Livestock grazing, plant community and abiotic factors shape blue carbon stocks in Nordic coastal marshes

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Supplement material

Figure S1: Relation between total soil organic carbon (%) and loss of ignition (LOI, %), indicator of soil organic matter.

Points represent the data for grazed (round point, n = 239) and ungrazed (square point, n = 275) areas along the 12 sites. For Als, Tullgarn North, Trondheim, Lenholmen and Seden Strand 3 cores per management type were used, compared to one core per management for the other sites. Different slicing resolutions were used depending on the soil compression factor. The black line represents the second-order polynomial regression fitted using a linear model. The grey area corresponds to 95 % level of confidence.

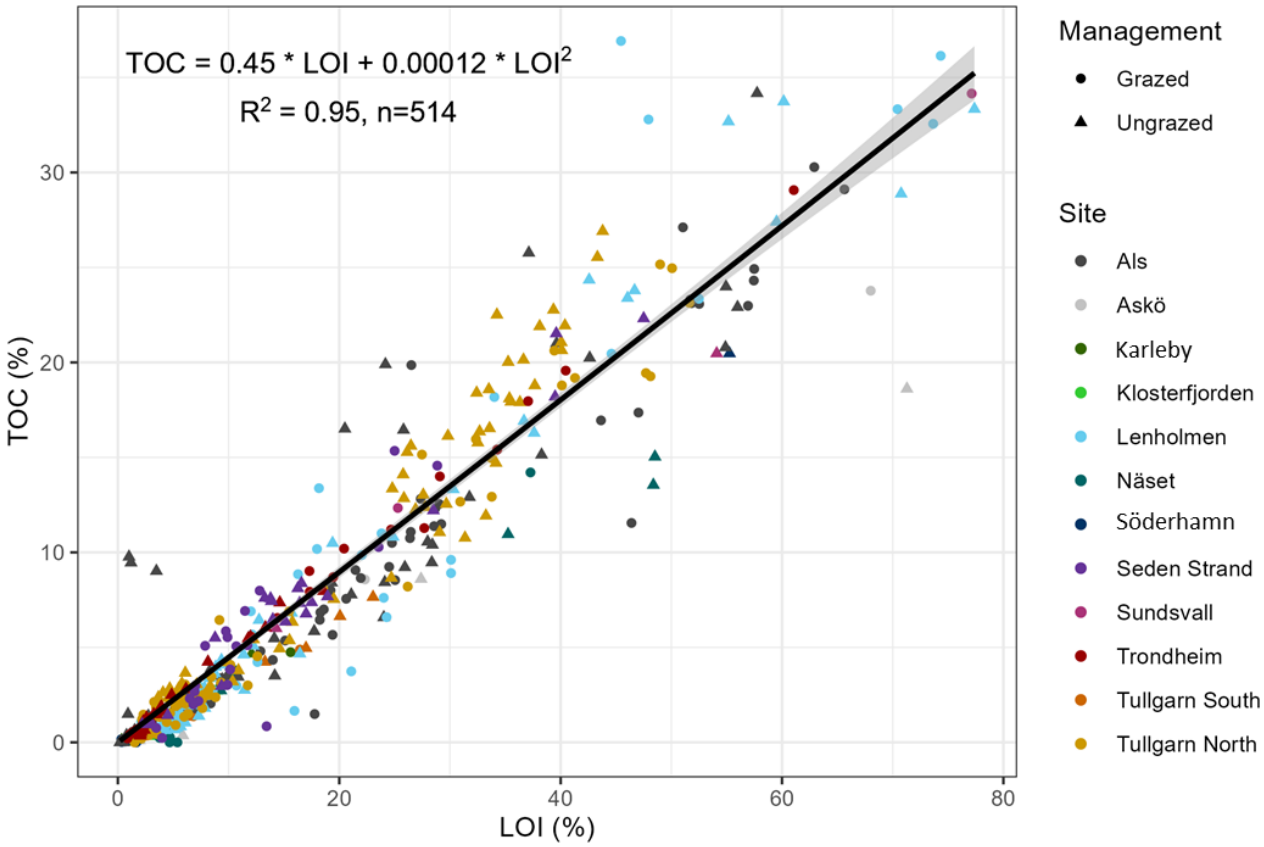

Figure S2: Relation between total soil nitrogen (%) and loss of ignition (LOI, %), indicator of soil organic matter.

Points represent the data for grazed (round point, n = 231) and ungrazed (square point, n = 256) areas along the 12 sites. For Als, Tullgarn North, Trondheim, Lenholmen and Seden Strand 3 cores per management type were used, compared to one core per management for the other sites. Different slicing resolutions were used depending on the soil compression factor. The black line represents the second-order polynomial regression fitted using a linear model. The grey area corresponds to 95 % level of confidence.

