Spring phenology inferred from two remotely sensed vegetation indices time series: confidence and uncertainty
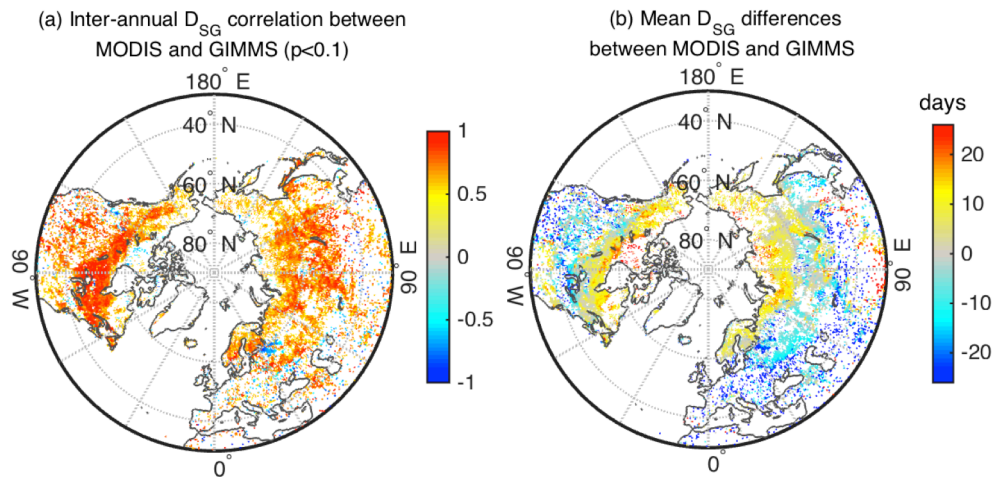

