

Supplementary Materials

Table S1. Area by suitability class under historical climate conditions.

Suitability class	Index Range (cloglog)	Area (km ²)	% of Total Assessed Area	% of Suitable Area (low+medium+high)
Unsuitable	≤ 0.447	956,341.18	74.04	—
Low suitability	0.447 – 0.558	121,333.60	9.39	36.18
Medium suitability	0.558 – 0.722	97,247.24	7.53	29.00
High suitability	> 0.722	116,808.89	9.04	34.83

Table S2. Area by projected suitability class for each General Circulation Model (GCM), under the SSP2-4.5 and SSP5-8.5 scenarios, across three future time periods.

Scenario	Period	GCM	Unsuitable (km ²)	Low suitability (km ²)	Medium suitability (km ²)	High suitability (km ²)	Total suitable area (km ²)	% suitable of territory
SSP2-4.5	2041-2060	ACCESS-CM2	1,022,731	60,314	85,335	123,351	269,000	20.82
		HadGEM3-GC31-LL	1,053,459	66,270	91,670	80,331	238,272	18.45
		MPI-ESM1-2-HR	1,038,534	63,958	94,545	94,694	253,197	19.60
	2061-2080	ACCESS-CM2	1,028,392	58,362	80,214	124,763	263,339	20.39
		HadGEM3-GC31-LL	1,077,599	59,813	87,166	67,153	214,132	16.58
		MPI-ESM1-2-HR	1,078,250	60,122	81,464	71,895	213,481	16.53
	2081-2100	ACCESS-CM2	1,017,671	59,028	80,502	134,531	274,060	21.22
		HadGEM3-GC31-LL	1,103,187	69,718	75,622	43,204	188,544	14.60
		MPI-ESM1-2-HR	1,068,322	61,706	83,315	78,387	223,408	17.30
SSP5-8.5	2041-2060	ACCESS-CM2	1,013,995	64,111	88,788	124,836	277,735	21.50
		HadGEM3-GC31-LL	1,074,186	64,892	88,500	64,153	217,544	16.84
		MPI-ESM1-2-HR	1,095,065	60,568	75,757	60,340	196,666	15.22
	2061-2080	ACCESS-CM2	1,004,348	61,574	86,987	138,821	287,383	22.25
		HadGEM3-GC31-LL	1,105,988	71,221	69,589	44,934	185,743	14.38
		MPI-ESM1-2-HR	1,147,049	48,005	55,903	40,774	144,682	11.20
	2081-2100	ACCESS-CM2	1,005,452	59,469	87,848	138,962	286,279	22.16
		HadGEM3-GC31-LL	1,097,214	67,806	75,901	50,809	194,517	15.06
		MPI-ESM1-2-HR	1,169,180	43,632	46,406	32,513	122,551	9.49

Table S3. Area by suitability class for the multi-GCM ensemble (average of ACCESS-CM2, HadGEM3-GC31-LL, and MPI-ESM1-2-HR), under the SSP2-4.5 and SSP5-8.5 scenarios.

Scenario	Period	Unsuitable (km ²)	Low suitability (km ²)	Medium suitability (km ²)	High suitability (km ²)	Total suitable area (km ²)	% suitable of territory
SSP2-4.5	2041-2060	1,036,953	66,143	91,583	97,052	254,778	19.72
	2061-2080	1,062,176	60,654	85,036	83,866	229,555	17.77
	2081-2100	1,062,068	63,468	89,418	76,776	229,663	17.78
SSP5-8.5	2041-2060	1,059,996	66,655	91,139	73,940	231,735	17.94
	2061-2080	1,075,013	74,472	89,329	52,918	216,718	16.78
	2081-2100	1,081,925	68,990	91,767	49,050	209,806	16.24

Table S4. Jenks natural-breaks thresholds used to classify the habitat suitability change layer (future minus current suitability) into five categories, for each SSP scenario and future period.

SSP	Period	High loss	Loss	No change	Gain	High gain
SSP2-4.5	2041–2060	[−0.726, −0.224]	(−0.224, −0.080]	(−0.080, −0.024]	(−0.024, 0.034]	(0.034, 0.288]
SSP2-4.5	2061–2080	[−0.605, −0.273]	(−0.273, −0.134]	(−0.134, −0.043]	(−0.043, 0.039]	(0.039, 0.211]
SSP2-4.5	2081–2100	[−0.618, −0.246]	(−0.246, −0.127]	(−0.127, −0.035]	(−0.035, 0.061]	(0.061, 0.391]
SSP5-8.5	2041–2060	[−0.528, −0.179]	(−0.179, −0.097]	(−0.097, −0.028]	(−0.028, 0.062]	(0.062, 0.421]
SSP5-8.5	2061–2080	[−0.719, −0.245]	(−0.245, −0.132]	(−0.132, −0.033]	(−0.033, 0.100]	(0.100, 0.358]
SSP5-8.5	2081–2100	[−0.730, −0.249]	(−0.249, −0.119]	(−0.119, −0.015]	(−0.015, 0.150]	(0.150, 0.483]

Table S5. Taxonomic composition of the 245 occurrence records used to calibrate the MaxEnt model for *Clusia* L. in Peru, by taxon and by life-form group.

