

Table S1. List of sediment samples collected in the water off Miyagi, Fukushima, and Ibaraki Prefectures in Japan.

Stn.	Sampling Date	Latitude (N)	Longitude (E)	Water Depth(m)	Bulk Density	Water Content
A1	2011/5/11	38° 29.6′	141° 50.7′	200	1.72	0.323
	2011/5/26	38° 30.1′	141° 51.2′	211	1.73	0.345
	2011/6/10	38° 30.0′	141° 51.0′	206	1.70	0.343
	2011/6/23	38° 30.0′	141° 51.0′	205	1.70	0.330
	2011/7/8	38° 29.8′	141° 51.2′	212	1.73	0.298
	2011/7/31	38° 29.9′	141° 51.0′	207	1.73	0.298
	2011/9/15	38° 30.0′	141° 50.9′	209	1.69	0.349
	2011/10/17	38° 29.9′	141° 51.2′	214	1.72	0.314
	2011/12/15	38° 30.0′	141° 50.9′	205	1.64	0.342
	2012/2/19	38° 30.0′	141° 50.9′	208	1.62	0.359
a1	2011/9/15	38° 15.0′	141° 50.9′	217	1.77	0.283
	2011/10/17	38° 14.9′	141° 51.0′	214	1.68	0.350
	2011/12/16	38° 15.1′	141° 50.8′	211	1.68	0.283
	2012/2/20	38° 14.9′	141° 51.0′	215	1.67	0.350
A3	2011/9/15	38° 30.0′	142° 04.9′	495	1.55	0.401
	2011/10/17	38° 30.0′	142° 05.0′	483	1.61	0.381
	2011/12/15	38° 30.1′	142° 05.1′	486	1.53	0.430
	2012/2/19	38° 29.9′	142° 05.0′	490	1.57	0.385
B1	2011/5/11	38° 05.6′	141° 15.7′	45	1.95	0.172
	2011/5/25	38° 05.1′	141° 15.6′	45	1.99	0.191
	2011/6/9	38° 05.0′	141° 15.5′	45	1.80	0.147
	2011/6/22	38° 05.0′	141° 15.4′	45	1.93	0.160
	2011/7/7	38° 05.1′	141° 15.3′	45	2.01	0.151
	2011/7/31	38° 05.1′	141° 15.3′	44	2.01	0.151
	2011/9/14	38° 05.1′	141° 15.3′	45	1.94	0.150
	2011/10/18	38° 05.1′	141° 15.6′	45	1.94	0.147
	2011/12/16	38° 05.0′	141° 15.4′	45	1.91	0.176
	2012/2/17	38° 05.0′	141° 15.4′	45	1.89	0.176
B3	2011/9/14	38° 05.0′	141° 29.3′	121	1.17	0.724
	2011/10/18	38° 05.0′	141° 29.2′	118	1.20	0.713
	2011/12/14	38° 04.9′	141° 29.2′	119	1.20	0.687
	2012/2/17	38° 04.9′	141° 29.4′	120	1.20	0.702
C1	2011/5/11	37° 45.2′	141° 16.2′	59	2.00	0.176
	2011/5/25	37° 45.4′	141° 15.3′	55	2.05	0.179
	2011/6/9	37° 45.0′	141° 15.4′	56	1.80	0.106
	2011/6/22	37° 45.0′	141° 15.3′	56	1.88	0.133
	2011/7/7	37° 44.9′	141° 15.4′	57	1.70	0.092
	2011/7/30	37° 45.2′	141° 15.5′	55	1.70	0.092
	2011/9/14	37° 45.1′	141° 15.5′	57	1.97	0.170
	2011/10/19	37° 45.0′	141° 15.5′	56	1.94	0.164

Stn.	Sampling Date	Latitude (N)	Longitude (E)	Water Depth(m)	Bulk Density	Water Content
C1	2011/12/13	37° 44.9′	141° 15.4′	56	1.61	0.189
	2012/2/17	37° 44.9′	141° 15.4′	56	1.98	0.169
C3	2011/9/14	37° 44.8′	141° 29.3′	137	1.67	0.345
	2011/10/18	37° 44.9′	141° 29.5′	133	1.74	0.324
	2011/12/13	37° 44.9′	141° 29.3′	134	1.81	0.300
	2012/2/20	37° 44.9′	141° 29.4′	135	1.83	0.259
