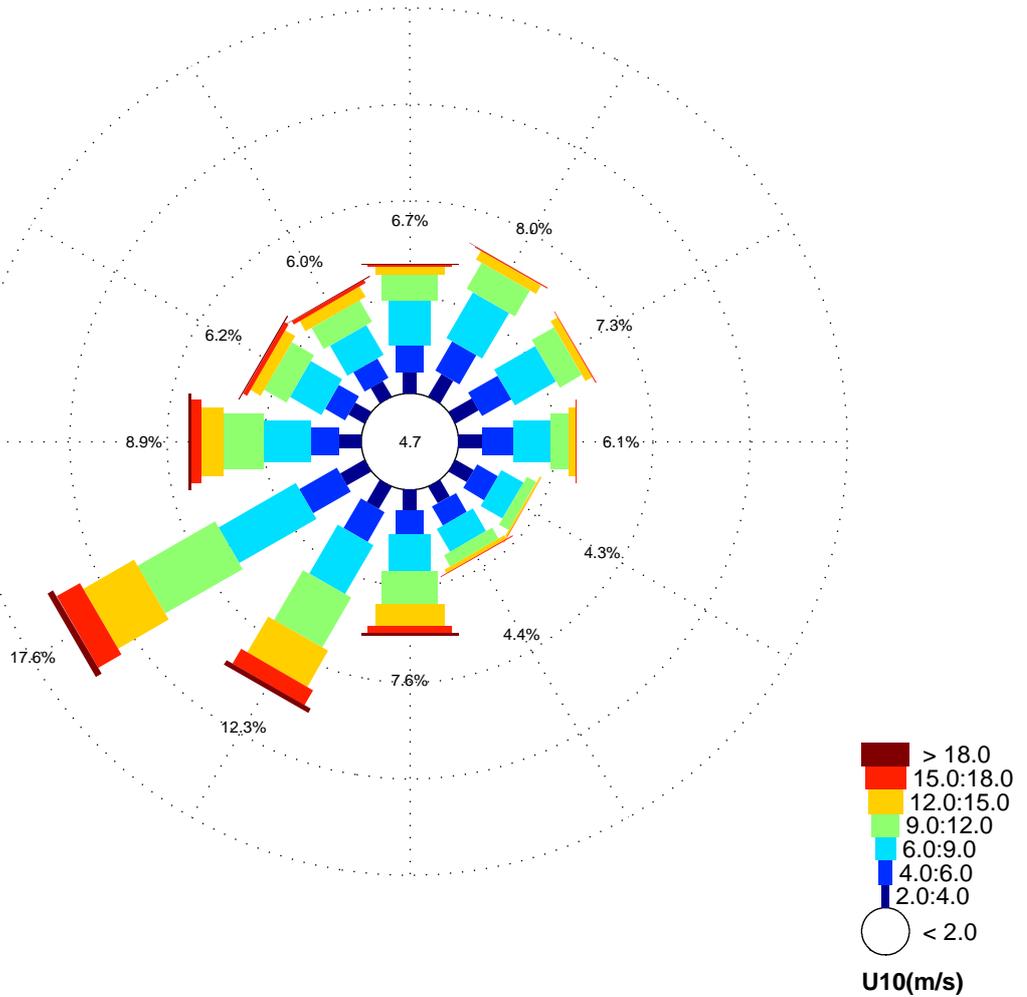


Data from 01-Jan-1987 01:00:00 until 01-Jan-2014 (mean=7.8 m/s, max=31.7m/s)



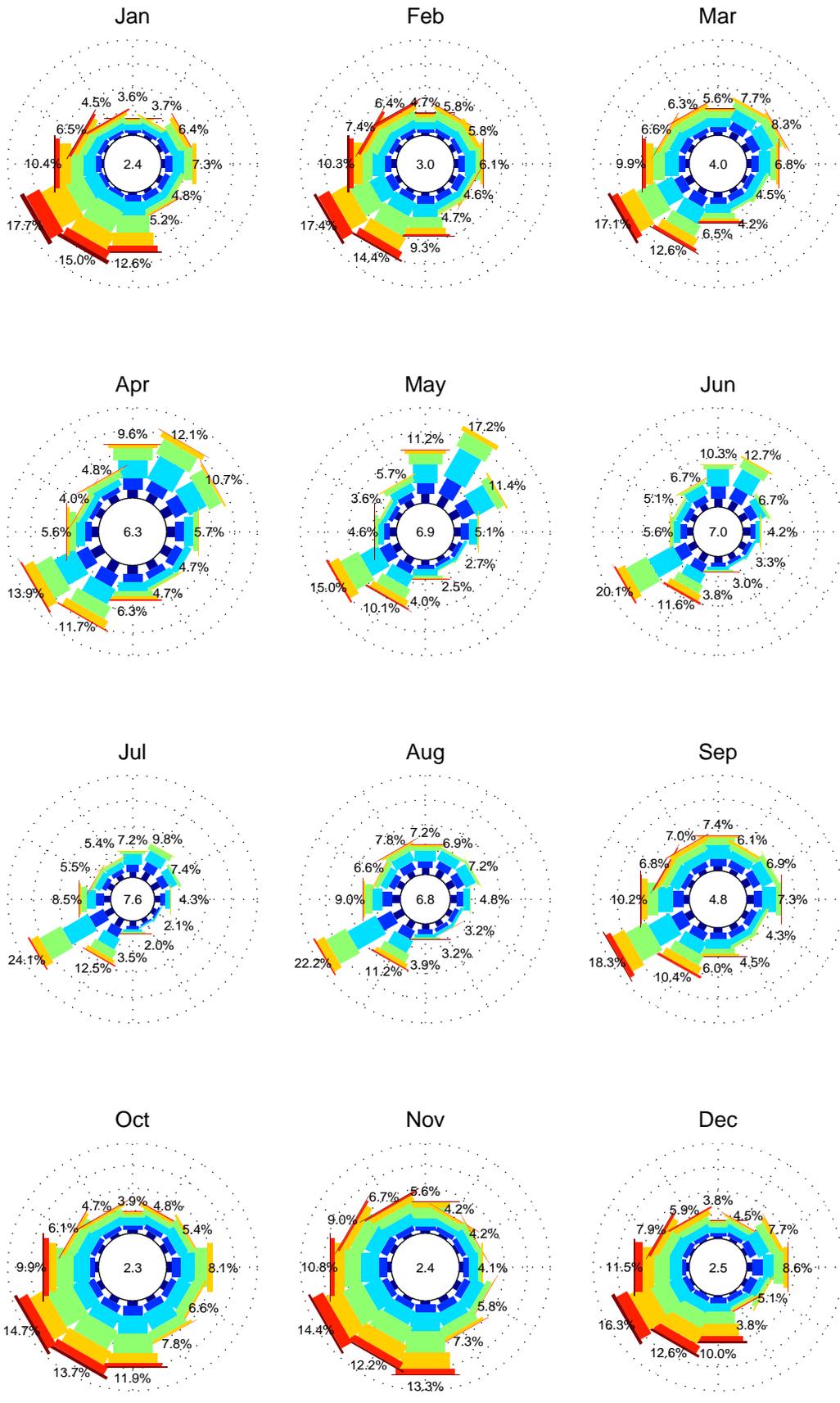
Annual wind rose at height of 10m  
Nautical convention: coming from, clockwise from North

Height: 10m

All Year

Deltares

App. A.1.001

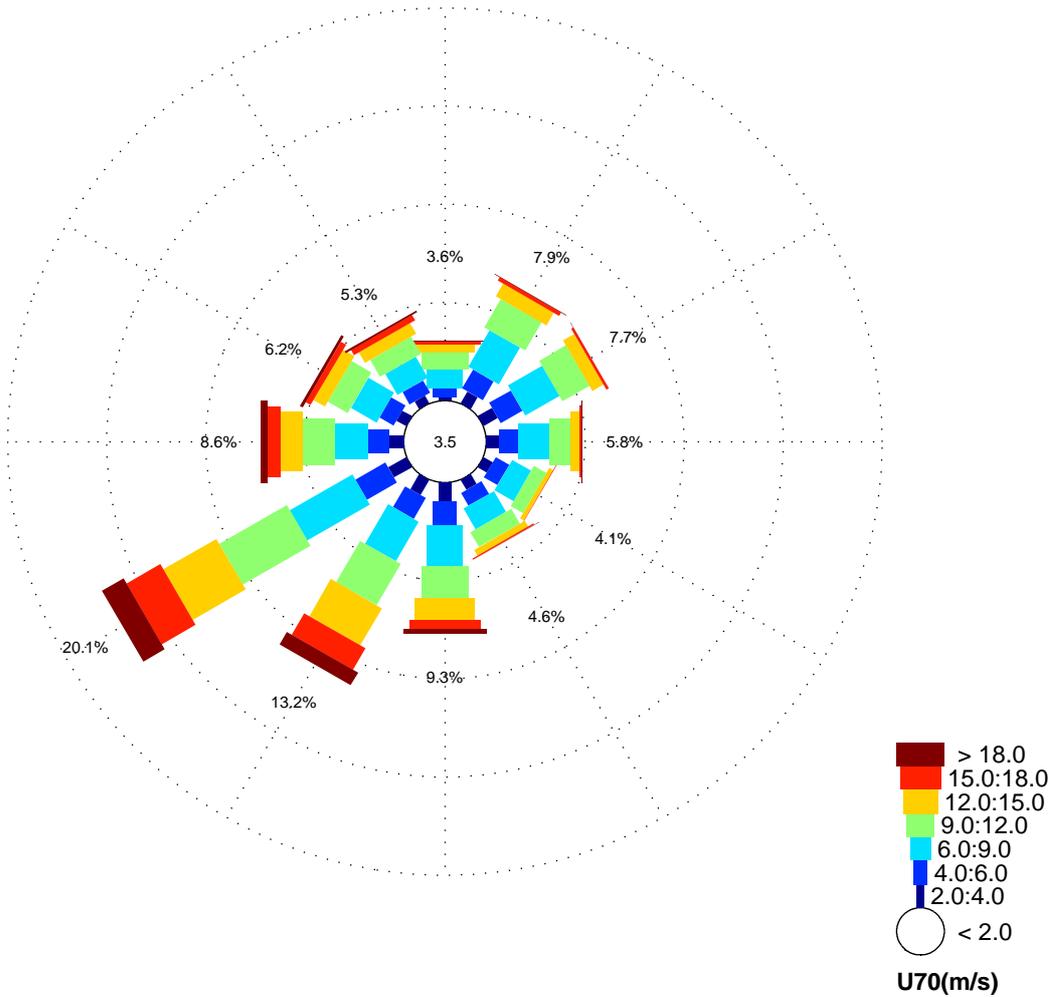


Monthly wind roses at height of 10m  
 Nautical convention: coming from, clockwise from North

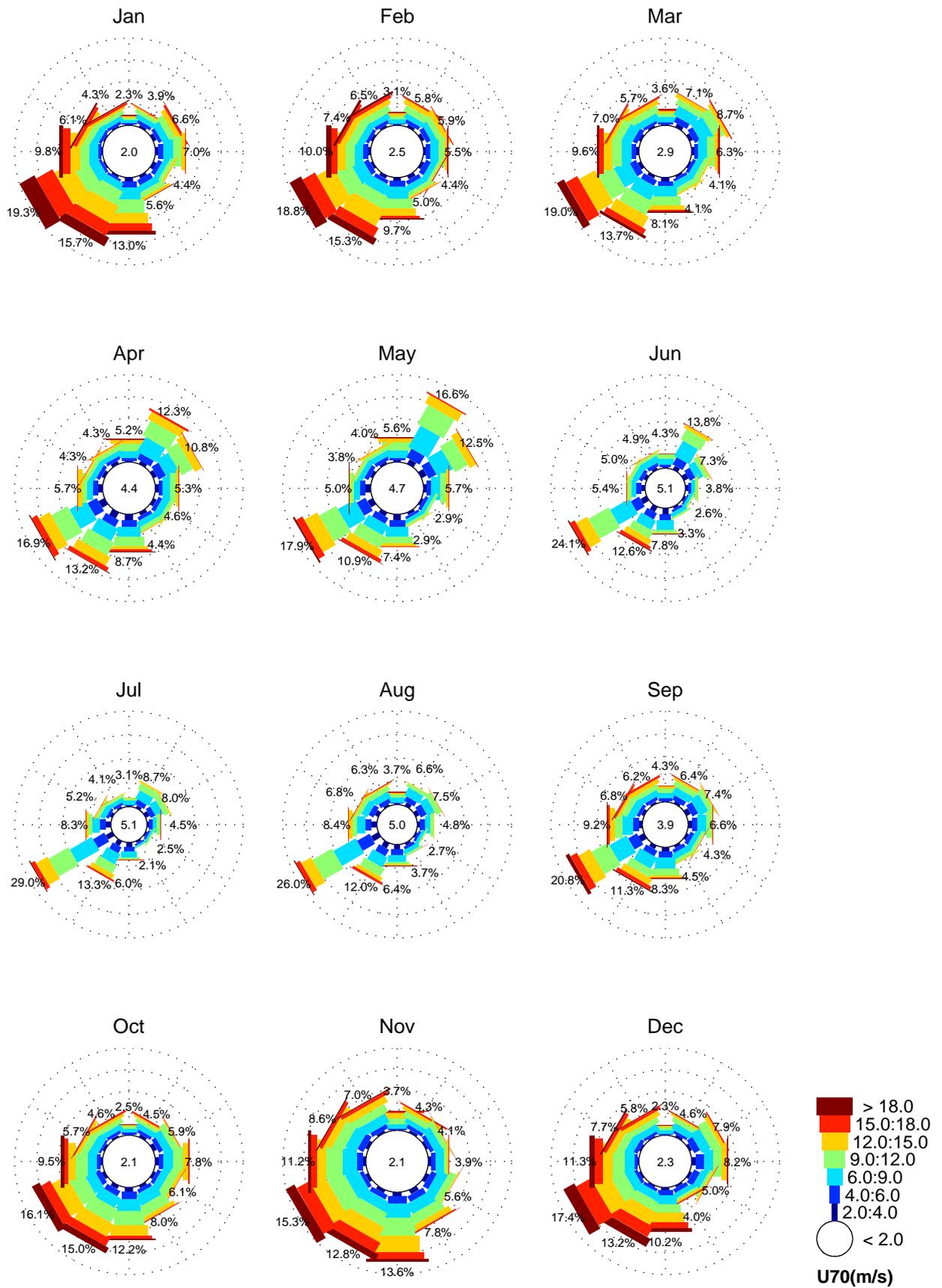
Height: 10m

Monthly

Data from 01-Jan-1987 01:00:00 until 01-Jan-2014 (mean=9.0 m/s, max=37.0m/s)



