Supplementary Material

Table S1. Main physical and chemical characteristics of Tacuarembó site soil profile.

Horizon	Depth	Clay	Silt	Sand	%OM	pH †		Extractable Cations					Total Bases	CECe	Base Sat.
						H_2O	KCl	Al	Ca	Mg	K	Na			
	Cm	--------- g kg^{-1} --------						---------- $cmol_c$ kg^{-1} ----------							%
A	46	14,7	24,3	61,0	1,2	4,7	3,8	1,0	2,7	1,0	0,3	0,2	4,2	5,3	79,2
AB	18	18,0	29,6	52,4	1,0	4,6	3,8	1,0	3	1,3	0,3	0,2	4,8	5,8	82,8
Bt	27	35,6	40,1	31,1	0,8	4,8	3,7	0,9	5,3	2,6	0,4	0,4	8,5	10,4	81,7
BC	18	36,4	31,7	32,0	0,8	5,1	4,1	0,7	6,5	3,1	0,3	0,6	10,5	11,2	93,8
C	13	27,5	36,8	35,8	0,8	5,1	4,1	0,6	5,1	2,5	0,3	0,2	8,0	8,6	93,0

Note: † pH: soil: solution relation v/v 1:2.5; Extractable Al: extracted by KCl 1M; Extractable bases: extracted by Ammonium Acetate 1M; CECe: effective Cation Exchange Capacity; Base Sat.: (Total Bases/CECe) × 100. Source: Bentancor, 2017.

Table S2. Main physical and chemical characteristics of Paysandú site soil profile.

Horizon	Depth	Clay	Silt	Sand	%OM	pH †		Extractable Cations					Total Bases	CECe	Base Sat.
						H_2O	KCl	Al	Ca	Mg	K	Na			
	Cm	--------- g kg^{-1} --------						---------- $cmol_c$ kg^{-1} ----------							%
A	43	13,1	27,2	59,7	1,1	4,8	3,7	0,8	2,1	0,8	0,1	0,2	3,2	4,0	80,0
E	24	12,6	25,3	62,1	0,5	4,8	3,7	0,8	1,9	0,8	0,1	0,2	3,0	3,8	79,0
Bt	40	30,3	31,7	38,0	0,6	5,1	4,1	0,6	9,6	3,2	0,4	0,3	13,4	14,1	95,0
BC	26	29,0	36,2	34,8	0,3	5,4	4,2	0,3	11	3,7	0,4	0,4	15,4	15,7	98,1

Note: † pH: soil: solution relation v/v 1:2.5; Extractable Al: extracted by KCl 1M; Extractable bases: extracted by Ammonium Acetate 1M; CECe: effective Cation Exchange Capacity; Base Sat.: (Total Bases/CECe) × 100. Source: Bentancor 2017.

Table S3. Coefficients of Height´s models adjusted for each site, specie and planting density.

Site	Specie	Planting Density (tres.ha^{-1})	βo	β_1	β_2	Coefficien β_3	β_4	β_5	β_6
Paysandú	*E.benthamii*	2220	3.234334	−2.985321	1.849822	−289698			
Paysandú	*E.benthamii*	3330	1.2556572	0.3211152	−0.0687087				
Paysandú	*E.benthamii*	4440	1.2766285	0.4000407	−0.0839982				
Paysandú	*E.benthamii*	6660	1.0797972	0.3029672	−0.0731201				
Paysandú	*E.dunnii*	2220	3.346361	−3.170208	1.945555	−0.309188			
Paysandú	*E.dunnii*	3330	3.282902	−2.932254	1.858174	−0.305457			
Paysandú	*E.dunnii*	4440	1.5678927	−0.3894695	0.6907860	−0.1353519			
Paysandú	*E.dunnii*	6660	1.5139701	−0.4480516	0.6843423	−0.1212293			
Paysandú	*E.grandis*	2220	2.2718742	−1.3487567	0.9908357	−0.1523363			
Paysandú	*E.grandis*	3330	1.5139701	−0.4480516	0.6843423	−0.1212293			
Paysandú	*E.grandis*	4440	1.7035954	−0.7250901	0.8373629	−0.1485176			
Paysandú	*E.grandis*	6660	2.0387488	−1.3187250	1.1720816	−0.2099997			
Tacuarembó	*E.benthamii*	2220	−82.240729	4.887956	−13.394079	−0.013024	14.372559	−0.103941	
Tacuarembó	*E.benthamii*	3330	4.986	6.145	−0.1408	−17.06	−0.0004142		
Tacuarembó	*E.benthamii*	4440	−64.605383	6.204005	−0.127141	−23.010	−21.620	−0.003980	11.844659
Tacuarembó	*E.benthamii*	6660	−890.7	0.859	−0.02367	12.35	33.72	−0.0242	
Tacuarembó	*E.dunnii*	2220	−225.72014	4.15170	−0.07885	−14.216	−0.03759	39.76994	−11.72844
Tacuarembó	*E.dunnii*	3330	-487.3	3.056	−0.07363	23.73	−0.03981	71.59	
Tacuarembó	*E.dunnii*	4440	22.82362	5.35403	−0.13322	−12.47193	−2.70668		
Tacuarembó	*E.dunnii*	6660	7.5333023	3.676834	−0.0014699	−0.0874711	−6.7473766		
Tacuarembó	*E.grandis*	2220	33.40901	-0.02259	17.92124	61.11832	−9.72528		
Tacuarembó	*E.grandis*	3330	−244.2	1.292	−0.03971	−0.01581	33.01	10.7	
Tacuarembó	*E.grandis*	4440	533.088313	2.019936	−74.919410	0.020226	−0.047956	11.947853	
Tacuarembó	*E.grandis*	6660	226	3.399	−30.04	−0.08268	0.005823	−6.914	

