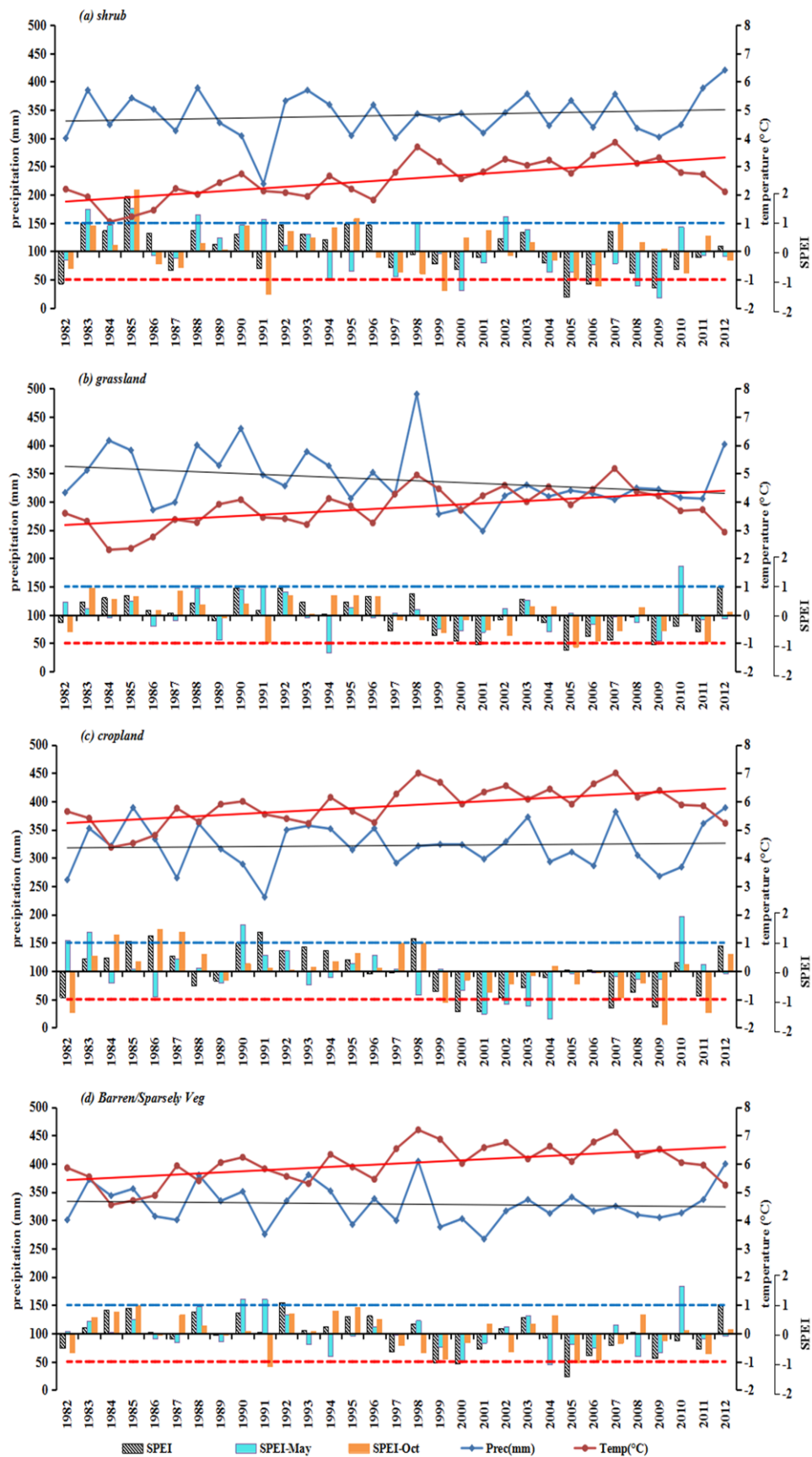
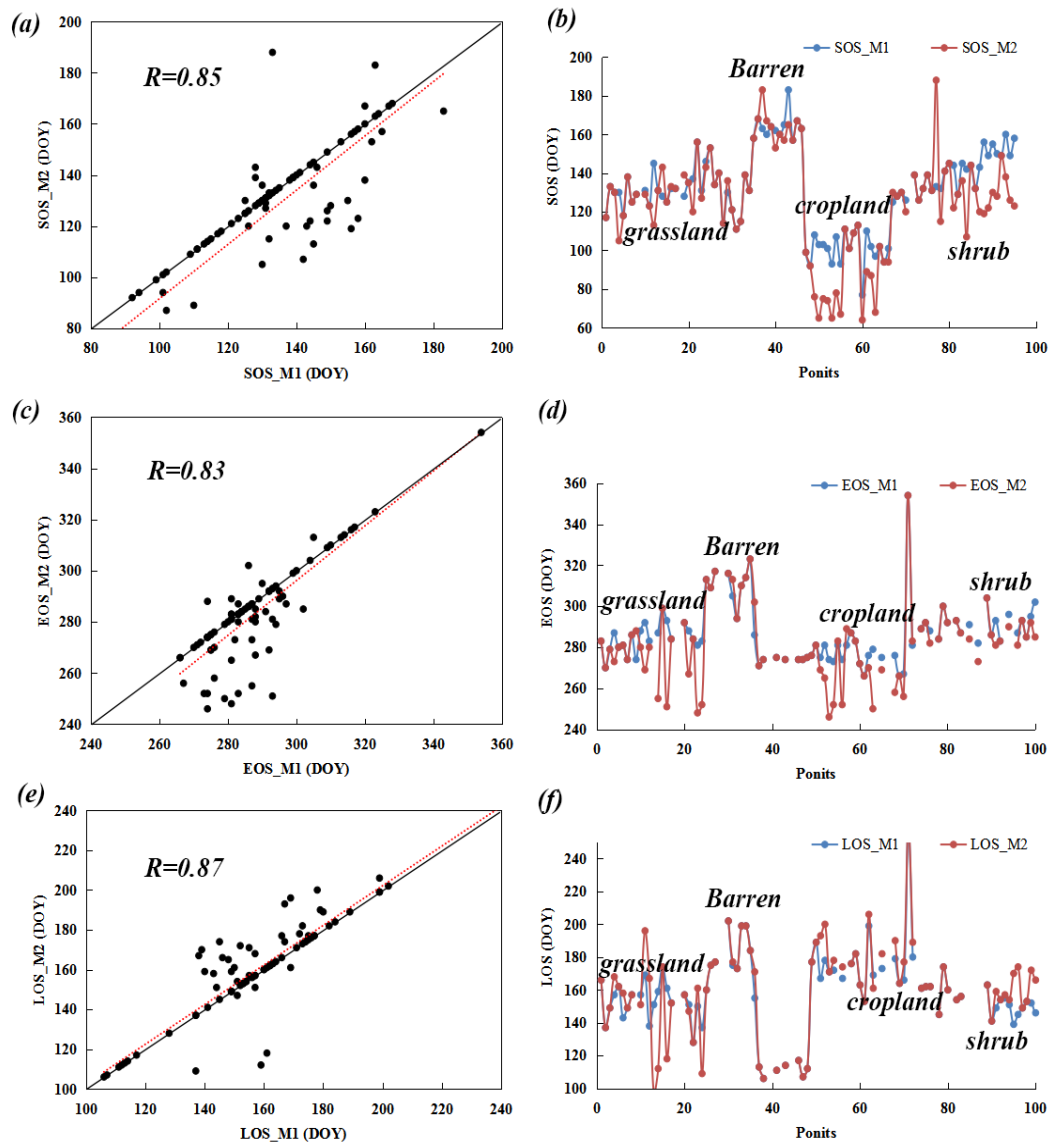


**Figure S1.** The variation of MODIS land cover types during 2001-2012



**Figure S2.** Meteorological metrics analysis during 1982-2012 among different land cover types.  
All the data are spatial average value for a specific land cover type.



**Figure S3.** Comparison phenology metrics between threshold and derivation method. M1, M2 means dynamic threshold method and derivation methods, respectively. Black line in a, c, e is 1:1 line, and red dotted line is correlation slope. 100 points was selected randomly at four land cover types, which showed in b, d, f.