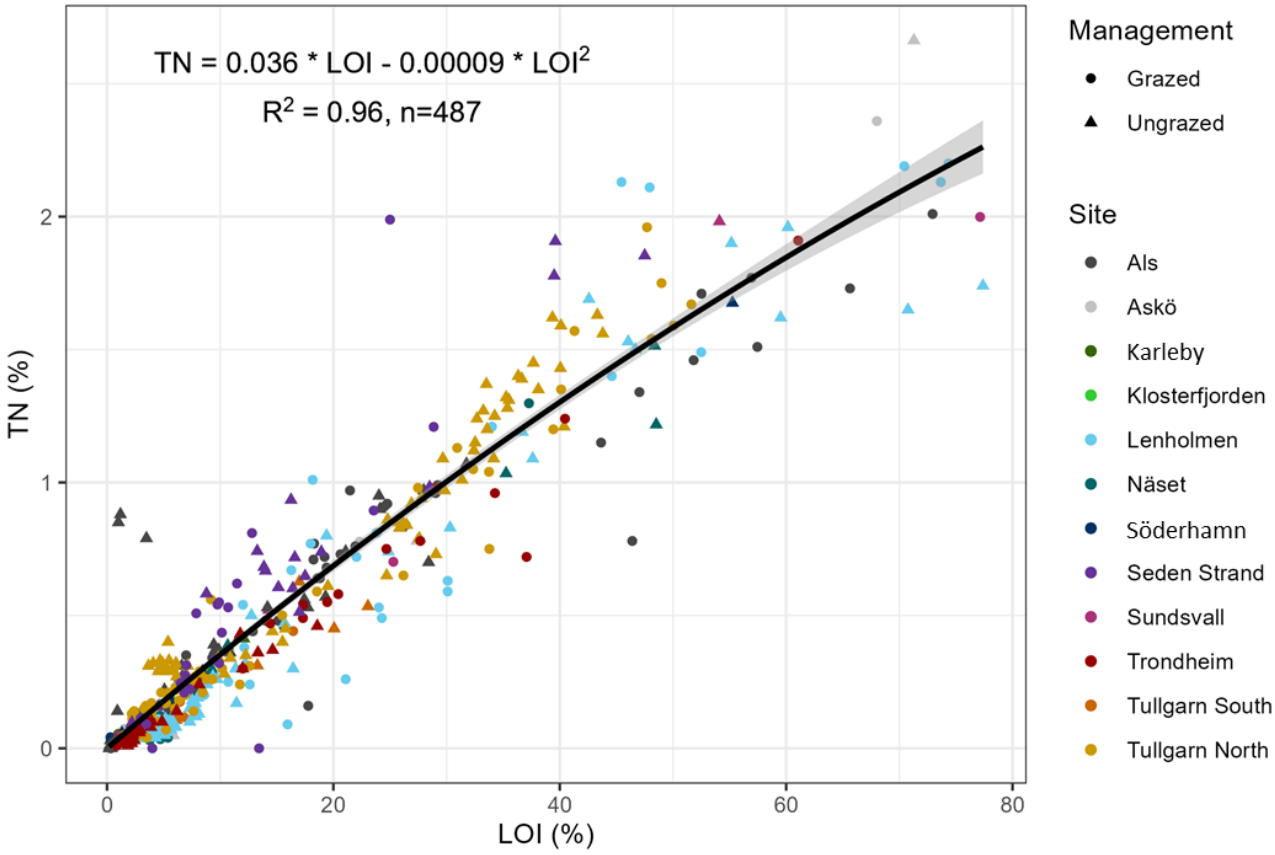

Figure S3: Spearman correlation between plant community descriptors and environmental variables

Spearman correlation coefficients between plant community descriptors (left table): mean vegetation height estimated (cm; Mean height), maximum vegetation height measured (cm; Max height), *Phragmites australis* cover estimated (%; *P. australis* cover), Species richness, Shannon-Wiener index, Simpson index and evenness, Pielou evenness and Hill index calculated). Spearman correlation coefficients between environmental variables (right table): Latitude (°), Longitude (°), Mean water salinity and temperature (°C), and land uplift values are relative to geoid (mm yr^{-1}). Positive Spearman correlation coefficient (from 1 to 0) is indicated in blue, and negative value (from 0 to -1) in grey. Significant coefficients are not crossed out ($p < 0.05$), and non-significant coefficients are crossed out ($p > 0.05$).

