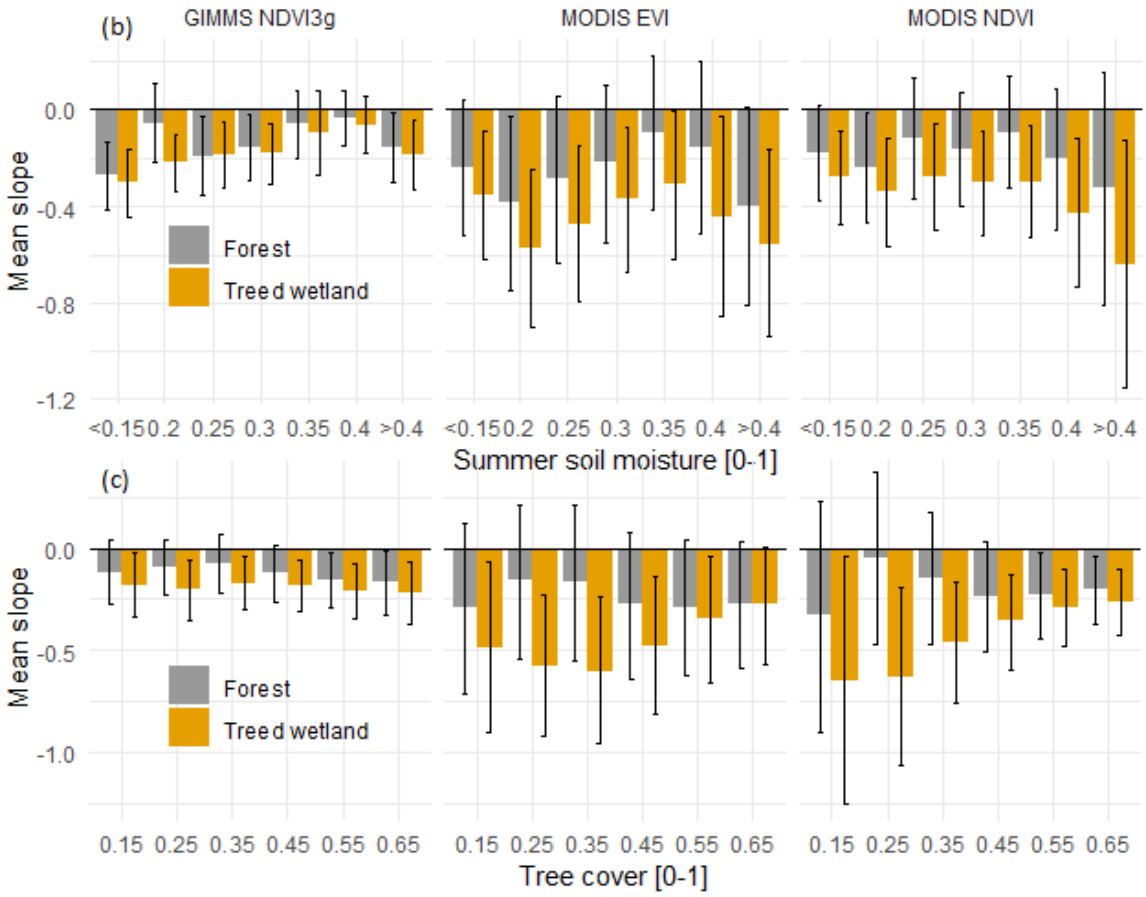

Figure S1. The spatial distribution of regression slopes between spring and summer greenness from GIMMS NDVI3g for 1982 – 2011 and MODIS NDVI and EVI for 2000 – 2017 (a), and slopes plotted along the long-term mean summer soil moisture (m^3/m^3) (b) and tree cover (c) classes for forests and treed wetland. Error bars in (b) and (c) represent one standard deviation of spatial slope in each soil moisture or tree cover class. The regression slopes are computed at native spatial resolutions of GIMMS and MODIS data.