Annual wind rose at height of 70m Nautical convention: coming from, clockwise from North	Height: 70m	All Year
<b>Deltares</b>		App. A.1.003



Monthly wind roses at height of 70m  
 Nautical convention: coming from, clockwise from North

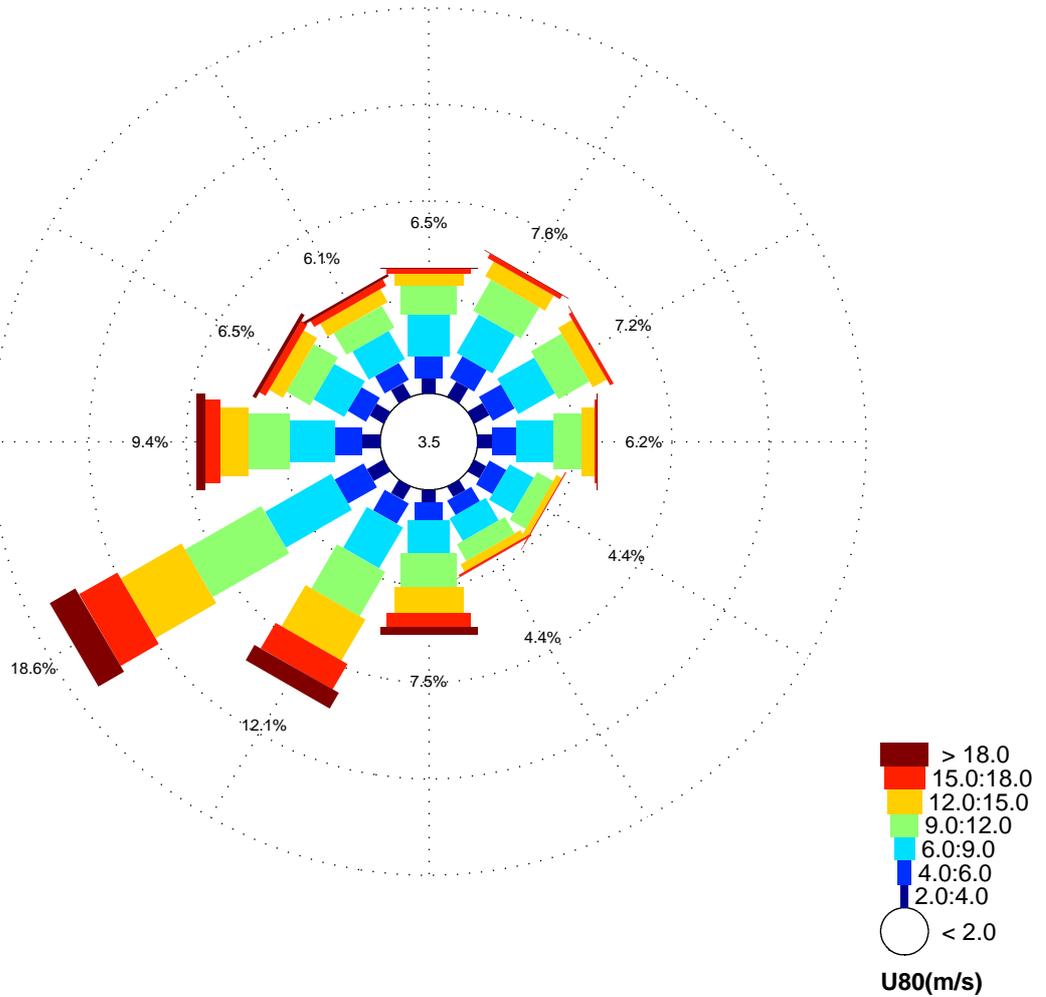
Height: 70m

Monthly

**Deltares**

App. A.1.004

Data from 01-Jan-1987 01:00:00 until 01-Jan-2014 (mean=9.1 m/s, max=37.4m/s)



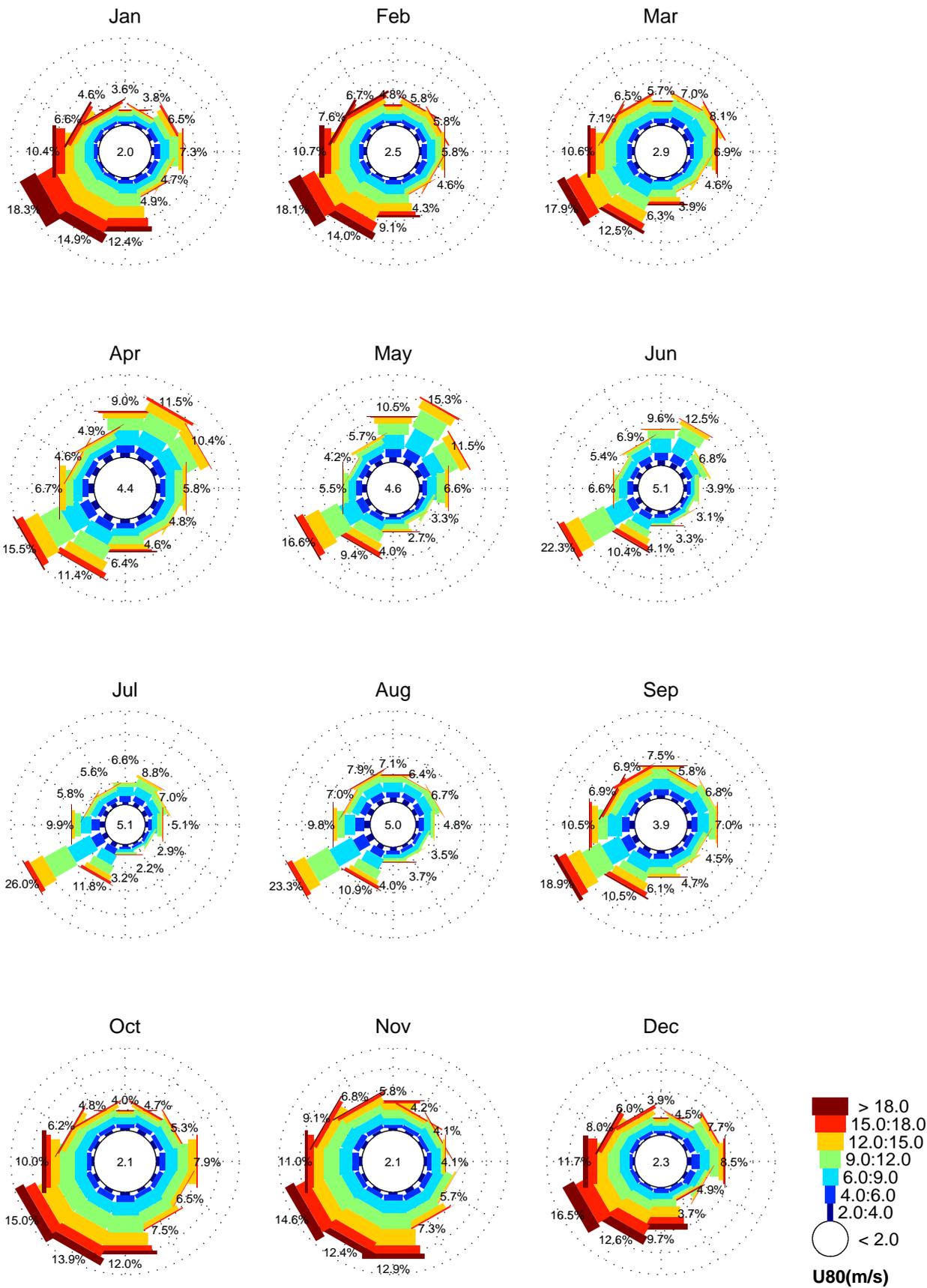
Annual wind rose at height of 80m  
Nautical convention: coming from, clockwise from North

Height: 80m

All Year

**Deltares**

App. A.1.005



Monthly wind roses at height of 80m  
 Nautical convention: coming from, clockwise from North

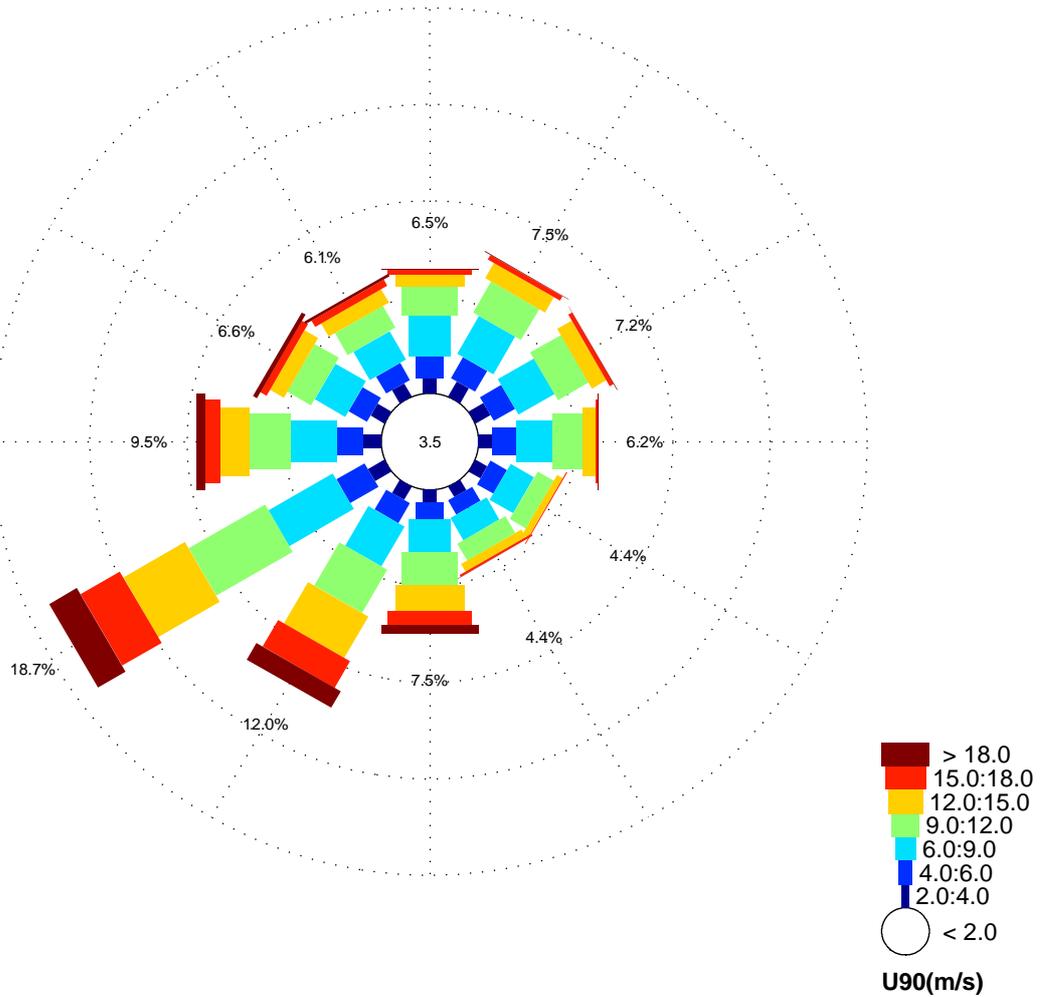
Height: 80m

Monthly

**Deltares**

App. A.1.006

Data from 01-Jan-1987 01:00:00 until 01-Jan-2014 (mean=9.2 m/s, max=37.8m/s)



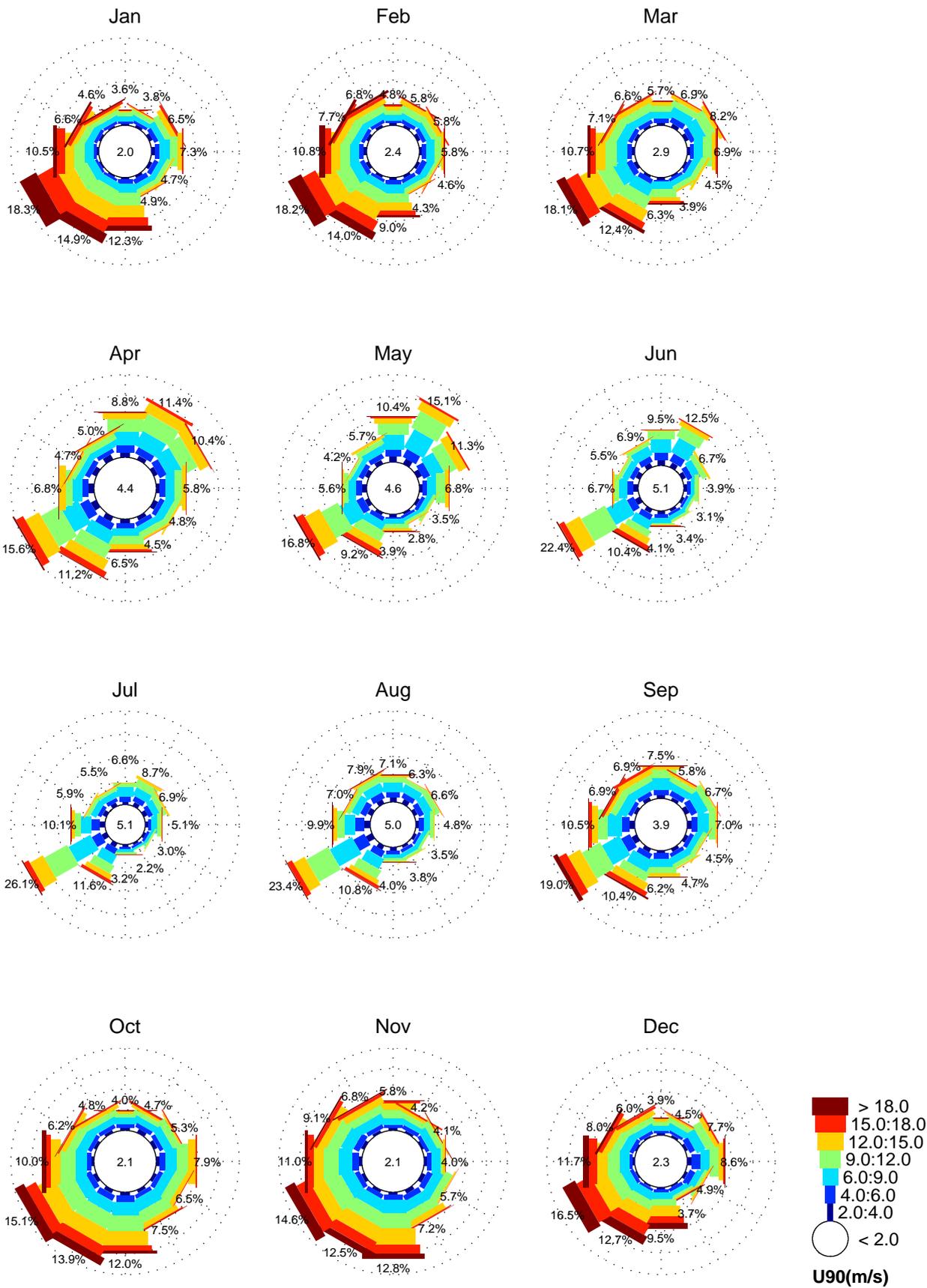
Annual wind rose at height of 90m  
Nautical convention: coming from, clockwise from North