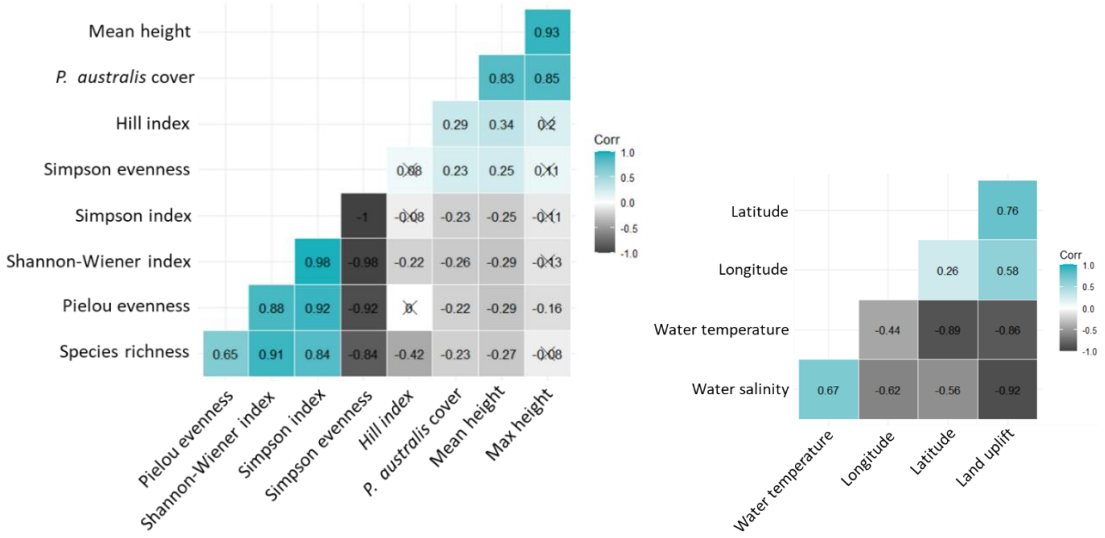

Figure S4: Spearman correlation between soil characteristics descriptors

Spearman correlation coefficients between soil characteristics descriptors (left table; mean on the first 50 cm depth): water content (%), dry bulk density (g DW cm^{-3}), dry matter content (%), percentage of silt and clay (< 6 3µm) and D50 (µm), representing the grain size where 50 % of the volume sample is below that value. Positive Spearman correlation coefficient (from 1 to 0) is indicated in blue, and negative value (from 0 to -1) in grey. Significant coefficients are not crossed out ($p < 0.05$).

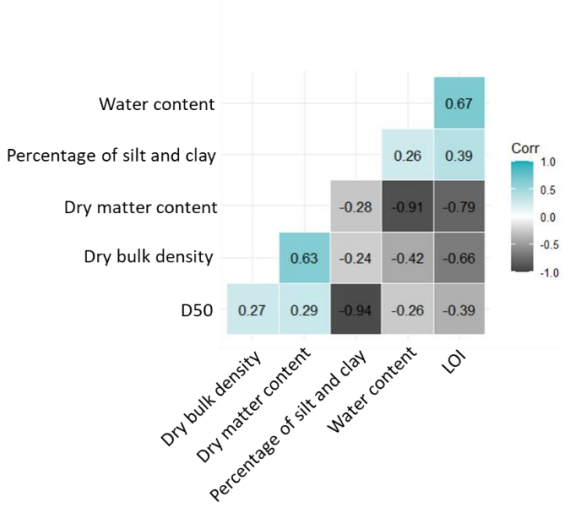

Table S1: List of identified species

Mean cover ± sd (n = 36 quadrats in grazed areas, n = 33 in ungrazed areas).

