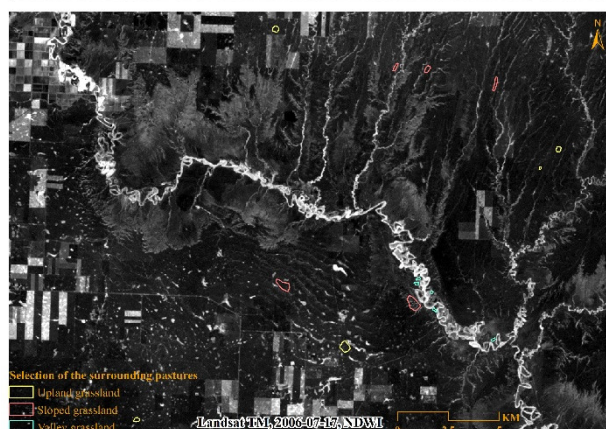
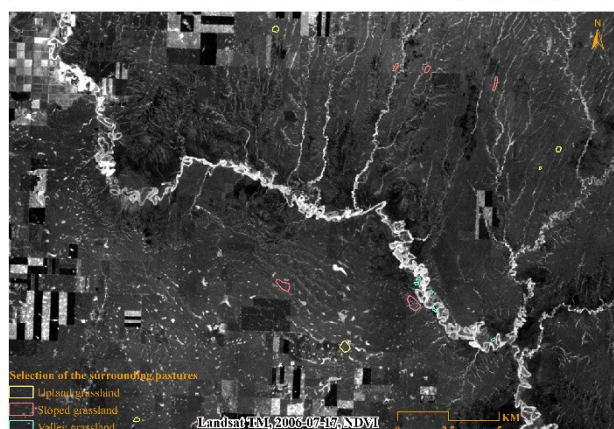
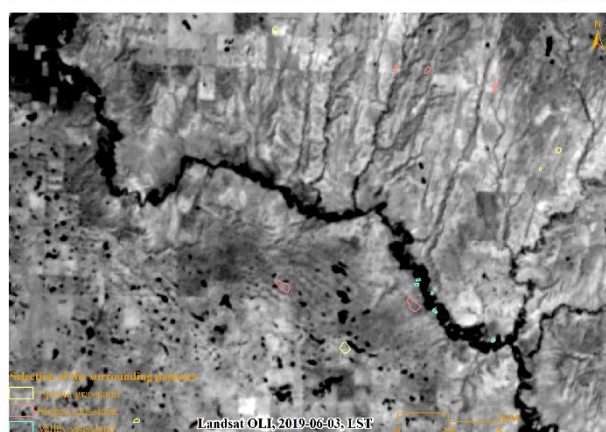
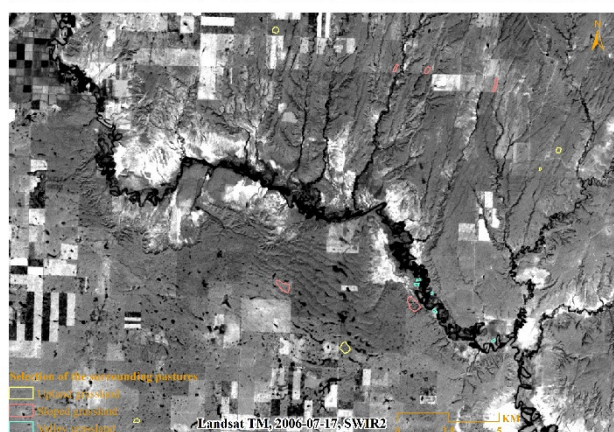
