

Present and future distribution of *Faidherbia albida* in Cabo Verde as revealed by climatic modelling and LULC analysis

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Supplementary Data

Supplementary data 1. Herbarium records corresponding to the occurrence points of *Faidherbia albida* in Cabo Verde archipelago.

Island	Location	Latitude (N)	Longitude (W)	Collector	Herbarium
Boavista	Lagoa de Porto Ferreira	16.115050	-22.680864	M.C. Duarte	LISC
Boavista	Praia das Gatas	16.194632	-22.709936	M.C. Duarte	LISC
Fogo	Entre Pico da Veiga e Praia Ladrão	14.938963	-24.495211	Barbosa, L.A.G.	CECV; LISC
Fogo	Penteada	14.887087	-24.451677	M.C. Duarte	LISC
Fogo	S. Filipe	14.881006	-24.442338	Matos	CECV; LISC
Maio	Pedro Vaz	15.247111	-23.118332	Malato-Beliz, J.V.C., Guerra, J.A.	LISC
Maio	Pilão Cão	15.212622	-23.116151	M.C. Duarte	LISC
Maio	Praia Gonçalo	15.248192	-23.116792	M.C. Duarte	LISC
St. Antão	Near Corda	17.132500	-25.087500	M. Romeiras	LISC
St. Antão	Near Corda	17.133718	-25.085267	M. Romeiras	LISC
St. Antão	Ponta do Sol	17.197170	-25.091068	Cardoso	COI
S. Vicente	Mato Inglês	16.872800	-24.944200	M.C. Duarte	LISC
S. Vicente	Pé do Verde	16.868333	-24.941111	M.C. Duarte	LISC
Sal	Algodoeiro	16.626642	-22.928244	Chevalier, A.	P
Santiago	Belém	15.007500	-23.663611	Barbosa, L.A.G. & Magalhães	LISC
Santiago	Belém, Ribeira de S. João	14.995396	-23.666843	M.C. Duarte	LISC
Santiago	Chã de Mato	15.058908	-23.681739	M. Romeiras	LISC
Santiago	Chã de Tanque	15.092007	-23.703817	M.C. Duarte	LISC
Santiago	Cidade da Praia	14.919996	-23.501477	Gossweiler, J.	LISC
Santiago	Cidade Velha	14.916847	-23.603776	M.C. Duarte	LISC
Santiago	Cidade Velha	14.926069	-23.630802	Barbosa, L.A.G.	CECV; LISC

Santiago	Forte (Cidade Velha)	14.915382	-23.602539	M.C. Duarte	LISC
Santiago	Mato Sancho	15.103438	-23.725244	M.C. Duarte	LISC
Santiago	Monte Tchota	15.037971	-23.634880	M.C. Duarte	LISC
Santiago	Pedregal	14.990593	-23.512410	M.C. Duarte	LISC
Santiago	Pico Leão	15.037555	-23.646171	M.C. Duarte	LISC
Santiago	Praia	14.919350	-23.497196	Gossweiler, J.	LISC
Santiago	Road St ^a Catarina - Cutelo Branco, crossroad to Malagueta	15.188926	-23.734183	Barbosa, L.A.G.	CECV; COI; LISC; MO
Santiago	Road St ^a Catarina - Porto Rincão, near Porto Rincão	15.077885	-23.757942	Barbosa, L.A.G.	CECV; COI; LISC
Santiago	Road St ^a Catarina - Ribeira da Barca	15.154333	-23.727697	Barbosa, L.A.G.	CECV; COI; LISC
Santiago	S. Francisco	14.972722	-23.482090	D'Orey, J.D.S., Rosado, R.	LISC
Santiago	S. Francisco	14.971347	-23.481913	D'Orey, J.D.S., Rosado, R.	LISC
Santiago	S. Francisco	14.971619	-23.480862	D'Orey, J.D.S., Rosado, R.	LISC
Santiago	S. Francisco	14.972217	-23.484000	M.C. Duarte	LISC

