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Spatial heterogeneity of sedimentary organic carbon in fjords around Stavanger, Norway – implications for upscaling

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Table S1. Predictor variables

Variable	Unit	Statistics	Source
Bathymetry	m	-	Kartverket
Backscatter	dB	-	NGU
Distance to coastline	m	-	Calculated
Mud	%	-	NGU
Sand	%	-	NGU
Gravel	%	-	NGU
Cobbles/boulders	%	-	NGU
Bedrock	%	-	NGU
PAR at the seabed	W m^{-2}	Mean	EMODnet Seabed Habitats
Bottom water salinity	PSU	Minimum, maximum, mean, standard deviation	Institute of Marine Research, Bergen
Bottom water temperature	°C	Minimum, maximum, mean, standard deviation	Institute of Marine Research, Bergen
Current velocity at the seabed	m s^{-1}	Minimum, maximum, mean, standard deviation	Institute of Marine Research, Bergen
Wave orbital velocity at the seabed	m s^{-1}	90^{th} percentile	Institute of Marine Research, Bergen

Table S2. Organic carbon accumulation rates of fjords in Norway. MAR – mass accumulation rate; TOC – total organic carbon; OCAR10 – organic carbon accumulation rate calculated from data of the upper 10 cm of the analysed cores; CRS – constant rate of supply

Core ID	Fjord	Latitude (dec. °N)	Longitude (dec. °E)	Water depth (m)	Gear type	Method	MAR (kg m^{-2} yr^{-1})	TOC content (weight-%)	$OCAR_{10}$ (g m^{-2} yr^{-1})	Source
P2302006b	Boknafjorden	59.16320	5.60376	375	Multi corer	210Pb CRS	1.84	2.05	37.76	(Diesing et al., 2024)
P2302007b	Boknafjorden	59.18287	5.61084	540	Multi corer	210Pb CRS	2.83	2.14	60.52	(Diesing et al., 2024)
P2302013b	Boknafjorden	59.12286	5.54225	382	Multi corer	210Pb CRS	2.44	1.95	47.62	(Diesing et al., 2024)
P2302016b	Boknafjordwn	59.09843	5.54293	286	Multi corer	210Pb CRS	3.32	1.94	64.49	(Diesing et al., 2024)
P2302021b	Talgjefjorden	59.13725	5.76842	183	Multi corer	210Pb CRS	1.60	1.51	24.19	(Diesing et al., 2024)
P2302022b	Talgjefjordwn	59.13876	5.72891	207	Multi corer	210Pb CRS	1.09	1.71	18.71	(Diesing et al., 2024)
P2302023b	Fognafjorden	59.13569	5.98276	268	Multi corer	210Pb CRS	1.64	2.44	40.11	(Diesing et al., 2024)
P2302030b	Finnøyfjorden	59.17894	5.91793	205	Multi corer	210Pb CRS	1.43	1.65	23.56	(Diesing et al., 2024)
P2302039b	Boknafjorden	59.18634	5.75105	280	Multi corer	210Pb CRS	1.05	2.05	21.53	(Diesing et al., 2024)
P2302040b	Boknafjorden	59.18949	5.67236	333	Multi corer	210Pb CRS	1.82	2.25	40.95	(Diesing et al., 2024)
P2002005	Boknafjorden	59.14533	5.54150	582	Multi corer	210Pb CRS	3.03	2.41	72.90	(Knies et al., 2021a)
P2002006	Talgjefjorden	59.14282	5.74543	220	Multi corer	210Pb CRS	2.92	2.83	82.54	(Knies et al., 2021a)
Lysefjord st. 1	Lysefjorden	59.04835	6.60587	163	Niemistö corer	210Pb CRS	3.26	3.58	116.82	(Duffield et al., 2017)
Lysefjord st. 2	Lysefjorden	59.02393	6.43630	326	Niemistö corer	210Pb CRS	0.82	2.81	23.14	(Duffield et al., 2017)
Lysefjord st. 3	Lysefjorden	59.00337	6.26582	446	Niemistö corer	210Pb CRS	1.18	3.36	39.63	(Duffield et al., 2017)
Høgsfjord	Høgsfjorden	58.95743	5.95985	260	Niemistö corer	210Pb CRS	1.07	2.87	30.74	(Duffield et al., 2017)
P200503b	Valderhaugfjorden	62.47916	6.08444	104	Multi corer	210Pb CRS	4.90	1.23	60.38	(Knies et al., 2021b)
P200508c	Vigrafjorden	62.57869	6.18129	180	Multi corer	210Pb CRS	1.83	4.48	81.81	(Knies et al., 2021b)
P200514c	Harøyfjorden	62.70064	6.47764	89	Multi corer	210Pb CRS	1.80	2.27	40.90	(Knies et al., 2021b)
P210210b	Maursundet	69.96589	21.01111	170	Multi corer	210Pb CRS	1.51	1.20	18.18	(Knies et al., 2022)
P210212a	Kjølmangen	69.91159	20.78097	201	Multi corer	210Pb CRS	1.99	2.12	42.06	(Knies et al., 2022)
P210215a	Kvænangen	70.06446	21.32795	345	Multi corer	210Pb CRS	2.12	2.23	47.36	(Knies et al., 2022)
P230102d	Halsnøyfjorden	59.76089	5.55302	355	Multi corer	210Pb CRS	3.09	0.85	26.22	(Knies et al., 2024)
P230104b	Stokksundet	59.76259	5.36167	262	Multi corer	210Pb CRS	1.63	2.25	36.78	(Knies et al., 2024)
P230109b	Selbjørnsfjorden	59.96563	5.21129	373	Multi corer	210Pb CRS	3.03	1.98	59.95	(Knies et al., 2024)
P1002-017	Vågsfjorden	68.81430	16.57880	133	Niemistö corer	210Pb CRS	0.24	3.03	7.34	(Lepland et al., 2012)
P1002-074	Øyfjorden	69.53900	17.63400	230	Niemistö corer	210Pb CRS	0.64	6.55	41.93	(Lepland et al., 2012)
P1002-078	Astafjorden	68.73010	17.12330	350	Niemistö corer	210Pb CRS	1.59	2.13	33.78	(Lepland et al., 2012)