Species	Grazed area (%)	Ungrazed area (%)
Achillea millefolium	0.03 ± 0.17	0
Agrostis capillaris	0.76 ± 2.21	0.28 ± 1.67
Agrostis gigantea	0.03 ± 0.17	0.42 ± 2.50
Agrostis stolonifera	11.52 ± 22.38	4.86 ± 9.24
Alopecurus geniculatus	0.03 ± 0.17	0
Angelica sylvestris	0.30 ± 1.21	0
Anthriscus sylvestris	0	2.08 ± 7.11
Argentina anserina	7.61 ± 12.30	2.78 ± 9.44
Armeria maritima	0.09 ± 0.38	0
Arrhenatherum elatius	0	1.94 ± 11.67
Artemisia maritima	0	1.28 ± 5.26
Artemisia vulgaris	0.06 ± 0.35	0
Atriplex glabriuscula	0	2.00 ± 10.01
Atriplex prostrata	0	0.33 ± 1.67
Atriplex sp.	0.03 ± 0.17	0.47 ± 1.84
Blysmus compressus	0.03 ± 0.17	0
Bolboschoenus maritimus	0	7.17 ± 16.72
Calamagrostis arenaria	8.03 ± 25.8	0
Calamagrostis canescens	7.27 ± 23.39	0.14 ± 0.83
Calamagrostis neglecta	0.24 ± 1.39	5.00 ± 18.75
Caltha palustris	0.36 ± 1.76	0.22 ± 0.90
Calystegia sepium	0	1.25 ± 5.53
Carex aquatilis	1.52 ± 7.01	0.69 ± 4.17
Carex disticha	0.45 ± 2.61	0
Carex hirta	0.15 ± 0.87	0
Carex nigra	5.61 ± 12.59	0
Carex sp.	0.03 ± 0.17	0
Cicuta virosa	0	0.06 ± 0.33
Cirsium arvense	0	0.72 ± 2.71
Comarum palustre	2.88 ± 9.92	0.42 ± 2.50
Dactylis glomerata	0	0.03 ± 0.17
Deschampsia cespitosa	1.97 ± 7.28	2.78 ± 13.65
Eleocharis palustris	0	1.28 ± 6.69
Eleocharis uniglumis	0	1.39 ± 5.93
Elymus caninus	0.52 ± 2.62	0

Elymus repens	0.30 ± 1.21	6.64 ± 17.59
Empetrum nigrum	0.76 ± 3.56	0
Equisetum arvense	0	0.56 ± 3.33
Festuca pratensis	1.67 ± 6.45	0
Festuca rubra	11.67 ± 21.82	12.08 ± 26.49
Filipendula ulmaria	0.09 ± 0.38	5.53 ± 17.91
Galium aparine	0	1.42 ± 5.93
Galium palustre	0.88 ± 2.53	5.33 ± 11.99
Galium trifidum	1.27 ± 4.84	0
Galium uliginosum	0.03 ± 0.17	0
Galium verum	0.45 ± 2.61	0
Geranium palustre	0.03 ± 0.17	0
Glechoma hederacea	0	0.06 ± 0.23
Hieracium umbellatum	0.39 ± 1.77	0
Hierochloe odorata	0	0.28 ± 1.67
Hylotelephium telephium	0.21 ± 0.93	0
Impatiens glandulifera	0	0.03 ± 0.17
Juncus articulatus	0.45 ± 2.61	0
Juncus compressus	5.88 ± 19.01	0.14 ± 0.83
Juncus effusus	0.15 ± 0.87	0
Juncus gerardii	15.73 ± 27.05	1.89 ± 7.37
Lathyrus palustris	0	0.83 ± 3.68
Lathyrus pratensis	0	1.67 ± 10.00
Leymus arenarius	0.82 ± 3.57	0
Limonium humile	0.09 ± 0.52	0
Linaria vulgaris	0.18 ± 0.88	0
Lolium perenne	0.91 ± 3.84	0
Lysimachia europaea	0	0.03 ± 0.17
Lysimachia maritima	3.58 ± 5.85	3.03 ± 10.36
Lysimachia thyrsiflora	0.15 ± 0.87	2.64 ± 11.74
Lythrum salicaria	0.03 ± 0.17	0.69 ± 2.44
Mentha aquatica	0	7.50 ± 17.99
Myosotis laxa	0	3.11 ± 10.29
Ophioglossum vulgatum	0	0.14 ± 0.83
Persicaria amphibia	0	0.42 ± 2.50
Peucedanum palustre	0	0.14 ± 0.83
Phalaris arundinacea	0	1.11 ± 3.98
Phragmites australis	3.67 ± 5.88	69.86 ± 32.03
Plantago major	0.03 ± 0.17	0