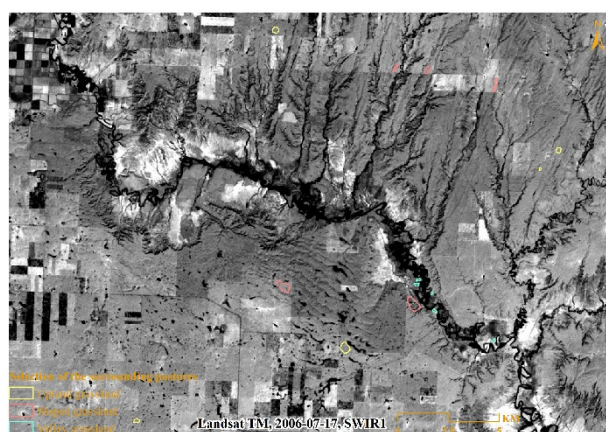
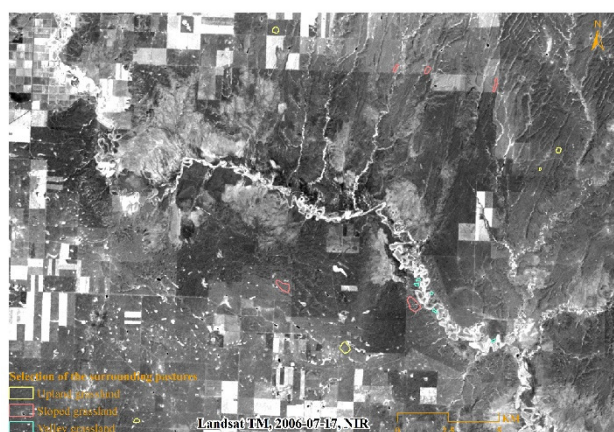
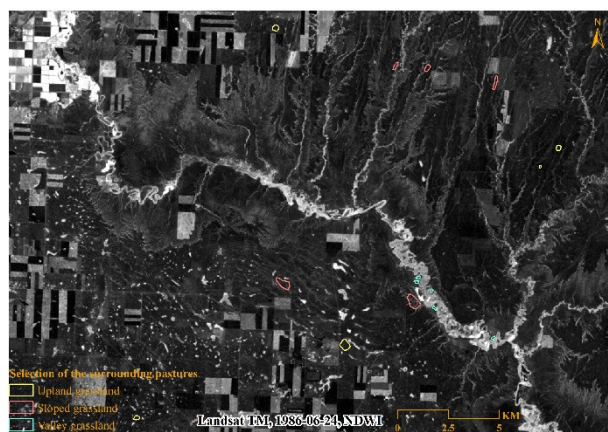
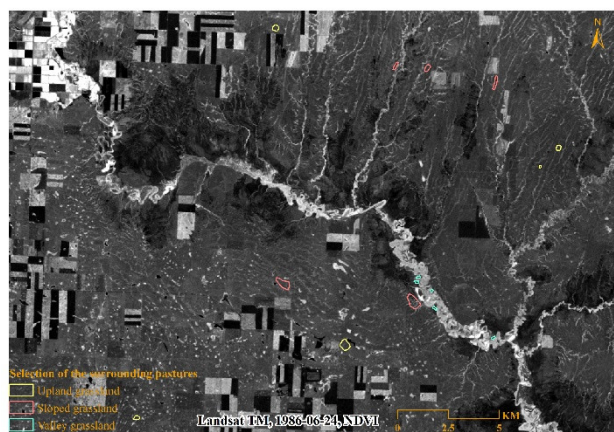
