

Supplementary Data: Table S1. CEOS WGCV LPV supersites and S3VT 'core' validation sites. The land cover assigned to each site is based on Global Land Cover 2000 (GLC2000) product.

No	Site acronym	Country	Network	Lat	Lon	Land cover
1	AU-Cumberland	Australia	TERN-SuperSites, AusCover/OzFlux	-33.615	150.723	Broadleaved, evergreen
2	AU-Great-Western	Australia	TERN-SuperSites, AusCover/OzFlux	-30.192	120.654	Broadleaved, deciduous, open
3	AU-Litchfield	Australia	TERN-SuperSites, AusCover/OzFlux	-13.180	130.790	Broadleaved, evergreen
4	AU-Robson-Creek	Australia	TERN-SuperSites, AusCover/OzFlux	-17.117	145.630	Broadleaved, evergreen
5	IT-Tra	Italy	CORE	37.646	12.867	Cropland
6	SP-Ali	Spain	CORE	38.452	-1.065	Cropland
7	US-Moab-Site	United States	NEON, AERONET	38.248	-109.388	Shrub, closed-open, deciduous
8	US-Talladega	United States	NEON, AERONET	32.950	-87.393	Needle-leaved, evergreen
9	AU-Wombat	Australia	TERN-SuperSites, AusCover/OzFlux	-37.422	144.094	Broadleaved, evergreen
10	FR-Guayaflux	France	ICOS Associated	5.279	-52.925	Broadleaved, evergreen
11	FR-Hesse	France	ICOS	48.674	7.065	Broadleaved, deciduous, closed
12	US-Harvard	United States	NEON, AERONET	42.537	-72.173	Broadleaved, deciduous, closed
13	US-Mountain-Lake	United States	NEON, AERONET	37.378	-80.525	Broadleaved, deciduous, closed
14	AU-Calperum	Australia	TERN-SuperSites, AusCover/OzFlux	-34.003	140.588	Shrub, closed-open, deciduous
15	AU-Cape-Tribulation	Australia	TERN-SuperSites, OzFlux	-16.106	145.378	Broadleaved, evergreen
16	AU-Rushworth	Australia	TERN-AusCover	-36.753	144.966	Broadleaved, deciduous, open
17	AU-Tumbarumba	Australia	TERN-SuperSites, AusCover/OzFlux	-35.657	148.152	Broadleaved, evergreen
18	FR-Puechabon	France	ICOS	43.741	3.596	Needle-leaved, evergreen
19	IT-Cat	Italy	CORE	37.279	14.883	Cropland
20	IT-Lison	Italy	ICOS	45.740	12.750	Cropland
21	US-Central-Plains	United States	NEON, AERONET	40.816	-104.746	Shrub, closed-open, deciduous
22	US-Oak-Rige	United States	NEON, AERONET	35.964	-84.283	Broadleaved, deciduous, closed
23	AU-Watts-Creek	Australia	TERN-AusCover	-37.689	145.685	Broadleaved, evergreen
24	CR-Santa-Rosa	Costa Rica	ENVIRONET	10.842	-85.616	Broadleaved, evergreen
25	FR-Montiers	France	ICOS	48.538	5.312	Broadleaved, deciduous, closed
26	UK-Wytham-Woods	United Kingdom	ForestGeo - NPL	51.774	-1.338	Broadleaved, deciduous, closed
27	US-Bartlett	United States	NEON, AERONET	44.064	-71.287	Broadleaved, deciduous, closed
28	AU-Warra-Tall	Australia	TERN-SuperSites, AusCover/OzFlux	-43.095	146.654	Broadleaved, evergreen
29	BR-Mata-Seca	Brazil	ENVIRONET	-14.880	-43.973	Herbaceous, closed-open
30	IT-Collelongo	Italy	EFDC	41.849	13.588	Broadleaved, deciduous, closed
31	SE-Dahra	Senegal	KIT / UC	15.400	-15.430	Cultivated and managed areas
32	AU-Zigzag-Creek	Australia	TERN-AusCover	-37.474	148.339	Broadleaved, evergreen
33	FR-Estrees-Mons	France	ICOS Associated	49.872	3.021	Cultivated and managed areas
34	DE-Selhausen	Deutschland	ICOS	50.866	6.447	Cropland
35	NE-Loobos	Netherlands	ICOS Associated	52.166	5.744	Needle-leaved, evergreen
36	DE-Geb	Deutschland	CORE	51.100	10.914	Cropland
37	FR-Aurade	France	ICOS	43.550	1.106	Cropland