Plantago maritima	8.91 ± 15.94	0.72 ± 4.17
Plantago media	0.15 ± 0.87	0
Poa annua	0.33 ± 1.22	0
Poa humilis	1.06 ± 3.9	0
Poaceae	0.12 ± 0.70	0
Potentilla aurea	0.15 ± 0.87	0
Ranunculus acris	0.09 ± 0.38	0.03 ± 0.17
Ranunculus repens	0.61 ± 2.08	0
Ranunculus sp.	0	0.22 ± 0.96
Rubus idaeus	0	2.08 ± 8.23
Rumex acetoca	0.18 ± 0.88	0
Rumex crispus	0	0.11 ± 0.46
Salicornia europaea	0.58 ± 1.94	0
Salix phylicifolia	0	0.03 ± 0.17
Schoenoplectus tabernaemontani	0	0.14 ± 0.83
Scutellaria galericulata	0	0.03 ± 0.17
Scrozoneroides autumnalis	3.45 ± 7.93	0.56 ± 3.33
Senecio vulgaris	0	0.14 ± 0.83
Silene uniflora	0.03 ± 0.17	0
Spergularia media	0.18 ± 0.88	0
Stellaria graminea	0.55 ± 1.46	0
Stellaria palustris	0.15 ± 0.87	0.14 ± 0.83
Suaeda maritima	8.58 ± 27.56	0
Tanacetum vulgare	2.58 ± 8.49	0
Thysselinum palustre	0	0.89 ± 4.23
Trifolium fragiferum	3.48 ± 9.80	0
Trifolium repens	2.45 ± 7.19	0.28 ± 1.67
Triglochin maritima	0.79 ± 2.19	1.11 ± 3.98
Triglochin palustris	0.15 ± 0.87	0
Tripolium pannonicum	0	0.03 ± 0.17
Urtica dioica	0	4.58 ± 14.8
Valeriana excelsa	0	0.44 ± 2.5
Vicia cracca	0.18 ± 0.88	0
Vicia villosa	0.09 ± 0.38	0

105

Table S2: Mean and maximum vegetation height in 1x1 m quadrat, aboveground and belowground (sum of the first 50 cm) biomass in 25 x 25 cm quadrat, and biodiversity indices for each grazed and ungrazed sites. Data correspond to the mean and standard deviation (n = 3).