Height: 90m

All Year

**Deltares**

App. A.1.007



Monthly wind roses at height of 90m  
 Nautical convention: coming from, clockwise from North

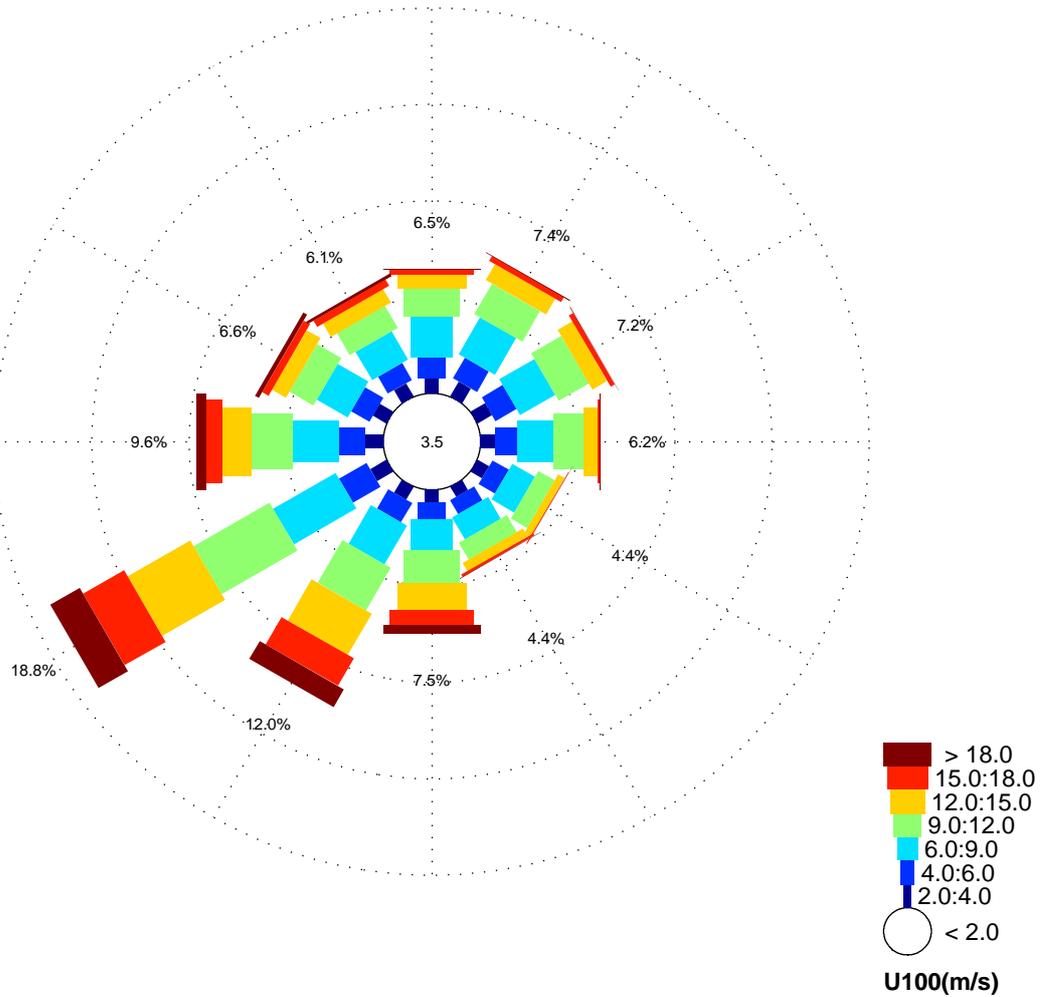
Height: 90m

Monthly

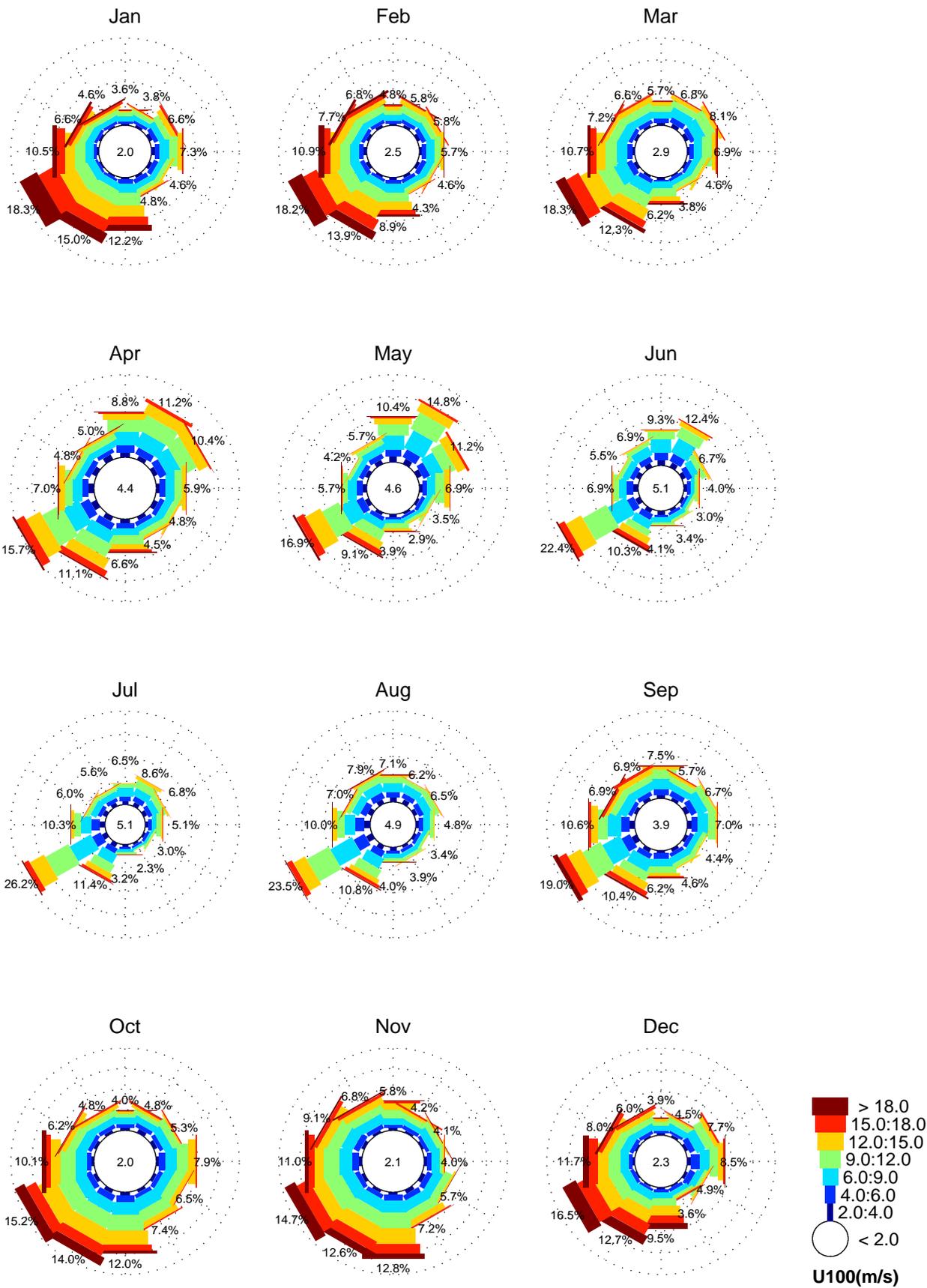
**Deltares**

App. A.1.008

Data from 01-Jan-1987 01:00:00 until 01-Jan-2014 (mean=9.3 m/s, max=38.2m/s)



Annual wind rose at height of 100m Nautical convention: coming from, clockwise from North	Height: 100m	All Year
<b>Deltares</b>		App. A.1.009



Monthly wind roses at height of 100m  
 Nautical convention: coming from, clockwise from North

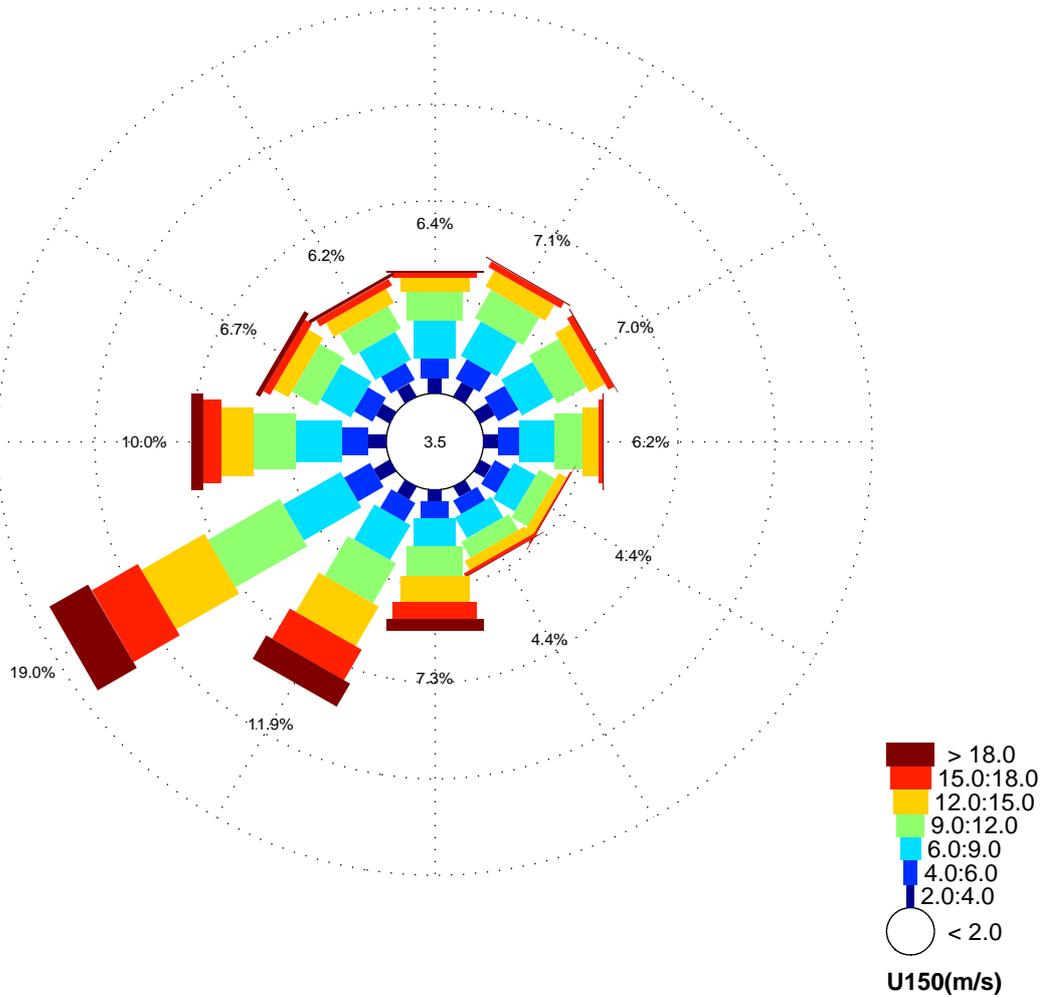
Height: 100m

Monthly

**Deltares**

App. A.1.010

Data from 01-Jan-1987 01:00:00 until 01-Jan-2014 (mean=9.6 m/s, max=39.6m/s)



