

Supplemental material

Table S1. Description of FLUXNET sites and available years used in this study. PFT— Plant Functional type (ENF—Evergreen Needleleaf Forest; EBF—Evergreen Broadleaf Forest; DBF—Deciduous Broadleaf Forest; GRA—Grassland; CRO—Cropland; WSA—Woody Savanna; OSH—Open shrubland). MODIS 250m date is the date of selected MOD13Q1 NDVI images at 250-m and 16-days used for the development of the Spatial Heterogeneity Indicator (SHI).

N. Site	Site ID	Site name	Country	Lat (decimal degrees)	Lon (decimal degrees)	PFT	Measurement Interval (years)	MODIS 250m date
1	BR-Sa3	Santarem-Km83-Logged Forest	Brazil	-3.018030	-54.971401	EBF	2002–2003	24/05/2002
2	CA-NS5	UCI-1981 burn site	Canada	55.863098	-98.485001	ENF	2004–2005	25/05/2004
3	CA-NS6	UCI-1989 burn site	Canada	55.916698	-98.964401	OSH	2002–2005	24/05/2002
4	CA-NS7	UCI-1998 burn site	Canada	56.635799	-99.948303	OSH	2003–2005	25/05/2004
5	DE-Geb	Gebesee	Germany	51.100101	10.914300	CRO	2004–2006	24/05/2005
6	DE-Hai	Hainich	Germany	51.079300	10.452000	DBF	2004–2006	24/05/2005
7	DE-Kli	Klingenberg – cropland	Germany	50.892899	13.522500	CRO	2004–2006	24/05/2005
8	DE-Meh	Mehrstedt 1	Germany	51.275299	10.655500	GRA	2004–2006	24/05/2005
9	DE-Tha	Anchor Station Tharandt - old spruce	Germany	50.963600	13.566900	ENF	2005–2006	24/05/2005
10	DE-Wet	Wetzstein	Germany	50.453499	11.457500	ENF	2004–2006	24/05/2005
11	FI-Hyy	Hyytiala	Finland	61.847401	24.294800	ENF	2004–2006	24/05/2005
12	NL-Loo	Loobos	Netherlands	52.167900	5.743960	ENF	2005–2006	24/05/2005
13	US-ARM	ARM Southern Great Plains site- Lamont	USA	36.605801	-97.488800	CRO	2005–2006	24/05/2005
14	US-Bar	Bartlett Experimental Forest	USA	44.064602	-71.288078	DBF	2004–2005	24/05/2005
15	US-Bo1	Bondville	USA	40.006199	-88.290398	CRO	2003–2006	24/05/2005
16	US-FPe	Fort Peck	USA	48.307701	-105.101898	GRA	2004–2006	24/05/2005
17	US-Goo	Goodwin Creek	USA	34.254700	-89.873497	GRA	2002–2006	24/05/2005
18	US-MOz	Missouri Ozark Site	USA	38.744099	-92.199997	DBF	2005–2006	24/05/2005

19	US-Ne1	Mead - irrigated continuous maize site- Nebraska	USA	41.16506	-96.4766	CRO	2001–2004	24/05/2005
20	US-Ne2	Mead - irrigated maize- soybean rotation site	USA	41.164902	-96.470100	CRO	2001–2004	24/05/2002
21	US-SRM	Santa Rita Mesquite	USA	31.821400	-110.865997	WSA	2004–2006	24/05/2005

Figure S1

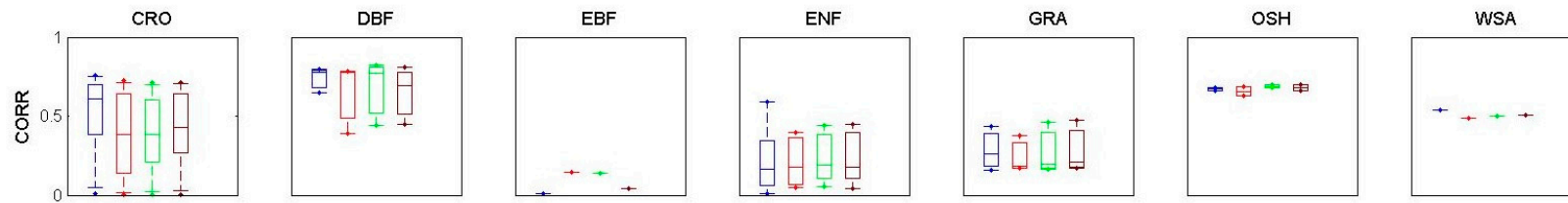


Figure S1. Results of the statistical analysis between NDVI_is and NDVIMD for different spatial resolutions in km (1 × 1 blue, 3 × 3 red, 5 × 5 green, and 7 × 7 brown) across PFTs (see Table S1 for the definition) on a site × year basis. CRO: Cropland; DBF: Deciduous broadleaf forest; EBF: Evergreen broadleaf forest; ENF: Evergreen needle leaf forest; GRA: Grassland; OSH: Open shrubland; and WSA: Woody savanna. CORR—coefficient of determination. The top and bottom of a "box" represents the 25th and 75th percentile of the sample, respectively, and the distance between top and bottom is the interquartile range. The line in the middle of a box represents the median value. The whiskers are drawn from the ends of the interquartile ranges to the 25th and 75th percentiles. The highest/lowest annual outlier scores are displayed with a black + sign.