Figure S1 Correlation between MODIS and GIMMS inferred inter-annual D_{SG} over 2001-2013 ($p < 0.1$) (a), and the difference between GIMMS and MODIS inferred $\overline{D}_{SG}$ (days, $D_{SG}^{M} - D_{SG}^{G}$)(b).
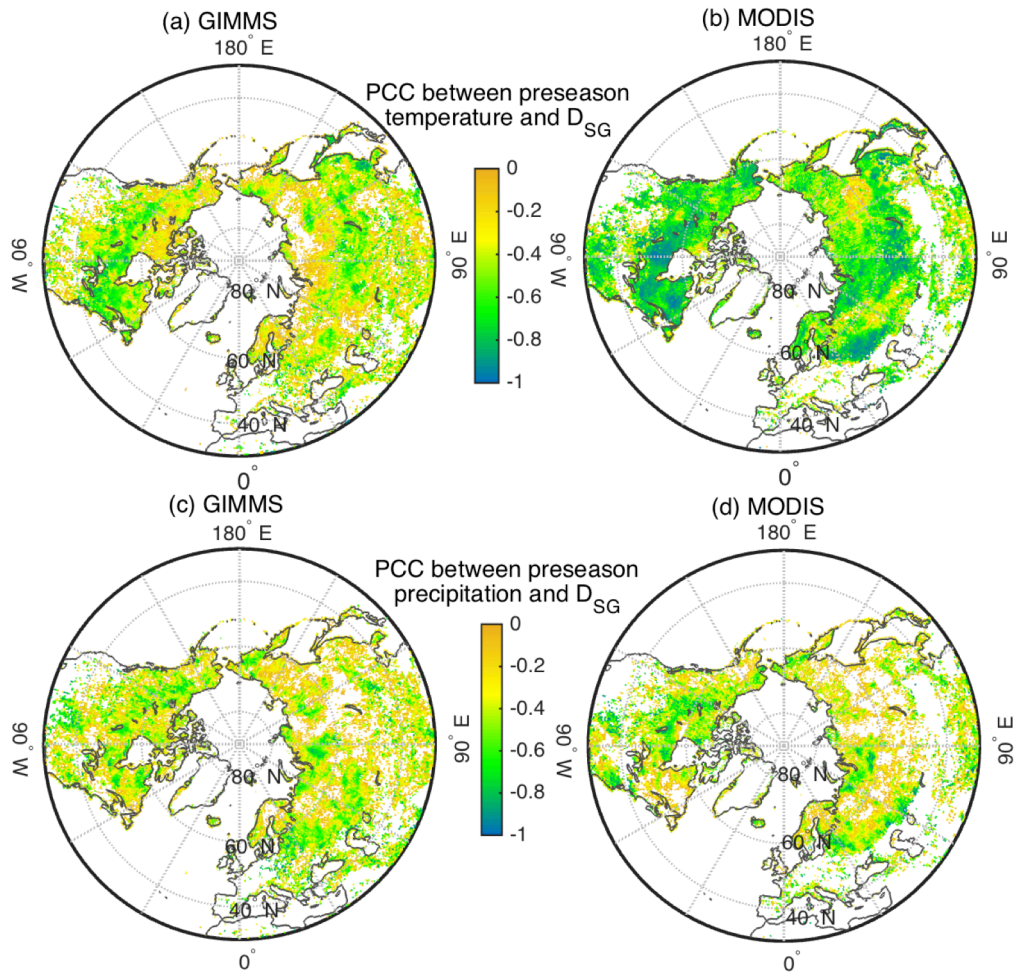
Figure S2 Pearson correlation coefficient (PCC) between preseason temperature (T_m) and date of spring greenup (D_{SG}) for GIMMS (a) and MODIS(b) and Pearson correlation coefficient (PCC) between preseason precipitation (P_t) and date of spring greenup (D_{SG}) for GIMMS (c) and MODIS(d).
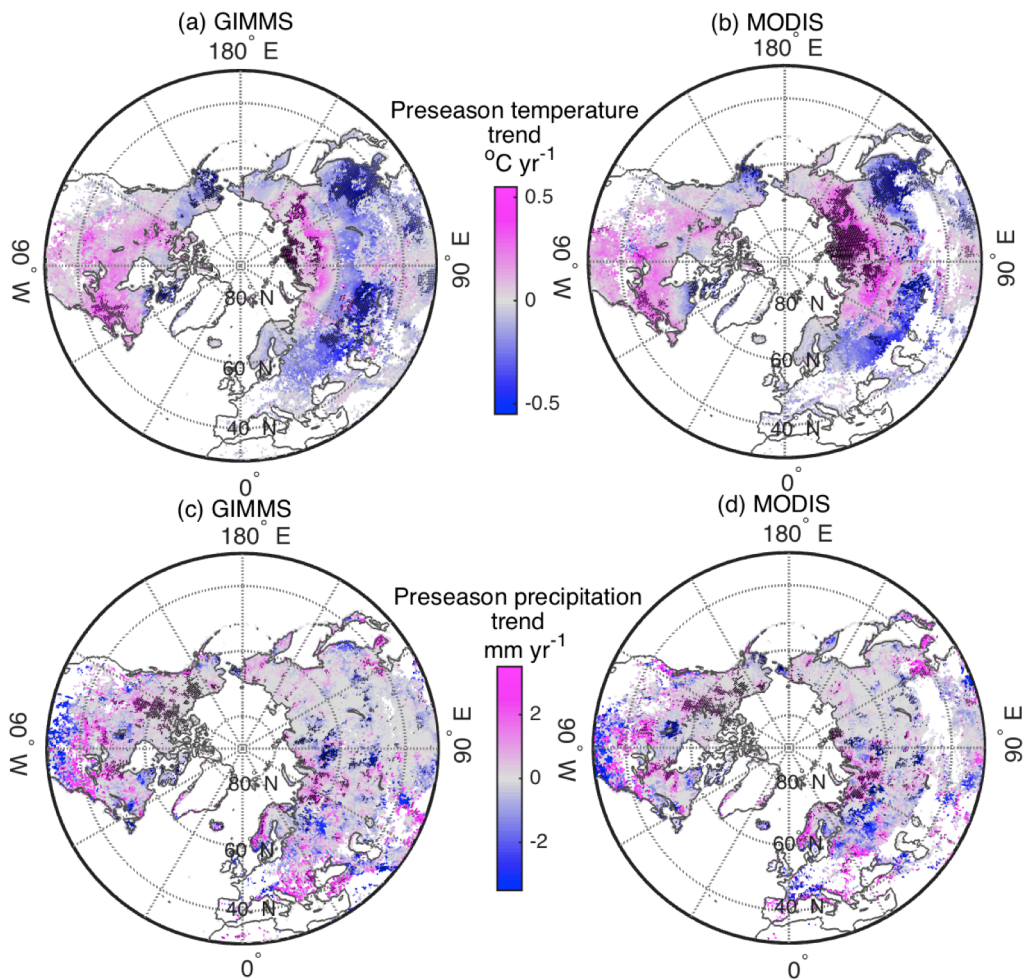
Figure S3 The preseason temperature trend (°C yr⁻¹) calculated from CRUNCEP correlated to spring greenup date inferred from GIMMS (a) and MODIS (b) NDVI and precipitation trend (mm yr⁻¹) calculated from CRUNCEP correlated to spring greenup date inferred from GIMMS (c) and MODIS (d) NDVI. The shaded regions indicate that the trend is significant ($p < 0.1$).

Table S1. The number of pixels for the calculation of D_{SG} sensitivity to preseason temperature (p<0.1) for each biome

Veg.	1988-2000	2001-2013	
Type*	GIMMS	GIMMS	MODIS
ENF	1477	556	1677
DNF	356	202	339
DBF	119	26	96
MF	2700	966	2860
OS	4691	616	5371
WS	1204	168	1397
GLS	2076	630	1273
GLN	874	143	545
PW	327	95	330
CP	1019	587	791

*We used the IGBP land cover classification for 9 biomes in 2012: Evergreen Needleleaf Forest (ENF), Deciduous Needleleaf Forest (DNF), Deciduous Broadleaf forest (DBF), Mixed Forest (MF), Open Shrublands (OS), Woody Savannas (WS), Grassland (GL), Permanent Wetland (PW), and Cropland (CP). We distinguish the Arctic grassland to the north of 60°N (GLN), from temperate grassland in the south (GLS) due to their expected differences in climate and controls on phenology.