

Table S1. MAE¹, RMSE², and D_{Pielke} index for simulated and observed T, RH, and WS in selected stations for September (2014-2023)*.

Station	Statistics	2014			2015			2016			2017			2018			2019			2020			2021			2022			2023		
		T	RH	WS	T	RH	WS	T	RH	WS	T	RH	WS	T	RH	WS	T	RH	WS	T	RH	WS	T	RH	WS	T	RH	WS	T	RH	WS
Guarulhos Pimentas	MAE				1.9	12	1.1	1.4	10	1.2	1.6	11	1.1	1.7	11	1.2	1.9	11	1.1	1.9	12	1.1	1.8	11	1.1	1.6	8	1.1			
	RMSE				2.6	17	1.3	1.7	13	1.4	1.9	14	1.3	2.4	14	1.4	2.6	15	1.3	2.4	17	1.3	2.4	14	1.3	2.3	12	1.3			
	D _{Pielke}				0.9	1.6	2.7	0.9	1.6	2.7	0.9	1.3	2.7	1.0	1.7	2.9	1.0	1.5	2.7	0.9	1.5	2.8	0.9	1.5	2.6	1.1	1.4	2.7			
Marginal Tietê	MAE	1.5	10	1.2	1.9	11	1.1	1.4	9	1.2	1.4	10	1.0	1.6	10	1.2	1.9	10	0.9	1.9	11	1.0				1.7	9	0.9	1.7	9	1.0
	RMSE	1.9	12	1.4	2.6	16	1.3	1.7	12	1.3	1.7	13	1.2	2.3	13	1.4	2.5	13	1.1	2.6	15	1.2				2.5	13	1.1	2.2	12	1.2
	D _{Pielke}	0.9	1.5	2.6	1.0	1.7	2.5	1.0	1.7	2.3	0.8	1.2	2.3	1.1	1.9	2.6	0.9	1.4	2.2	1.0	1.5	2.4				1.3	1.5	2.3	0.8	1.2	2.2
Mirante de Santana	MAE	1.6	10	1.2	2.0	10	1.0	1.5	9	1.2	1.6	9	1.0	1.9	10	1.3	2.1	10	1.0	2.2	12	1.0	2.0	9	0.9	1.8	8	0.9	1.9	9	0.9
	RMSE	2.1	12	1.5	2.8	14	1.3	2.0	12	1.4	2.0	12	1.3	2.6	13	1.6	2.9	13	1.3	3.1	15	1.2	2.7	13	1.2	2.6	11	1.2	2.4	12	1.2
	D _{Pielke}	1.0	1.4	2.6	1.0	1.5	2.4	1.1	1.7	2.6	0.9	1.2	2.5	1.2	1.9	2.8	1.1	1.4	2.4	1.2	1.5	2.4	1.1	1.4	2.3	1.3	1.4	2.5	0.9	1.2	2.2
Itutinga	MAE				2.0	15	2.6																								
	RMSE				2.9	23	3.0																								
	D _{Pielke}				1.1	3.4	6.3																								
Morro Grande	MAE																												1.9	12	1.1
	RMSE																												2.4	16	1.4
	D _{Pielke}																												1.0	1.9	2.0

¹MAE denotes the mean absolute error. ²RMSE denotes the root-mean-square difference. *Blank spaces indicate no data at the station for the year.