D1	2011/5/10	37° 34.2′	141° 23.0′	126	1.70	0.336
	2011/5/24	37° 35.2′	141° 22.3′	126	1.54	0.443
	2011/6/7	37° 35.0′	141° 22.2′	124	1.54	0.456
	2011/6/21	37° 35.1′	141° 22.4′	124	1.55	0.412
	2011/7/6	37° 35.0′	141° 22.2′	127	1.52	0.443
	2011/7/30	37° 35.2′	141° 22.4′	125	1.52	0.443
	2011/9/13	37° 35.0′	141° 22.3′	127	1.51	0.441
	2011/9/13	37° 35.1′	141° 22.2′	127	1.53	0.456
	2011/9/13	37° 35.0′	141° 22.3′	127	1.46	0.489
	2011/9/13	37° 35.0′	141° 22.3′	127	1.38	0.539
	2011/9/13	37° 35.0′	141° 22.3′	127	1.44	0.478
	2011/9/13	37° 35.0′	141° 22.3′	127	1.51	0.445
	2011/10/19	37° 35.0′	141° 22.4′	124	1.52	0.446
	2011/12/13	37° 35.0′	141° 22.3′	124	1.46	0.514
	2012/2/21	37° 35.0′	141° 22.4′	125	1.48	0.461
D3	2011/9/13	37° 34.8′	141° 36.2′	228	1.70	0.323
	2011/10/19	37° 34.9′	141° 36.4′	224	1.68	0.337
	2011/12/14	37° 35.0′	141° 36.4′	225	1.72	0.327
	2012/2/21	37° 34.9′	141° 36.4′	227	1.65	0.348
E1	2011/5/10	37° 24.4′	141° 23.3′	138	1.63	0.363
	2011/5/24	37° 25.0′	141° 22.7′	137	1.54	0.431
	2011/6/7	37° 25.0′	141° 22.4′	135	1.54	0.425
	2011/6/21	37° 24.9′	141° 22.4′	135	1.56	0.418
	2011/7/6	37° 24.9′	141° 22.3′	138	1.54	0.439
	2011/7/29	37° 24.8′	141° 22.3′	133	1.54	0.439
	2011/9/11	37° 24.9′	141° 22.3′	136	1.50	0.455
	2011/10/22	37° 25.6′	141° 22.1′	135	1.44	0.501
	2011/12/10	37° 25.0′	141° 22.3′	135	1.43	0.509
	2012/2/13	37° 25.0′	141° 22.4′	135	1.35	0.496
E3	2011/9/11	37° 25.0′	141° 36.4′	238	1.70	0.349
	2011/10/22	37° 24.7′	141° 36.4′	232	1.68	0.343
	2011/12/10	37° 24.9′	141° 36.3′	231	1.65	0.350
	2012/2/13	37° 25.0′	141° 36.4′	235	1.62	0.373
E5	2011/9/13	37° 30.2′	141° 59.9′	545	1.63	0.398
	2011/10/19	37° 30.0′	141° 59.9′	533	1.63	0.377

Stn.	Sampling Date	Latitude (N)	Longitude (E)	Water Depth(m)	Bulk Density	Water Content
E5	2011/12/14	37° 30.0′	141° 59.9′	530	1.65	0.357
	2012/2/16	37° 29.9′	141° 59.6′	535	1.68	0.343
F1	2011/5/9	37° 15.1′	141° 22.7′	142	1.60	0.393
	2011/5/23	37° 15.6′	141° 22.3′	146	1.68	0.321
	2011/6/6	37° 15.0′	141° 22.3′	143	1.58	0.413
	2011/6/20	37° 14.9′	141° 22.4′	144	1.60	0.392
	2011/7/5	37° 14.8′	141° 22.5′	142	1.64	0.361
	2011/7/29	37° 14.9′	141° 22.3′	141	1.64	0.361
	2011/9/11	37° 14.9′	141° 22.2′	145	1.57	0.424
	2011/10/23	37° 15.0′	141° 22.5′	142	1.59	0.397
	2011/12/9	37° 15.0′	141° 22.3′	143	1.44	0.454
	2012/2/12	37° 15.0′	141° 22.4′	144	1.52	0.420
F3	2011/9/11	37° 14.9′	141° 36.4′	241	1.66	0.352
	2011/10/22	37° 15.0′	141° 36.5′	236	1.60	0.377
	2011/12/9	37° 15.0′	141° 36.3′	233	1.63	0.373