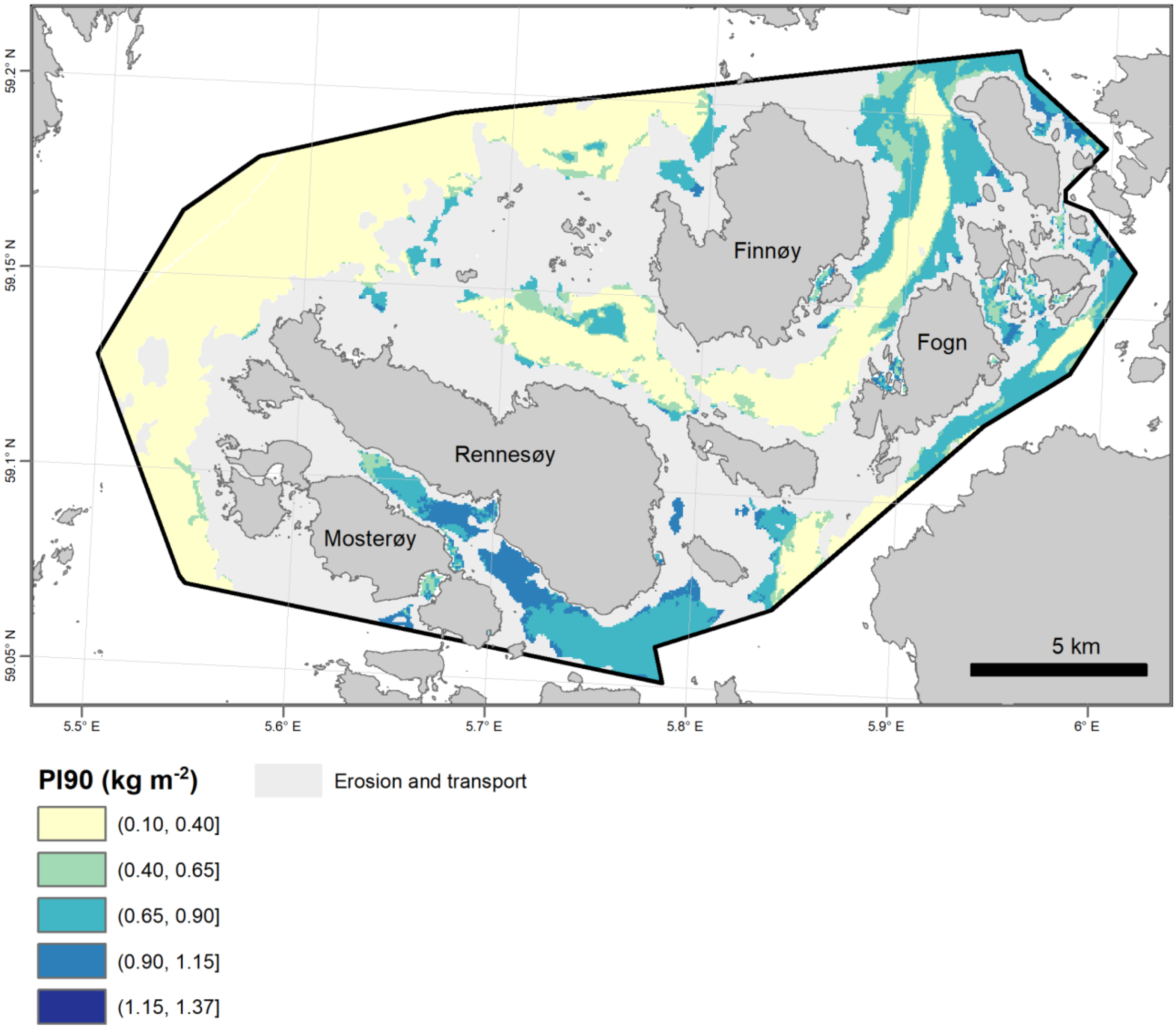

Figure S1. 90% prediction interval (PI90) of the organic carbon stock model.