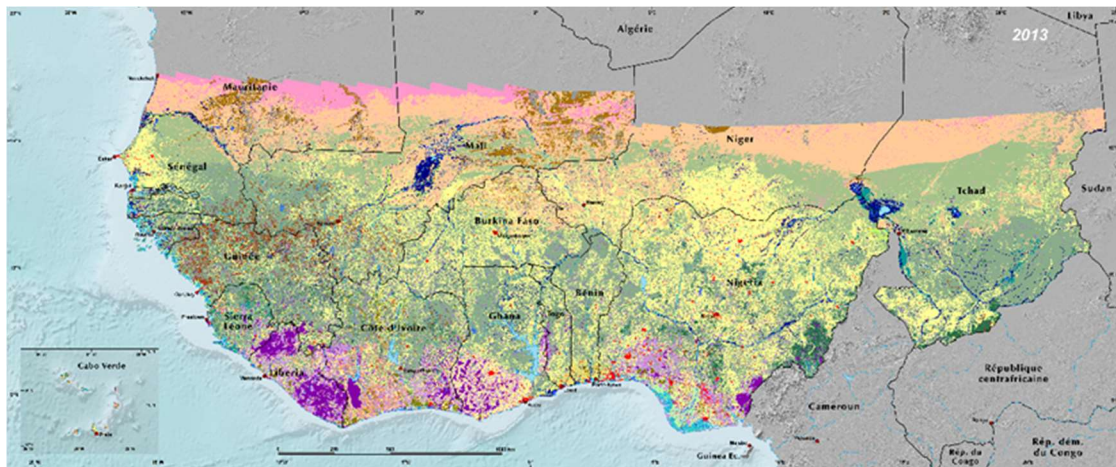
Supplementary data 2. Summary of annual mean temperature, and annual precipitation for the years 1970-2000.

Area	Annual Mean Temperature (°C)			Annual Precipitation (mm)		
	Median	Max	Min	Median	Max	Min
Cabo Verde	23.7	25.9	11.0	229	598	46
Africa continental	24.2	33.7	2.5	470	1089	0
Cabo Verde at <i>Faidherbia albida</i> occurrences points	22.8	24.9	18.0	243	359	55
Africa at <i>Faidherbia albida</i> occurrences points	25.4	30.3	10.1	208.3	304.1	16.3

Supplementary data 3. Summary of bioclimatic variables at different climate scenarios for Cabo Verde

Present climatic conditions								
	BIO2	BIO5	BIO6	BIO3	BIO8	BIO13	BIO14	BIO15
Min.	2.4		4.90	31.1		26.0	0.0	110.6
Median	7.7		16.70	61.9		102.0	0.0	159.6
Max.	10.5		20.7	71.5		206.0	5.0	183.7
Climatic conditions under RCP 4.5 in 2050								
Min.	3.8		5.5	44		24	0	104
Median	6.3		19.2	53		98	0	150
Max.	7.4		23.3	71		213	2	221
Climatic conditions under RCP 4.5 in 2080								
Min.	3.8		59	45		24	0	105
Median	6.3		195	55		98	0	148
Max.	7.5		237	71		212	2	210

Supplementary data 4. West Africa and Cabo Verde Land Use Land Cover maps for 2013 (CILSS, 2016).



Supplementary data 5. LULC Index calculated based on the LULC data for Cabo Verde, on a sample of 342 cells in CV and WA, covering different types of LULC, and on the occurrences and absences of *F. albida* in Cabo Verde, per type of LULC category. We followed two different approaches a) A simple formula calculated as the ratio between the percentage of Occurrences in a certain LULC category and the percentage of Area for that LULC category, and b) Using Bayes Theorem (see text for detailed formulations).

LULC Categories	Data			Bayes Theorem					Simple formula	LULC Index
	Area (%)	Occurrences (%)	Absences (%)	P(FA)	P(!FA)	P(LULC FA)	P(LULC !FA)	P(FA LULC)	Occurrences (%) / Area (%)	
Lowlands and wetlands	0.37	10.53	0.30	0.01	0.99	0.11	0.00	18.95	28.58	1.00
Rocky Land	0.54	3.80	0.52	0.01	0.99	0.04	0.01	4.67	7.04	0.75
Agriculture	10.58	40.35	10.38	0.01	0.99	0.40	0.10	2.53	3.81	0.75
Irrigated agriculture	0.54	0.88	0.54	0.01	0.99	0.01	0.01	1.08	1.62	0.50
Gallery Forest	0.25	0.29	0.25	0.01	0.99	0.00	0.00	0.79	1.19	0.50
Forest	0.83	0.88	0.83	0.01	0.99	0.01	0.01	0.70	1.05	0.50
Steppe	39.63	32.75	39.67	0.01	0.99	0.33	0.40	0.55	0.83	0.50
Plantation	5.97	3.80	5.98	0.01	0.99	0.04	0.06	0.42	0.64	0.25
Bare Soil	11.93	2.92	11.99	0.01	0.99	0.03	0.12	0.16	0.25	0.25
Herbaceous savanna	5.52	1.17	5.55	0.01	0.99	0.01	0.06	0.14	0.21	0.25
Sandy Area	1.77	0.29	1.78	0.01	0.99	0.00	0.02	0.11	0.17	0.25
Woodland	4.32	0.58	4.35	0.01	0.99	0.01	0.04	0.09	0.14	0.25
Shrubland	15.37	1.75	15.46	0.01	0.99	0.02	0.15	0.08	0.11	0.25
Settlements	2.31	0.00	2.32	0.01	0.99	0.00	0.02	0.00	0.00	0.00
Open Mine	0.07	0.00	0.07	0.01	0.99	0.00	0.00	0.00	0.00	0.00