Sites	Manage-ment	Mean vegetation height (cm)	Maximum vegetation height (cm)	Aboveground biomass (g DW m^{-2})	Belowground biomass (g DW m^{-2})	Species richness	Shannon-Wiener index	Simpson index	Simpson equitability	Pielou equitability	Hill index
Als	Grazed	7.7 ± 1.8	16.1 ± 1.4	282.1 ± 104.5	6317.9 ± 1210.3	6.0 ± 1.0	1.0 ± 0.2	0.5 ± 0.1	0.4 ± 0.1	0.6 ± 0.1	0.8 ± 0.0
	Ungrazed	93.1 ± 9.4	139.8 ± 5.7	1425.4 ± 644.2	8889.6 ± 3188.1	7.7 ± 1.2	1.4 ± 0.1	0.7 ± 0.0	0.2 ± 0.0	0.7 ± 0.1	0.8 ± 0.0
Askö	Grazed	6.0 ± 3.5	32.7 ± 2.5	263.5 ± 67.1	9851.1 ± 4049.2	7.7 ± 1.5	1.4 ± 0.3	0.7 ± 0.1	0.2 ± 0.1	0.7 ± 0.1	0.8 ± 0.0
	Ungrazed	80.0 ± 26.5	180.3 ± 32.0	1389.0 ± 478.5	4286.5 ± 947.5	6.3 ± 0.6	1.5 ± 0.0	0.7 ± 0.0	0.2 ± 0.0	0.8 ± 0.0	0.9 ± 0.0
Karleby	Grazed	13.3 ± 2.9	50.3 ± 4.6	290.6 ± 32.7	8219.5 ± 938.8	8.3 ± 0.6	1.6 ± 0.1	0.8 ± 0.0	0.2 ± 0.0	0.8 ± 0.1	0.8 ± 0.1
	Ungrazed	120.0 ± 10.0	269.0 ± 11.5	3564.9 ± 2048.8	5805.0 ± 4034.9	6.7 ± 0.6	1.2 ± 0.2	0.6 ± 0.1	0.3 ± 0.1	0.7 ± 0.1	0.8 ± 0.0
Klosterfjorden	Grazed	-	-	-	-	-	-	-	-	--	-
	Ungrazed	92.3 ± 6.8	195.3 ± 2.9	2673.6 ± 1453.7	4277.1 ± 2270.7	11.0 ± 1.7	1.9 ± 0.3	0.8 ± 0.1	0.1 ± 0.1	0.8 ± 0.1	0.8 ± 0.1
Lenholmen	Grazed	10.7 ± 1.2	17.7 ± 2.5	153.9 ± 31.9	9259.7 ± 3713.0	6.7 ± 1.5	1.6 ± 0.4	0.8 ± 0.1	0.2 ± 0.1	0.8 ± 0.1	0.9 ± 0.1
	Ungrazed	30.0 ± 0.0	106.7 ± 55.1	539.9 ± 54.7	10435.5 ± 4197.0	9.0 ± 1.0	2.0 ± 0.1	0.8 ± 0.0	0.1 ± 0.0	0.9 ± 0.1	0.8 ± 0.1
Naset	Grazed	13.7 ± 7.8	58.5 ± 9.6	250.5 ± 78.9	6130.0 ± 1949.8	8.3 ± 2.3	1.7 ± 0.1	0.8 ± 0.0	0.2 ± 0.0	0.8 ± 0.1	0.7 ± 0.1
	Ungrazed	176.7 ± 25.2	219.2 ± 12.5	1410.0 ± 125.8	17370.0 ± 5321.5	2.7 ± 0.6	0.3 ± 0.1	0.1 ± 0.1	0.9 ± 0.1	0.3 ± 0.1	0.9 ± 0.0
Söderhamn	Grazed	28.3 ± 7.6	100.2 ± 26.8	437.6 ± 48.7	2438.0 ± 446.5	12.3 ± 2.1	1.6 ± 0.1	0.7 ± 0.1	0.2 ± 0.1	0.7 ± 0.1	0.6 ± 0.0
	Ungrazed	56.3 ± 3.2	176.3 ± 33.5	718.5 ± 150.8	7254.6 ± 3207.9	8.3 ± 2.1	1.7 ± 0.2	0.8 ± 0.0	0.1 ± 0.0	0.8 ± 0.0	0.9 ± 0.0
Seden Strand	Grazed	27.8 ± 0.9	43.2 ± 3.9	374.5 ± 138.8	6598.5 ± 2491.4	2.3 ± 0.6	0.3 ± 0.1	0.1 ± 0.0	0.9 ± 0.0	0.3 ± 0.1	0.9 ± 0.0
	Ungrazed	118.0 ± 12.2	189.0 ± 19.1	750.3 ± 350.0	9302.9 ± 304.8	3.0 ± 1.0	0.3 ± 0.2	0.1 ± 0.1	0.9 ± 0.1	0.2 ± 0.2	0.9 ± 0.1
Sundsvall	Grazed	21.7 ± 2.9	62.3 ± 5.1	550.5 ± 169.8	7446.1 ± 2504.1	8.3 ± 1.2	1.6 ± 0.2	0.7 ± 0.0	0.2 ± 0.0	0.8 ± 0.0	0.8 ± 0.0
	Ungrazed	80.0 ± 10.0	191.3 ± 15.5	1674.7 ± 213.8	4206.5 ± 780.6	7.0 ± 2.0	1.2 ± 0.5	0.6 ± 0.2	0.3 ± 0.2	0.6 ± 0.2	0.8 ± 0.0
Trondheim	Grazed	17.3 ± 7.6	49.8 ± 12.2	619.6 ± 232.7	12761.3 ± 9317.5	6.3 ± 1.5	1.0 ± 0.4	0.5 ± 0.2	0.5 ± 0.2	0.5 ± 0.1	0.7 ± 0.0
	Ungrazed	32.8 ± 5.9	62.7 ± 14.2	497.3 ± 183.0	11579.3 ± 3729.3	4.7 ± 1.2	0.9 ± 0.6	0.5 ± 0.3	0.5 ± 0.3	0.6 ± 0.3	0.9 ± 0.0
Tullgarn North	Grazed	4.7 ± 2.3	31.1 ± 17.0	245.1 ± 73.0	10091.7 ± 4366.4	5.3 ± 1.2	0.9 ± 0.4	0.5 ± 0.2	0.5 ± 0.3	0.6 ± 0.3	0.8 ± 0.1
	Ungrazed	258.3 ± 14.4	285.0 ± 19.0	1997.1 ± 1047.5	9310.0 ± 2246.5	2.7 ± 1.2	0.3 ± 0.1	0.1 ± 0.0	0.9 ± 0.0	0.3 ± 0.1	0.9 ± 0.0
Tullgarn South	Grazed	33.3 ± 14.4	86.3 ± 5.1	519.4 ± 167.0	5188.3 ± 2842.8	14.7 ± 1.2	2.3 ± 0.2	0.9 ± 0.0	0.0 ± 0.0	0.8 ± 0.1	0.8 ± 0.0
	Ungrazed	208.3 ± 14.4	228.3 ± 7.6	1069.7 ± 456.7	13313.3 ± 1205.4	6.0 ± 1.0	1.1 ± 0.3	0.5 ± 0.2	0.4 ± 0.2	0.6 ± 0.1	0.8 ± 0.0

Table S3: Soil characteristics of the first 50 cm. Data correspond to the mean and standard deviation (n = 3). For D50 (50 % of grain soil sample is below this grain size (µm)) and percentage of silt and clay (< 63 µm), values represent the mean of the first 50 cm of one core, and the standard deviations correspond to variation along the 50 cm depth.