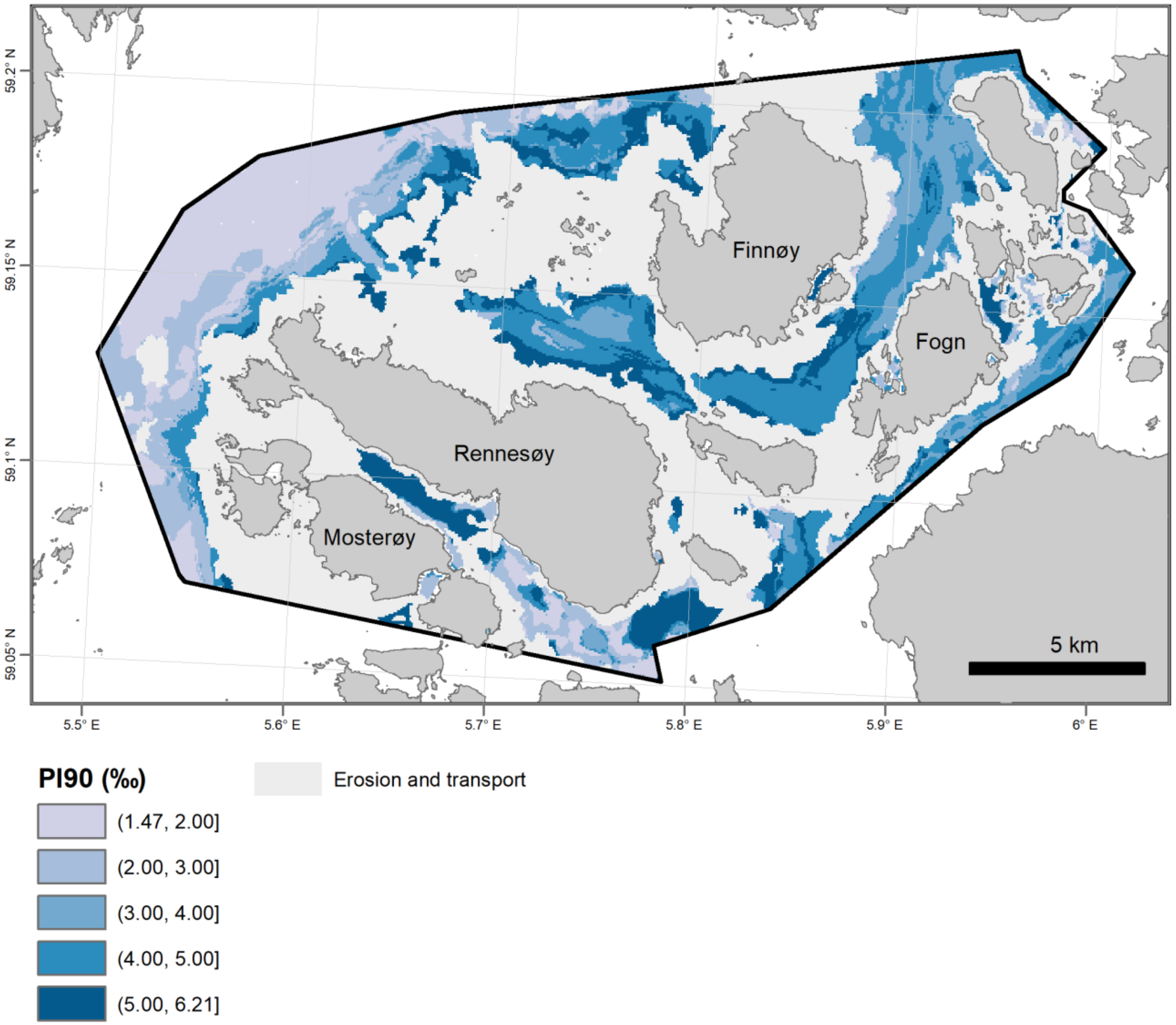

Figure S2. 90% prediction interval (PI90) of the δ^{113}C-model.

