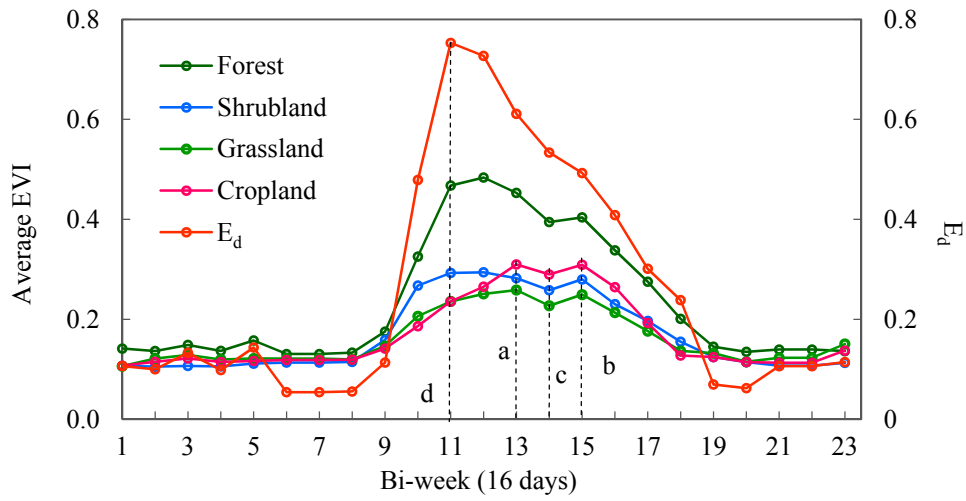
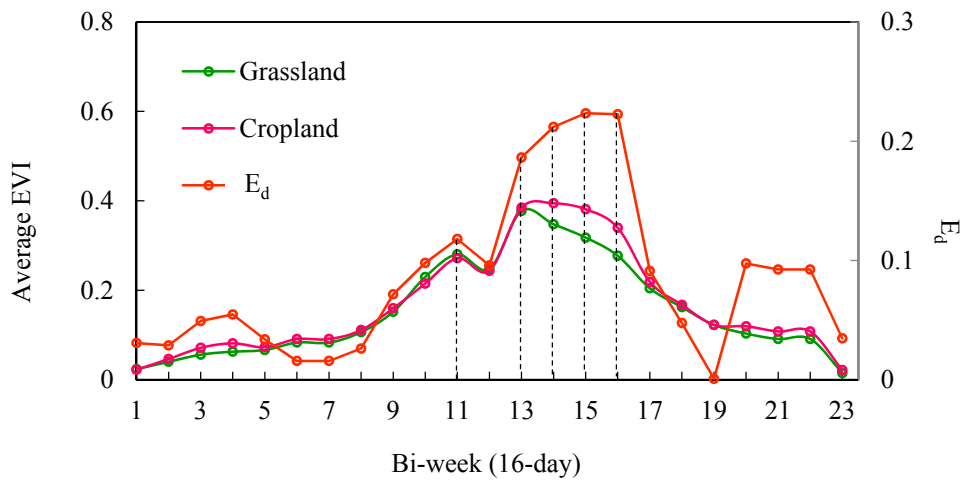


