

Supplementary Materials:

Table S1. Rank of primary soil property maps used for the comparison of the pedological features of CMPs and nCMPs in the case of the three study areas. The higher the D value, the greater the degree to which CMPs and nCMPs differed in their tested soil properties.

Study area 1 – Danube-Tisza interfluve		Study area 2 - Sió-Sárvíz		Study area 3 – Rába interfluve	
<i>Soil properties</i>	<i>D-value</i>	<i>Soil properties</i>	<i>D-value</i>	<i>Soil properties</i>	<i>D-value</i>
silt_0_5cm	0.967	sand_5_15	0.966	CC_15_30cm	0.950
silt_0_60cm	0.966	sand_15_30	0.966	CC_30_60cm	0.905
sand_15_30	0.962	sand_0_5cm	0.955	CC_0_30cm	0.900
sand_5_15	0.950	sand_0_30cm	0.940	CC_5_15cm	0.900
silt_0_30cm	0.949	sand_100_200cm	0.940	CC_0_5cm	0.900
silt_5_15	0.949	silt_0_5cm	0.940	clay_100_200cm	0.865
silt_15_30	0.947	silt_60_100cm	0.939	sand_100_200cm	0.861
sand_0_5cm	0.940	silt_15_30	0.938	som_5_15cm	0.833
sand_30_60cm	0.938	silt_0_30cm	0.937	silt_100_200cm	0.822
sand_0_30cm	0.927	silt_60_90cm	0.932	clay_0_30cm	0.809
sand_0_60cm	0.926	silt_100_200cm	0.929	clay_0_5cm	0.808
sand_60_90cm	0.917	silt_5_15	0.926	CC_60_100cm	0.808
sand_60_100cm	0.904	sand_60_100cm	0.919	sand_0_5cm	0.782
silt_30_60cm	0.900	silt_0_60cm	0.917	clay_60_100cm	0.773
silt_60_90cm	0.891	sand_0_60cm	0.915	CC_100_200cm	0.773
sand_100_200cm	0.881	sand_60_90cm	0.910	sand_60_100cm	0.747
silt_100_200cm	0.878	silt_30_60cm	0.898	clay_60_90cm	0.745
silt_60_100cm	0.875	sand_30_60cm	0.881	clay_15_30	0.744
clay_30_60cm	0.813	CC_0_30cm	0.870	silt_0_5cm	0.738
clay_5_15	0.800	CC_0_5cm	0.870	clay_30_60cm	0.733
clay_0_30cm	0.800	CC_5_15cm	0.833	sand_15_30	0.729
CC_30_60cm	0.800	som_5_15cm	0.833	clay_5_15	0.720
CC_5_15cm	0.800	som_0_30cm	0.833	sand_5_15	0.718
CC_0_5cm	0.792	CC_15_30cm	0.800	clay_0_60cm	0.712
clay_15_30	0.775	CC_30_60cm	0.793	silt_60_100cm	0.706
clay_0_60cm	0.774	CC_60_100cm	0.763	silt_15_30	0.691
CC_0_30cm	0.769	clay_60_100cm	0.757	sand_0_30cm	0.688
CC_15_30cm	0.759	som_0_5cm	0.714	sand_60_90cm	0.681
clay_0_5cm	0.750	clay_0_5cm	0.711	silt_60_90cm	0.674
clay_60_90cm	0.750	clay_60_90cm	0.690	silt_5_15	0.661
clay_60_100cm	0.700	clay_100_200cm	0.688	sand_0_60cm	0.609
CC_60_100cm	0.700	clay_5_15	0.667	silt_30_60cm	0.600
rooting depth	0.652	clay_15_30	0.638	sand_30_60cm	0.569
CC_100_200cm	0.615	clay_30_60cm	0.625	silt_0_30cm	0.566
clay_100_200cm	0.608	clay_0_30cm	0.625	silt_0_60cm	0.558
		CC_100_200cm	0.621	rooting depth	0.508
		clay_0_60cm	0.600		
		rooting depth	0.553		

Table S2. Variable importance rank of primary soil properties used in Random Forest modelling of CMPs and nCMPs in the case of the three study areas. The higher the importance value, the more informative is the given soil property in the discrimination of CMPs and nCMPs.

