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Supplement of

Spatial variations in terrestrial net ecosystem productivity and its local indicators

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Supplementary tables

Table S1 Summary of FLUXNET sites used in this study.

Table S1. Summary of FLUXNET sites used in this study.

Site	Lat (°)	Long (°)	Alt (m)	PFT	n (years)	MATa (°C)	MAP (mm)
AT-Neu	47.12	11.32	970	GRA	11	6.79	669
AU-Dap	-14.06	131.32	-	GRA	7	25.46	1403
AU-DaS	-14.16	131.39	-	SAV	7	26.63	1452
AU-Dry	-15.26	132.37	-	SAV	7	26.72	922
AU-Stp	-17.15	133.35	-	GRA	7	26.07	761
AU-Tum	-35.66	148.15	-	EBF	14	9.52	963
BE-Bra	51.31	4.52	15	MF	9	10.84	831
BE-Lon	50.55	4.75	167	CRO	11	11.41	766
BE-Vie	50.31	6.00	493	MF	19	8.35	965
CA-Man	55.88	-98.48	259	ENF	15	-1.36	316
CA-Qfo	49.69	-74.34	382	ENF	8	1.13	939
CH-Cha	47.21	8.41	393	GRA	10	9.55	1144
CH-Dav	46.82	9.86	1639	ENF	18	3.55	850
CH-Fru	47.12	8.54	982	GRA	10	7.72	1300
CH-Lae	47.48	8.37	689	MF	11	7.82	1187
CH-Oe1	47.29	7.73	450	GRA	7	9.27	1222
CH-Oe2	47.29	7.73	452	CRO	11	9.56	2063
CZ-wet	49.02	14.77	426	WET	9	8.40	609
DE-Akm	53.87	13.68	-1	WET	6	9.23	648
DE-Geb	51.10	10.91	161.5	CRO	14	9.67	531
DE-Gri	50.95	13.51	385	GRA	11	8.58	943
DE-Hai	51.08	10.45	430	DBF	13	8.33	761
DE-Kli	50.89	13.52	478	CRO	11	7.82	814
DE-Obe	50.78	13.72	735	ENF	7	6.49	1046
DE-Tha	50.96	13.57	380	ENF	19	8.91	844
DK-NuF	64.13	-51.39	50	WET	7	0.13	954
DK-Sor	55.49	11.64	40	DBF	19	8.40	861
DK-ZaH	74.47	-20.55	38	GRA	15	-8.84	161
FI-Hyy	61.85	24.30	181	ENF	19	4.41	611
FI-Sod	67.36	26.64	180	ENF	14	0.75	531
FR-Fon	48.48	2.78	103	DBF	10	11.43	691
FR-Gri	48.84	1.95	125	CRO	10	10.96	587
FR-LBr	44.72	-0.77	61	ENF	13	13.40	919
FR-Pue	43.74	3.60	270	EBF	15	13.76	925
GF-Guy	5.28	-52.92	48	EBF	11	25.61	3110
IT-BCi	40.52	14.96	20	CRO	11	18.06	1200
IT-Col	41.85	13.59	1560	DBF	19	7.34	1159
IT-Cpz	41.71	12.38	68	EBF	13	15.40	820
IT-MBo	46.01	11.05	1550	GRA	11	5.21	974
IT-Noe	40.61	8.15	28	SHR	11	16.42	585
IT-Ro1	42.41	11.93	235	DBF	9	15.47	865
IT-Ro2	42.39	11.92	160	DBF	11	15.45	786