Taxon	N occurrence records	Life form
<i>Clusia alata</i>	47	Tree
<i>Clusia flavida</i>	103	Shrub
<i>Clusia lorentensis</i>	31	Shrub
<i>Clusia multiflora</i>	28	Tree
<i>Clusia thurifera</i>	16	Tree/Shrub
<i>Clusia trochiformis</i>	8	Tree
<i>Clusia weberbaueri</i>	12	Tree

Figure S1. Spatial distribution of projected climatic suitability for *Clusia* L. for the period 2041–2060, for three General Circulation Models (ACCESS-CM2, HadGEM3-GC31-LL, and MPI-ESM1-2-HR) under the SSP2-4.5 and SSP5-8.5 scenarios.

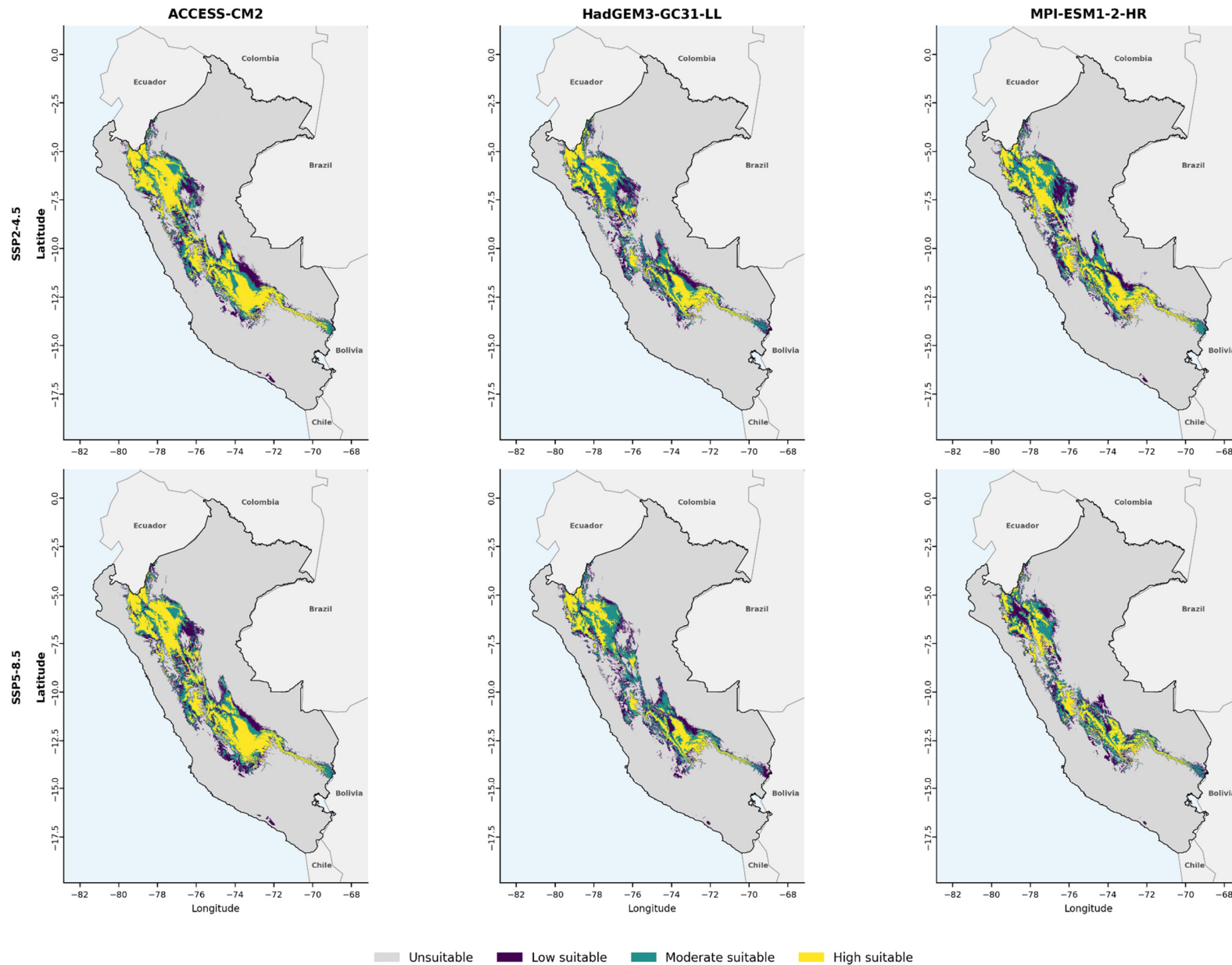


Figure S2. Spatial distribution of projected climatic suitability for *Clusia* L. for the period 2061–2080, for three General Circulation Models (ACCESS-CM2, HadGEM3-GC31-LL, and MPI-ESM1-2-HR) under the SSP2-4.5 and SSP5-8.5 scenarios.