	2012/2/13	37° 15.0′	141° 36.4′	237	1.66	0.351
G0	2011/9/10	37° 05.0′	141° 08.5′	109	1.40	0.531
	2011/10/23	37° 05.0′	141° 08.5′	107	1.46	0.433
	2011/12/9	37° 05.0′	141° 08.4′	108	1.46	0.510
	2012/2/11	37° 05.0′	141° 08.4′	107	1.30	0.581
G1	2011/5/9	37° 05.3′	141° 15.5′	138	1.55	0.417
	2011/5/23	37° 05.3′	141° 14.6′	141	1.43	0.501
	2011/6/6	37° 04.8′	141° 15.3′	140	1.47	0.488
	2011/6/20	37° 04.9′	141° 15.3′	141	1.47	0.472
	2011/7/5	37° 05.0′	141° 15.4′	140	1.49	0.466
	2011/7/28	37° 04.9′	141° 15.4′	140	1.49	0.466
	2011/9/10	37° 04.8′	141° 15.5′	142	1.41	0.516
	2011/10/23	37° 05.0′	141° 15.6′	141	1.41	0.521
	2011/12/9	37° 04.9′	141° 15.4′	140	1.28	0.523
	2012/2/12	37° 04.9′	141° 15.5′	141	1.42	0.502
G3	2011/9/10	37° 04.9′	141° 29.3′	215	1.83	0.291
	2011/10/24	37° 04.9′	141° 29.2′	210	1.89	0.267
	2011/12/8	37° 04.9′	141° 29.2′	209	1.87	0.249
	2012/2/10	37° 04.9′	141° 29.3′	213	1.80	0.273
G4	2011/9/10	37° 01.0′	141° 44.9′	675	1.34	0.578
	2011/10/24	36° 59.9′	141° 44.9′	664	1.44	0.498
	2011/12/8	36° 59.8′	141° 45.0′	662	1.46	0.520
	2012/2/10	37° 00.0′	141° 45.2′	666	1.39	0.526
H1	2011/5/13	36° 55.4′	141° 08.0′	132	1.52	0.446
	2011/5/27	36° 55.0′	141° 08.2′	135	1.63	0.369
	2011/6/10	36° 55.1′	141° 08.2′	136	1.65	0.387

Stn.	Sampling Date	Latitude (N)	Longitude (E)	Water Depth(m)	Bulk Density	Water Content
H1	2011/6/25	36° 54.7′	141° 08.1′	131	1.57	0.427
	2011/7/5	36° 55.1′	141° 08.5′	130	1.73	0.334
	2011/7/25	36° 54.9′	141° 08.4′	136	1.64	0.379
	2011/9/9	36° 54.9′	141° 08.3′	137	1.42	0.512
	2011/10/23	36° 54.9′	141° 08.4′	134	1.53	0.437
	2011/12/7	36° 55.0′	141° 08.3′	134	1.45	0.424
	2012/2/9	36° 54.9′	141° 08.3′	134	1.53	0.454
H3	2011/9/9	36° 55.0′	141° 22.3′	238	1.61	0.405
	2011/10/24	36° 55.0′	141° 22.0′	232	1.64	0.377
	2011/12/7	36° 55.0′	141° 22.4′	234	1.58	0.394
	2012/2/10	36° 55.0′	141° 22.4′	236	1.57	0.405
I0	2011/9/9	36° 44.9′	140° 53.1′	74	1.44	0.491
	2011/10/25	36° 45.6′	140° 53.0′	73	1.46	0.483
	2011/12/7	36° 45.0′	140° 53.0′	73	1.43	0.496
	2012/2/9	36° 45.0′	140° 53.0′	72	1.40	0.506
I1	2011/5/13	36° 45.7′	140° 57.6′	102	1.45	0.466
	2011/5/27	36° 45.1′	140° 56.9′	100	1.45	0.493
	2011/6/9	36° 45.4′	140° 56.8′		1.42	0.502
	2011/6/23	36° 45.0′	140° 57.1′	95	1.41	0.490
	2011/7/6	36° 45.0′	140° 56.9′	95	1.44	0.494
	2011/7/28	36° 44.9′	140° 56.8′	98	1.44	0.494
	2011/9/9	36° 44.9′	140° 57.1′	101	1.38	0.544
	2011/10/25	36° 45.0′	140° 57.0′	99	1.43	0.530
	2011/12/7	36° 45.0′	140° 56.9′	99	1.33	0.593
