

Figure 1. Spatial distribution of species occurrence across elevation range

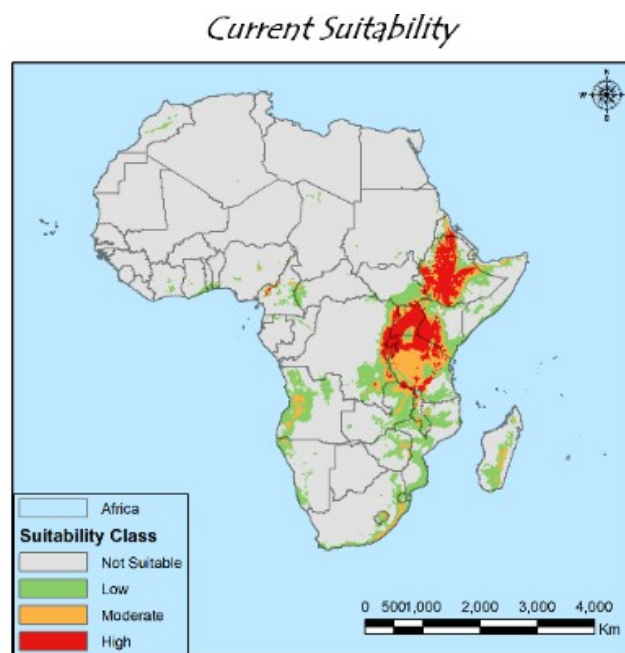


Figure 2 *S. didymobotrya* invasions under current climatic conditions

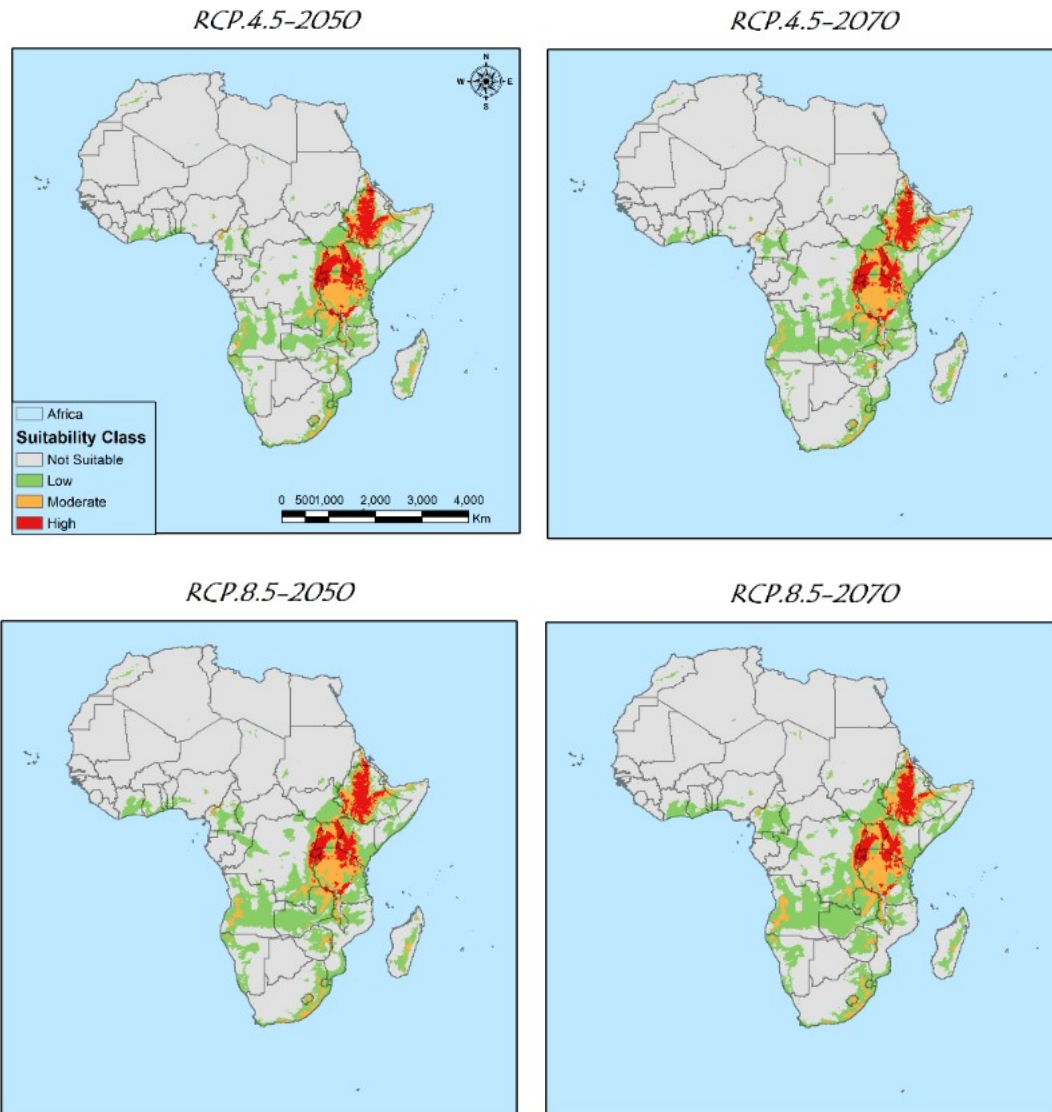


Figure 3 S.didymobotrya invasion suitability under future projected climatic condition for RCP 4.5 and RCP 8.5.

Table 2 Mean model performance statistics of the eight models using test dataset for predicting the current and future area suitability of *S. didymobotrya* tree species under different climatic scenarios

Measure of statistics	Models								
	GLM	SVM	RF	BRT	MARS	GAM	MDA	FDA	Mean value
AUC	0.92	0.96	0.99	0.95	0.95	0.95	0.94	0.92	0.95
TSS	0.76	0.83	0.92	0.81	0.80	0.83	0.78	0.77	0.81
Deviance	0.68	0.52	0.30	0.76	0.59	0.82	0.67	0.71	0.63
Cor	0.76	0.84	0.91	0.81	0.81	0.83	0.79	0.77	0.82

Table 3 . The relative contribution (%) of the environmental variables based on correlation metric

Environmental Variables	description	Percentage contribution
elev	Elevation	33
bio6	Min Temperature of Coldest Month	27.3
boi1	Annual Mean Temperature	20.6
