

**Table S1.** Pearson correlation coefficients between SM-GPP, LST-GPP and SM\_LST anomalies during spring and summer for each land cover-type in 2005 and 2012 over IB. All correlation values are statistically significant at 1% level, with exception for the underline italic values. HTC corresponds to High Tree Cover areas, LTC represents Low Tree Cover Areas and Cp characterizes croplands.

		SM-GPP			LST-GPP			SM-LST		
		<i>HTC</i>	<i>LTC</i>	<i>Cp</i>	<i>HTC</i>	<i>LTC</i>	<i>Cp</i>	<i>HTC</i>	<i>LTC</i>	<i>Cp</i>
<b>IB05</b>	Spring	0.07	0.17	0.10	-0.38	-0.54	-0.50	-0.29	-0.36	-0.35
	Summer	0.32	0.39	0.35	-0.57	-0.59	-0.61	-0.39	-0.49	-0.43
<b>IB12</b>	Spring	-0.41	-0.10	<u>0.01</u>	0.23	0.09	-0.07	-0.36	-0.42	-0.32
	Summer	-0.04	<u>0.01</u>	0.23	-0.32	-0.40	-0.49	-0.06	-0.13	-0.27

**Table S2.** See Table S1 for similar explanation, but over EM in 2003 and 2007.

		SM-GPP			LST-GPP			SM-LST		
		<i>HTC</i>	<i>LTC</i>	<i>Cp</i>	<i>HTC</i>	<i>LTC</i>	<i>Cp</i>	<i>HTC</i>	<i>LTC</i>	<i>Cp</i>
<b>EM03</b>	Spring	0.05	-0.01	0.16	0.25	0.11	-0.06	-0.05	-0.09	-0.08
	Summer	0.16	0.10	0.09	-0.38	-0.54	-0.65	-0.16	-0.18	-0.29
<b>EM07</b>	Spring	-0.14	-0.12	0.06	0.35	0.31	0.11	-0.06	-0.10	-0.25
	Summer	0.36	0.25	0.37	-0.50	-0.41	-0.57	-0.48	-0.30	-0.50

**Table S3.** See Table S1 for similar explanation, but over WE in 2003 and 2006.

		SM-GPP			LST-GPP			SM-LST		
		<i>HTC</i>	<i>LTC</i>	<i>Cp</i>	<i>HTC</i>	<i>LTC</i>	<i>Cp</i>	<i>HTC</i>	<i>LTC</i>	<i>Cp</i>
<b>WE03</b>	Spring	-0.05	0.08	<u>0.00</u>	-0.06	0.06	<u>-0.00</u>	-0.21	-0.13	-0.17
	Summer	-0.23	-0.12	<u>-0.01</u>	-0.37	-0.58	-0.55	0.11	-0.23	-0.32
<b>WE06</b>	Spring	0.11	0.22	0.16	0.18	0.29	0.25	0.19	0.15	0.09
	Summer	0.15	0.11	0.17	-0.20	-0.14	-0.03	-0.63	-0.54	-0.49