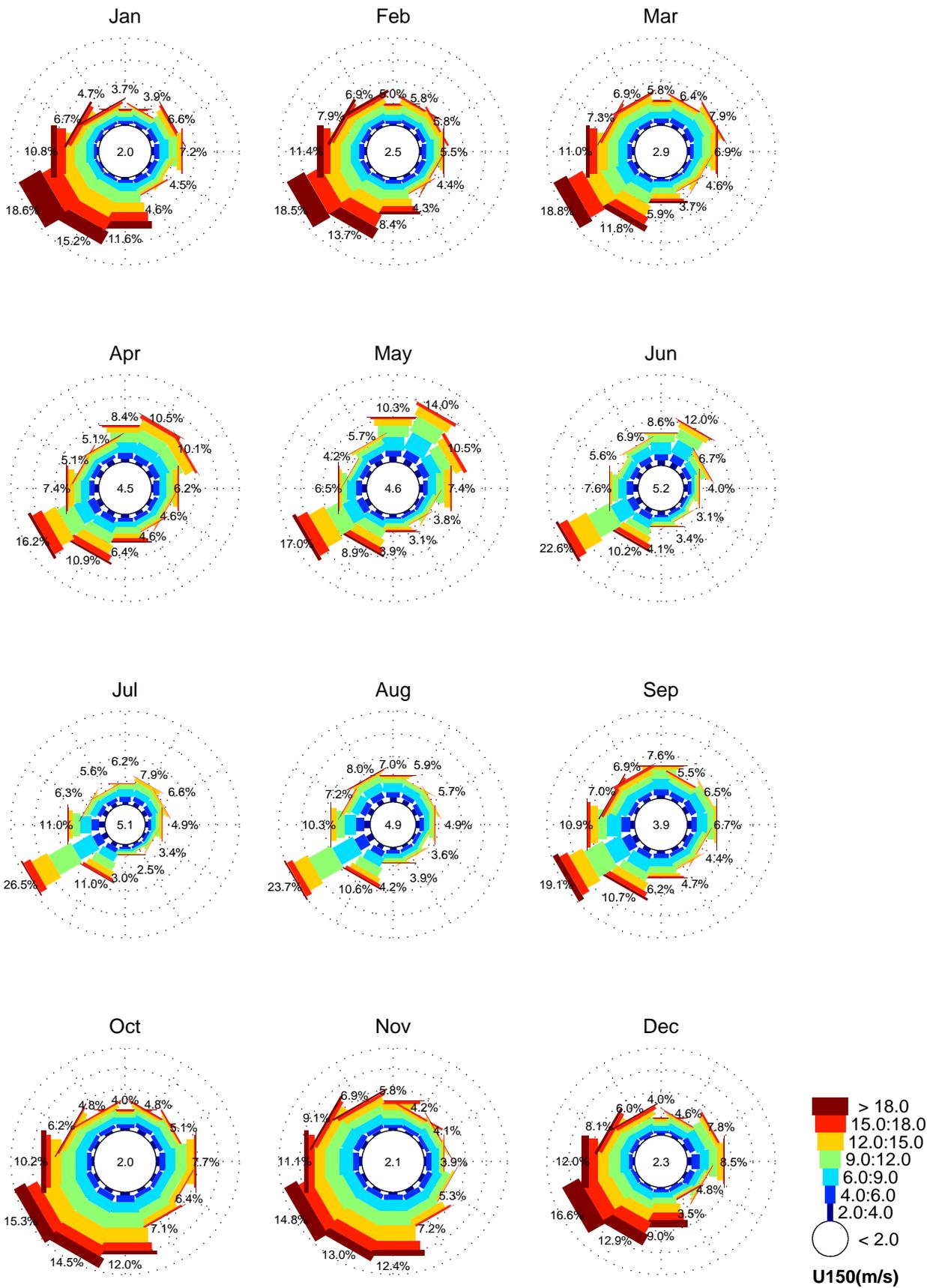
Annual wind rose at height of 150m  
Nautical convention: coming from, clockwise from North

Height: 150m

All Year

**Deltares**

App. A.1.011



Monthly wind roses at height of 150m  
 Nautical convention: coming from, clockwise from North

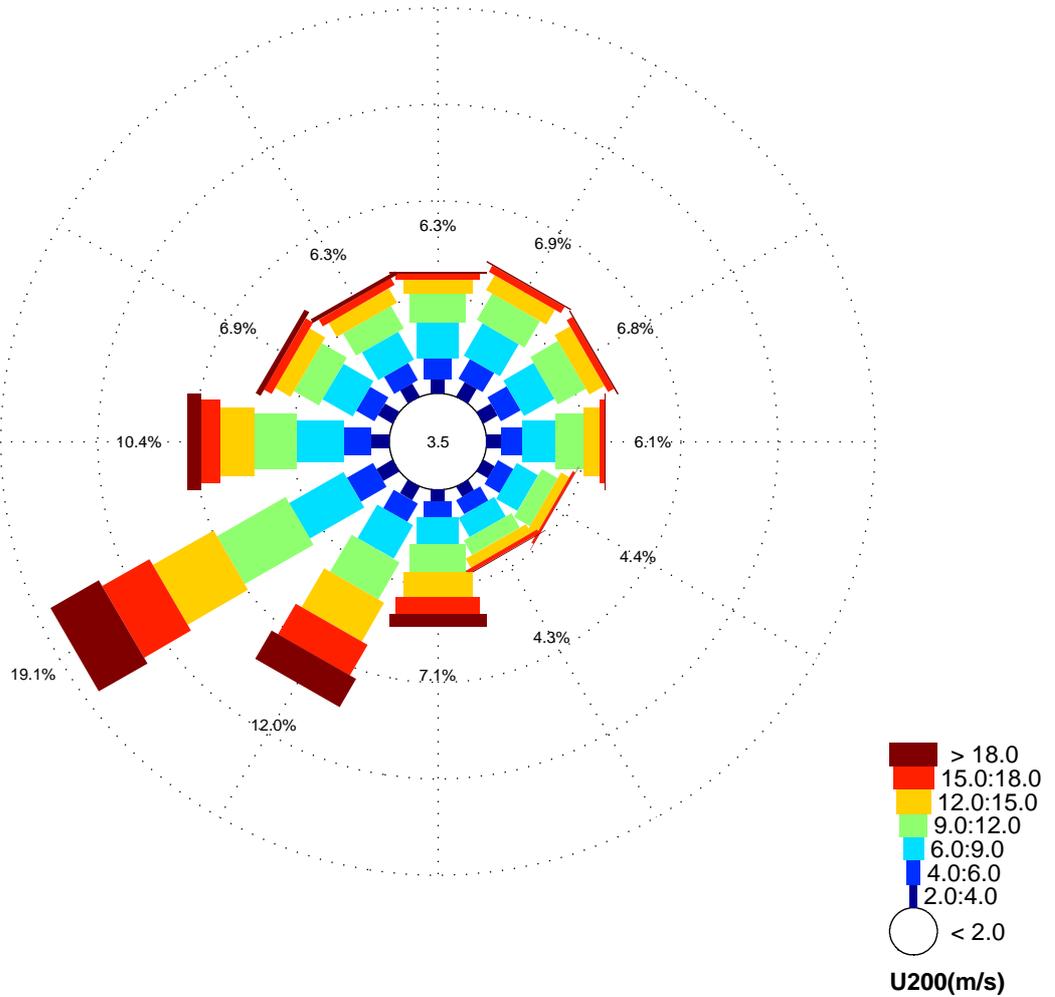
Height: 150m

Monthly

**Deltares**

App. A.1.012

Data from 01-Jan-1987 01:00:00 until 01-Jan-2014 (mean=9.7 m/s, max=40.7m/s)



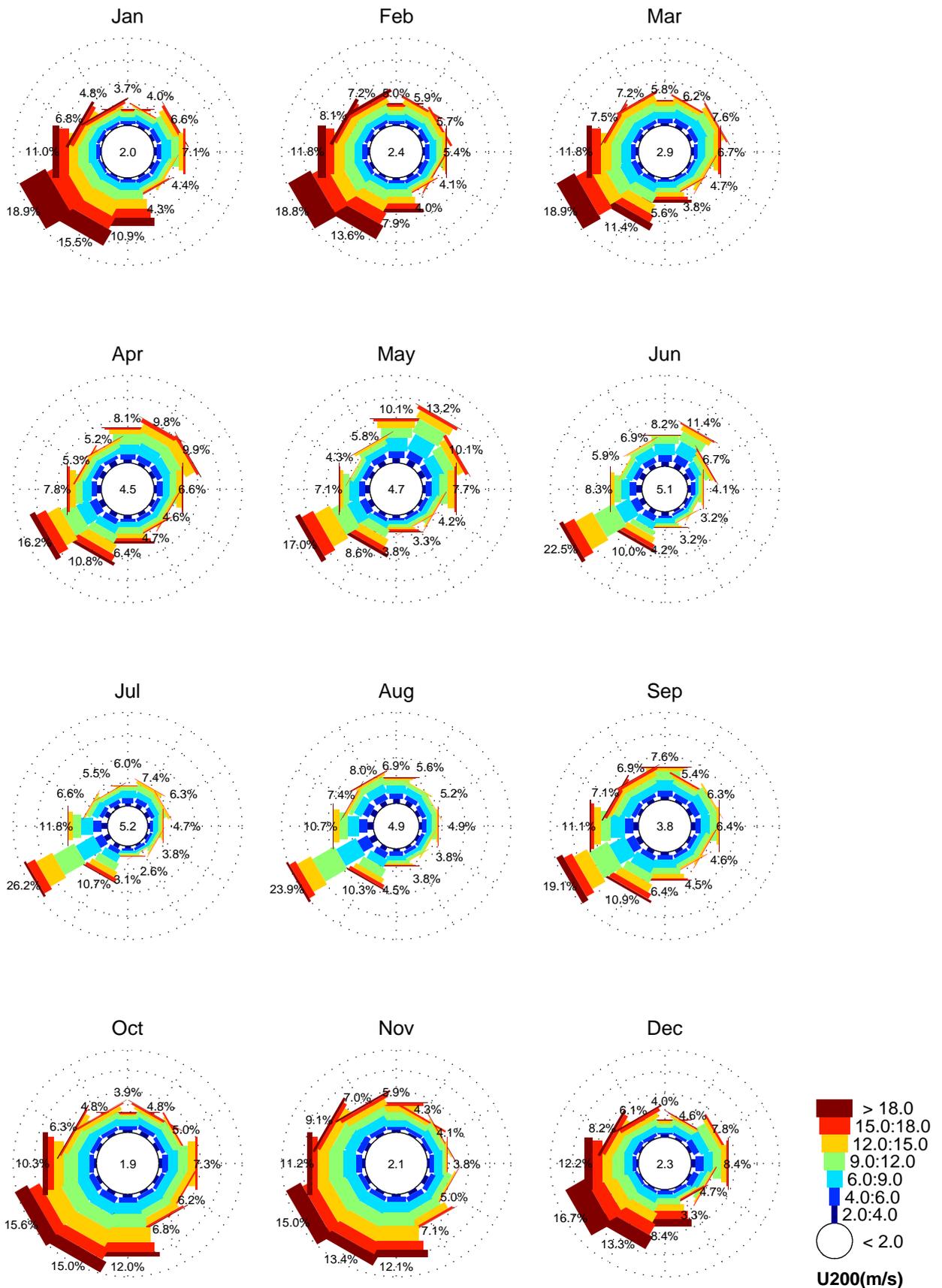
Annual wind rose at height of 200m  
Nautical convention: coming from, clockwise from North

Height: 200m

All Year

**Deltares**

App. A.1.013



Monthly wind roses at height of 200m  
 Nautical convention: coming from, clockwise from North

Height: 200m

Monthly

**Deltares**

App. A.1.014

Dir10 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.01	0.00	0.00			0.00	0.11	0.26	0.34	0.12	0.06	0.04	0.94
15.0-18.0	0.08	0.05	0.04	0.02	0.01	0.04	0.40	0.89	1.37	0.47	0.23	0.19	3.80
12.0-15.0	0.44	0.53	0.41	0.36	0.11	0.21	1.12	2.15	3.03	1.17	0.61	0.62	10.75
9.0-12.0	1.30	1.55	1.31	0.96	0.57	0.67	1.70	2.99	4.60	2.05	1.34	1.27	20.29
6.0-9.0	2.34	2.74	2.46	1.92	1.29	1.35	1.96	2.93	4.59	2.47	1.87	1.79	27.72
4.0-6.0	1.43	1.75	1.74	1.60	1.25	1.14	1.23	1.77	2.24	1.43	1.19	1.15	17.91
2.0-4.0	1.07	1.35	1.38	1.21	1.08	0.99	1.05	1.33	1.44	1.15	0.95	0.92	13.92
0.0-2.0	0.37	0.39	0.40	0.42	0.39	0.36	0.40	0.43	0.44	0.39	0.34	0.34	4.67
	7.05	8.36	7.74	6.47	4.71	4.76	7.96	12.74	18.05	9.25	6.59	6.32	100.00

All year

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 10m

All Year

Deltares

App. A.2.001

Dir10 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.02					0.01	0.26	0.86	0.95	0.23	0.17	0.06	2.57
15.0-18.0	0.10	0.03	0.21			0.06	1.09	1.81	3.19	0.88	0.50	0.35	8.22
12.0-15.0	0.31	0.36	0.94	0.77	0.08	0.43	2.93	3.58	5.22	2.46	1.01	0.62	18.71
9.0-12.0	0.76	0.71	1.67	1.74	1.02	0.96	3.42	4.88	4.06	2.55	1.49	0.96	24.23
6.0-9.0	1.28	1.26	1.69	2.54	1.56	1.61	3.10	2.63	3.02	2.56	1.75	1.33	24.32
4.0-6.0	0.63	0.71	1.08	1.49	1.23	1.37	1.19	0.81	0.83	1.18	0.98	0.75	12.26
2.0-4.0	0.48	0.60	0.85	0.81	0.89	0.74	0.65	0.39	0.41	0.50	0.57	0.44	7.33
0.0-2.0	0.13	0.16	0.30	0.23	0.30	0.18	0.21	0.24	0.15	0.19	0.12	0.13	2.35
	3.71	3.83	6.74	7.58	5.08	5.36	12.86	15.21	17.82	10.56	6.59	4.65	100.00

Jan

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 10m

Jan

Deltares

App. A.2.002

Dir10 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04	0.04					0.14	0.37	0.61	0.46	0.11	0.17	1.94
15.0-18.0	0.16	0.11		0.10	0.08	0.01	0.32	1.53	2.61	0.98	0.63	0.50	7.04
12.0-15.0	0.77	0.76	0.99	0.40	0.26	0.23	1.39	2.92	3.95	1.69	0.86	0.98	15.20
9.0-12.0	0.98	1.72	1.43	1.21	0.55	0.82	2.27	4.24	4.28	2.17	2.23	1.62	23.53
6.0-9.0	1.50	1.59	1.41	2.12	1.10	1.44	2.72	3.16	3.36	2.62	1.67	1.60	24.30
4.0-6.0	0.72	0.91	1.02	1.45	1.59	1.33	1.59	1.34	1.69	1.32	0.99	0.90	14.85
2.0-4.0	0.52	0.68	0.93	0.85	1.05	0.88	0.81	0.79	0.96	1.10	0.90	0.68	10.16
0.0-2.0	0.27	0.24	0.24	0.23	0.29	0.22	0.20	0.22	0.29	0.24	0.24	0.29	2.99
	4.97	6.06	6.01	6.37	4.93	4.94	9.45	14.59	17.74	10.57	7.63	6.74	100.00