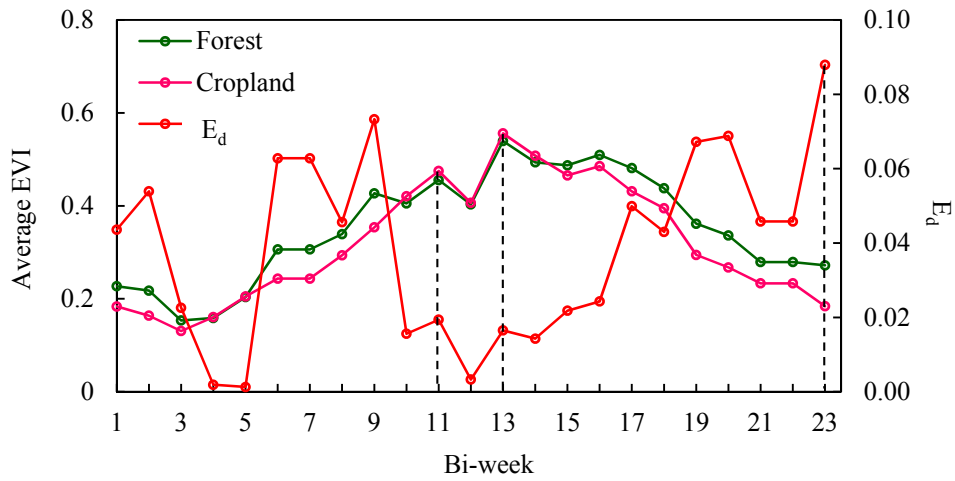
**Figure S1: MODIS EVI 16-day time series for all study sites.**



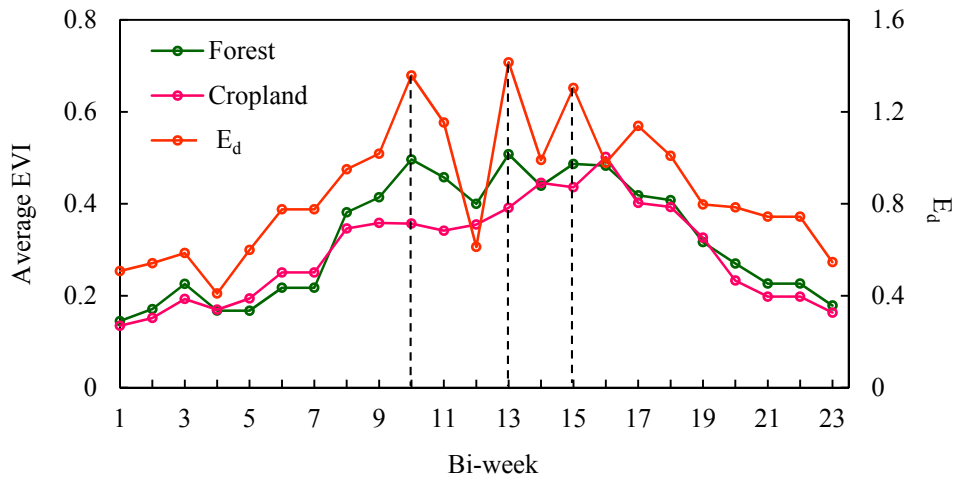
**(a)** Time-series of 16-day EVI and  $E_d$  for the major land cover types in BLZ (Ba Lin Zuo) in 2013.  $E_d$  indicates the difference of EVIs between main land cover classes (Equation 3-1). Four dotted lines are the final frame determined to be the optimal time of images for classification. Line “a” and line “b” are the peak value of cropland which is the dominant land cover type of BLZ. Line “c” is the EVI value which is bigger than peak EVI value minus 0.02. Line “d” is the peak value of  $E_d$ .



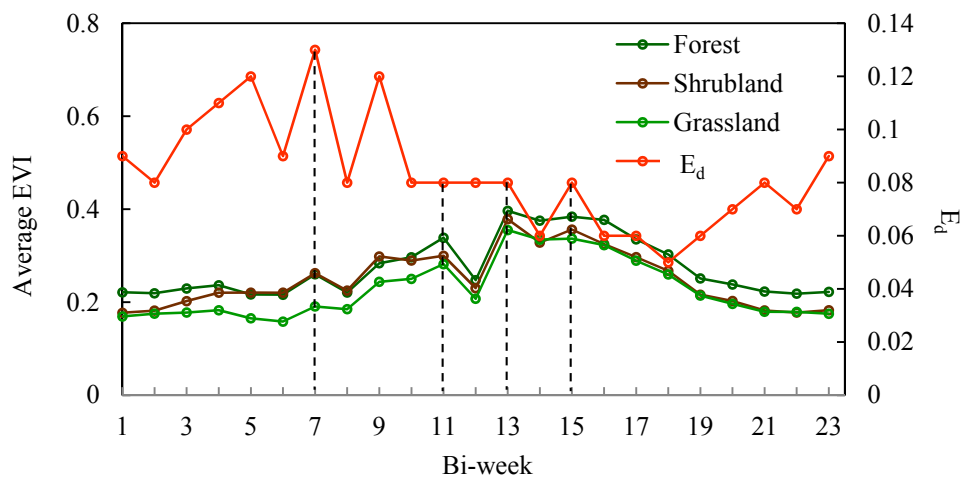
**(b)** Same as figure1, but for DQ (Da Qing).



