

Table 4R. Measured and modelled soil organic C (SOC) content (Mg/ha) under current scenario (baseline scenarios according to BCCR-BCM2 , CNRMCM3 and ECHAM5), and results of the Kolmogorov-Smirnov test. (\*) Correlation is significant at the 0.01 level.

Soil depth (cm)	N	Measured SOC		BCCR-BCM2			CNRMCM3			ECHAM5			Kolmogorov-Smirnov test (p)
				Modelled SOC			Modelled SOC			Modelled SOC			
		Mean	SD	Mean	SD	R	Mean	SD	R	Mean	SD	R	
0-25	1504	30.51	28.11	31.36	29.93	0.9889	31.70	26.89	0.9892	31.48	26.90	0.9892	< 0.01
25-50	1033	19.66	19.18	19.82	18.60	0.9898	19.88	18.60	0.9898	19.87	18.59	0.9898	< 0.01
50-75	600	15.65	14.67	15.87	14.31	0.9912	15.92	14.31	0.9912	15.88	14.31	0.9912	< 0.01
0-75	1504	51.25	47.55	54.48	38.82	0.8840	52.51	38.66	0.8850	54.47	38.88	0.8840	< 0.01

Table 5R. Modelled soil organic carbon stocks (SOC, Mg/ha) in current scenario (baseline scenario) for each land use and soil type. N: number of profiles; S: area (ha). AR: Arenosols, CL: Cambisols, CM: Cambisols, FL: Fluvisols, LP: Leptosols, LV: Luvisols, PL: Planosols, RG: Regosols, SC: Solonchaks, VR: Vertisols

Land use	Arable land			Permanent crops			Heterogeneous agricultural			Forests			Scrub and/or herbaceous vegetation			Open spaces, little/no vegetation			Maritime wetlands		
	Soil type	N	S	SOC	N	S	SOC	N	S	SOC	N	S	SOC	N	S	SOC	N	S	SOC	N	S
AR	6	67,2 (0,1%) 418,4	45,2±13,2	5	24,6 (0%) 118,9	33,3±13,8	9	24,3 (0%) 323,6	43,5±10,9	26	221 (0,3%)	38,0±18,2	17	198 (0,2%) 822,5	43,6±20,1				2	10,9 (0%)	36,9±13,6
CL	72	(0,5%) 4430,5	70,0±30,3	49	(0,1%) 7254,2	62,3±20,8	23	(0,4%) 6364,8	64,5±20,7	8	36,8 (0%) 9229,7	74,3±55,3	11	(1%) 8180,5	73,8±29,0						
CM	43	(5,1%) 1437,7	47,1±34,3	23	(8,4%) 953,6	53,7±18,9	72	(7,4%) 597	22,9±19,3	52	(10,7%) 452,9	44,1±38,1	31	(9,5%) 730,3	38,6±22,4						
FL	27	(1,7%) 257,2	65,4±18,7	3	(1,1%) 542,7	28,6±2,4	13	(0,7%) 352,1	41,3±30,3	15	(0,5%) 2046,3	36,8±22,6	8	(0,8%) 3878,7	54,3±24,4				1	61,5 (0,1%)	44,70
LP	16	(0,3%) 1521	66,8±46,6	22	(0,6%) 2380,1	55,4±21,4	59	(0,4%) 860,7	42,2±40,7	131	(2,4%) 1159,4	58,2±59,2	75	(4,5%) 938,7	65,2±56,5	4	91,6 (0,1%) 20,4	25,2±20,2			
LV	26	(1,8%) 725,4	50,8±23,1	32	(2,8%)	56,7±33,3	27	(1%)	28,3±18,3	36	(1,3%)	54,1±40,7	13	(1,1%) 211,9	76,7±39,3	1	(0%)	17,80			
PL	1	(0,8%) 2037,7	64,50										1	(0,2%) 4370,2	51,30						
RG	53	(2,4%) 910,5	61,1±22,1	59	(4,5%) 10,6	56,8±27,3	27	(1,9%) 80,3	42,9±23,0	111	(5,2%) 4464,2	53,5±46,7	53	(5,1%) 4370,2	55,1±31,9	2	4370,2 (5,1%)	8,5±0,6	1	16,5 (0%)	17,10
SC	3	(1,1%) 3645,3	48,3±22,3	1	(0%) 1625,7	55,20	2	(0,1%) 975,9	69,9±21,6	1	36,8 (0%) 33,90								10	(0,6%)	78,4±
VR	33	(4,2%)	66,7±19,1	14	(1,9%)	61,2±15,0	20	(1,1%)	64,1±19,4				7	(0,7%)	627,1 56,9±26,9						



Figure 1R. Study area.