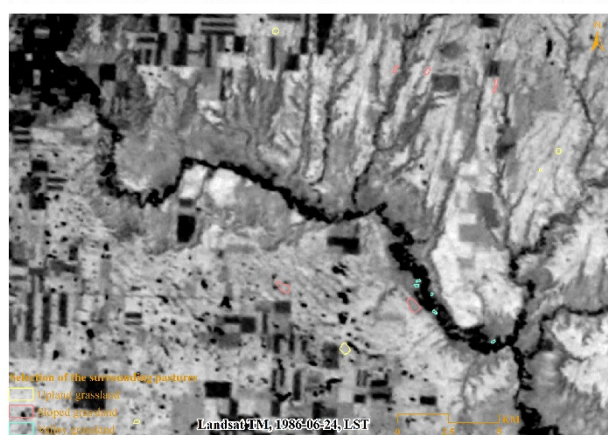
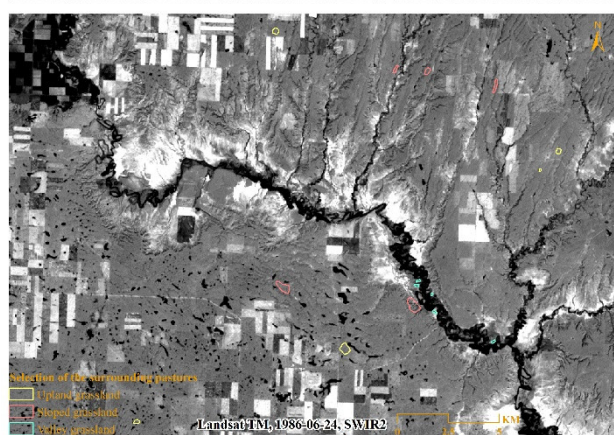
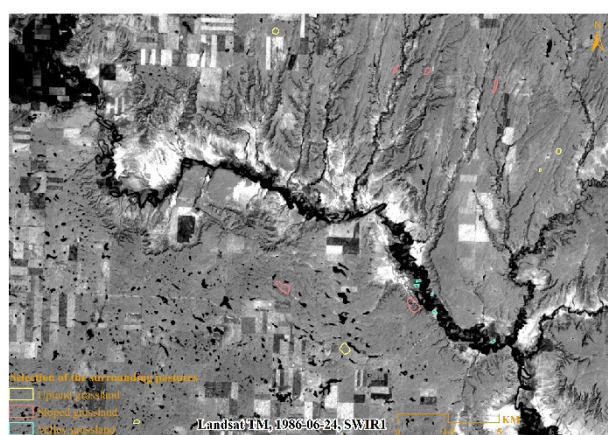
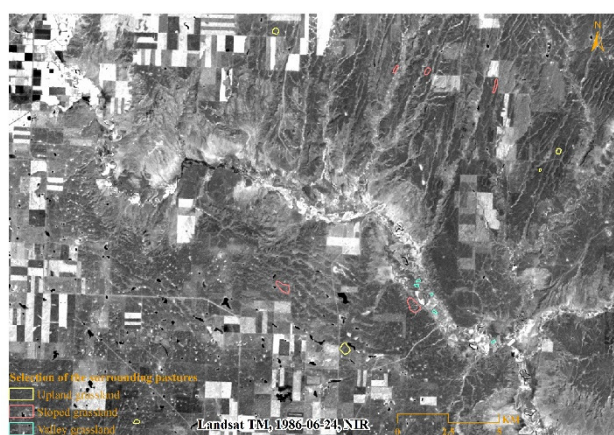