boi12	Annual Precipitation	10.8
bio14	Precipitation of Driest Month	8.2
boi17	Precipitation of Driest Quarter	7.8
boi8	Mean Temperature of Wettest Quarter	5.3
bio9	Mean Temperature of Driest Quarter	3.5
bio18	Precipitation of Warmest Quarter	3.1

Table 4 Percentage of total suitability and suitable habitat change with respect to the current distribution.

Total suitability (%) in different ranges						Suitable habitat change rate (%)			
Years	Scenarios	Not suitable	Low	Moderate	High	Not suitable	Low	Moderate	High
Current	-	81.88	10.27	3.84	4.00				
2050	RCP4.5	79.20	13.18	4.22	3.40	-3.27	28.33	9.90	-15.00
	RCP8.5	76.34	15.82	4.68	3.17	-6.77	54.04	21.88	-20.75
2070	RCP4.5	77.71	14.69	4.42	3.18	-5.09	43.04	15.10	-20.50
	RCP8.5	74.46	17.79	5.03	2.73	-9.06	73.22	30.99	-31.75

Table 5 the percentage of future suitable habitat increase rate

Future suitable habitat increase rate in (%) by 2050 and 2070					
Years	Scenarios	Not suitable	Low	Moderate	High
2050	RCP4.5	1.94	36.48	25.09	2.71
	RCP8.5	1.71	47.05	32.78	3.05
2070	RCP4.5	1.79	42.42	30.70	3.41
	RCP8.5	2.23	55.23	40.39	3.01