

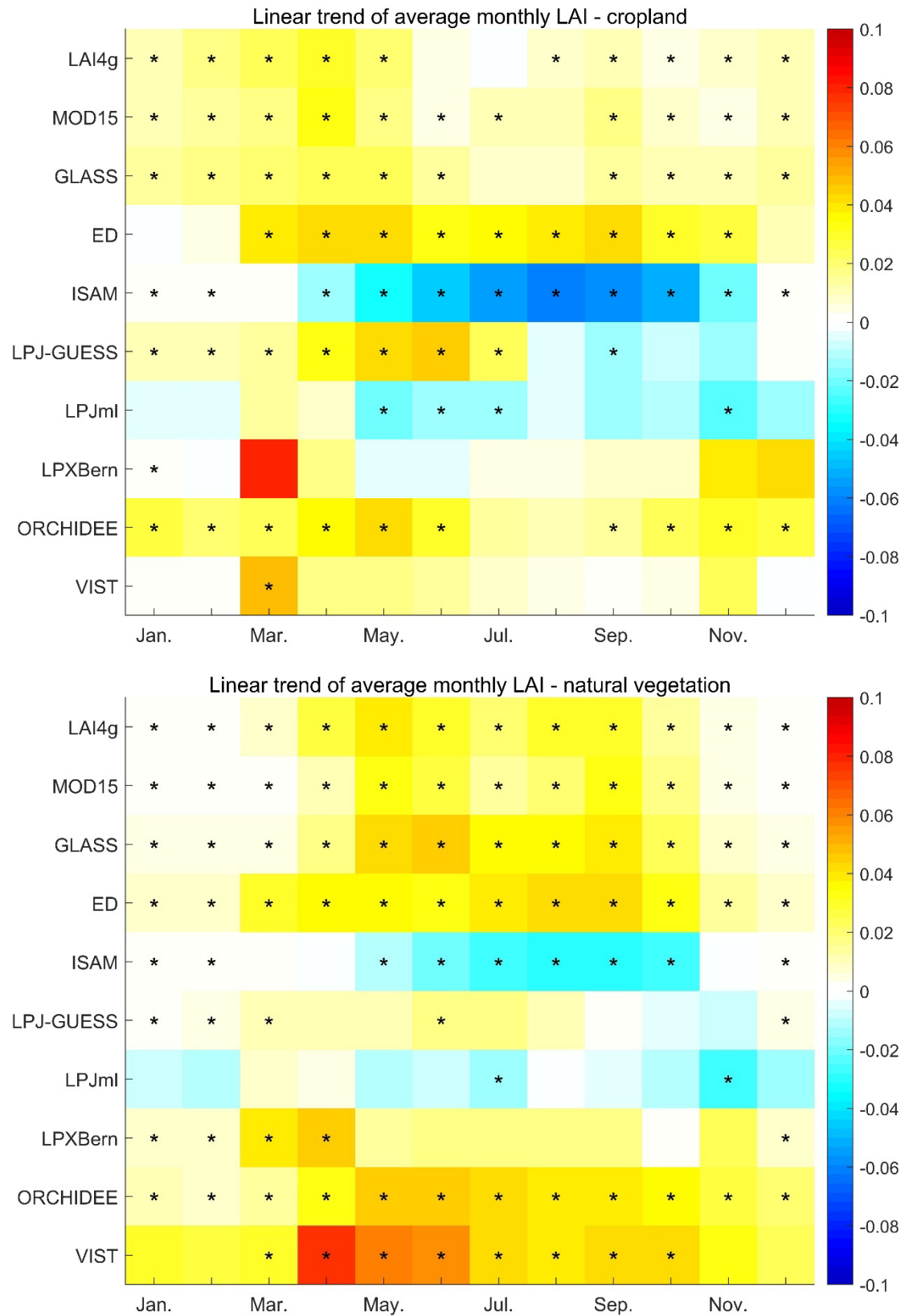


Figure S1: linear trends of average monthly LAI for cropland and natural vegetation. Warm colors represent positive trends while Cool colors represent negative trends; The asterisk(*) means the linear trend pass the significance test($p < 0.05$).