	2012/2/9	36° 45.0′	140° 57.0′	99	1.28	0.640
I3	2011/9/9	36° 44.9′	141° 11.0′	192	1.85	0.265
	2011/10/25	36° 45.0′	141° 10.9′	184	1.87	0.253
	2011/12/7	36° 44.9′	141° 10.9′	185	1.87	0.261
	2012/2/9	36° 45.1′	141° 11.0′	184	1.85	0.261
J1	2011/5/13	36° 25.7′	140° 43.1′	51	1.75	0.211
	2011/5/25	36° 24.9′	140° 43.1′	48	1.96	0.200
	2011/6/8	36° 24.9′	140° 42.9′	48	1.73	0.188
	2011/6/22	36° 24.9′	140° 43.0′	43	1.75	0.148
	2011/7/6	36° 25.1′	140° 42.9′	43	1.69	0.218
	2011/7/27	36° 24.9′	140° 43.0′	48	1.69	0.218
	2011/9/8	36° 25.0′	140° 42.8′	50	1.44	0.505
	2011/10/26	36° 25.1′	140° 43.0′	49	1.81	0.245
	2011/12/6	36° 25.1′	140° 43.1′	50	1.56	0.215
	2012/2/6	36° 25.0′	140° 42.8′	47	1.84	0.241
J2	2011/9/8	36° 25.2′	140° 57.2′	297	1.55	0.419
	2011/10/26	36° 24.9′	140° 57.0′	291	1.56	0.440

Stn.	Sampling Date	Latitude (N)	Longitude (E)	Water Depth(m)	Bulk Density	Water Content
J2	2011/12/6	36° 24.9′	140° 56.9′	284	1.51	0.468
	2012/2/5	36° 25.1′	140° 57.0′	291	1.47	0.454
J3	2011/9/8	36° 24.9′	141° 04.3′	591	1.26	0.651
	2011/10/25	36° 25.0′	141° 03.9′	570	1.25	0.653
	2011/12/6	36° 25.0′	141° 04.2′	573	1.18	0.718
	2012/2/5	36° 25.1′	141° 04.1′	571	1.25	0.674
K1	2011/5/14	36° 04.3′	140° 43.3′	31	1.83	0.281
	2011/5/25	36° 04.9′	140° 43.0′	26	1.82	0.261
	2011/6/7	36° 04.1′	140° 42.9′	31	1.83	0.273
	2011/6/22	36° 04.1′	140° 42.8′	25	1.96	0.250
	2011/7/7	36° 04.0′	140° 43.0′	25	1.84	0.257
	2011/7/26	36° 04.0′	140° 43.1′	31	1.84	0.257
	2011/9/7	36° 04.0′	140° 43.2′	33	1.64	0.239
	2011/10/14	36° 04.0′	140° 43.0′	32	1.76	0.280
	2011/12/5	36° 04.1′	140° 42.7′	27	1.93	0.237
	2012/2/5	36° 04.0′	140° 43.0′	29	1.48	0.216
K2	2011/9/7	36° 04.2′	140° 57.1′	215	1.49	0.449
	2011/10/13	36° 04.1′	140° 56.9′	211	1.57	0.401
	2011/12/5	36° 04.0′	140° 56.9′	206	1.58	0.408
	2012/2/4	36° 04.0′	140° 57.0′	210	1.50	0.443
L1	2011/5/14	35° 45.3′	140° 56.8′	42	1.86	0.118
	2011/5/26	35° 45.1′	140° 56.6′	28	1.97	0.160
	2011/6/6	35° 45.0′	140° 57.0′	39	1.75	0.077
	2011/6/20	35° 45.1′	140° 57.0′	40	2.00	0.103
	2011/7/9	35° 44.8′	140° 57.1′	45	2.18	0.114
	2011/7/26	35° 44.9′	140° 56.8′	43	1.98	0.162
	2011/9/7	35° 44.8′	140° 57.0′	44	2.00	0.118
	2011/10/13	35° 45.1′	140° 57.1′	44	2.14	0.121
	2011/12/5	35° 45.0′	140° 57.1′	45	1.41	0.126
	2012/2/4	35° 45.0′	140° 56.9′	43	1.76	0.127
L3	2011/9/7	35° 45.2′	141° 10.9′	167	1.58	0.411
	2011/10/13	35° 45.0′	141° 10.9′	168	1.52	0.450
	2011/12/5	35° 45.0′	141° 10.8′	165	1.55	0.449
	2012/2/4	35° 45.3′	141° 11.0′	168	1.56	0.409