Feb

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 10m

Feb

Deltares

App. A.2.003

Dir10 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.00						0.10	0.18	0.52	0.10	0.06	0.00	0.98
15.0-18.0	0.15	0.04	0.10	0.07		0.00	0.25	0.71	1.39	0.63	0.14	0.17	3.67
12.0-15.0	0.45	0.58	0.56	0.59	0.05	0.06	0.59	1.92	3.48	1.62	0.57	0.81	11.27
9.0-12.0	1.34	1.33	1.61	1.33	0.75	0.46	1.06	2.66	4.38	2.48	1.43	1.91	20.74
6.0-9.0	1.72	2.52	2.81	2.37	1.78	1.38	2.02	3.62	3.69	2.83	2.08	1.74	28.57
4.0-6.0	1.10	1.86	1.85	1.48	1.13	1.44	1.41	2.26	2.04	1.37	1.45	0.99	18.37
2.0-4.0	0.80	1.40	1.34	0.97	0.82	0.80	1.02	1.24	1.61	0.86	0.86	0.71	12.43
0.0-2.0	0.35	0.35	0.37	0.29	0.35	0.29	0.28	0.35	0.42	0.39	0.23	0.28	3.97
	5.91	8.09	8.65	7.11	4.87	4.45	6.74	12.94	17.52	10.28	6.83	6.60	100.00

Mar

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 10m

Mar

Deltares

App. A.2.004

Dir10 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0								0.01	0.04				0.05
15.0-18.0	0.08	0.04	0.07			0.01	0.22	0.23	0.25	0.02	0.03	0.08	1.01
12.0-15.0	0.60	1.02	0.40	0.16	0.01	0.14	0.49	1.47	1.83	0.47	0.28	0.24	7.11
9.0-12.0	2.15	2.98	2.56	0.80	0.10	0.43	0.97	2.47	3.24	1.12	0.67	1.10	18.57
6.0-9.0	3.20	4.56	3.53	1.57	1.30	1.32	1.65	3.06	4.09	1.65	1.10	1.26	28.28
4.0-6.0	2.13	2.00	2.37	1.66	1.61	1.32	1.39	2.44	2.34	1.09	0.83	0.91	20.10
2.0-4.0	1.41	1.53	1.75	1.52	1.64	1.45	1.55	1.99	2.14	1.24	1.10	1.20	18.53
0.0-2.0	0.50	0.48	0.43	0.57	0.47	0.51	0.63	0.64	0.54	0.59	0.48	0.50	6.34
	10.08	12.61	11.11	6.28	5.12	5.17	6.91	12.31	14.46	6.18	4.48	5.29	100.00

Apr

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 10m

Apr

**Deltares**

App. A.2.005

Dir10 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0								0.04	0.05	0.01			0.11
15.0-18.0	0.13	0.01					0.03	0.32	0.38	0.04	0.03	0.01	0.97
12.0-15.0	0.63	1.04	0.32	0.01	0.00	0.02	0.17	1.39	2.11	0.05	0.07	0.23	6.05
9.0-12.0	2.33	3.33	1.78	0.32	0.05	0.14	0.61	2.28	4.25	0.73	0.50	1.12	17.43
6.0-9.0	3.97	6.75	4.42	1.60	0.61	0.74	1.19	2.74	4.20	1.16	1.05	1.75	30.18
4.0-6.0	2.14	3.73	2.87	1.84	0.97	0.76	0.94	1.71	2.52	1.22	0.99	1.25	20.93
2.0-4.0	2.00	2.38	2.00	1.32	1.08	0.85	1.05	1.56	1.49	1.41	0.97	1.36	17.46
0.0-2.0	0.76	0.62	0.66	0.66	0.58	0.52	0.48	0.50	0.53	0.46	0.50	0.58	6.86
	11.96	17.86	12.05	5.76	3.29	3.03	4.46	10.55	15.54	5.10	4.11	6.30	100.00

May

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 10m

May

**Deltares**

App. A.2.006

Dir10 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0								0.07	0.07				0.14
15.0-18.0		0.01				0.01	0.01	0.51	0.43			0.02	0.98
12.0-15.0	0.10	0.40	0.11	0.01	0.01	0.02	0.07	1.59	1.93	0.11	0.08	0.31	4.74
9.0-12.0	1.02	2.26	0.64	0.17	0.05	0.12	0.33	2.28	5.70	0.81	0.65	0.66	14.71
6.0-9.0	4.26	4.60	1.85	0.98	0.64	0.58	0.88	2.69	6.78	1.71	1.61	2.54	29.14
4.0-6.0	2.91	3.19	2.12	1.30	1.06	0.83	0.86	2.27	3.11	1.39	1.40	1.74	22.18
2.0-4.0	2.03	2.28	1.96	1.77	1.54	1.43	1.59	2.18	2.03	1.56	1.32	1.45	21.14
0.0-2.0	0.58	0.61	0.59	0.63	0.64	0.55	0.58	0.63	0.58	0.56	0.49	0.56	6.98
	10.90	13.35	7.28	4.87	3.94	3.53	4.33	12.22	20.63	6.14	5.54	7.27	100.00
	Jun												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

Jun

**Deltares**

App. A.2.007

Dir10 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0								0.02					0.02
15.0-18.0		0.00	0.01				0.00	0.28	0.43	0.01	0.03	0.04	0.82
12.0-15.0	0.05	0.14	0.02	0.01			0.08	1.20	2.30	0.34	0.23	0.16	4.55
9.0-12.0	0.67	1.60	0.78	0.14	0.05	0.06	0.40	2.44	6.68	1.64	0.66	0.81	15.93
6.0-9.0	2.91	3.20	2.21	1.26	0.37	0.33	0.80	3.36	8.01	2.62	1.77	1.73	28.55
4.0-6.0	2.02	2.45	2.13	1.48	0.56	0.45	0.77	2.64	4.29	2.03	1.33	1.27	21.43
2.0-4.0	1.56	2.39	2.27	1.44	1.17	1.13	1.47	2.52	2.34	1.91	1.47	1.38	21.06
0.0-2.0	0.50	0.70	0.52	0.61	0.49	0.56	0.76	0.89	0.86	0.70	0.54	0.50	7.62
	7.71	10.49	7.94	4.95	2.64	2.53	4.29	13.35	24.92	9.24	6.04	5.89	100.00
	Jul												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 10m

Jul

**Deltares**

App. A.2.008

Dir10 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0							0.01	0.03	0.01		0.06	0.05	0.17
15.0-18.0	0.05	0.01				0.00	0.01	0.32	0.37	0.01	0.03	0.12	0.96
12.0-15.0	0.36	0.08	0.05			0.02	0.16	1.12	2.16	0.48	0.32	0.41	5.17
9.0-12.0	1.04	0.61	0.52	0.13	0.09	0.09	0.33	2.13	5.47	1.81	1.12	1.33	14.68
6.0-9.0	2.53	2.47	2.79	1.46	0.67	0.82	0.95	3.32	7.77	2.50	1.85	2.46	29.58
4.0-6.0	1.64	1.82	1.94	1.67	1.21	1.04	1.06	2.35	3.85	2.26	1.66	1.99	22.50
2.0-4.0	1.59	1.90	1.88	1.56	1.22	1.25	1.33	1.93	2.51	1.98	1.53	1.42	20.09
0.0-2.0	0.51	0.64	0.56	0.61	0.51	0.47	0.60	0.70	0.76	0.50	0.55	0.45	6.84
	7.73	7.53	7.74	5.44	3.71	3.69	4.46	11.90	22.91	9.54	7.11	8.24	100.00

Aug

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 10m

Aug

Deltares

App. A.2.009

		Dir10 (° N)												
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
U10 (m/s)	>18.0							0.01	0.09	0.22	0.03	0.08	0.01	0.43
	15.0-18.0	0.02	0.02		0.01		0.01	0.05	0.50	1.10	0.20	0.23	0.21	2.35
	12.0-15.0	0.43	0.59	0.15	0.22	0.11	0.07	0.39	1.69	2.72	1.23	0.81	1.04	9.45
	9.0-12.0	1.65	1.09	0.99	0.90	0.57	0.65	1.18	2.23	4.91	2.16	1.43	1.55	19.31
	6.0-9.0	2.83	1.84	2.53	2.84	1.18	1.31	1.84	2.80	5.05	3.17	2.29	1.97	29.65
	4.0-6.0	1.55	1.61	1.75	1.73	1.45	1.37	1.49	1.86	2.67	2.10	1.15	1.30	20.02
	2.0-4.0	0.95	0.93	1.49	1.55	1.03	1.14	1.06	1.26	1.61	1.28	0.84	0.89	14.02
	0.0-2.0	0.33	0.26	0.40	0.48	0.45	0.40	0.38	0.40	0.49	0.46	0.42	0.31	4.77
		7.76	6.33	7.30	7.73	4.79	4.93	6.40	10.82	18.77	10.62	7.25	7.28	100.00
Sep													Total	
Joint Occurrence table of hourly wind speed vs. wind direction Nautical convention: coming from, clockwise from North									Height: 10m		Sep			
<b>Deltares</b>											App. A.2.010			

Dir10 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0						0.01	0.18	0.55	0.52	0.27	0.03	0.01	1.57
15.0-18.0	0.10	0.19	0.04		0.00	0.07	0.54	1.45	1.69	0.80	0.16	0.10	5.15
12.0-15.0	0.33	0.53	0.37	1.01	0.40	0.51	1.80	2.73	3.08	1.43	0.56	0.51	13.26
9.0-12.0	0.74	0.90	1.05	2.08	1.75	1.78	3.45	3.72	4.49	2.95	1.60	1.21	25.71
6.0-9.0	1.31	1.31	1.91	2.51	2.47	3.24	3.31	2.78	2.80	2.90	2.18	1.38	28.11
4.0-6.0	0.86	0.92	1.14	1.66	1.14	1.36	1.59	1.41	1.28	0.92	0.99	0.90	14.17
2.0-4.0	0.57	0.94	0.89	0.87	0.87	0.81	0.99	1.02	0.88	0.64	0.63	0.60	9.69
0.0-2.0	0.19	0.25	0.21	0.20	0.18	0.21	0.21	0.19	0.24	0.14	0.14	0.16	2.33
	4.10	5.04	5.62	8.32	6.82	8.00	12.07	13.85	14.97	10.05	6.29	4.87	100.00

Oct

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 10m

Oct

**Deltares**

App. A.2.011

Dir10 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04		0.02				0.15	0.31	0.41	0.10	0.10	0.10	1.22
15.0-18.0	0.10	0.06	0.06		0.06	0.10	1.05	1.26	2.12	0.76	0.41	0.35	6.32
12.0-15.0	0.93	0.51	0.14	0.18	0.12	0.62	2.80	2.90	3.04	1.59	1.27	1.01	15.12
9.0-12.0	1.88	1.16	0.92	0.59	1.04	1.93	3.87	3.32	3.77	3.01	2.41	1.67	25.56
6.0-9.0	1.41	1.08	1.65	1.57	2.36	2.41	3.34	2.72	3.25	3.23	2.71	2.01	27.73
4.0-6.0	0.85	0.87	0.90	1.04	1.31	1.35	1.38	1.09	1.09	1.39	1.34	1.01	13.62
2.0-4.0	0.43	0.48	0.47	0.70	0.94	0.94	0.66	0.62	0.74	0.74	0.76	0.57	8.05
0.0-2.0	0.17	0.17	0.15	0.14	0.15	0.24	0.23	0.22	0.22	0.29	0.22	0.19	2.39
	5.82	4.33	4.30	4.22	5.98	7.58	13.49	12.43	14.63	11.11	9.21	6.90	100.00

Nov

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 10m

Nov

**Deltares**

App. A.2.012

		Dir10 (° N)												
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
U10 (m/s)	>18.0	0.01	0.01					0.42	0.56	0.73	0.23	0.08	0.06	2.11
	15.0-18.0	0.07	0.12	0.03	0.05	0.02	0.20	1.15	1.75	2.58	1.36	0.57	0.32	8.25
	12.0-15.0	0.36	0.36	0.89	0.89	0.30	0.34	2.53	3.36	4.54	2.57	1.32	1.12	18.58
	9.0-12.0	1.05	0.92	1.82	2.02	0.74	0.57	2.51	3.27	3.88	3.10	1.97	1.36	23.21
	6.0-9.0	1.19	1.57	2.58	2.18	1.49	1.10	1.80	2.28	2.97	2.73	2.39	1.78	24.06
	4.0-6.0	0.65	0.85	1.63	2.31	1.76	1.11	1.14	0.99	1.11	0.88	1.10	0.82	14.34
	2.0-4.0	0.50	0.62	0.70	1.09	0.78	0.43	0.47	0.38	0.50	0.61	0.48	0.39	6.96
	0.0-2.0	0.13	0.21	0.36	0.32	0.26	0.19	0.19	0.17	0.20	0.18	0.17	0.08	2.48
		3.97	4.67	8.02	8.87	5.36	3.95	10.23	12.75	16.50	11.67	8.08	5.93	100.00
Dec													Total	
Joint Occurrence table of hourly wind speed vs. wind direction Nautical convention: coming from, clockwise from North									Height: 10m		Dec			
Deltares											App. A.2.013			

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.03	0.03	0.02	0.01	0.01	0.02	0.26	0.88	1.51	0.41	0.18	0.12	3.47
15.0-18.0	0.16	0.24	0.16	0.11	0.04	0.09	0.58	1.52	2.36	0.75	0.35	0.36	6.71
12.0-15.0	0.49	0.88	0.77	0.55	0.25	0.41	1.32	2.61	3.71	1.36	0.79	0.75	13.88
9.0-12.0	1.03	1.99	1.88	1.33	0.87	1.04	2.01	2.91	4.73	1.92	1.41	1.19	22.32
6.0-9.0	1.21	2.58	2.40	1.85	1.34	1.46	2.48	2.78	4.39	2.04	1.80	1.49	25.82
4.0-6.0	0.50	1.33	1.51	1.15	0.94	0.90	1.44	1.47	2.10	1.27	0.99	0.87	14.47
2.0-4.0	0.22	0.84	1.01	0.79	0.64	0.71	1.16	1.07	1.26	0.89	0.68	0.54	9.82
0.0-2.0	0.08	0.19	0.31	0.29	0.28	0.41	0.53	0.46	0.37	0.30	0.19	0.10	3.51
	3.72	8.07	8.05	6.08	4.37	5.03	9.79	13.71	20.43	8.92	6.39	5.42	100.00