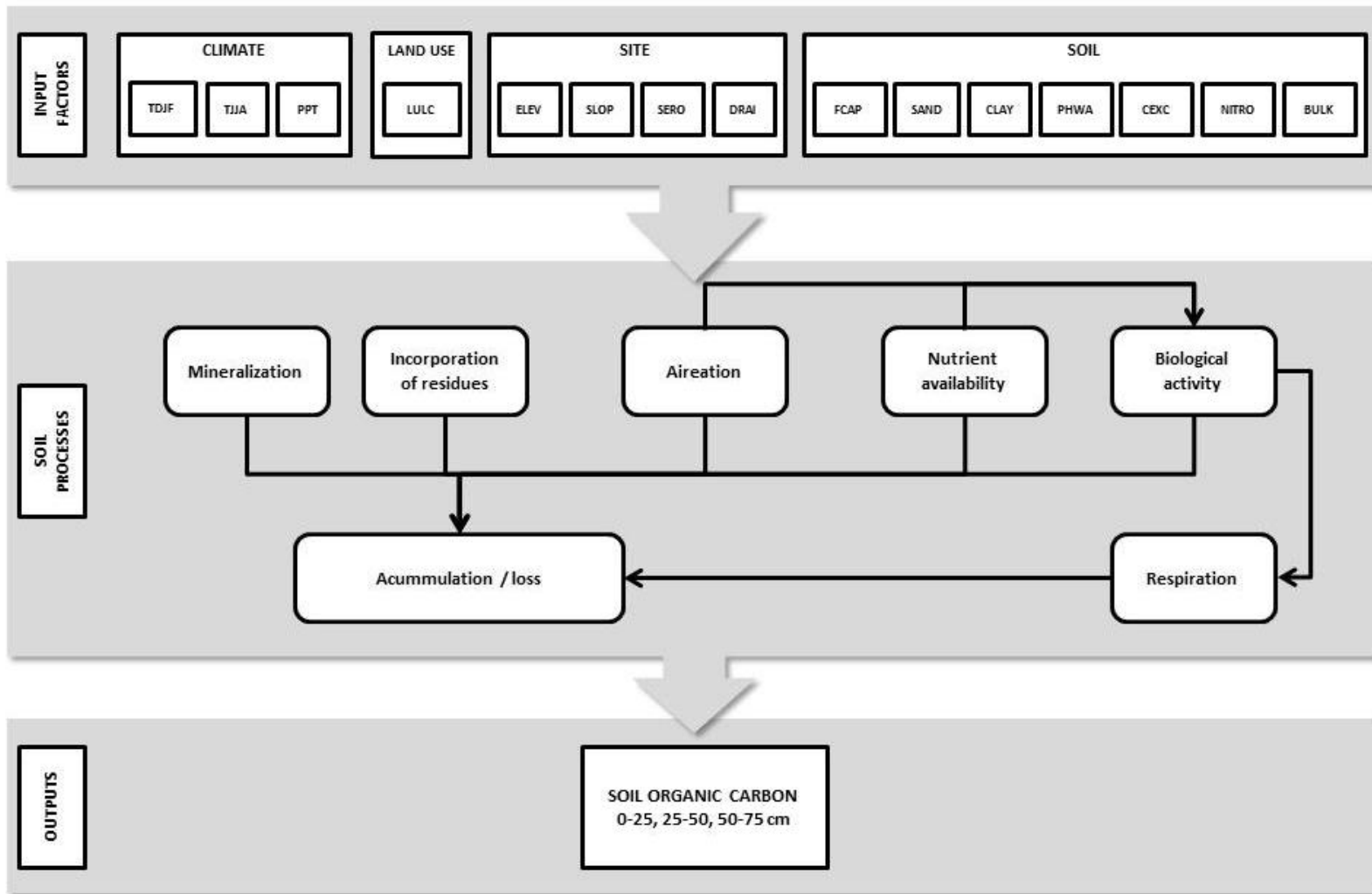


Figure 2R. General diagram of CarboSOIL model: input factors, simulated soil processes and outputs. Input factors abbreviations are described in Table 1