Modeling Soil CO_2 Efflux in a Subtropical Forest by Combining Fused Remote Sensing Images with Linear Mixed Effect Models

Supplementary materials

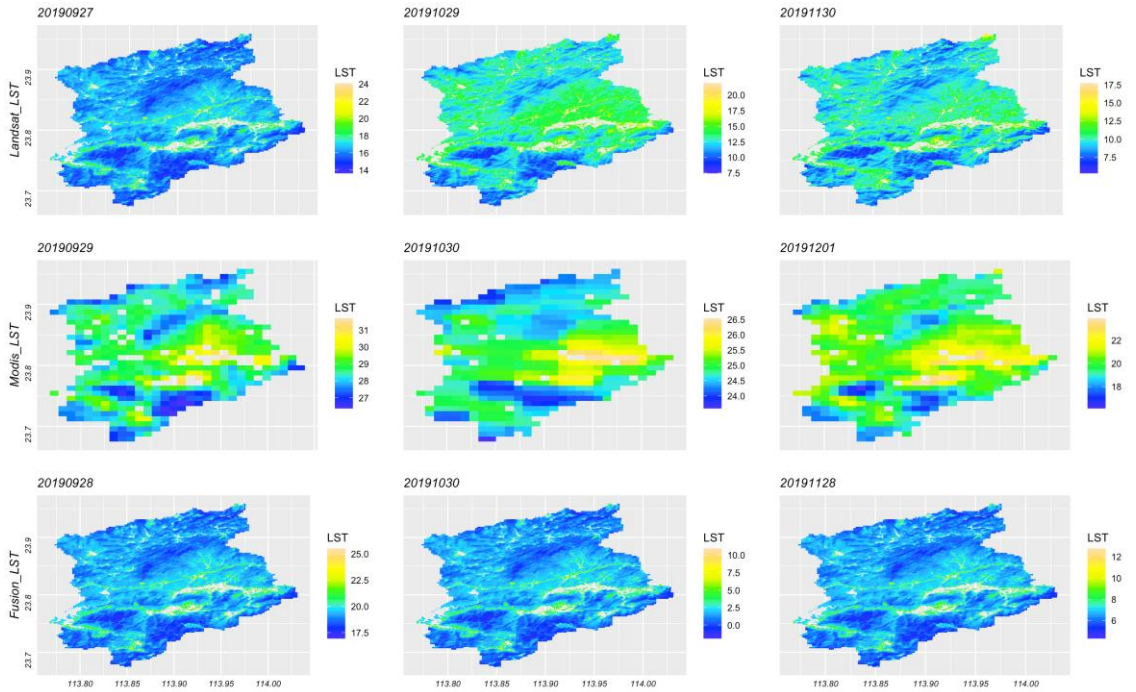

Figure S1 Spatial distribution of LST derived from multi source remote sensing images in different study periods of subtropical forests in dry seasons. First line is Landsat 8-LST, second line is MODIS-LST, third line is Landsat-MODIS Fusion-LST.

Table S1 Linear mixed effect of which Fusion-LST estimate grouped by month (random intercept effect) of observation was used to explain variability in soil $FSCO_2$ subtropical forests.

Random effect			
Groups	Name	Variance	Std.Dev.
month	(Intercept)	0.042	0.205
residual		0.037	0.193
Fixed effect	Estimate	Std.Error	t-value
(intercept)	0.535	0.10	5.335
Fusion_LST	-0.214	0.06	-3.287
Wald's chi-square test			
Fusion_LST	Chisq	df	p-value
		137.653	0.001 * *

Table S2 Linear mixed effect of which Fusion-LST estimate grouped by season (random intercept effect) of observation was used to explain variability in soil $FSCO_2$ subtropical forests.

Random effect			
Groups	Name	Variance	Std.Dev.
season	(Intercept)	0.028	0.168
residual		0.053	0.229
Fixed effect	Estimate	Std.Error	t-value
(intercept)	0.477	0.104	4.588
Fusion_LST	-0.840	0.068	-1.239
Wald's chi-square test			
Fusion_LST	Chisq	df	p-value
		136.612	0.2176

Table S3 Linear mixed effect of which Fusion-LST estimate grouped by day (random intercept effect) of observation was used to explain variability in soil $FSCO_2$ subtropical forests.

Random effect			
Groups	Name	Variance	Std.Dev.
day	(Intercept)	0.065	0.255
residual		0.007	0.084
Fixed effect	Estimate	Std.Error	t-value
(intercept)	0.467	0.099	4.694
Fusion_LST	-0.129	0.159	-0.812
Wald's chi-square test			
Fusion_LST	Chisq	df	p-value
		52.763	0.42