

Supplementary Information

# Prediction of Potential Suitable Areas and Priority Protection for *Cupressus gigantea* on the Tibetan Plateau

Huayong Zhang <sup>1,2,\*</sup>, Yanan Wei <sup>1</sup>, Junjie Yue <sup>1</sup>, Zhongyu Wang <sup>1</sup>, Hengchao Zou <sup>1</sup>, Xiande Ji <sup>3</sup>, Shijia Zhang <sup>4</sup> and Zhao Liu <sup>2</sup>

<sup>1</sup> Research Center for Engineering Ecology and Nonlinear Science, North China Electric Power University, Beijing 102206, China; zouhc@ncepu.edu.cn (H.Z.)

<sup>2</sup> Theoretical Ecology and Engineering Ecology Research Group, School of Life Sciences, Shandong University, Qingdao 250100, China

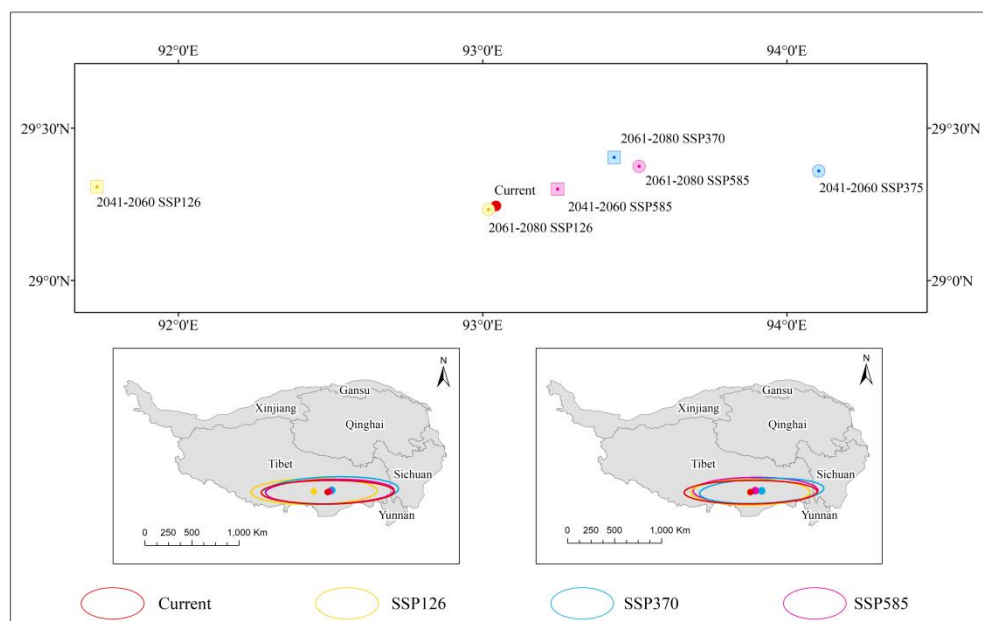
<sup>3</sup> Energy Conversion Group, Energy and Sustainability Research Institute Groningen, Faculty of Science and Engineering, University of Groningen, Nijenborgh 6, 9747AG Groningen, The Netherlands

<sup>4</sup> Research Group WILD Department Biology, Vrije Universiteit Brussel, Pleinlaan 2, 1050 Brussels, Belgium

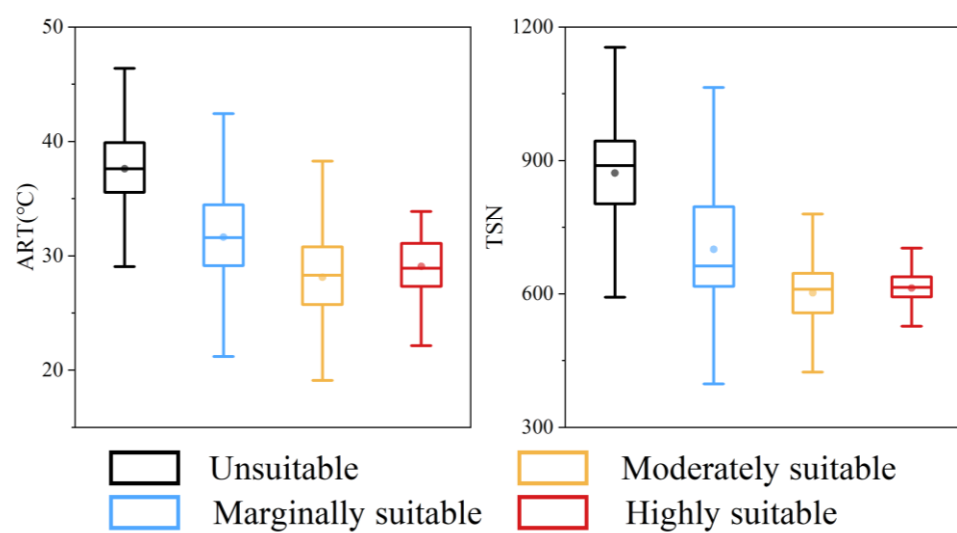
\* Correspondence: zhanghuayong@sdu.edu.cn

**This word file includes**

Figure and Table Legends



**Figure S1.** The centroid and standard deviation ellipses of highly suitable areas.



**Figure S2.** Distribution of TSN and ART in different potential suitable areas.

**Table S1.** All variables and their abbreviations used in our study.

Groups	Abbreviations	Environmental variables	Source [resolution]
Temperature	MAT	Annual mean temperature	WorldClim version 2.1 [0.25°]
	MDR	Mean diurnal range	
	Iso	Isothermality	
	Tmax	Max temperature of warmest month	
	Tmin	Min temperature of coldest month	
	MTWEQ	Mean temperature of wettest quarter	
	MTDQ	Mean temperature of driest quarter	
	MTWQ	Mean temperature of warmest quarter	
	MTCQ	Mean temperature of coldest quarter	
	TSN	Temperature seasonality	
	ART	Temperature annual range	
Precipitation	MAP	Annual precipitation	WorldClim version 2.1 [0.25°]
	PWM	Precipitation of wettest month	
	PDM	Precipitation of driest month	
	PWQ	Precipitation of wettest quarter	
	PDQ	Precipitation of driest quarter	
	PWAQ	Precipitation of warmest quarter	
	PCOQ	Precipitation of coldest quarter	
	PSN	Precipitation seasonality	
Soil texture	BDOD	Bulk density (kg/m <sup>3</sup> )	SoilGrids 2.0[250m]
	CLAY	Clay content (%)	
	CFVO	Coarse fragments volumetric (%)	
	SILT	Silt content (%)	
	SAND	Sand content (%)	
Soil fertility	CEC	Cation exchange capacity (cmolc/kg)	SoilGrids 2.0[250m]
	OCD	Soil organic carbon density (kg/m <sup>3</sup> )	
	OCS	Soil organic carbon stock	
	SOC	Soil organic carbon content (g/kg)	
	PHH2O	Soil pH x 10 in H2O	
Terrain	NITROGEN	Total nitrogen (g/kg)	WorldClim version 2.1 [0.25°]
	ELE	Elevation(m)	