All year

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

All Year

Deltares

App. A.2.014

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04		0.07			0.03	0.78	2.29	3.88	0.73	0.43	0.27	8.53
15.0-18.0	0.20	0.21	0.49	0.21	0.00	0.15	1.59	2.91	4.28	1.79	0.77	0.51	13.12
12.0-15.0	0.28	0.30	1.19	0.92	0.43	0.54	2.47	4.31	4.33	2.18	0.94	0.57	18.45
9.0-12.0	0.72	0.94	1.51	1.76	0.93	1.29	3.18	3.44	3.46	2.15	1.46	0.95	21.80
6.0-9.0	0.65	1.10	1.57	2.21	1.24	1.53	2.65	1.67	2.30	1.91	1.45	1.09	19.38
4.0-6.0	0.31	0.77	0.92	1.26	1.00	1.32	1.45	0.56	0.68	0.76	0.72	0.62	10.37
2.0-4.0	0.13	0.58	0.83	0.65	0.78	0.70	0.87	0.49	0.35	0.31	0.34	0.32	6.34
0.0-2.0	0.04	0.15	0.28	0.18	0.24	0.25	0.30	0.22	0.13	0.10	0.07	0.02	2.00
	2.39	4.06	6.86	7.18	4.62	5.81	13.28	15.90	19.41	9.94	6.18	4.36	100.00
	Jan												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

Jan

Deltares

App. A.2.015

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.09	0.12		0.04	0.05		0.26	1.65	3.00	1.06	0.62	0.48	7.38
15.0-18.0	0.21	0.27	0.22	0.18	0.14	0.13	0.69	2.35	3.19	1.37	0.56	0.72	10.04
12.0-15.0	0.65	1.14	1.16	0.44	0.28	0.43	1.68	4.25	4.16	1.87	1.43	1.04	18.53
9.0-12.0	0.76	1.58	1.31	1.34	0.65	1.06	2.16	2.95	3.87	2.11	1.89	1.62	21.31
6.0-9.0	0.90	1.21	1.27	1.88	1.33	1.44	2.74	2.47	2.81	1.94	1.60	1.32	20.90
4.0-6.0	0.28	0.84	1.20	1.04	1.27	1.02	1.29	0.93	1.21	1.08	0.74	0.85	11.74
2.0-4.0	0.16	0.66	0.77	0.59	0.69	0.92	0.83	0.72	0.57	0.63	0.52	0.52	7.57
0.0-2.0	0.07	0.22	0.15	0.26	0.25	0.32	0.39	0.25	0.17	0.15	0.14	0.15	2.51
	3.12	6.04	6.09	5.78	4.66	5.31	10.05	15.59	18.99	10.20	7.49	6.70	100.00

Feb

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

Feb

**Deltares**

App. A.2.016

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04	0.02	0.02	0.03			0.25	0.69	1.86	0.56	0.13	0.07	3.68
15.0-18.0	0.17	0.17	0.28	0.31	0.01	0.00	0.43	1.33	2.95	1.03	0.37	0.39	7.45
12.0-15.0	0.59	0.95	0.74	0.72	0.35	0.34	0.93	2.80	4.19	1.87	0.71	1.06	15.23
9.0-12.0	0.97	1.32	2.39	1.73	1.19	1.19	2.02	3.44	3.95	2.37	1.83	1.55	23.95
6.0-9.0	1.03	2.37	3.06	1.87	1.45	1.50	2.49	3.33	3.69	2.11	2.37	1.49	26.76
4.0-6.0	0.61	1.34	1.37	0.90	0.73	0.62	1.06	1.40	1.60	1.07	1.08	0.72	12.50
2.0-4.0	0.20	0.89	0.84	0.73	0.40	0.48	0.89	0.73	0.81	0.64	0.50	0.46	7.57
0.0-2.0	0.07	0.22	0.30	0.26	0.14	0.33	0.45	0.37	0.21	0.16	0.17	0.15	2.85
	3.68	7.29	9.01	6.55	4.28	4.47	8.51	14.11	19.26	9.80	7.17	5.88	100.00

Mar

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

Mar

Deltares

App. A.2.017

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.03	0.01	0.02				0.10	0.11	0.28			0.03	0.57
15.0-18.0	0.19	0.44	0.15	0.05		0.02	0.39	0.96	1.34	0.14	0.13	0.13	3.95
12.0-15.0	0.78	1.92	1.77	0.50	0.17	0.29	0.81	2.27	2.79	0.96	0.40	0.46	13.13
9.0-12.0	1.59	3.86	3.05	1.35	0.91	1.04	2.16	3.30	4.25	1.11	0.84	1.03	24.49
6.0-9.0	1.69	3.85	3.08	1.74	1.68	1.36	2.27	3.19	4.33	1.31	1.24	1.07	26.79
4.0-6.0	0.64	1.45	1.87	0.94	0.97	0.85	1.53	1.82	2.38	1.25	0.92	0.79	15.42
2.0-4.0	0.30	0.79	0.90	0.74	0.82	0.81	1.39	1.55	1.51	0.95	0.73	0.77	11.26
0.0-2.0	0.13	0.19	0.33	0.28	0.33	0.60	0.67	0.57	0.47	0.42	0.28	0.15	4.40
	5.34	12.50	11.17	5.61	4.89	4.96	9.33	13.76	17.35	6.14	4.54	4.42	100.00

Apr

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

Apr

**Deltares**

App. A.2.018

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.02	0.00						0.16	0.40	0.04	0.01	0.00	0.65
15.0-18.0	0.23	0.35	0.15	0.02		0.01	0.09	0.78	1.60	0.03	0.04	0.03	3.33
12.0-15.0	0.90	2.19	1.69	0.51	0.07	0.24	0.72	1.95	3.40	0.19	0.13	0.42	12.41
9.0-12.0	1.74	4.96	3.42	1.47	0.61	0.55	1.49	3.01	4.45	0.80	0.78	0.92	24.20
6.0-9.0	1.73	5.61	3.84	1.96	0.92	0.91	2.26	2.54	4.39	1.39	1.17	1.25	27.97
4.0-6.0	0.62	2.32	2.03	0.96	0.78	0.59	1.47	1.49	2.32	1.29	1.02	0.85	15.74
2.0-4.0	0.41	1.20	1.34	0.78	0.52	0.63	1.40	0.96	1.35	1.22	0.65	0.57	11.03
0.0-2.0	0.16	0.23	0.43	0.31	0.34	0.52	0.72	0.60	0.53	0.50	0.20	0.12	4.67
	5.81	16.86	12.91	6.02	3.23	3.46	8.14	11.48	18.44	5.47	4.02	4.16	100.00

May

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

May

**Deltares**

App. A.2.019

		Dir70 (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
U70 (m/s)	>18.0							0.01	0.27	0.41			0.01	0.70	
	15.0-18.0	0.02	0.21	0.03				0.01	0.03	0.95	1.41	0.03	0.02	0.05	2.76
	12.0-15.0	0.12	1.03	0.37	0.09	0.08	0.09	0.25	1.90	3.78	0.23	0.21	0.33	8.49	
	9.0-12.0	1.12	3.50	1.30	0.81	0.45	0.58	1.14	2.49	6.92	0.91	0.88	0.80	20.90	
	6.0-9.0	1.88	5.24	2.29	1.02	0.91	1.19	2.82	3.02	6.63	1.59	1.75	1.93	30.27	
	4.0-6.0	0.82	2.47	1.86	0.90	0.53	0.75	1.71	2.16	2.87	1.38	1.14	1.09	17.67	
	2.0-4.0	0.35	1.30	1.48	0.95	0.64	0.69	1.88	1.78	2.04	1.27	1.01	0.73	14.14	
	0.0-2.0	0.09	0.16	0.42	0.39	0.45	0.58	0.79	0.73	0.65	0.48	0.26	0.07	5.08	
		4.41	13.92	7.76	4.16	3.06	3.89	8.62	13.31	24.71	5.88	5.28	5.01	100.00	
Jun													Total		

Joint Occurrence table of hourly wind speed vs. wind direction Nautical convention: coming from, clockwise from North	Height: 70m	Jun
<b>Deltares</b>		App. A.2.020

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0			0.01					0.09	0.31		0.01	0.01	0.44
15.0-18.0		0.03	0.02	0.00			0.02	0.54	1.40	0.09	0.08	0.08	2.27
12.0-15.0	0.18	0.65	0.42	0.15	0.02	0.02	0.24	1.62	4.30	0.64	0.41	0.28	8.95
9.0-12.0	0.79	2.26	1.76	1.04	0.44	0.18	0.65	3.07	7.69	1.49	1.02	0.76	21.12
6.0-9.0	1.42	3.02	2.66	1.46	0.75	0.59	2.09	3.79	8.40	2.43	1.84	1.42	29.88
4.0-6.0	0.53	1.77	1.74	1.08	0.67	0.61	1.37	2.36	4.35	1.94	0.95	0.89	18.26
2.0-4.0	0.20	1.00	1.44	0.79	0.61	0.74	1.59	1.81	2.51	1.70	0.93	0.67	13.99
0.0-2.0	0.11	0.20	0.34	0.33	0.32	0.53	0.73	0.82	0.73	0.56	0.29	0.11	5.09
	3.24	8.94	8.39	4.86	2.80	2.67	6.70	14.10	29.69	8.87	5.53	4.23	100.00
	Jul												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

Jul

Deltares

App. A.2.021

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.03						0.01	0.13	0.26		0.10	0.09	0.64
15.0-18.0	0.16	0.01	0.03			0.00	0.05	0.63	1.32	0.09	0.10	0.23	2.66
12.0-15.0	0.35	0.14	0.14	0.01	0.05	0.08	0.27	1.21	3.36	0.96	0.55	0.47	7.60
9.0-12.0	1.01	1.08	1.66	0.72	0.41	0.60	0.90	2.70	6.73	1.50	1.22	1.41	19.93
6.0-9.0	1.37	2.64	2.52	1.78	0.98	1.29	1.96	3.38	7.59	2.27	2.05	2.06	29.88
4.0-6.0	0.49	1.49	1.94	1.33	0.69	0.90	1.65	2.23	4.26	1.95	1.61	1.29	19.83
2.0-4.0	0.29	1.22	1.22	0.95	0.60	0.81	1.52	1.74	2.51	1.64	1.21	0.70	14.43
0.0-2.0	0.09	0.24	0.35	0.42	0.34	0.54	0.71	0.84	0.64	0.41	0.32	0.12	5.03
	3.79	6.84	7.87	5.21	3.07	4.23	7.08	12.86	26.68	8.82	7.16	6.39	100.00

Aug

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

Aug

Deltares

App. A.2.022

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0		0.01					0.02	0.34	0.97	0.13	0.21	0.03	1.70
15.0-18.0	0.12	0.22	0.06	0.05	0.04	0.01	0.15	0.94	1.91	0.52	0.48	0.58	5.09
12.0-15.0	0.47	0.68	0.26	0.39	0.21	0.28	0.67	1.80	3.42	1.36	0.81	1.15	11.50
9.0-12.0	1.41	1.42	1.42	1.26	0.90	0.95	1.86	2.15	5.00	1.94	1.51	1.25	21.08
6.0-9.0	1.33	2.02	2.66	2.54	1.39	1.56	2.89	3.39	5.13	2.82	2.03	1.58	29.34
4.0-6.0	0.65	1.33	1.76	1.32	1.08	1.00	1.56	1.66	2.69	1.53	0.95	0.95	16.46
2.0-4.0	0.30	0.68	1.25	1.02	0.72	0.72	1.18	1.03	1.64	0.93	0.81	0.61	10.88
0.0-2.0	0.04	0.19	0.26	0.42	0.30	0.39	0.66	0.48	0.43	0.42	0.21	0.15	3.95
	4.33	6.54	7.68	6.99	4.64	4.91	8.97	11.80	21.18	9.66	7.01	6.30	100.00

Sep

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

Sep

**Deltares**

App. A.2.023

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04	0.06	0.00			0.03	0.31	1.48	1.95	0.75	0.09	0.06	4.78
15.0-18.0	0.16	0.41	0.14	0.21	0.10	0.23	0.82	1.97	2.32	0.90	0.26	0.36	7.89
12.0-15.0	0.35	0.49	0.31	1.36	0.76	0.97	2.34	3.24	3.74	1.74	0.83	0.71	16.84
9.0-12.0	0.47	0.81	1.54	2.11	1.88	2.45	3.21	3.40	3.66	2.76	1.56	1.11	24.96
6.0-9.0	0.89	1.30	1.83	2.22	1.81	2.79	2.88	2.61	2.48	2.06	1.93	1.19	23.98
4.0-6.0	0.43	0.78	1.12	1.16	0.92	0.93	1.64	1.38	1.16	0.84	0.61	0.77	11.74
2.0-4.0	0.18	0.65	0.91	0.72	0.61	0.61	0.97	0.92	0.75	0.50	0.47	0.45	7.74
0.0-2.0	0.05	0.18	0.23	0.18	0.19	0.20	0.37	0.27	0.14	0.14	0.05	0.04	2.07
	2.58	4.68	6.09	7.96	6.27	8.22	12.54	15.26	16.22	9.69	5.80	4.68	100.00

Oct

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

Oct

Deltares

App. A.2.024

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04	0.04	0.06		0.03	0.05	0.59	1.28	1.97	0.52	0.25	0.21	5.04
15.0-18.0	0.28	0.29	0.01	0.01	0.04	0.24	1.36	2.18	2.75	1.15	0.66	0.61	9.57
12.0-15.0	0.90	0.67	0.21	0.33	0.25	1.16	3.18	2.93	3.03	1.90	1.47	1.34	17.38
9.0-12.0	1.18	1.10	1.02	0.53	1.37	2.01	3.42	2.66	3.48	3.16	2.16	1.64	23.73
6.0-9.0	0.90	0.97	1.57	1.51	1.98	2.26	2.84	2.13	2.68	2.63	2.26	1.93	23.65
4.0-6.0	0.32	0.77	0.80	0.90	1.17	1.23	1.39	0.96	0.81	1.29	1.25	0.87	11.76
2.0-4.0	0.07	0.50	0.43	0.60	0.72	0.91	0.77	0.65	0.60	0.52	0.59	0.45	6.79
0.0-2.0	0.04	0.11	0.17	0.15	0.17	0.38	0.31	0.20	0.15	0.11	0.14	0.13	2.08
	3.73	4.44	4.27	4.03	5.73	8.23	13.88	13.00	15.47	11.28	8.77	7.18	100.00