Supplementary Materials

In 2006, when Grassland National Park (GNP) had been under grazing cessation management for 21 years, the park region was obviously darker than the surrounding grazing pastures from NIR, SWIR1, SWIR2 and LST images (i.e., image acquired in 2006-07-17, the maximum growing season of prairie). Therefore, upland, sloped and valley grasslands in the surrounding pastures are easy to be selected based on the difference of the color tone from GNP region. However, the difference between GNP and surrounding pastures in NDVI (normalized difference vegetation index) and NDWI (normalized difference water index) images are not clear. There was no visual difference between GNP and surrounding pastures for the images acquired in 1986 and 2019, except NIR image acquired in 2019-06-03. The NIR image of 2019 shows some visible difference in the western part of GNP from the surrounding pastures.





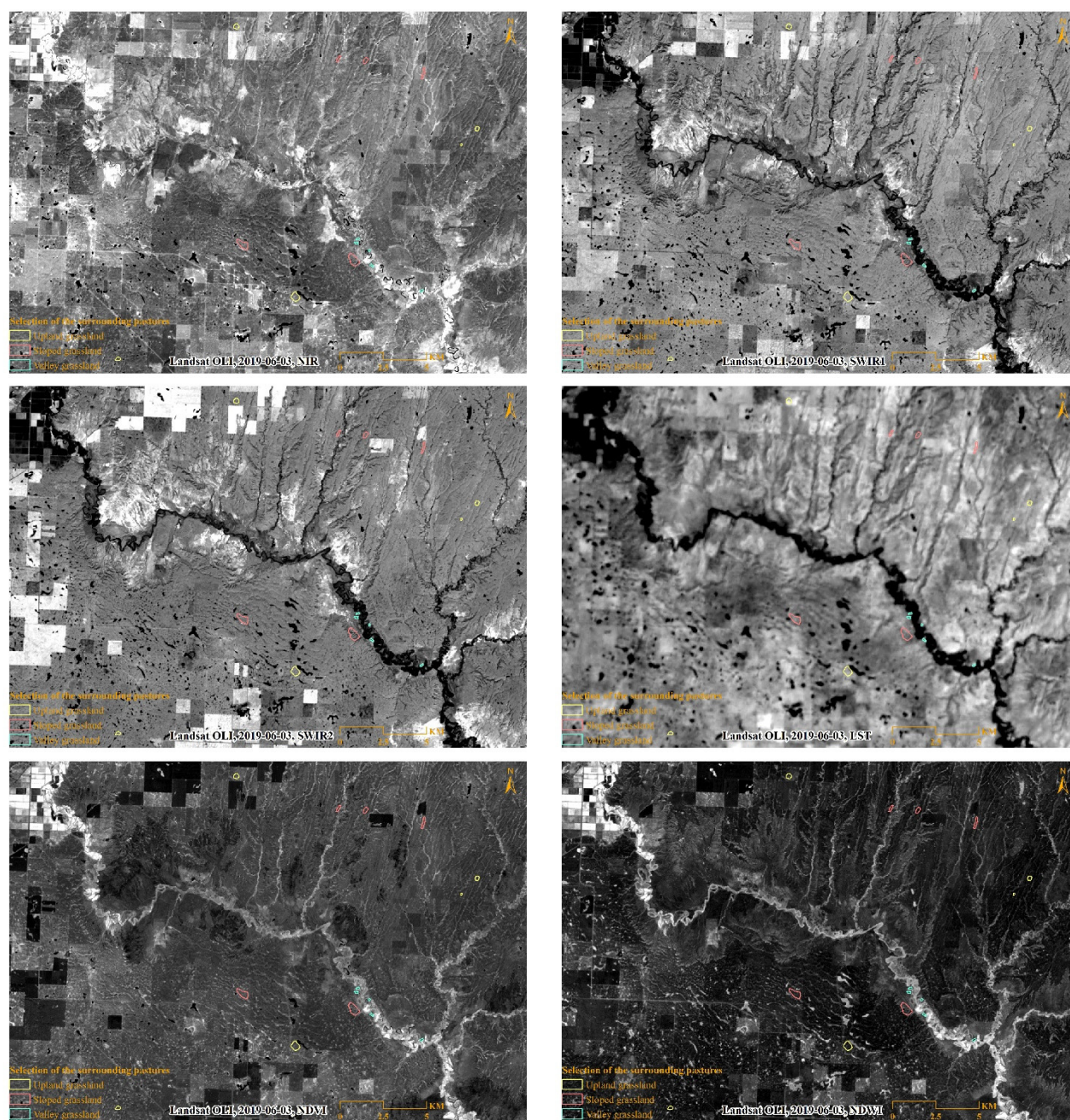


Figure S1. Selection of three vegetation types in the surrounding pastures

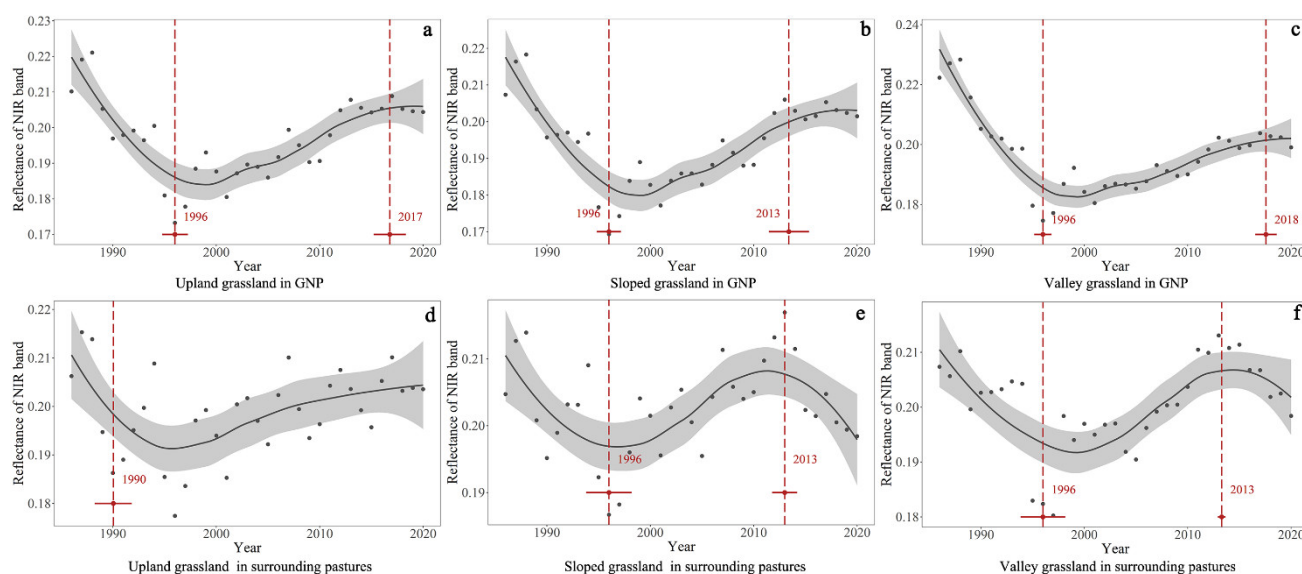


Figure S2. NIR reflectance of upland, sloped, and valley grasslands from both GNP and the surrounding pastures

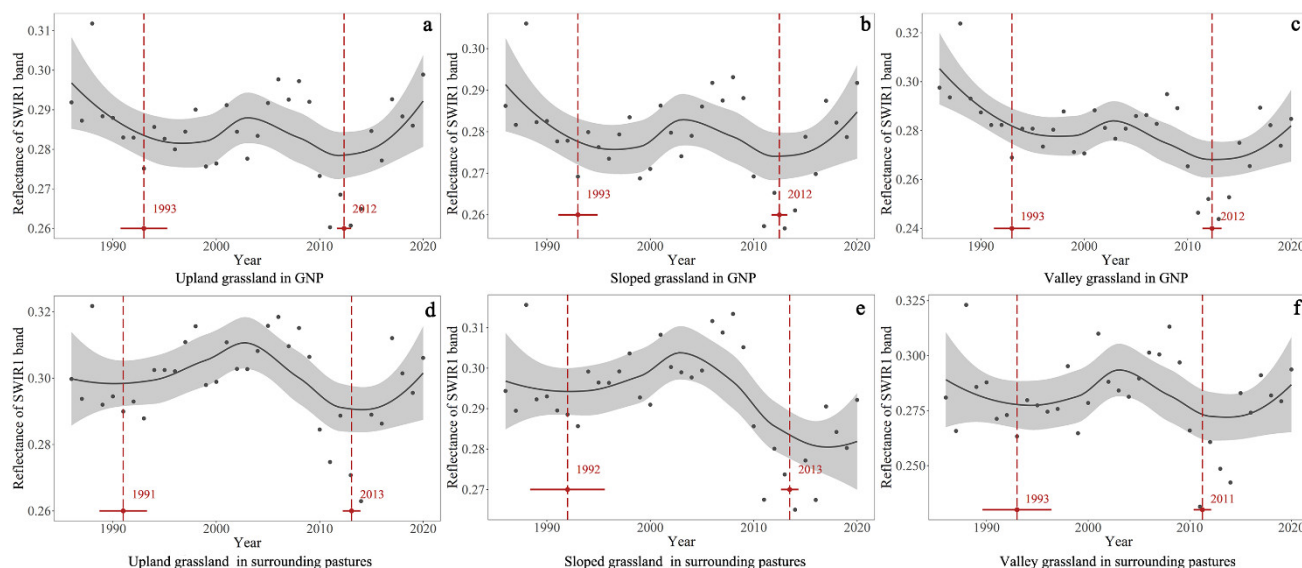


Figure S3. SWIR1 reflectance of upland, sloped, and valley grasslands from both GNP and the surrounding pastures