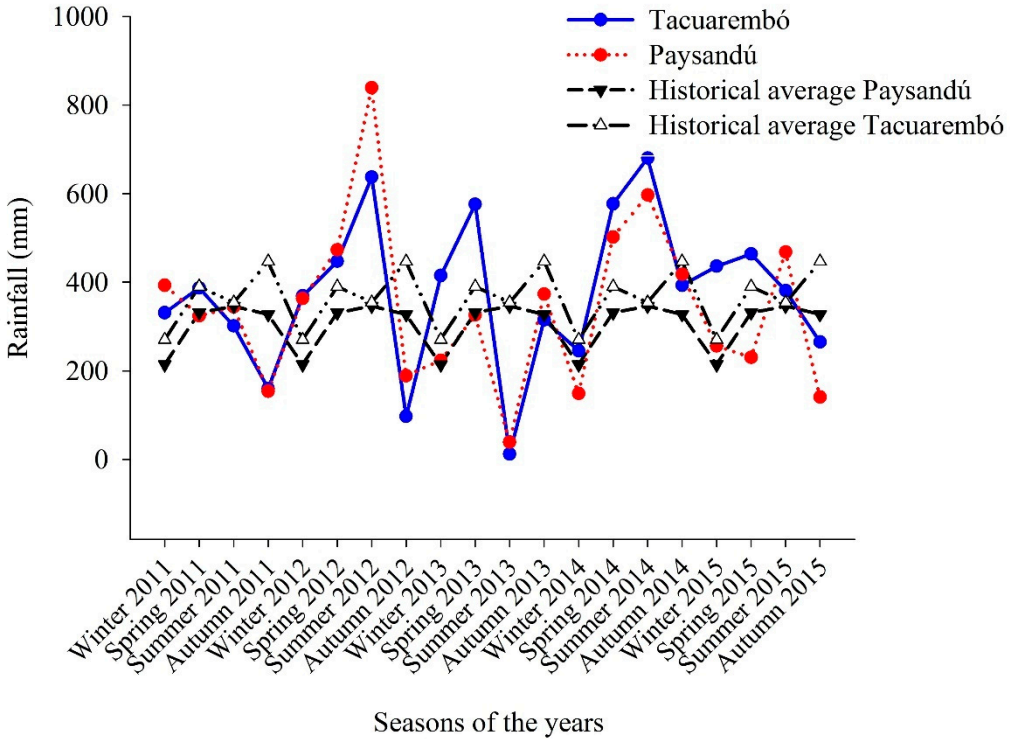

Figure S1. Rainfall regime evolution along the year in the two studied sites.