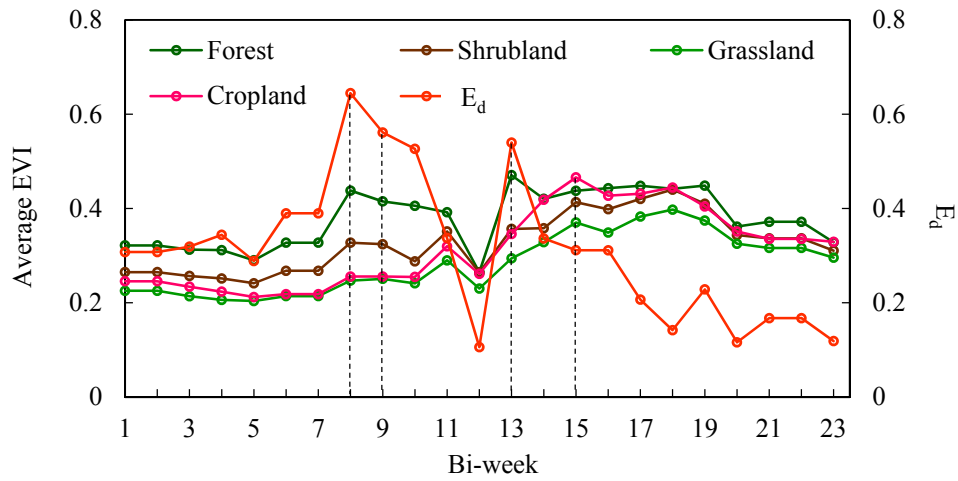
(c) Same as figure1, but for DZ (Da Zhu).



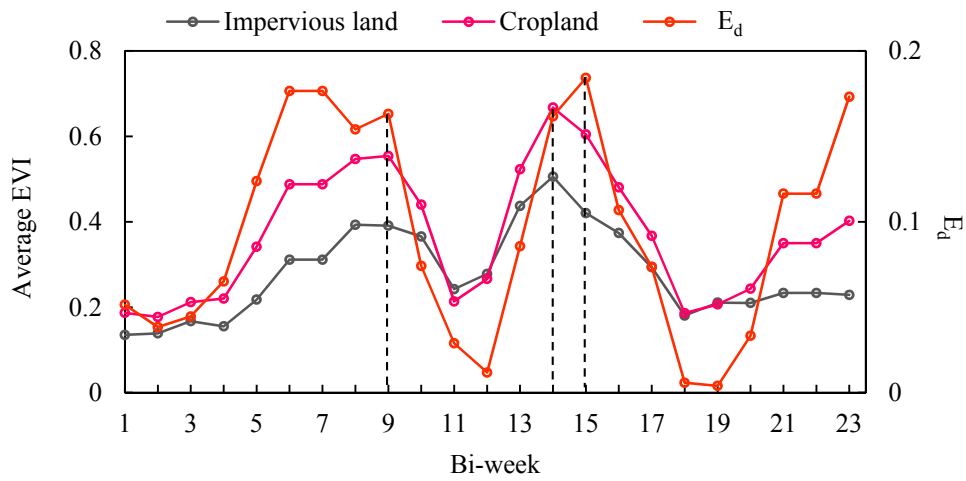
(d) Same as figure1, but for JR (Ju Rong).