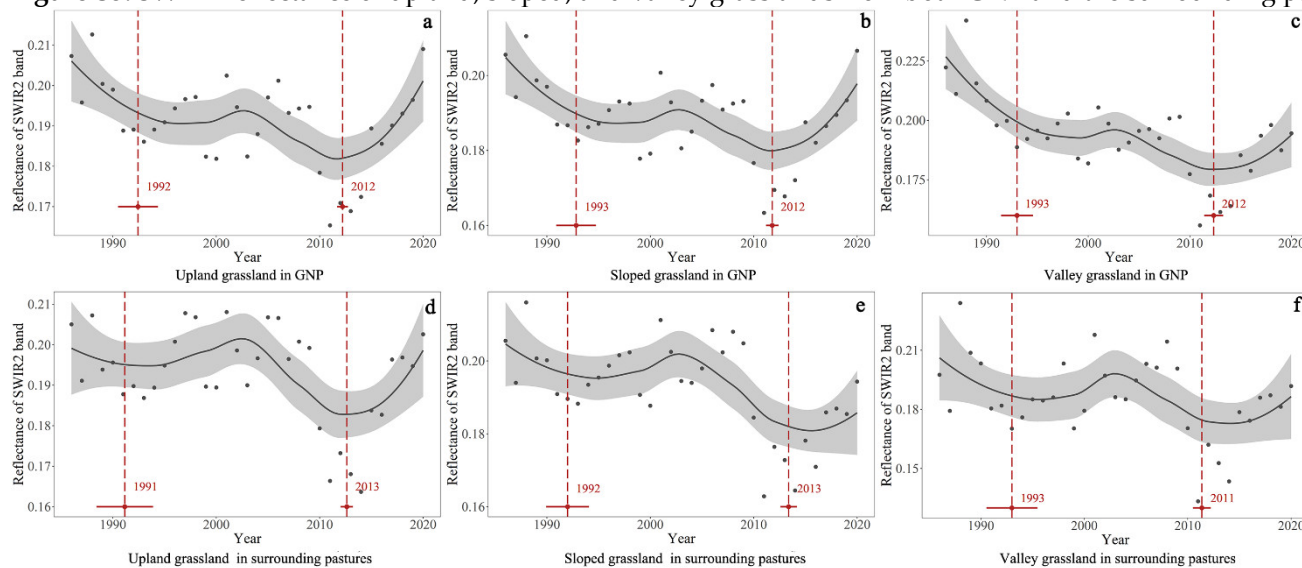


Figure S4. SWIR2 reflectance of upland, sloped, and valley grasslands from both GNP and the surrounding pastures

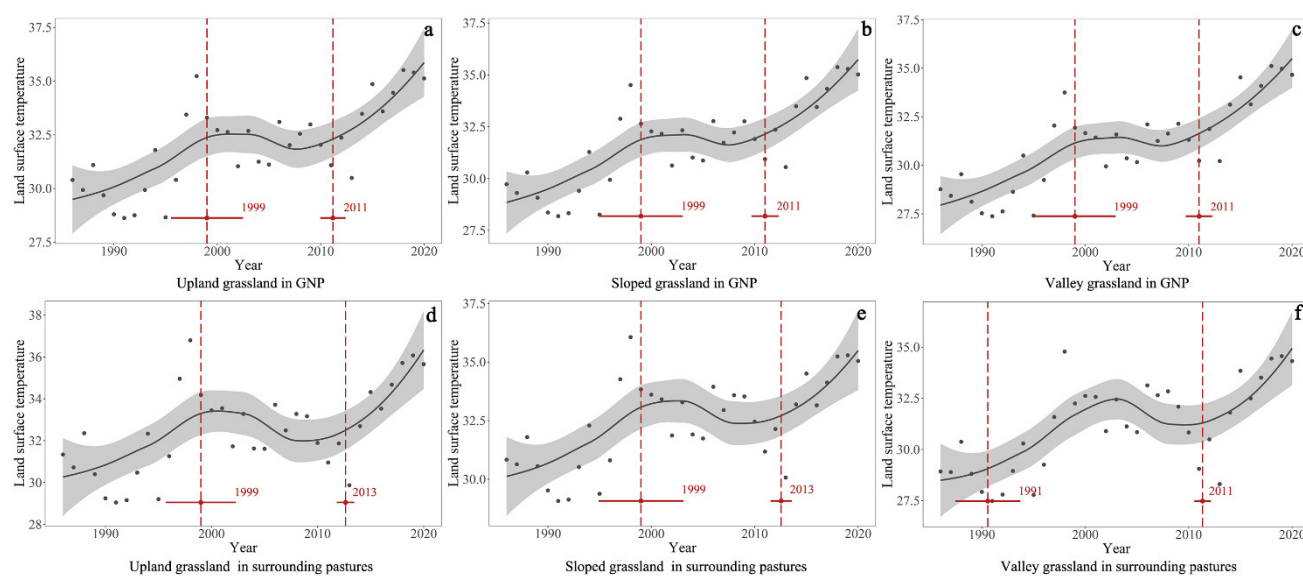


Figure S5. LST of upland, sloped, and valley grasslands from both GNP and the surrounding pastures.