Sites	Management	Dry bulk density (g cm^{-3})	Dry matter content (%)	Water content (%)	Organic matter content (%)	Silt and clay (%)	D50 (µm)
Als	Grazed	1.0 ± 0.1	60.7 ± 2.5	50.9 ± 0.4	15.9 ± 1.6	6 ± 7	256 ± 24
	Ungrazed	0.8 ± 0.1	56.2 ± 1.3	49.5 ± 1.9	13.0 ± 2.6	4 ± 5	250 ± 58
Askö	Grazed	0.7 ± 0.1	76.4 ± 5.3	23.6 ± 5.3	16.8 ± 0.7	11 ± 3	177 ± 41
	Ungrazed	0.3 ± 0.1	44.2 ± 7.4	55.8 ± 7.4	29.0 ± 8.9	59 ± 40	116 ± 148
Karleby	Grazed	0.7 ± 0.2	79.5 ± 7.2	20.5 ± 7.2	5.1 ± 0.5	12 ± 10	224 ± 50
	Ungrazed	1.1 ± 0.3	76.9 ± 7.6	23.1 ± 7.6	3.1 ± 0.5	1 ± 2	346 ± 37
Klosterfjorden	Grazed	-	-	-	-	-	-
	Ungrazed	0.7 ± 0.1	80.1 ± 1.1	19.9 ± 1.1	6.5 ± 1.1	45 ± 12	73 ± 31
Lenholmen	Grazed	0.9 ± 0.2	65.1 ± 0.4	41.3 ± 9.0	15.5 ± 3.8	78 ± 20	17 ± 33
	Ungrazed	0.7± 0.1	58.1 ± 2.5	44.9 ± 12.3	14.1 ± 2.9	71 ± 30	42 ± 65
Naset	Grazed	0.9 ± 0.1	66.5 ± 3.5	33.5 ± 3.5	15.0 ± 4.9	82 ± 24	20 ± 34
	Ungrazed	0.3 ± 0.0	33.8 ± 3.6	66.2 ± 3.6	29.8 ± 0.8	45 ± 19	98 ± 54
Söderhamn	Grazed	0.9 ± 0.1	91.2 ± 2.4	8.8 ± 2.4	1.1 ± 0.1	3 ± 2	778 ± 86
	Ungrazed	0.6 ± 0.1	55.1 ± 0.6	44.9 ± 0.6	16.6 ± 1.8	34 ± 29	182 ± 117
Seden Strand	Grazed	0.7 ± 0.0	53.8 ± 0.5	46.2 ± 0.5	12.9 ± 0.5	31 ± 10	144 ± 65
	Ungrazed	0.4 ± 0.1	39.3 ± 4.6	60.7 ± 4.6	21.2 ± 3.3	35 ± 6	119 ± 55
Sundsvall	Grazed	0.7 ± 0.0	73.1 ± 2.2	26.9 ± 2.2	14.3 ± 3.6	55 ± 21	69 ± 42
	Ungrazed	0.7 ± 0.1	58.2 ± 3.1	41.8 ± 3.1	19.4 ± 5.5	61 ± 31	73 ± 81
Trondheim	Grazed	1.0 ± 0.3	61.1 ± 9.8	50.3 ± 5.1	13.6 ± 5.5	37 ± 7	99 ± 27
	Ungrazed	1.1 ± 0.1	67.6 ± 0.6	50.4 ± 5.9	4.6 ± 0.8	50 ± 32	121 ± 104
Tullgarn North	Grazed	0.9 ± 0.3	64.7 ± 7.2	35.3 ± 7.2	12.3 ± 6.0	38 ± 24	169 ± 194
	Ungrazed	0.2 ± 0.1	31.2 ± 5.9	68.8 ± 5.9	24.8 ± 5.1	62 ± 20	46 ± 32
Tullgarn South	Grazed	0.8 ± 0.1	66.0 ± 6.9	34.0 ± 6.9	12.1 ± 5.3	54 ± 17	58 ± 26
	Ungrazed	0.2 ± 0.0	32.5 ± 2.0	67.5 ± 2.0	19.2 ± 0.8	52 ± 7	59 ± 15

Table S4: Total organic carbon and nitrogen stocks in aboveground and belowground biomass, and soil (Mg ha^{-1}) in Nordic salt marshes. Data correspond to the mean and standard deviation (n = 3).