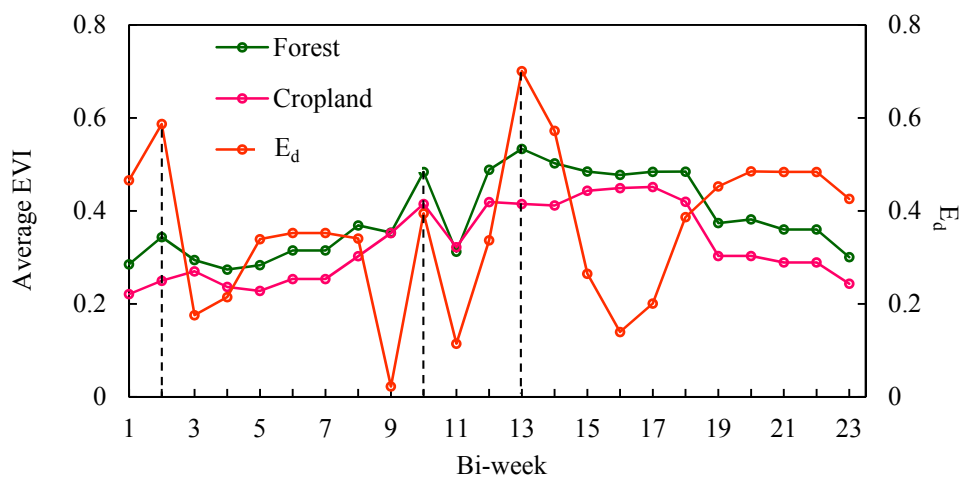
(e) Same as figure1, but for ML (Mi Lin).



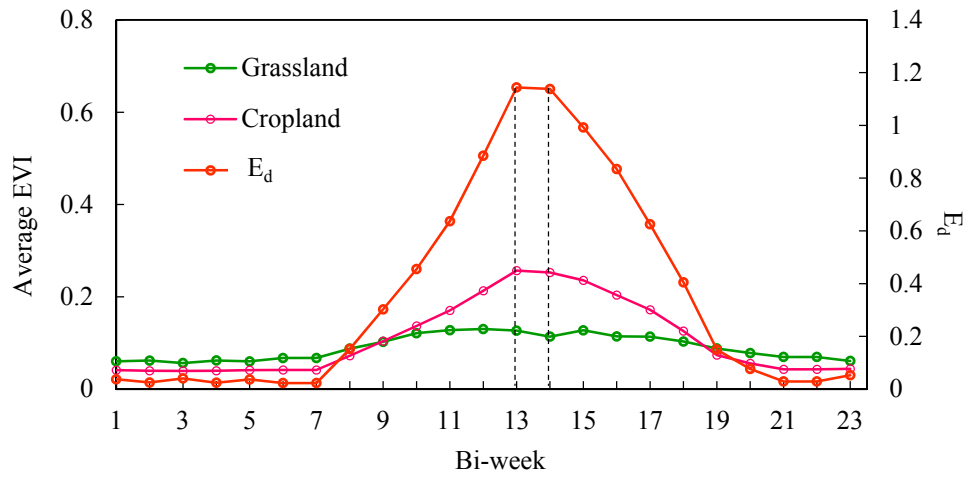
(f) Same as figure1, but for SB (Shuang Bo).



(g) Same as figure1, but for TK (Tai Kang).