Study area 1 – Danube-Tisza interfluve		Study area 2 - Sió-Sárvíz valley		Study area 3 – Rába interfluve	
BD_0_30cm_TIM	289.59	rooting depth	131.73	som_100_200cm	69.26
som_0_5cm	227.46	som_60_100cm	115.33	rooting depth	68.24
rooting depth	224.76	som_30_60cm	114.76	ph_100_200cm	63.66
som_5_15cm	216.51	som_100_200cm	113.63	som_60_100cm	60.21
ph_100_200cm	207.06	ph_100_200cm	112.88	som_30_60cm	53.60
som_30_60cm	205.66	BD_0_30cm_TIM	112.87	BD_0_30cm_TIM	51.00
som_60_100cm	203.75	silt_60_90cm	112.52	ph_60_100cm	48.44
som_100_200cm	201.28	ph_60_100cm	109.86	clay_60_100cm	46.37
som_0_30cm	200.23	clay_60_90cm	106.98	silt_5_15	45.66
som_15_30cm	192.74	silt_100_200cm	106.64	silt_100_200cm	45.34
ph_60_100cm	184.22	som_0_30cm	106.11	sand_100_200cm	44.45
silt_60_90cm	177.99	som_15_30cm	104.94	som_15_30cm	44.28
CC_100_200cm	176.41	sand_60_90cm	104.87	clay_5_15	43.75
clay_60_90cm	172.33	som_0_5cm	102.96	ph_0_5cm	43.73
CC_30_60cm	169.05	clay_0_5cm	102.64	som_0_5cm	43.71
sand_60_90cm	168.41	som_5_15cm	102.23	som_5_15cm	43.67
clay_30_60cm	166.77	clay_5_15	99.84	silt_15_30	43.38
silt_100_200cm	166.09	clay_60_100cm	99.81	clay_60_90cm	43.28
sand_100_200cm	165.95	CC_60_100cm	99.07	clay_30_60cm	42.58
CC_60_100cm	165.11	silt_0_30cm	98.97	ph_5_15cm	42.19
clay_5_15	164.37	clay_100_200cm	96.27	som_0_30cm	42.12
clay_15_30	162.99	silt_0_5cm	95.66	sand_60_100cm	41.32
silt_60_100cm	161.09	CC_15_30cm	95.41	silt_60_100cm	41.26
silt_15_30	160.73	silt_15_30	95.06	clay_100_200cm	41.12
clay_0_5cm	159.78	silt_30_60cm	94.80	CC_100_200cm	40.62
clay_60_100cm	156.33	CC_30_60cm	93.91	ph_15_30cm	39.29
CC_5_15cm	153.73	silt_60_100cm	93.16	silt_0_30cm	39.21
sand_60_100cm	153.66	clay_15_30	92.78	CC_60_100cm	38.73
silt_0_5cm	153.19	sand_100_200cm	91.82	clay_0_30cm	38.53
silt_5_15	152.58	CC_0_30cm	91.46	clay_15_30	38.35
CC_0_30cm	150.50	CC_0_5cm	91.19	CC_0_5cm	37.76
CC_0_5cm	150.39	silt_5_15	91.11	ph_30_60cm	37.70
ph_0_5cm	150.18	clay_0_30cm	90.86	silt_60_90cm	37.57
ph_0_30cm	149.91	sand_60_100cm	89.11	clay_0_60cm	37.47
CC_15_30cm	148.59	CC_5_15cm	89.08	CC_5_15cm	37.40
ph_30_60cm	147.23	CC_100_200cm	88.95	clay_0_5cm	37.14
ph_5_15cm	146.69	clay_30_60cm	88.80	CC_30_60cm	36.75
clay_100_200cm	146.42	sand_0_5cm	87.50	ph_0_30cm	36.57
silt_0_30cm	143.57	sand_0_30cm	87.47	sand_60_90cm	36.50
clay_0_60cm	143.28	ph_0_5cm	87.39	CC_0_30cm	36.17
ph_15_30cm	140.54	silt_0_60cm	87.24	sand_0_30cm	35.43
sand_0_5cm	140.44	clay_0_60cm	86.29	CC_15_30cm	35.03
clay_0_30cm	139.10	ph_5_15cm	84.90	silt_0_5cm	35.03
silt_30_60cm	135.53	ph_0_30cm	84.56	sand_30_60cm	33.89
sand_15_30	131.54	sand_30_60cm	81.55	silt_30_60cm	33.31
silt_0_60cm	127.08	ph_15_30cm	80.75	sand_15_30	33.23
sand_30_60cm	126.20	ph_30_60cm	80.74	sand_0_5cm	33.19
sand_5_15	125.01	sand_5_15	79.37	silt_0_60cm	32.32
sand_0_30cm	120.32	sand_15_30	78.77	sand_0_60cm	31.51
sand_0_60cm	113.26	sand_0_60cm	76.81	sand_5_15	31.32