IT-SRo	43.73	10.28	6	ENF	14	15.21	878
IT-Tor	45.84	7.58	2160	GRA	7	2.97	776
NL-Hor	52.24	5.07	2.2	GRA	8	10.60	1035
NL-Loo	52.17	5.74	25	ENF	18	10.07	865
RU-Fyo	56.46	32.92	265	ENF	17	5.23	566
US-ARM	36.61	-97.49	314	CRO	10	15.27	646
US-Blo	38.90	-120.63	1315	ENF	11	11.25	1401
US-Cop	38.09	-109.39	1520	GRA	7	13.62	203
US-GLE	41.37	-106.24	3197	ENF	11	-0.03	1405
US-Ha1	42.54	-72.17	340	DBF	22	8.16	1186
US-Los	46.08	-89.98	480	WET	15	4.86	787
US-Me2	44.45	-121.56	1253	ENF	13	7.50	512
US-MMS	39.32	-86.41	275	DBF	16	12.37	1083
US-Ne1	41.17	-96.48	361	CRO	13	10.62	839
US-Ne2	41.16	-96.47	362	CRO	13	10.34	861
US-Ne3	41.18	-96.44	363	CRO	13	10.44	697
US-NR1	40.03	-105.55	3050	ENF	17	2.29	727
US-PFa	45.95	-90.27	470	MF	20	5.74	606
US-SRG	31.79	-110.83	1291	GRA	7	18.77	388
US-SRM	31.82	-110.87	1120	SAV	11	19.01	333
US-Syv	46.24	-89.35	540	MF	14	3.96	734
US-Ton	38.43	-120.97	177	SAV	14	16.33	555
US-Twt	38.11	-121.65	-	CRO	6	14.75	359
US-UMB	45.56	-84.71	234	DBF	15	7.16	613
US-Umd	45.56	-84.70	239	DBF	8	7.09	738
US-Var	38.41	-120.95	129	GRA	15	15.87	563
US-WCr	45.81	-90.08	520	DBF	16	5.63	732
US-Whs	31.74	-110.05	1370	SHR	8	17.58	284
US-Wkg	31.74	-109.94	1531	GRA	11	17.33	293
ZA-Kru	-25.02	31.50	359	SAV	11	21.88	449

Lat, latitude; Long, longitude; Alt, altitude; PFT, plant functional type; n, data record length; MATa, mean annual air temperature; MAP, annual precipitation. ENF, evergreen needleleaf forest; DBF, deciduous broadleaf forest; EBF, evergreen broadleaf forest; MF, mixed forest; SHR, shrubland; GRA, grassland; CRO, cropland; SAV, savanna.

