Appendix S1. Calculation of growing season evapotranspiration (GPE).

First, for each month from May to October, the calculation of unjustified potential evapotranspiration (uPE) differed according to mean monthly temperature (t):

$$I = \sum_{n=1}^{12} \left(\frac{t}{5}\right)^{1.514} \qquad \text{(Eq. S1)}$$

$$a = (0.675 \times I^3 - 77.1 \times I^2 + 17920 \times I + 492390) \times 10^{-6} \qquad \text{(Eq. S2)}$$

$$\begin{cases} uPE = 188 \times \left(1 - e^{-0.0000061 \times t^{3.734}}\right), t > 26.5 \\ \quad uPE = 16 \times (10 \times t/I)^a, 0 < t < 26.5 \\ \qquad\qquad uPE = 0, t \le 0 \end{cases} \qquad \text{(Eq. S3)}$$

Second, we calculated adjusted potential evapotranspiration (PE) based on uPE and site latitude (L):

$$PE_{May} = uPE \times (-0.0098 \times L + 0.8609)^{-\frac{1}{3.5}} \qquad \text{(Eq. S4)}$$

$$PE_{Jun} = uPE \times (-0.0101 \times L + 0.9739)^{-\frac{1}{2.5}} \qquad \text{(Eq. S5)}$$

$$PE_{Jul} = uPE \times (-0.0088 \times L + 0.9024)^{-\frac{1}{2.5}} \qquad \text{(Eq. S6)}$$

$$PE_{Aug} = uPE \times (-0.0089 \times L + 0.8481)^{-\frac{1}{4.2}} \qquad \text{(Eq. S7)}$$

$$PE_{Sep} = uPE \times (-0.0104 \times L + 0.5984)^{-\frac{1}{48}} \qquad \text{(Eq. S8)}$$

$$PE_{Oct} = uPE \times (-0.016 \times L + 1.3396)^{\frac{1}{8}} \qquad \text{(Eq. S9)}$$

Finally, GPE is the sum of the PEs of these six months.