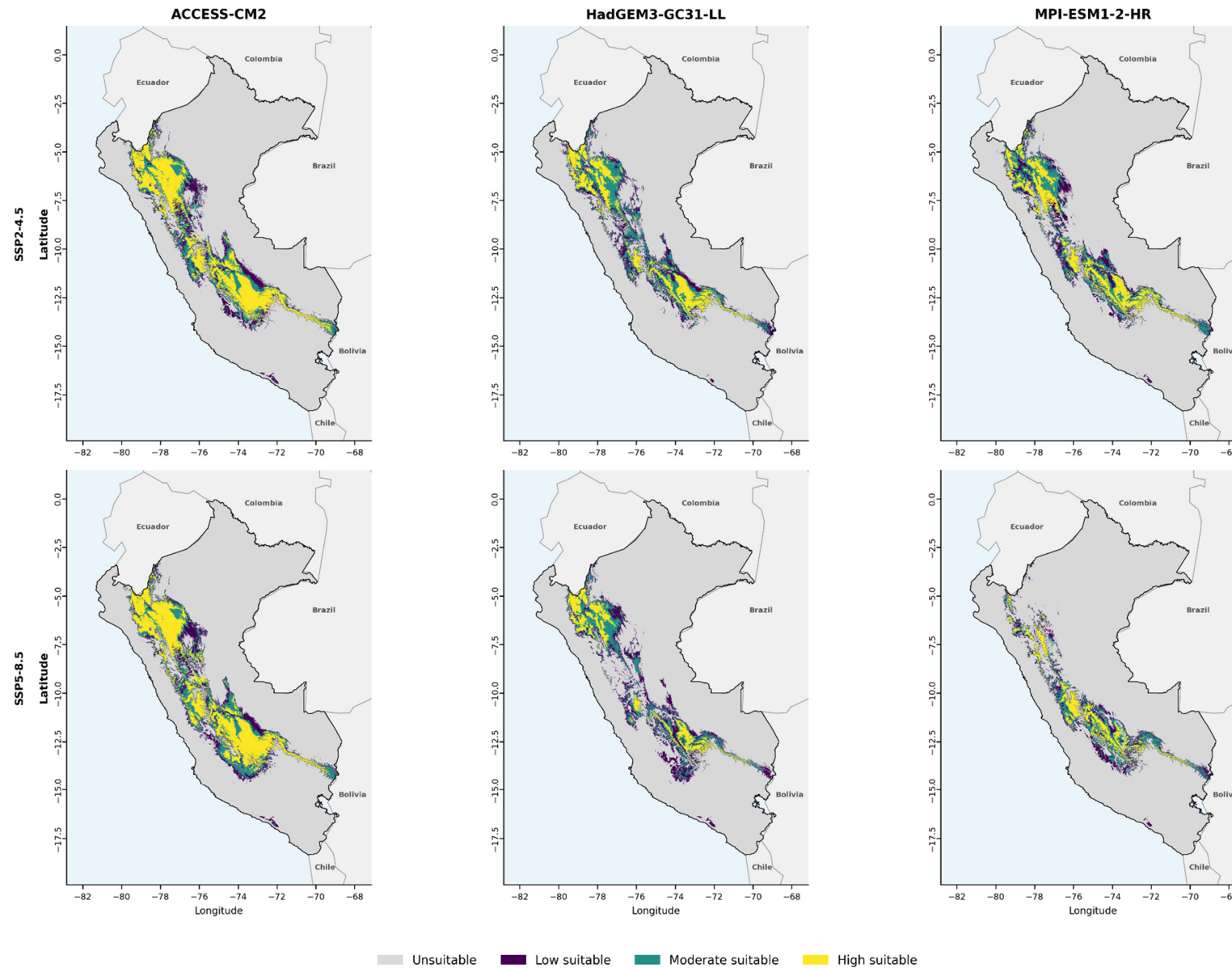


Figure S3. Spatial distribution of projected climatic suitability for *Clusia* L. for the period 2081–2100, for three General Circulation Models (ACCESS-CM2, HadGEM3-GC31-LL, and MPI-ESM1-2-HR) under the SSP2-4.5 and SSP5-8.5 scenarios.