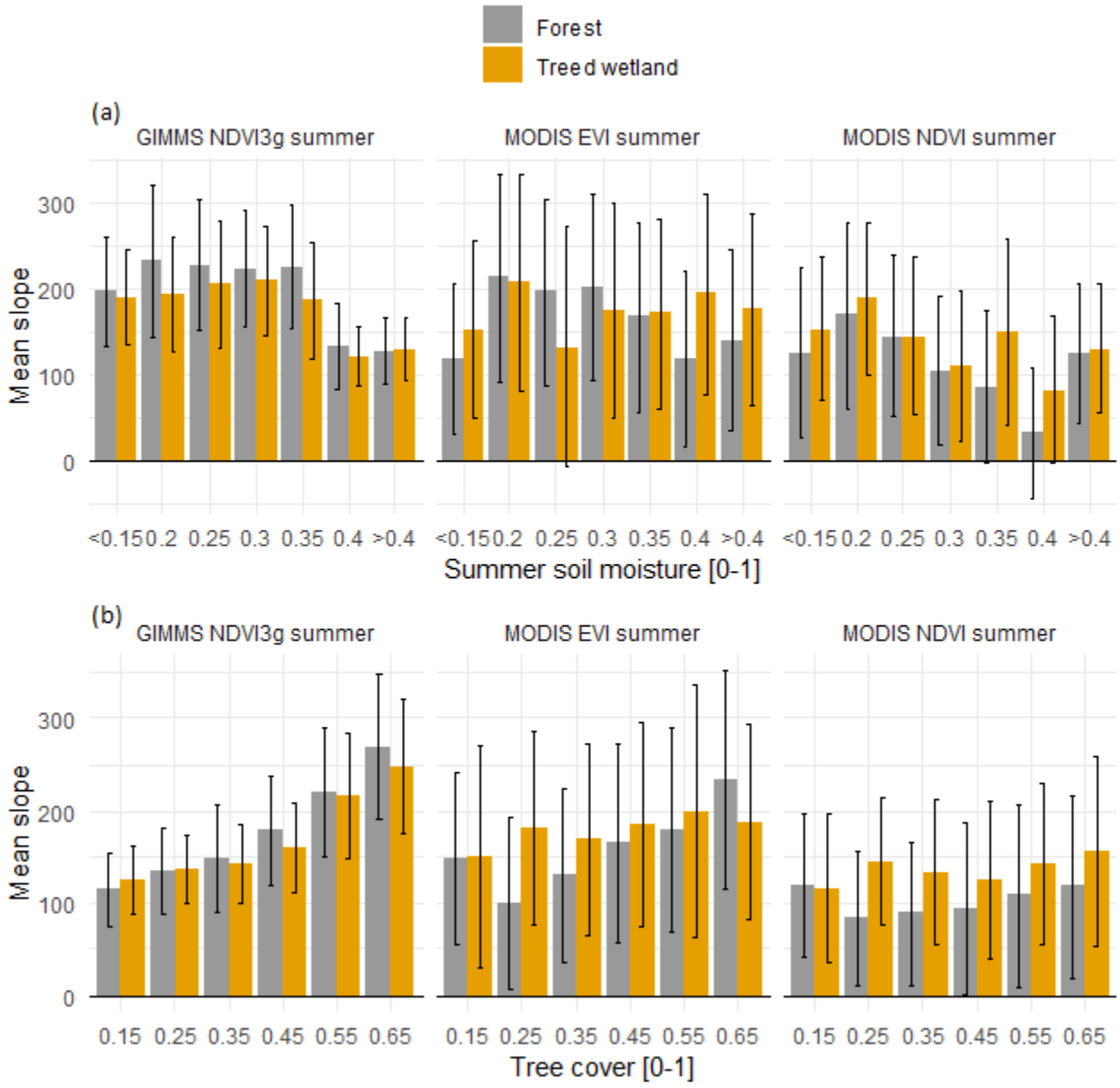

Figure S2. Regression slopes of start of season (SOS) with summer NDVI and EVI from GIMMS NDVI3g and MODIS plotted along the long-term mean summer soil moisture (m^3/m^3) (a) and tree cover (b) classes for forests and treed wetland. Error bars represent one standard deviation of spatial slope in each soil moisture or tree cover class. The regression slopes are computed at native spatial resolutions of GIMMS and MODIS data.