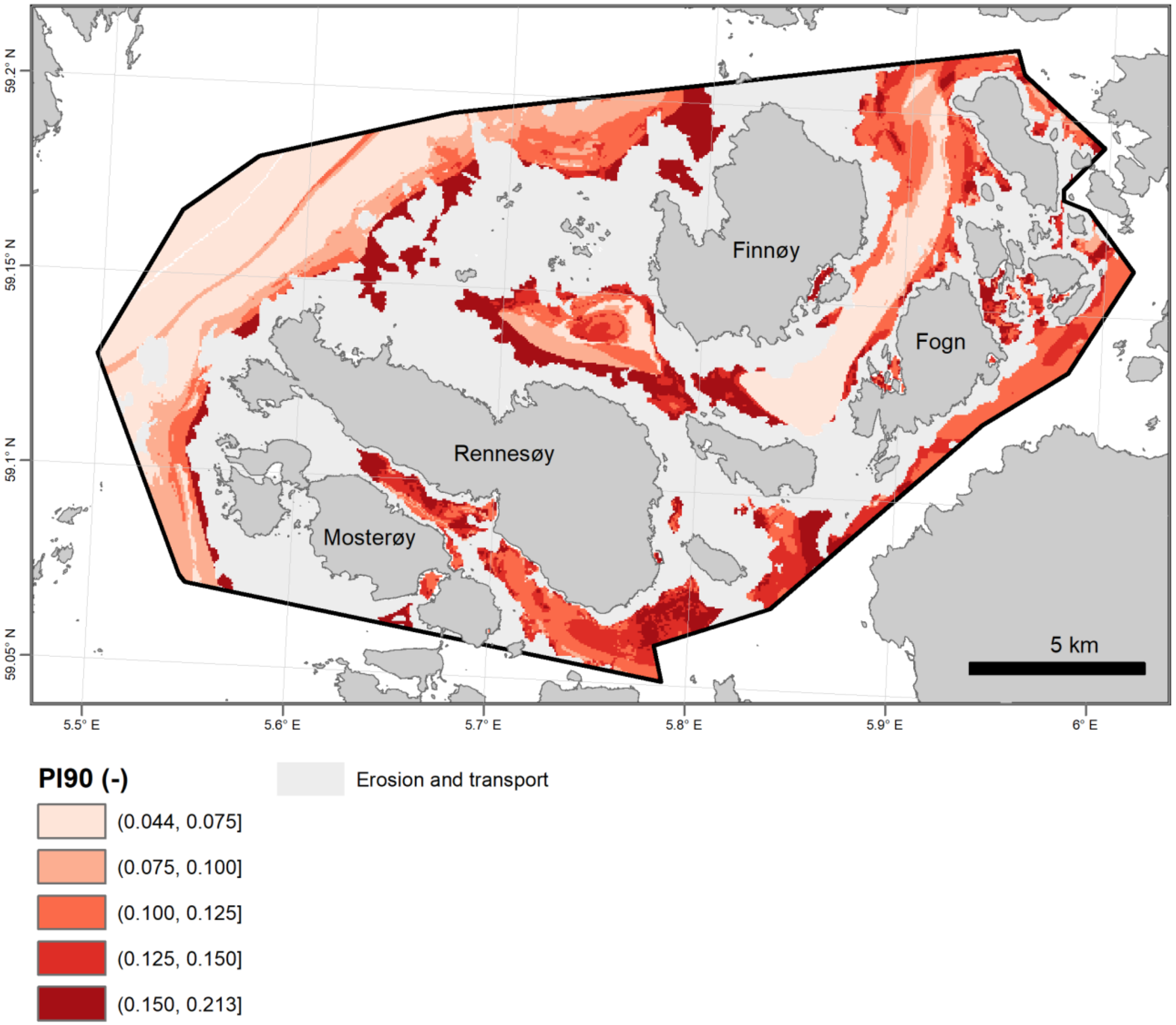

Figure S3. 90% prediction interval (PI90) of the carbon reactivity index model.

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