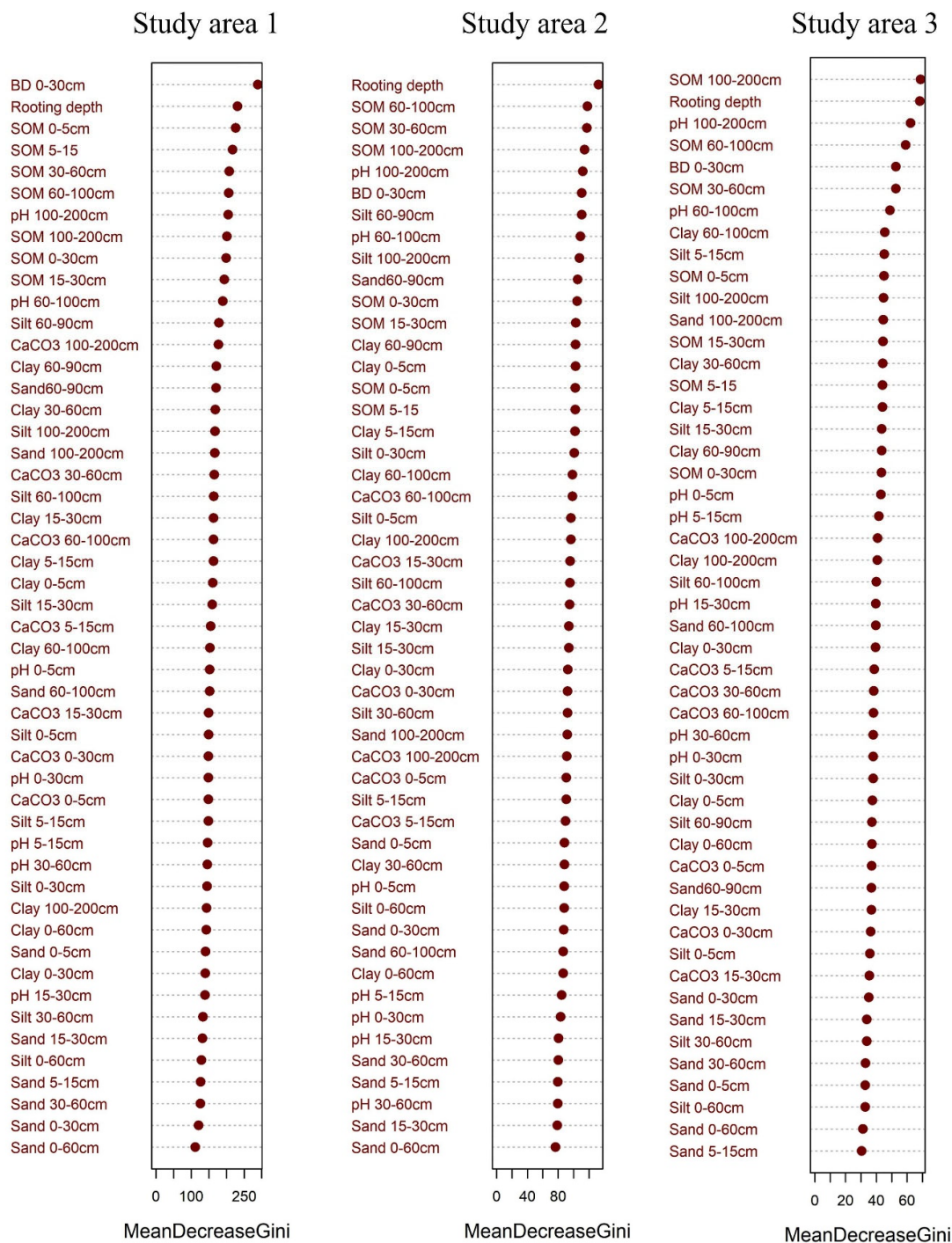


Figure S1. Variable importance rank of primary soil properties used in Random Forest modelling of CMPs and nCMPs in the case of the three test sites.