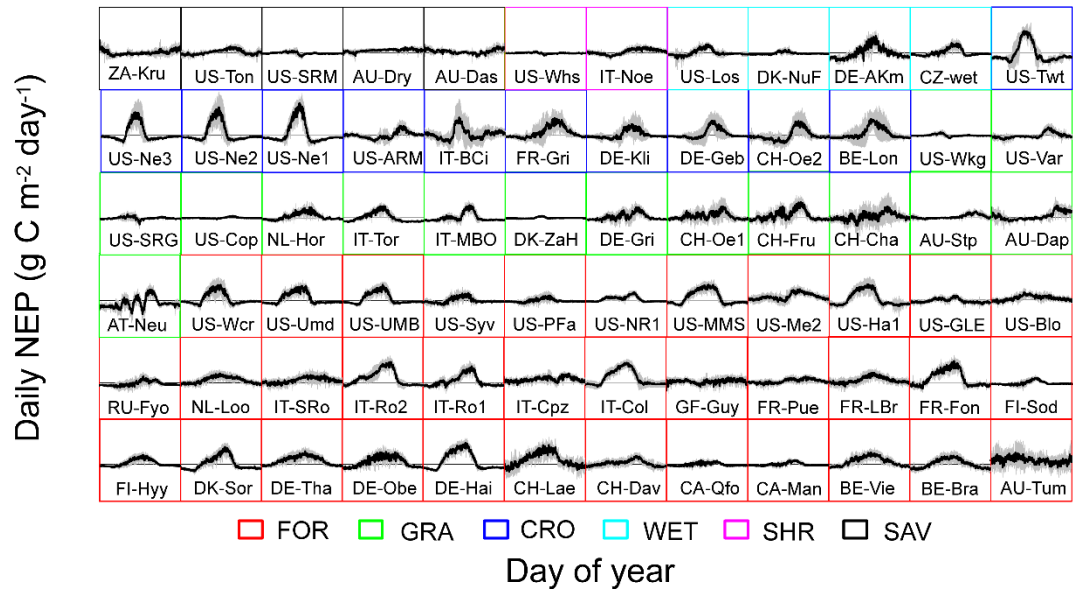


Figure S1. The micrometeorological tower sites with over 5 years of measurements in the FLUXNET2015 Dataset. The solid lines represent the multi-year mean NEP and the shades show the interannual variation of annual NEP.

