	0.3	0	
US-Bkg	GRA	Dfa	44.345	-96.836	LT		3	0.3	0	106
US-Blo	ENF	Csa	38.895	-120.633	F15	1.407	4.63	2.59	236	107
US-Brw	WET	ET	71.323	-156.626	LT		1.1	0.1	0	108
US-Cop	GRA	Dfa	38.090	-109.390	F15			0.5	0	109
US-Dk1	GRA	Cfa	35.971	-79.093	LT		2	0.55	136	
US-Dk2	DBF	Cfa	35.974	-79.100	LT	1.850	7.03	25	141	110
US-FPe	GRA	BSk	48.308	-105.102	LT		2.5	0.3	0	
US-FR2	SAV	Cfa	29.949	-97.996	LT	1.750	2.8		43	111
US-GBT	ENF	Dfc	41.366	-106.240	F15		3	14.9	108	
US-GLE	ENF	Dfc	41.367	-106.240	F15		4.5	14.9	108	
US-Goo	GRA	Cfa	34.255	-89.874	F15		2	0.35	26	112
US-Ha1	DBF	Dfb	42.538	-72.172	F15	1.972	5.2	25.4	187	113
US-Ho1	ENF	Dfb	45.204	-68.740	LT	1.160	5.8	20	194	114
US-Ivo	WET	ET	68.487	-155.750	F15			0.3	0	115
US-KS2	CSH	Cfa	28.609	-80.672	F15	1.200	2.5	1.5	30	116
US-Los	WET	Dfb	46.083	-89.979	F15	2.036	4.24	2	63	117,118
US-LPH	DBF	Dfb	42.542	-72.185	LT		4.5	16.5	150	
US-Me2	ENF	Csb	44.452	-121.557	F15	1.140	3.58	16.5	171	119
US-Me3	ENF	Csb	44.315	-121.608	F15	1.130	0.52	3.11	84	120
US-Me4	ENF	Csb	44.499	-121.622	F15	1.100	2	16.5	134	121
US-Me5	ENF	Csb	44.437	-121.567	F15	1.010	1.1	4.3	120	122
US-Me6	ENF	Csb	44.323	-121.608	F15	1.240	1.8	6.51	85	123
US-MMS	DBF	Cfa	39.323	-86.413	F15	2.060	4.62	27	178	124
US-MOz	DBF	Cfa	38.744	-92.200	LT	1.587	4.01	24.2	188	125
US-Myb	WET	Csa	38.050	-121.765	F15			2.664	13	
US-NR1	ENF	Dfc	40.033	-105.546	F15	0.983	3.65	15.9	105	126
US-Oho	DBF	Dfa	41.555	-83.844	F15		4	24.5	100	127
US-Prr	ENF	Dsc	65.124	-147.488	F15		0.73	2.53	29	128,129
US-SO2	CSH	Csa	33.374	-116.623	LT	0.913	3	1	3	130
US-SO3	CSH	Csa	33.377	-116.623	LT	0.913	1.1	0.5	5	130
US-SO4	CSH	Csa	33.384	-116.640	LT	0.913	3	2.3	6	130
US-SP1	ENF	Cfa	29.738	-82.219	LT	1.120	5.5	24.2	166	131
US-SP2	ENF	Cfa	29.765	-82.245	LT	0.950	7.29	10.1	168	131
US-SP3	ENF	Cfa	29.755	-82.163	LT	0.950	6.63	14	191	131
US-SRC	OSH	BSk	31.908	-110.840	F15			1.7	0	
US-SRG	GRA	BSk	31.789	-110.828	F15	1.770	1.7	0.5	0	132
US-SRM	SAV	BSk	31.821	-110.866	F15	3.043	0.5	2.5	0	133
US-Syv	MF	Dfb	46.242	-89.348	F15	1.958	7.53	27.5	124	134
US-Ton	SAV	Csa	38.432	-120.966	F15	2.130	3.28	10.64	0	135
US-Tw1	WET	Csa	38.107	-121.647	F15			3.43	0	
US-UMB	DBF	Dfb	45.560	-84.714	F15	1.753	7.76	23	144	136
US-Umd	DBF	Dfb	45.563	-84.698	F15		4.52	23	139	137
US-Var	GRA	Csa	38.413	-120.951	F15	2.300	3.9525	0.705	1	138
US-WCr	DBF	Dfb	45.806	-90.080	F15	1.877	5.36	24.3	95	118
US-Whs	OSH	BSk	31.744	-110.052	F15		0.57	1	0	
US-Wi3	DBF	Dfb	46.635	-91.099	F15		3.9	20.5	75	139
US-Wi4	ENF	Dfb	46.739	-91.166	F15		2.8	18	126	139

US-Wkg	GRA	BSk	31.737	-109.942	F15	2.640	0.9	0.5	0	¹⁴⁰
US-WPT	WET	Dfa	41.465	-82.996	F15			1.7	6	
US-Wrc	ENF	Csb	45.820	-121.952	LT	0.750	8.7	24.3	224	¹⁴¹
VU-Coc	EBF	Af	-15.443	167.192	LT		5.65	16	29	¹⁴²
ZA-Kru	SAV	Cwa	-25.020	31.497	F15	1.890	0.42	10	17	¹⁴³
ZM-Mon	SAV	Aw	-15.438	23.253	F15		1.7	12		

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