Nov

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

Nov

Deltares

App. A.2.025

Dir70 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.02	0.08		0.03		0.07	0.81	2.12	2.86	1.12	0.38	0.20	7.70
15.0-18.0	0.13	0.20	0.35	0.22	0.10	0.29	1.37	2.70	3.84	1.83	0.78	0.68	12.50
12.0-15.0	0.38	0.46	0.96	1.10	0.38	0.45	2.26	3.19	4.03	2.39	1.59	1.15	18.34
9.0-12.0	0.62	1.10	2.07	1.85	0.74	0.61	1.97	2.25	3.25	2.73	1.77	1.33	20.28
6.0-9.0	0.72	1.57	2.33	2.02	1.63	1.15	1.96	1.88	2.12	2.08	1.87	1.49	20.82
4.0-6.0	0.32	0.60	1.54	1.96	1.54	0.97	1.21	0.68	0.79	0.82	0.90	0.70	12.03
2.0-4.0	0.10	0.59	0.64	1.02	0.64	0.49	0.65	0.41	0.47	0.32	0.42	0.27	6.01
0.0-2.0	0.02	0.13	0.44	0.31	0.26	0.30	0.28	0.19	0.15	0.09	0.11	0.02	2.32
	2.32	4.74	8.33	8.51	5.29	4.34	10.50	13.42	17.52	11.37	7.82	5.85	100.00

Dec

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 70m

Dec

Deltares

App. A.2.026

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.05	0.03	0.02	0.01	0.01	0.02	0.40	0.93	1.53	0.42	0.20	0.13	3.76
15.0-18.0	0.21	0.25	0.20	0.12	0.04	0.11	0.73	1.52	2.28	0.78	0.37	0.36	6.97
12.0-15.0	0.67	0.89	0.82	0.64	0.31	0.43	1.34	2.47	3.61	1.45	0.80	0.78	14.21
9.0-12.0	1.49	1.87	1.83	1.49	0.95	0.99	1.74	2.64	4.54	2.11	1.42	1.30	22.36
6.0-9.0	2.14	2.31	2.19	1.93	1.43	1.35	1.70	2.46	3.93	2.34	1.82	1.70	25.31
4.0-6.0	1.13	1.29	1.30	1.21	0.99	0.87	0.93	1.23	1.72	1.39	1.11	1.03	14.20
2.0-4.0	0.80	0.91	0.89	0.77	0.70	0.62	0.67	0.79	0.99	0.94	0.82	0.79	9.70
0.0-2.0	0.28	0.32	0.29	0.30	0.28	0.26	0.28	0.29	0.31	0.31	0.29	0.27	3.49
	6.78	7.87	7.54	6.46	4.71	4.65	7.78	12.34	18.91	9.76	6.83	6.37	100.00

All year

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

All Year

**Deltares**

App. A.2.027

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.09		0.10			0.04	1.12	2.30	4.05	0.76	0.46	0.29	9.22
15.0-18.0	0.23	0.22	0.52	0.24	0.02	0.20	1.95	2.62	4.25	1.87	0.79	0.51	13.41
12.0-15.0	0.33	0.30	1.17	0.99	0.44	0.60	2.65	3.97	3.94	2.23	1.05	0.59	18.26
9.0-12.0	0.94	0.96	1.48	1.86	1.07	1.04	3.05	3.33	3.12	2.38	1.44	1.01	21.66
6.0-9.0	1.02	1.07	1.50	2.27	1.31	1.34	2.13	1.63	1.96	1.95	1.59	1.13	18.90
4.0-6.0	0.66	0.66	1.00	1.23	1.12	1.10	0.97	0.65	0.56	0.85	0.82	0.70	10.31
2.0-4.0	0.33	0.59	0.78	0.69	0.73	0.58	0.51	0.36	0.40	0.41	0.48	0.36	6.24
0.0-2.0	0.09	0.16	0.22	0.22	0.26	0.15	0.16	0.20	0.11	0.19	0.11	0.11	1.99
	3.70	3.97	6.77	7.51	4.95	5.05	12.53	15.07	18.38	10.63	6.75	4.69	100.00

Jan

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

Jan

Deltares

App. A.2.028

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.13	0.12		0.05	0.05		0.42	1.73	3.13	1.14	0.63	0.54	7.93
15.0-18.0	0.35	0.23	0.29	0.19	0.15	0.13	0.93	2.32	3.23	1.40	0.47	0.72	10.42
12.0-15.0	0.85	1.14	1.15	0.56	0.31	0.44	1.74	3.93	4.00	2.02	1.46	1.09	18.68
9.0-12.0	0.96	1.58	1.38	1.42	0.63	0.97	2.14	2.76	3.49	2.28	1.93	1.59	21.16
6.0-9.0	1.40	1.28	1.18	1.90	1.46	1.29	2.27	2.05	2.44	2.01	1.63	1.36	20.27
4.0-6.0	0.61	0.86	1.05	1.14	1.31	0.91	0.99	0.69	1.11	1.20	0.87	0.82	11.57
2.0-4.0	0.52	0.62	0.77	0.58	0.70	0.61	0.57	0.52	0.68	0.67	0.64	0.61	7.50
0.0-2.0	0.22	0.22	0.13	0.21	0.25	0.22	0.16	0.13	0.21	0.24	0.20	0.27	2.47
	5.04	6.07	5.95	6.06	4.85	4.57	9.23	14.13	18.30	10.95	7.85	7.00	100.00

Feb

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

Feb

Deltares

App. A.2.029

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.06	0.02	0.03	0.04		0.00	0.31	0.81	1.95	0.60	0.16	0.07	4.07
15.0-18.0	0.26	0.20	0.29	0.32	0.01	0.02	0.47	1.39	2.91	1.11	0.39	0.42	7.80
12.0-15.0	0.78	0.92	0.80	0.83	0.48	0.37	0.96	2.63	4.06	2.08	0.75	1.14	15.78
9.0-12.0	1.34	1.39	2.26	2.06	1.21	1.14	1.81	3.06	3.63	2.62	1.81	1.78	24.11
6.0-9.0	1.63	2.27	2.72	2.06	1.62	1.28	1.77	2.89	3.22	2.52	2.22	1.68	25.89
4.0-6.0	1.01	1.34	1.19	0.97	0.73	0.66	0.54	1.20	1.36	1.08	1.11	0.90	12.08
2.0-4.0	0.57	0.90	0.85	0.59	0.50	0.41	0.46	0.51	0.79	0.63	0.65	0.56	7.41
0.0-2.0	0.32	0.29	0.21	0.22	0.20	0.17	0.25	0.20	0.27	0.30	0.22	0.21	2.87
	5.98	7.33	8.35	7.09	4.75	4.06	6.56	12.69	18.18	10.93	7.30	6.76	100.00

Mar

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

Mar

**Deltares**

App. A.2.030

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04	0.01	0.02				0.16	0.15	0.28	0.01		0.04	0.70
15.0-18.0	0.25	0.53	0.18	0.06		0.09	0.43	1.07	1.33	0.16	0.15	0.15	4.41
12.0-15.0	1.05	1.92	1.91	0.64	0.27	0.35	0.88	1.95	2.90	1.09	0.41	0.44	13.82
9.0-12.0	2.40	3.51	2.99	1.50	1.01	1.18	1.66	2.91	4.08	1.37	0.89	1.19	24.68
6.0-9.0	2.84	3.26	3.00	1.76	1.71	1.27	1.49	2.67	3.81	1.74	1.19	1.18	25.92
4.0-6.0	1.40	1.41	1.53	1.14	0.98	0.91	0.93	1.54	1.95	1.29	1.08	0.81	14.96
2.0-4.0	0.97	0.86	0.80	0.72	0.86	0.78	0.87	1.08	1.16	1.01	0.92	1.09	11.12
0.0-2.0	0.39	0.39	0.32	0.35	0.30	0.35	0.35	0.39	0.32	0.40	0.42	0.40	4.39
	9.34	11.90	10.75	6.16	5.14	4.93	6.77	11.75	15.83	7.06	5.07	5.30	100.00

Apr

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

Apr

**Deltares**

App. A.2.031

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.03	0.00					0.00	0.28	0.34	0.05	0.01	0.00	0.73
15.0-18.0	0.28	0.43	0.26	0.01	0.00	0.01	0.13	0.97	1.53	0.02	0.05	0.06	3.78
12.0-15.0	1.28	2.07	1.89	0.73	0.14	0.27	0.49	1.78	3.61	0.28	0.11	0.59	13.24
9.0-12.0	2.59	4.41	3.19	1.89	0.55	0.66	1.13	2.55	4.41	0.96	0.71	1.14	24.18
6.0-9.0	3.39	4.94	3.22	2.13	1.16	0.72	1.04	1.98	3.96	1.70	1.15	1.70	27.10
4.0-6.0	1.66	2.14	1.75	1.09	0.88	0.60	0.53	1.13	1.81	1.43	1.21	1.17	15.39
2.0-4.0	1.24	1.35	1.16	0.75	0.60	0.49	0.67	0.72	0.98	1.05	0.93	1.03	10.95
0.0-2.0	0.53	0.51	0.38	0.37	0.28	0.36	0.33	0.32	0.34	0.40	0.40	0.41	4.63
	11.00	15.86	11.86	6.96	3.62	3.11	4.31	9.72	16.98	5.89	4.57	6.12	100.00

May

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

May

Deltares

App. A.2.032

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0						0.01	0.01	0.42	0.34			0.01	0.79
15.0-18.0	0.02	0.24	0.03		0.01	0.01	0.04	1.06	1.37	0.05	0.02	0.08	2.92
12.0-15.0	0.27	1.14	0.49	0.14	0.06	0.13	0.19	1.81	3.94	0.30	0.21	0.36	9.03
9.0-12.0	2.13	2.96	1.43	0.92	0.63	0.52	0.61	1.86	7.17	1.25	0.88	1.02	21.38
6.0-9.0	3.74	4.47	2.08	0.99	0.97	1.17	1.30	2.49	5.93	1.98	1.82	2.59	29.53
4.0-6.0	1.97	2.29	1.52	0.95	0.70	0.79	0.93	1.60	2.10	1.66	1.24	1.61	17.38
2.0-4.0	1.49	1.37	1.22	0.93	0.78	0.73	0.99	1.17	1.40	1.34	1.26	1.23	13.91
0.0-2.0	0.34	0.45	0.44	0.39	0.45	0.45	0.47	0.42	0.46	0.40	0.40	0.39	5.06
	9.96	12.93	7.21	4.32	3.60	3.80	4.54	10.83	22.73	6.97	5.82	7.29	100.00
	Jun												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

Jun

**Deltares**

App. A.2.033

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0			0.01					0.14	0.30	0.00	0.01	0.02	0.50
15.0-18.0		0.03	0.02	0.00			0.03	0.74	1.31	0.14	0.07	0.08	2.44
12.0-15.0	0.21	0.80	0.50	0.28	0.04	0.02	0.23	1.56	4.40	0.81	0.37	0.38	9.62
9.0-12.0	1.10	2.26	1.64	1.17	0.49	0.22	0.51	2.72	7.59	1.82	1.00	0.90	21.41
6.0-9.0	2.79	2.69	2.18	1.68	0.86	0.57	0.96	3.26	7.61	3.19	1.88	1.80	29.45
4.0-6.0	1.60	1.70	1.42	1.07	0.76	0.70	0.68	1.90	3.16	2.31	1.22	1.20	17.72
2.0-4.0	0.95	1.33	1.24	0.94	0.71	0.65	0.76	1.45	1.59	1.66	1.29	1.18	13.77
0.0-2.0	0.41	0.48	0.42	0.35	0.32	0.32	0.34	0.54	0.62	0.47	0.41	0.41	5.10
	7.05	9.28	7.44	5.50	3.18	2.49	3.51	12.32	26.58	10.40	6.26	5.98	100.00
	Jul												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

Jul

Deltares

App. A.2.034

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.03	0.00					0.03	0.19	0.22	0.00	0.07	0.13	0.70
15.0-18.0	0.20	0.05	0.03			0.01	0.07	0.73	1.30	0.11	0.11	0.20	2.84
12.0-15.0	0.40	0.14	0.18	0.03	0.06	0.15	0.24	1.21	3.34	1.04	0.53	0.55	7.88
9.0-12.0	1.31	1.12	1.57	0.88	0.56	0.55	0.66	2.51	6.56	1.89	1.15	1.59	20.35
6.0-9.0	2.46	2.34	2.39	1.68	1.28	1.26	1.06	3.08	6.68	2.82	1.99	2.48	29.52
4.0-6.0	1.43	1.41	1.55	1.32	0.86	0.95	1.04	1.98	3.32	2.26	1.74	1.67	19.53
2.0-4.0	1.28	1.36	0.97	0.86	0.77	0.75	0.93	1.19	1.85	1.67	1.35	1.24	14.22
0.0-2.0	0.39	0.51	0.37	0.46	0.44	0.26	0.38	0.46	0.48	0.42	0.44	0.36	4.98
	7.51	6.94	7.06	5.23	3.98	3.94	4.40	11.36	23.74	10.21	7.39	8.23	100.00

Aug

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

Aug

**Deltares**

App. A.2.035

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.01	0.01				0.01	0.04	0.39	0.99	0.14	0.22	0.05	1.85
15.0-18.0	0.15	0.24	0.05	0.08	0.04	0.04	0.22	1.01	1.81	0.59	0.50	0.58	5.30
12.0-15.0	0.64	0.64	0.27	0.46	0.23	0.30	0.65	1.87	3.16	1.46	0.81	1.21	11.69
9.0-12.0	2.01	1.28	1.44	1.41	0.98	0.92	1.39	1.99	4.76	2.10	1.53	1.43	21.24
6.0-9.0	2.61	1.64	2.43	2.66	1.45	1.63	1.91	3.02	4.58	3.22	2.13	1.84	29.12
4.0-6.0	1.24	1.30	1.53	1.34	1.01	1.02	1.25	1.31	2.26	1.80	1.01	1.04	16.12
2.0-4.0	0.84	0.73	1.08	1.04	0.76	0.76	0.67	0.89	1.31	1.17	0.72	0.81	10.76
0.0-2.0	0.26	0.26	0.29	0.40	0.34	0.29	0.36	0.29	0.37	0.40	0.40	0.27	3.93
	7.76	6.09	7.08	7.40	4.81	4.95	6.50	10.76	19.24	10.88	7.31	7.21	100.00