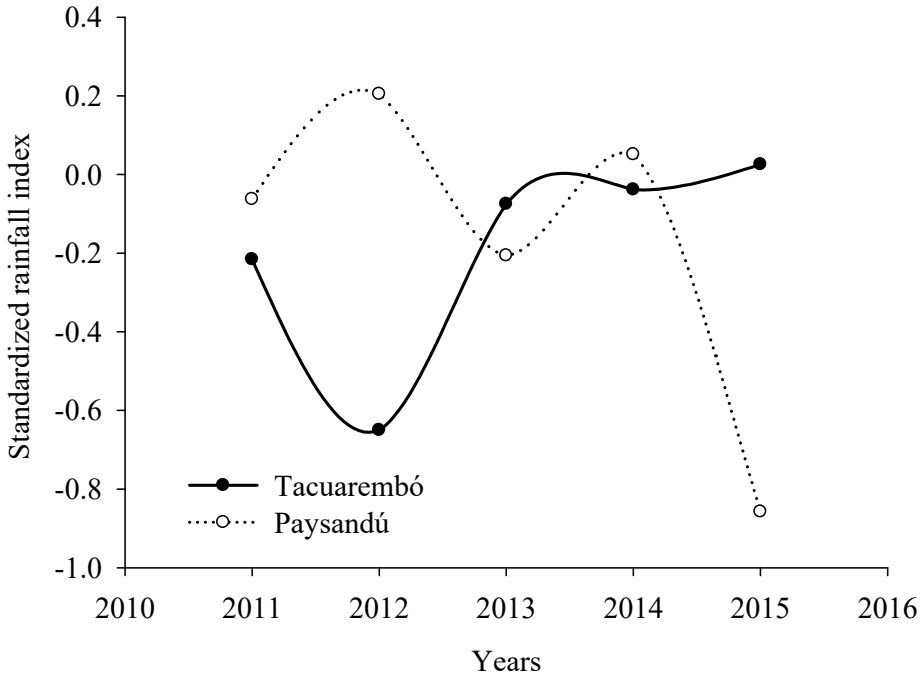

Figure S2. Standardized rainfall index (SRI) evolution in the two sites throughout the evaluation period. (Source: www.meterología.com.uy).

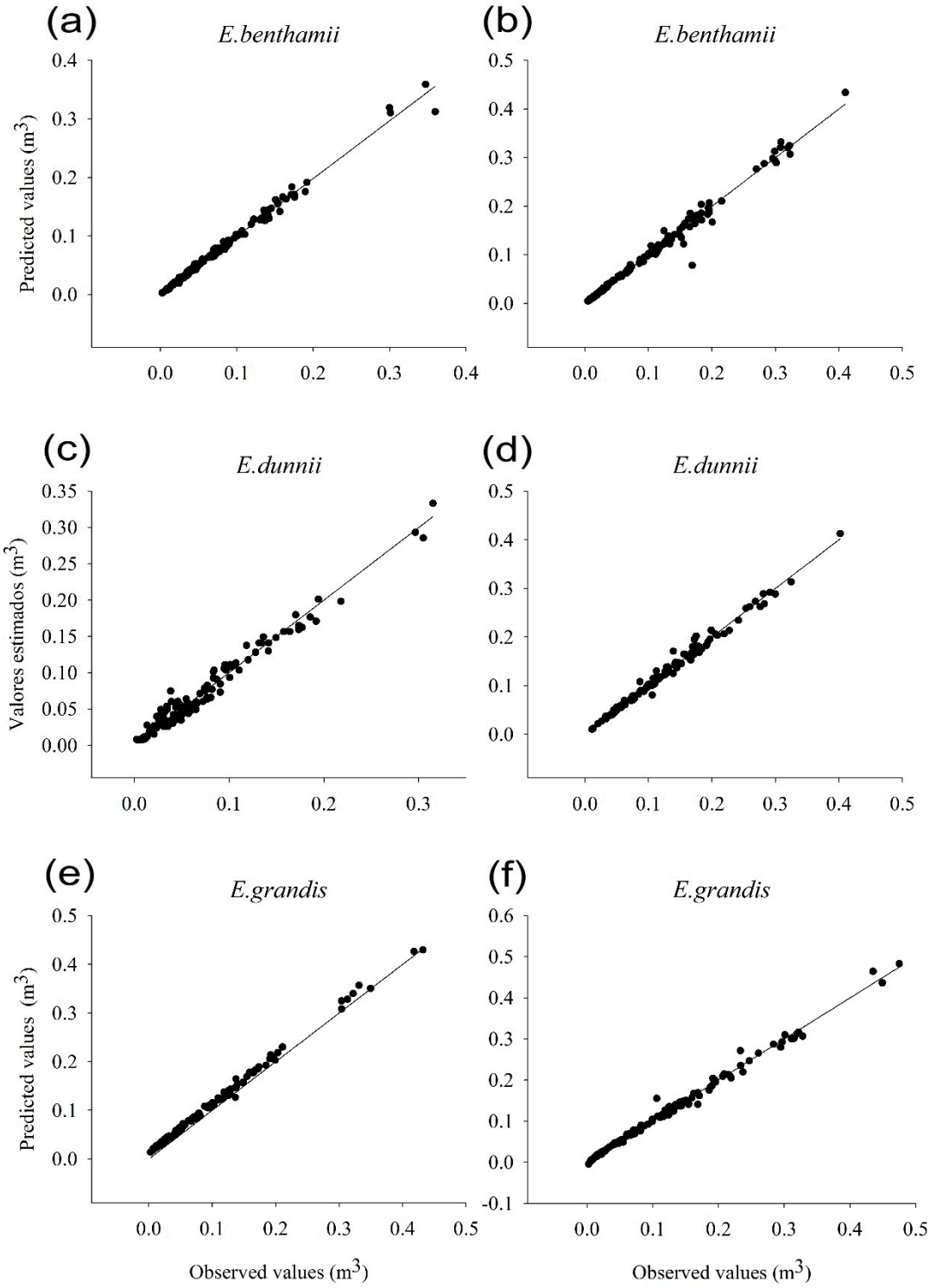

Figure S3. Relations between measured and estimated tree volume for each tested specie in Paysandú (Subfigures **a**, **c**, **e**) and Tacuarembó (Subfigures **b**, **d**, **f**) sites. Line 1:1.