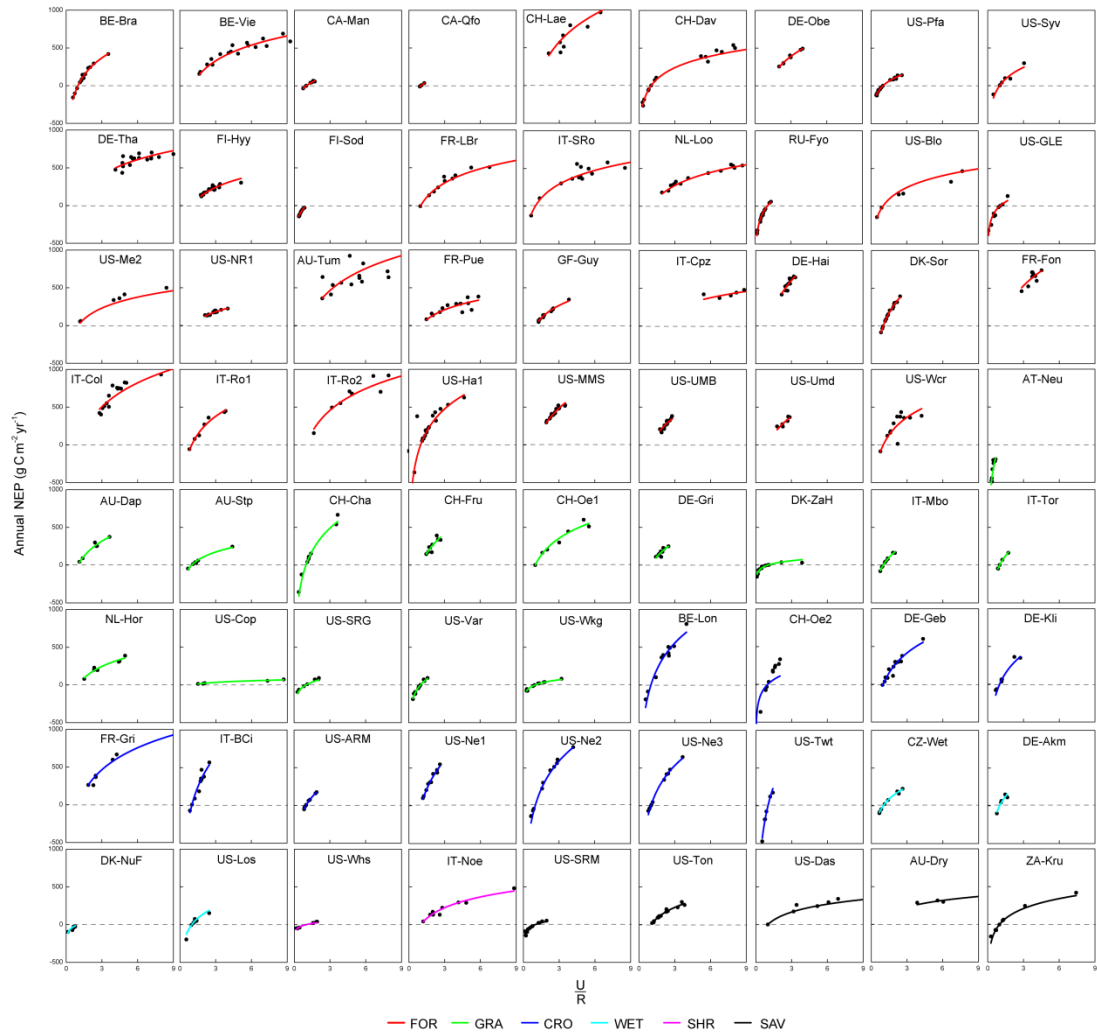


Figure S2. Logarithm regression of annual NEP and $\frac{U}{R}$ for 72 FLUXNET sites (of the form $NEP = \beta \cdot \ln\left(\frac{U}{R}\right)$). Each site with at least 5 years of data.

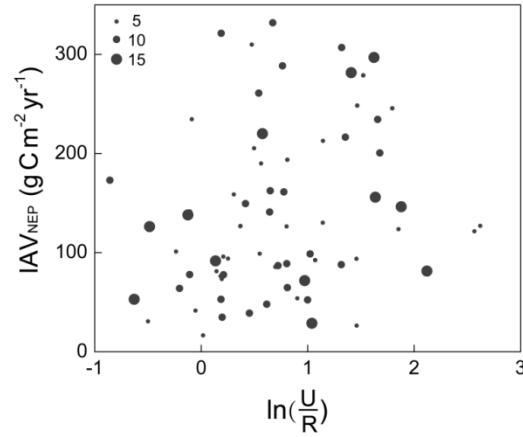


Figure S3. The relationship between IAV in NEP (IAV_{NEP} : quantified as the standard deviation of annual NEP) and $\ln(\frac{U}{R})$ ($R^2 = 0.048$, $P = 0.052$). The number of site-years at each site is indicated with the size of the point.

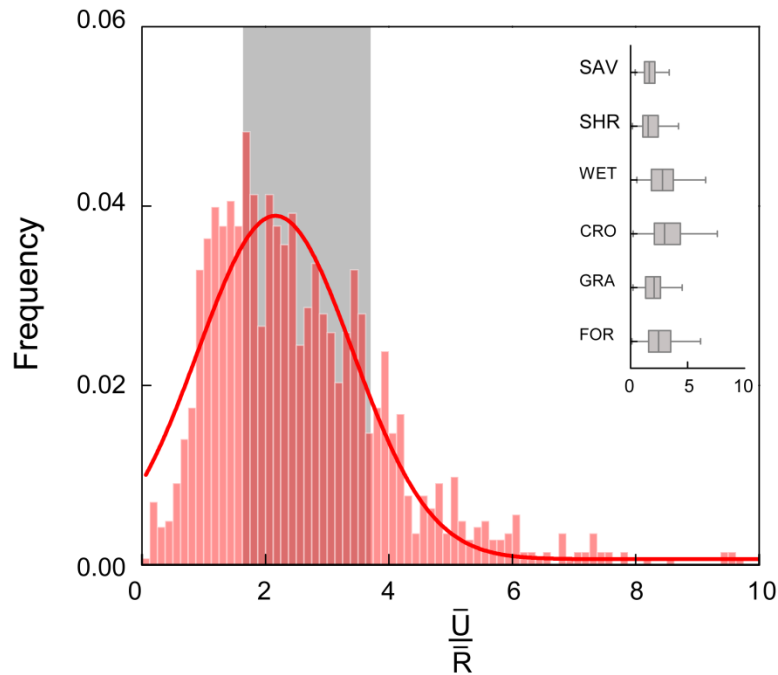


Figure S4. The frequency distribution of ratio $\frac{\bar{U}}{R}$ in this study (red) and the range of ratio $\frac{\bar{U}}{R}$ reported by Churkina et al. (2005) (grey shading). The inset panel shows distribution of $\frac{\bar{U}}{R}$ over different plant functional types.