Table S1. Literature on the gap-filling routines for net ecosystem exchange of CO_2

References	Surface type	Site location	Binning approaches	Vegetation development	Site number	Data-set length
Falge et al., 2001	forests, crops (wheat, corn, soybean), and grass	Europe, America	time window (2 or 3 months), temperature binning	N.A.	19	1 to 2 years
Hollinger et al., 2004	forest	America	time window (1 month)	N.A.	2	7 years
Desai et al., 2005	forest	America	time window (> 1 month)	LAI = 5.3	2	2 years
Reichstein et al., 2005	forests, shrub, and crops (corn, soybean)	Europe, America	time window (±7 or ±14 days)	N.A.	16	1 year
Papale et al., 2006	forests	Europe	time window (±7 or ±14 days)	N.A.	8	1 to 2 years
Ruppert et al., 2006	forest	Europe	temperature binning	PAI = 5.2	1	1 year
Stoy et al., 2006	forests,grass	America	time window (1 month)	LAI < 7	3	5 years
Ammann et al., 2007	grassland (rapid change)	Europe	time window (5 days)	LAI ≤7	1	3 years
Moffat et al., 2007	forests	Europe	time window (1 or 2 months)	N.A.	6	1 to 2 years
Noormets et al., 2007	forests	America	time window (1 month)	LAI = 0.2 to 3.86	5	0.5 year
Richardson and Hollinger, 2007	forests	Europe, America	time window (1 month)	N.A.	6	1 to 9 years
Xing et al., 2007	forests	America	time window (9 days)	LAI = 2.1 to 8.4	8	growing seasons within 1 year
Lasslop et al., 2010	forests, crops (corn or soybean), grass, and wet Savanna	Europe, America, Africa	time window (4 days)	N.A.	8	1 year
Wu et al., 2012	forest	Europe	time window (4 days)	N.A.	1	13 years
this study	croplands(potato, rice)	Asia	time window (4 days for potato, 8 days for rice), temperature binning	LAI = 0 to 5.7 (potato) LAI = 0.1 to 3.2 (rice)	2	growing seasons within 1 year