Table S1. Regression equation between environmental factors and PUE in each sub-regions (annual averaged air temperature (T_{mean}), net radiation (R_n), wind velocity (U), relative humidity (RH), and soil moisture (SM) , respectively).

Sub-Regions	Regression Function	
Arid	PUE=-0.048*T_{mean}-0.0001*R_n-0.135*U-0.012*RH+0.065*SM+3.472	R=0.63,P<0.001
Transition zone	PUE= 0.011*T_{mean}+0.0001*R_n-0.044*U-0.001*RH-0.061*SM+2.13	R=0.90,P<0.001
Humid	PUE=-0.032*T_{mean}+0.001*R_n-0.236*U+0.006*RH-0.071*SM+2.27	R=0.93,P<0.001