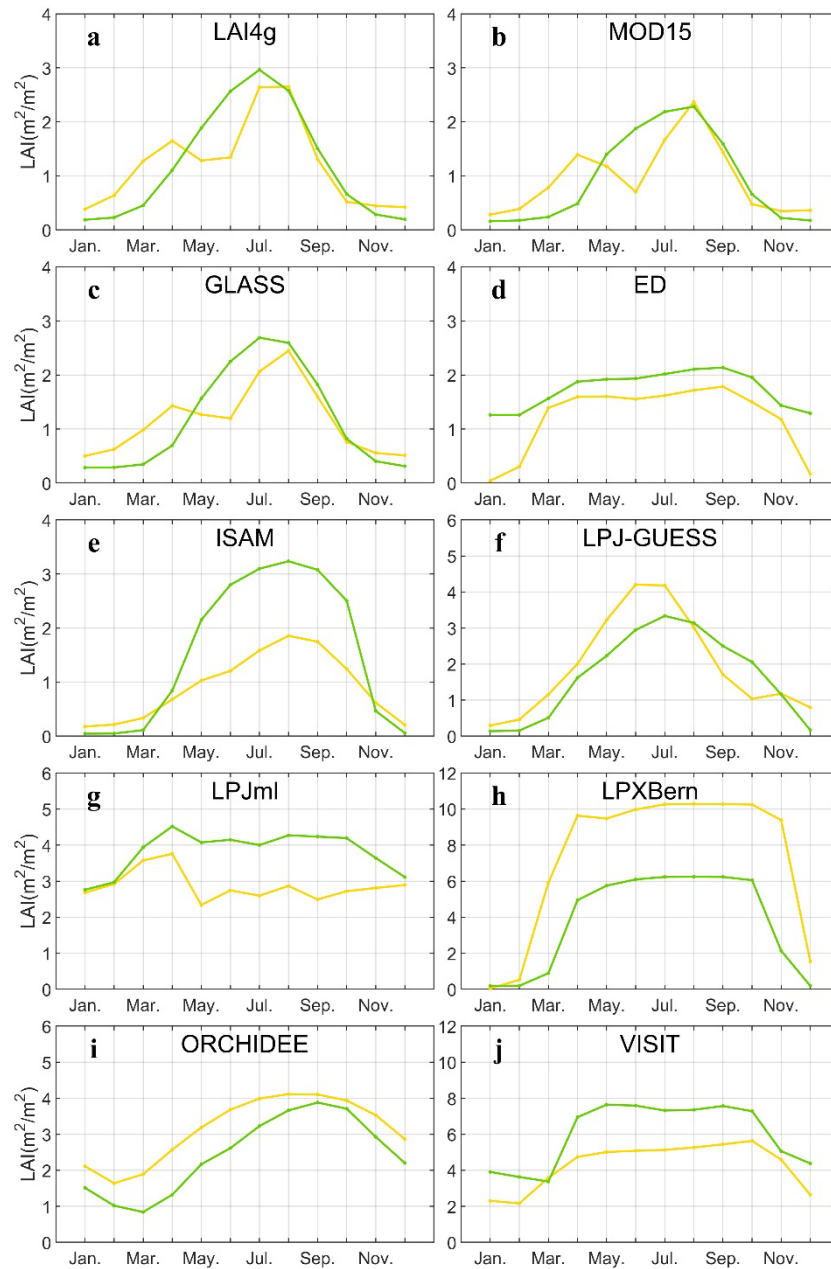


Figure S2: Direct comparison of seasonal cycles monthly LAI respectively for cropland and natural vegetation. Yellow represents cropland and green represents natural vegetation.

Table 1

Class	RESDC class name	2000	2005	2010	2015	2020	Changes	Change rate
1	Paddy cropland	16503	15798	15555	15354	16222	-281	-1.70%
2	Dry cropland	283847	281904	280140	278048	267825	-16022	-5.64%
3	Woodland	35840	35789	35776	35713	35236	-604	-1.69%
4	Grassland	31565	31117	31025	30980	25897	-5668	-17.96%
5	Water body	14263	14500	14619	14726	16883	2620	18.37%
6	Build land	58191	61411	63520	65844	79809	21618	37.15%
7	Unuse land	2131	1840	1762	1760	334	-1797	-84.33%

Table S1: Land Cover Types Derived From Fig.1b, 1c, 1d and the Area (km²) of Each Type Using RESDC Land Cover Product.

Table 2

Dataset Name	Spatial Resolution	Temporal Resolution	Temporal Coverage	Abbreviation
GIMMS-LAI4g	1/12°	half monthly	1982-2020	LAI4g
MOD15A2H	500m	8 day	2000.feb-2023	MOD15
GLASS-LAI	0.05°	8 day	2000.feb -2022	GLASS
ED	0.5°	monthly	1700-2023	ED
ISAM	0.5°	monthly	1700-2023	ISAM
LPJ-GUESS	0.5°	monthly	1700-2023	LPJ-GUESS
LPJml	0.5°	monthly	1700-2023	LPJml
LPXbern	0.5°	monthly	1700-2023	LPXbern
ORCHIDEE	0.5°	monthly	1700-2023	ORCHIDEE
VISIT	0.5°	monthly	1860-2023	VISIT

Table S2: Spatial Resolution, Temporal Resolution and Temporal Coverage of chosen Leaf Area Index datasets. The abbreviations represent the dataset names that appear later in the text.