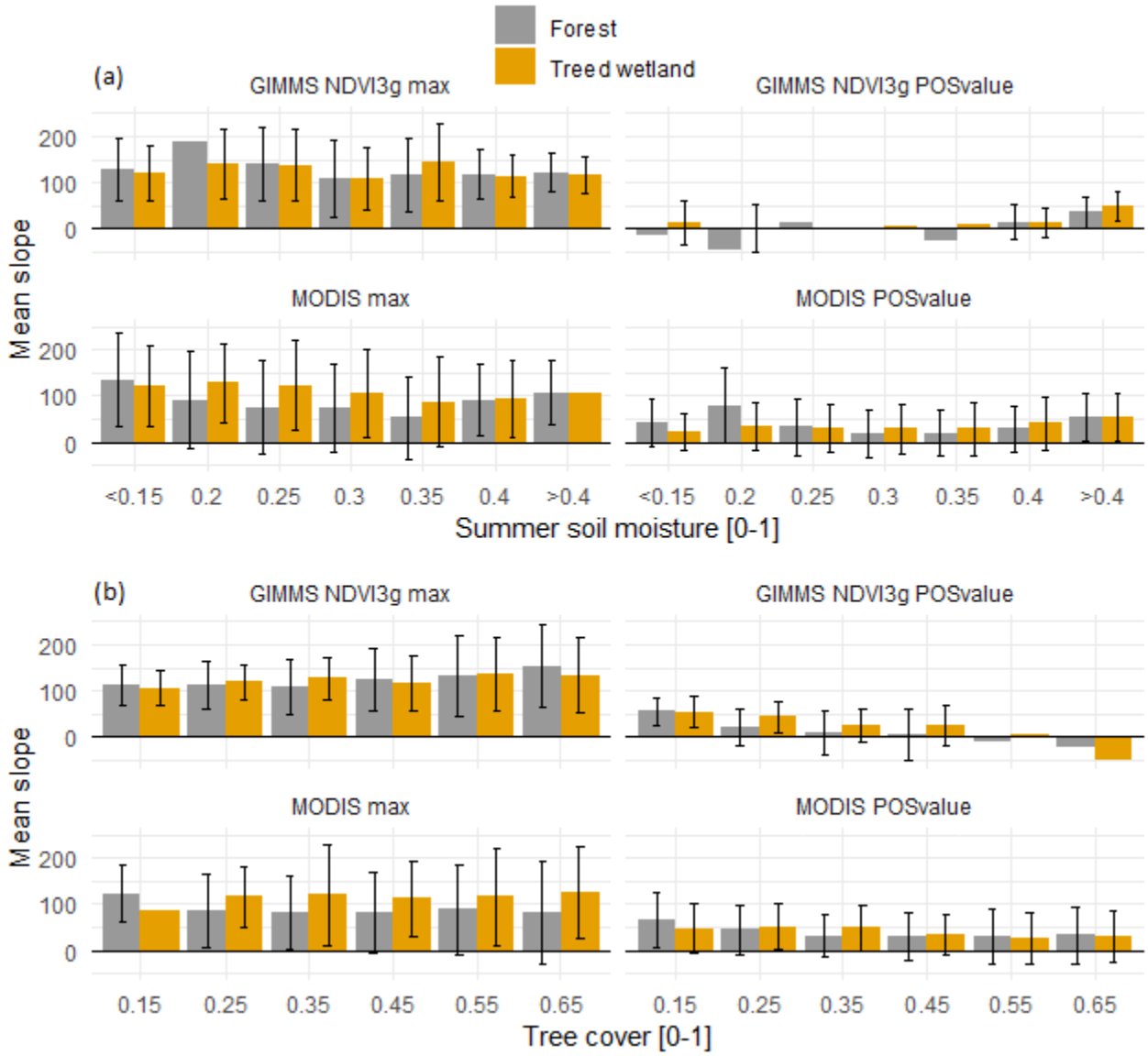

Figure S3. Regression slopes of start of season (SOS) with maximum productivity obtained from GIMMS NDVI3g and MODIS NDVI plotted along the long-term mean summer soil moisture (m^3/m^3) (a) and tree cover (b) classes for forests and treed wetland. Error bars represent one standard deviation of spatial slope in each soil moisture or tree cover class. The regression slopes are computed at native spatial resolutions of GIMMS and MODIS data. Maximum productivity values are obtained from peak of season day (i.e. POSvalue) using the curve-fitting algorithm and directly from maximum annual value of the raw data (i.e. max).