Sites	Management	Aboveground OC stock (Mg ha^{-1})	Aboveground N stock (Mg ha^{-1})	Belowground OC stock (Mg ha^{-1})	Belowground N stock (Mg ha^{-1})	Soil OC stock (Mg ha^{-1})	Soil N stock (Mg ha^{-1})
Als	Grazed	1.1 ± 0.4	0.04 ± 0.01	24.3 ± 4.5	0.74 ± 0.23	104.8 ± 9.4	9.0 ± 0.3
	Ungrazed	5.8 ± 2.7	0.15 ± 0.07	36.5 ± 13.5	1.24 ± 0.42	86.1 ± 19.5	7.2 ± 0.3
Askö	Grazed	1.1 ± 0.3	0.05 ± 0.02	40.3 ± 15.0	1.10 ± 0.56	77.1 ± 30.8	6.5 ± 1.2
	Ungrazed	6.1 ± 2.1	0.19 ± 0.08	18.1 ± 3.8	0.24 ± 0.03	39.1 ± 21.4	3.3 ± 0.9
Karleby	Grazed	1.3 ± 0.1	0.05 ± 0.00	31.2 ± 3.4	0.70 ± 0.05	33.1 ± 14.1	2.9 ± 0.6
	Ungrazed	16.0 ± 9.2	0.49 ± 0.30	24.0 ± 15.9	0.67 ± 0.32	20.0 ± 9.6	2.2 ± 0.2
Klosterfjorden	Grazed	-	-	-	-	-	-
	Ungrazed	11.4 ± 6.6	0.40 ± 0.17	17.0 ± 9.2	0.51 ± 0.14	86.6 ± 40.2	7.4 ± 2.1
Lenholmen	Grazed	0.6 ± 0.1	0.03 ± 0.01	40.2 ± 15.5	0.66 ± 0.24	153.0 ± 22.0	10.9 ± 1.6
	Ungrazed	2.4 ± 0.2	0.06 ± 0.01	46.4 ± 18.4	1.06 ± 0.52	98.8 ± 17.8	6.8 ± 1.2
Naset	Grazed	1.1 ± 0.3	0.02 ± 0.01	22.3 ± 5.7	0.83 ± 0.31	103.9 ± 49.4	8.7 ± 2.2
	Ungrazed	6.3 ± 0.5	0.18 ± 0.15	72.4 ± 22.5	1.43 ± 0.24	96.9 ± 17.9	7.8 ± 0.6
Söderhamn	Grazed	2.0 ± 0.2	0.05 ± 0.01	9.6 ± 1.8	0.28 ± 0.05	12.2 ± 6.9	1.3 ± 0.2
	Ungrazed	3.1 ± 0.6	0.06 ± 0.05	24.5 ± 9.9	0.24 ± 0.06	26.4 ± 8.0	2.4 ± 0.2
Seden Strand	Grazed	1.3 ± 0.5	0.09 ± 0.04	16.2 ± 6.6	1.02 ± 0.37	183.1 ± 25.2	17.9 ± 2.4
	Ungrazed	3.1 ± 1.3	0.09 ± 0.08	30.0 ± 0.5	1.33 ± 0.07	173.1 ± 52.7	15.8 ± 5.0
Sundsvall	Grazed	2.3 ± 0.7	0.07 ± 0.02	31.0 ± 9.9	0.78 ± 0.32	50.4 ± 5.6	4.0 ± 0.2
	Ungrazed	7.2 ± 0.9	0.22 ± 0.07	15.7 ± 4.2	0.28 ± 0.12	61.1 ± 18.4	5.0 ± 0.8
Trondheim	Grazed	2.6 ± 1.0	0.06 ± 0.02	49.1 ± 35.2	1.76 ± 1.31	132.7 ± 66.6	9.1 ± 4.1
	Ungrazed	2.0 ± 0.8	0.06 ± 0.02	40.0 ± 12.6	1.29 ± 0.41	86.6 ± 8.8	6.2 ± 0.7
Tullgarn North	Grazed	1.0 ± 0.3	0.05 ± 0.01	32.2 ± 14.2	1.03 ± 0.47	109.3 ± 16.5	9.2 ± 1.0
	Ungrazed	8.8 ± 4.7	0.32 ± 0.15	35.7 ± 8.7	0.96 ± 0.23	90.5 ± 24.4	7.2 ± 2.2
Tullgarn South	Grazed	2.2 ± 0.7	0.09 ± 0.04	11.3 ± 6.3	0.51 ± 0.27	137.0 ± 53.8	11.1 ± 3.2
	Ungrazed	4.5 ± 2.0	0.18 ± 0.06	45.6 ± 6.0	1.40 ± 0.18	73.3 ± 11.7	5.7 ± 0.6