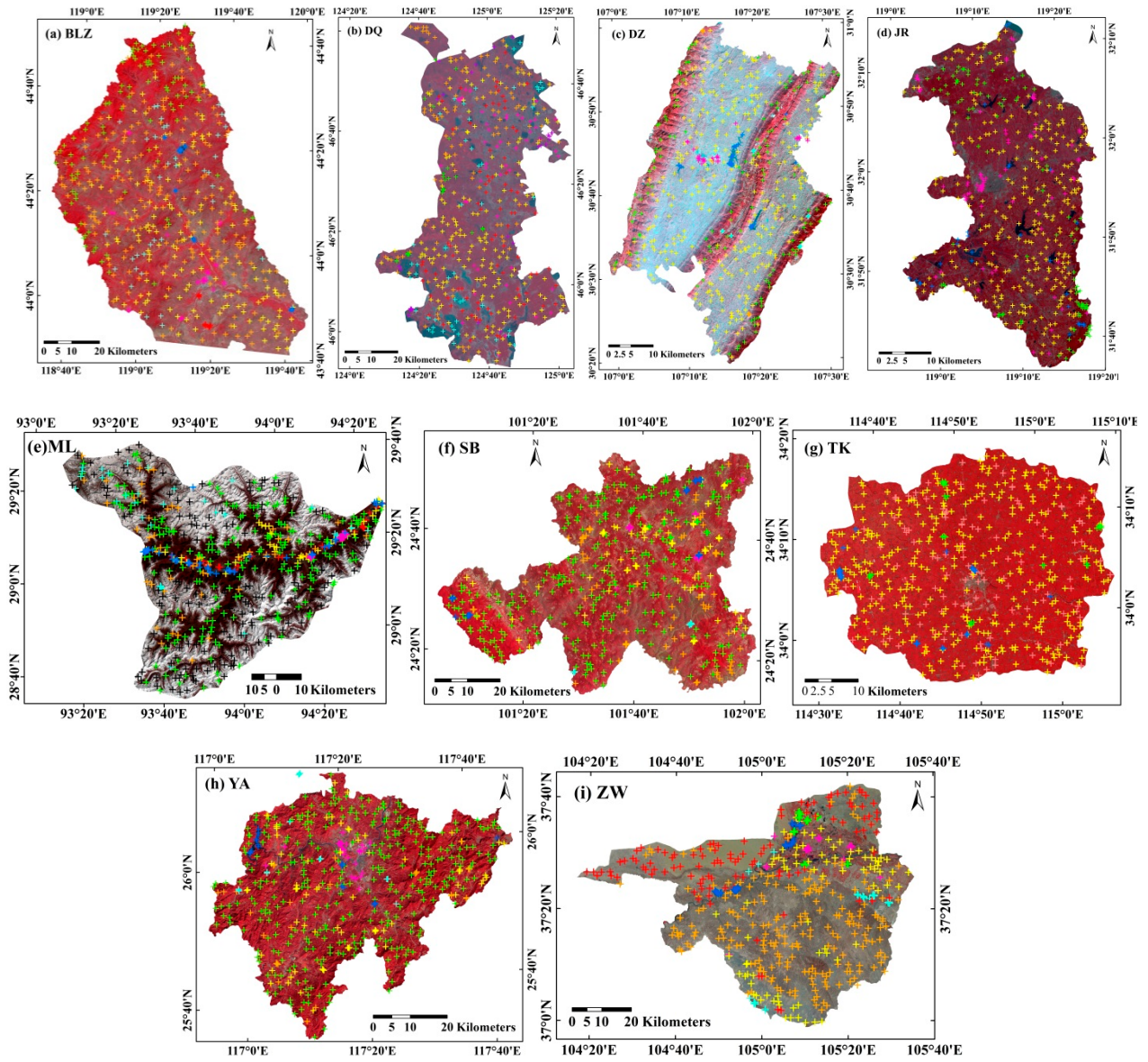


(h) Same as figure1, but for YA (Yong An).



(i) Same as figure1, but for ZW (Zhong Wei).

**Figure S2:** Location of randomly selected testing samples for validation for each study site.



**Legend**

- + Barren + Cropland + Grassland + Forest + Wetland
- + Shrubland + Water bodies + Impervious + Snow and Ice