

# appendix

Table 1: Supporting Information Table 1 (S1):

Climate variable	Units	Definition	Source
Mean annual temperature (MAT)	°C		Primary literature; WorldClim <sup>1</sup>
Mean annual precipitation (MAP)	mm $yr^{-1}$		Primary literature; WorldClim <sup>1</sup>
Temperature seasonality		Standard deviation of MAT *100	WorldClim <sup>1</sup>
Precipitation seasonality		Coefficient of variation of MAP	WorldClim <sup>1</sup>
Annual temperature range	°C	Maximum temperature of warmest month - minimum temperature of coldest month	WorldClim <sup>1</sup>
Solar radiation	$\text{kJ } m^{-2} yr^{-1}$		WorldClim2 <sup>2</sup>
Cloud cover	percentage	Cloud percentage cover	CRU time-series dataset v 4.03 <sup>3</sup>
Annual frost days	days $yr^{-1}$	Number of freeze days annually	CRU time-series dataset v 4.03 <sup>3</sup>
Annual wet days	days $yr^{-1}$	Number of days with precipitation >0.1 mm annually	CRU time-series dataset v 4.03 <sup>3</sup>
Potential evapotranspiration (PET)	mm $yr^{-1}$	Mean annual potential evapotranspiration	Global Aridity Index and Potential Evapotranspiration Climate Database <sup>4</sup>
Aridity		MAP/mean annual PET	Global Aridity Index and Potential Evapotranspiration Climate Database <sup>4</sup>
Vapour pressure deficit (VPD)	kPa		TerraClimate <sup>5</sup>
Maximum vapour pressure deficit (Max VPD)	kPa		Derived
Water stress months	months $yr^{-1}$	Number of months annually with MAP < PET	Derived
Length of growing season	months $yr^{-1}$	Number of months annually with mean minimum temperature > 0.5°C	Derived