

Supplementary Materials

Table S1. Global climate models from the CMIP5 ensemble used in the study Figure 1.

#	Research Centre	Country	Global climate model
1	The Centre for Australian Weather and Climate Research	Australia	ACCESS1-0
2	The Centre for Australian Weather and Climate Research	Australia	ACCESS1-3
3	Canadian Centre for Climate Modelling and Analysis	Canada	CanESM2,
4	National Centre for Atmospheric Research	USA	NCAR-CESM1-CAM5
5	CNRM-GAME & Cerfacs	France	CNRM-CM5
6	Australia's Commonwealth Scientific and Industrial Research Organisation	Australia	CSIRO-MK36
7	Geophysical Fluid Dynamics Laboratory	USA	GFDL-CM3
8	Geophysical Fluid Dynamics Laboratory	USA	GFDL-ESM2G
9	Geophysical Fluid Dynamics Laboratory	USA	GFDL-ESM2M
10	Goddard Institute for Space Studies	USA	GISS-E2-H
11	Goddard Institute for Space Studies	USA	GISS-E2-H-CC
12	Goddard Institute for Space Studies	USA	GISS-E2-R
13	Goddard Institute for Space Studies	USA	GISS-E2-R-CC
14	UK Meteorological Office	UK	HadGEM2-AO
15	UK Meteorological Office	UK	HadGEM2-CC
16	UK Meteorological Office	UK	HadGEM2-ES
17	Institute Pierre Simon Laplace	France	IPSL-CM5A-MR
18	Institute Pierre Simon Laplace	France	IPSL-CM5B-LR
19	Institute Pierre Simon Laplace	France	IPSL-CM5A-LR
20	University of Tokyo, National Institute for Envir. Studies, Japan Agency for Marine-Earth Science & Technology	Japan	MIROC-ESM
21	University of Tokyo, National Institute for Envir. Studies, Japan Agency for Marine-Earth Science & Technology	Japan	MIROC-ESM-CHEM
22	University of Tokyo, National Institute for Envir. Studies, Japan Agency for Marine-Earth Science & Technology	Japan	MIROC5
23	Max-Planck Institute for Meteorology	Germany	MPI-ESM-LR
24	Max-Planck Institute for Meteorology	Germany	MPI-ESM-MR
25	Meteorological Research Institute	Japan	MRI-CGCM3
26	Meteorological Research Institute	Japan	MRI-ESML
27	Norwegian Climate Centre	Norway	NorESM1-M

Table S2. Classification matrix of observed and predicted values for spruce suitability in the number of pixels (0-unsuitable, 1-suitable)

Predicted		0	1	Sum
Observed	0	15063	600	15663
	1	781	12765	13546
Sum		15844	13365	29209

Table S3. Classification matrix of observed and predicted values for spruce suitability in percentage (0-unsuitable, 1-suitable)

Predicted		0	1	Sum
Observed	0	96.17%	3.83%	100%
	1	5.77%	94.33%	100%
Sum		101.94%	98.16%	