Sep

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

Sep

Deltares

App. A.2.036

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.05	0.07	0.01			0.04	0.57	1.54	1.83	0.77	0.11	0.05	5.05
15.0-18.0	0.23	0.34	0.22	0.23	0.13	0.26	1.05	1.94	2.21	0.92	0.30	0.31	8.14
12.0-15.0	0.43	0.52	0.31	1.44	0.90	0.97	2.57	3.07	3.44	1.79	0.90	0.72	17.05
9.0-12.0	0.61	0.89	1.44	2.19	2.01	2.26	3.20	3.17	3.39	2.90	1.59	1.09	24.73
6.0-9.0	1.37	1.25	1.70	2.22	1.92	2.56	2.60	2.25	2.35	2.29	1.93	1.27	23.73
4.0-6.0	0.72	0.87	0.87	1.24	0.95	0.86	1.35	1.21	1.13	0.78	0.81	0.80	11.59
2.0-4.0	0.53	0.79	0.75	0.60	0.62	0.58	0.67	0.74	0.70	0.59	0.54	0.52	7.65
0.0-2.0	0.20	0.24	0.18	0.15	0.17	0.19	0.17	0.17	0.18	0.13	0.13	0.13	2.06
	4.15	4.98	5.49	8.08	6.71	7.72	12.18	14.09	15.22	10.18	6.32	4.89	100.00

Oct

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

Oct

**Deltares**

App. A.2.037

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.10	0.03	0.07		0.04	0.05	0.87	1.24	1.97	0.51	0.31	0.22	5.41
15.0-18.0	0.40	0.29	0.06	0.01	0.05	0.27	1.72	1.93	2.55	1.15	0.75	0.58	9.75
12.0-15.0	1.21	0.65	0.23	0.35	0.32	1.13	3.12	2.94	2.80	1.89	1.55	1.23	17.44
9.0-12.0	1.64	1.04	1.10	0.56	1.45	1.86	3.09	2.65	3.27	2.99	2.30	1.55	23.49
6.0-9.0	1.29	1.00	1.53	1.62	1.92	2.04	2.52	2.26	2.48	2.58	2.33	1.87	23.44
4.0-6.0	0.67	0.78	0.74	0.97	1.14	1.12	1.10	0.88	0.94	1.22	1.20	0.87	11.64
2.0-4.0	0.44	0.43	0.40	0.56	0.75	0.78	0.51	0.53	0.62	0.61	0.65	0.49	6.76
0.0-2.0	0.14	0.15	0.14	0.13	0.12	0.21	0.20	0.21	0.17	0.25	0.19	0.17	2.07
	5.90	4.37	4.26	4.19	5.79	7.46	13.12	12.65	14.80	11.20	9.28	6.99	100.00

Nov

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

Nov

**Deltares**

App. A.2.038

Dir80 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04	0.09	0.00	0.03		0.11	1.20	2.04	3.02	1.12	0.47	0.20	8.34
15.0-18.0	0.20	0.19	0.37	0.28	0.11	0.28	1.67	2.56	3.53	1.90	0.81	0.68	12.59
12.0-15.0	0.57	0.47	0.93	1.16	0.44	0.40	2.43	2.95	3.70	2.49	1.55	1.16	18.25
9.0-12.0	0.87	1.05	2.04	1.95	0.73	0.57	1.64	2.16	2.98	2.78	1.83	1.34	19.93
6.0-9.0	1.15	1.50	2.27	2.17	1.51	1.10	1.45	1.94	2.07	2.05	1.92	1.51	20.65
4.0-6.0	0.59	0.68	1.44	2.03	1.49	0.84	0.85	0.63	0.86	0.82	0.95	0.76	11.94
2.0-4.0	0.48	0.54	0.63	0.93	0.66	0.36	0.42	0.34	0.36	0.50	0.41	0.35	5.98
0.0-2.0	0.12	0.21	0.35	0.30	0.23	0.19	0.15	0.15	0.20	0.16	0.14	0.08	2.31
	4.03	4.74	8.04	8.84	5.18	3.85	9.82	12.77	16.72	11.82	8.09	6.09	100.00
	Dec												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 80m

Dec

**Deltares**

App. A.2.039

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.05	0.03	0.02	0.01	0.01	0.03	0.42	0.99	1.64	0.45	0.22	0.15	4.03
15.0-18.0	0.23	0.27	0.22	0.13	0.05	0.11	0.75	1.59	2.35	0.80	0.37	0.36	7.23
12.0-15.0	0.68	0.91	0.86	0.67	0.34	0.45	1.36	2.48	3.66	1.48	0.81	0.80	14.53
9.0-12.0	1.49	1.85	1.81	1.52	0.96	1.01	1.72	2.59	4.53	2.13	1.42	1.31	22.34
6.0-9.0	2.11	2.25	2.14	1.89	1.40	1.32	1.66	2.38	3.84	2.34	1.83	1.69	24.87
4.0-6.0	1.13	1.26	1.27	1.18	0.98	0.85	0.90	1.18	1.67	1.38	1.09	1.02	13.92
2.0-4.0	0.79	0.90	0.88	0.75	0.70	0.61	0.65	0.78	0.98	0.94	0.82	0.78	9.60
0.0-2.0	0.29	0.32	0.29	0.30	0.28	0.26	0.28	0.28	0.31	0.31	0.29	0.27	3.49
	6.76	7.80	7.49	6.46	4.71	4.66	7.76	12.29	18.99	9.83	6.85	6.39	100.00

All year

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

All Year

**Deltares**

App. A.2.040

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.10	0.00	0.11			0.06	1.18	2.43	4.26	0.84	0.48	0.30	9.77
15.0-18.0	0.22	0.24	0.52	0.26	0.02	0.18	2.00	2.71	4.32	1.89	0.81	0.52	13.70
12.0-15.0	0.35	0.29	1.21	1.02	0.45	0.59	2.60	3.91	3.82	2.18	1.03	0.59	18.03
9.0-12.0	0.93	0.98	1.44	1.83	1.06	1.05	2.98	3.26	3.06	2.42	1.45	1.02	21.47
6.0-9.0	1.05	1.06	1.48	2.27	1.31	1.32	2.08	1.64	1.88	1.91	1.59	1.12	18.70
4.0-6.0	0.64	0.67	0.99	1.22	1.10	1.09	0.92	0.62	0.57	0.84	0.79	0.70	10.14
2.0-4.0	0.33	0.59	0.79	0.68	0.73	0.59	0.51	0.36	0.39	0.40	0.48	0.36	6.21
0.0-2.0	0.09	0.17	0.21	0.22	0.25	0.14	0.17	0.19	0.12	0.18	0.11	0.10	1.98
	3.71	4.00	6.75	7.50	4.92	5.01	12.44	15.12	18.42	10.66	6.75	4.71	100.00
	Jan												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

Jan

Deltares

App. A.2.041

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.14	0.12		0.05	0.05		0.45	1.87	3.35	1.19	0.66	0.56	8.43
15.0-18.0	0.36	0.25	0.33	0.20	0.16	0.14	0.99	2.44	3.30	1.42	0.48	0.71	10.78
12.0-15.0	0.87	1.14	1.14	0.57	0.33	0.43	1.73	3.78	4.04	2.05	1.50	1.10	18.68
9.0-12.0	0.96	1.59	1.39	1.39	0.64	0.99	2.14	2.83	3.37	2.34	1.91	1.61	21.15
6.0-9.0	1.38	1.27	1.17	1.88	1.49	1.27	2.14	1.85	2.32	1.95	1.62	1.38	19.72
4.0-6.0	0.62	0.86	1.03	1.10	1.26	0.89	0.97	0.68	1.09	1.19	0.88	0.81	11.36
2.0-4.0	0.50	0.62	0.76	0.58	0.68	0.60	0.60	0.52	0.69	0.65	0.63	0.62	7.44
0.0-2.0	0.23	0.20	0.13	0.21	0.25	0.23	0.16	0.13	0.20	0.23	0.21	0.28	2.45
	5.05	6.05	5.95	5.98	4.86	4.55	9.16	14.09	18.37	11.00	7.87	7.08	100.00

Feb

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

Feb

Deltares

App. A.2.042

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.07	0.02	0.04	0.04		0.00	0.34	0.90	2.13	0.63	0.18	0.08	4.44
15.0-18.0	0.28	0.23	0.30	0.34	0.01	0.04	0.50	1.50	3.03	1.19	0.40	0.43	8.26
12.0-15.0	0.78	0.92	0.80	0.85	0.54	0.43	0.98	2.74	4.15	2.12	0.76	1.17	16.23
9.0-12.0	1.34	1.33	2.32	2.12	1.22	1.12	1.80	2.93	3.58	2.64	1.88	1.76	24.04
6.0-9.0	1.65	2.24	2.65	2.02	1.53	1.21	1.67	2.74	3.07	2.43	2.23	1.67	25.11
4.0-6.0	1.00	1.27	1.17	0.95	0.70	0.66	0.52	1.10	1.36	1.05	1.05	0.90	11.72
2.0-4.0	0.56	0.87	0.87	0.56	0.51	0.41	0.45	0.50	0.76	0.62	0.64	0.57	7.32
0.0-2.0	0.33	0.29	0.20	0.22	0.21	0.16	0.21	0.22	0.29	0.29	0.21	0.23	2.88
	6.00	7.17	8.36	7.10	4.72	4.04	6.47	12.63	18.36	10.98	7.35	6.81	100.00

Mar

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

Mar

**Deltares**

App. A.2.043

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04	0.01	0.02			0.01	0.18	0.17	0.30	0.01	0.01	0.04	0.78
15.0-18.0	0.28	0.57	0.26	0.07		0.09	0.50	1.12	1.53	0.19	0.15	0.16	4.92
12.0-15.0	1.08	2.01	1.97	0.70	0.34	0.39	0.94	2.16	3.01	1.15	0.44	0.45	14.63
9.0-12.0	2.41	3.40	2.95	1.52	1.06	1.19	1.63	2.76	4.08	1.36	0.89	1.20	24.46
6.0-9.0	2.71	3.14	2.93	1.75	1.61	1.23	1.47	2.53	3.62	1.83	1.20	1.21	25.23
4.0-6.0	1.38	1.38	1.50	1.06	0.95	0.87	0.94	1.45	1.90	1.26	1.05	0.82	14.58
2.0-4.0	0.94	0.83	0.82	0.68	0.87	0.76	0.88	1.02	1.17	1.02	0.94	1.09	11.02
0.0-2.0	0.43	0.36	0.31	0.34	0.27	0.39	0.38	0.38	0.34	0.40	0.39	0.42	4.38
	9.26	11.71	10.75	6.13	5.09	4.93	6.90	11.58	15.96	7.22	5.06	5.40	100.00

Apr

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

Apr

Deltares

App. A.2.044

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.05	0.01					0.00	0.31	0.39	0.05	0.01	0.00	0.84
15.0-18.0	0.28	0.49	0.36	0.05	0.00	0.02	0.14	1.02	1.65	0.03	0.05	0.07	4.18
12.0-15.0	1.33	2.11	2.04	0.85	0.17	0.29	0.54	1.82	3.79	0.33	0.12	0.60	14.01
9.0-12.0	2.56	4.32	2.91	2.02	0.64	0.64	1.08	2.48	4.38	0.97	0.72	1.19	23.90
6.0-9.0	3.36	4.72	3.11	2.07	1.18	0.74	1.03	1.90	3.86	1.77	1.19	1.65	26.56
4.0-6.0	1.64	2.08	1.72	1.05	0.87	0.63	0.51	1.05	1.77	1.43	1.16	1.19	15.10
2.0-4.0	1.21	1.36	1.12	0.76	0.60	0.51	0.63	0.68	0.96	1.02	0.94	1.00	10.79
0.0-2.0	0.53	0.49	0.39	0.37	0.27	0.36	0.33	0.35	0.35	0.38	0.39	0.41	4.62
	10.97	15.57	11.65	7.16	3.74	3.20	4.27	9.60	17.14	5.99	4.59	6.12	100.00

May

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

May

Deltares

App. A.2.045

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0		0.01				0.01	0.01	0.44	0.39			0.01	0.86
15.0-18.0	0.03	0.28	0.04		0.01	0.01	0.05	1.09	1.49	0.05	0.02	0.08	3.12
12.0-15.0	0.29	1.26	0.58	0.18	0.11	0.14	0.24	1.90	4.21	0.35	0.22	0.37	9.85
9.0-12.0	2.13	2.93	1.43	0.94	0.61	0.58	0.64	1.77	7.15	1.30	0.88	1.05	21.41
6.0-9.0	3.62	4.35	2.01	0.98	0.93	1.17	1.31	2.41	5.71	2.02	1.82	2.59	28.90
4.0-6.0	1.94	2.26	1.49	0.93	0.71	0.75	0.88	1.60	2.00	1.61	1.26	1.57	17.00
2.0-4.0	1.45	1.39	1.15	0.93	0.74	0.74	0.95	1.18	1.41	1.36	1.27	1.22	13.79
0.0-2.0	0.33	0.45	0.46	0.40	0.46	0.44	0.50	0.41	0.45	0.40	0.38	0.40	5.07
	9.79	12.92	7.16	4.34	3.55	3.82	4.58	10.81	22.81	7.09	5.83	7.29	100.00

Jun

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

Jun

Deltares

App. A.2.046

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0			0.01					0.15	0.35	0.00	0.02	0.03	0.58
15.0-18.0		0.05	0.02	0.00			0.03	0.78	1.43	0.15	0.07	0.07	2.63
12.0-15.0	0.23	0.87	0.57	0.37	0.08	0.05	0.23	1.61	4.56	0.85	0.37	0.39	10.19
9.0-12.0	1.12	2.26	1.64	1.20	0.50	0.26	0.52	2.69	7.78	1.91	1.03	0.90	21.80
6.0-9.0	2.69	2.57	2.09	1.57	0.86	0.56	0.98	3.12	7.47	3.20	1.92	1.80	28.83
4.0-6.0	1.60	1.64	1.38	1.04	0.79	0.68	0.66	1.83	2.94	2.28	1.21	1.18	17.23
2.0-4.0	0.94	1.30	1.22	0.92	0.73	0.62	0.76	1.41	1.60	1.69	1.30	1.16	13.65
0.0-2.0	0.40	0.49	0.43	0.36	0.32	0.31	0.35	0.48	0.64	0.44	0.44	0.41	5.08
	6.97	9.18	7.38	5.46	3.29	2.48	3.53	12.08	26.78	10.53	6.37	5.95	100.00
	Jul												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
 Nautical convention: coming from, clockwise from North

Height: 90m

Jul

Deltares

App. A.2.047

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04	0.00					0.03	0.21	0.25	0.00	0.07	0.14	0.76
15.0-18.0	0.21	0.05	0.04			0.01	0.06	0.76	1.36	0.11	0.11	0.21	2.94
12.0-15.0	0.40	0.16	0.22	0.06	0.10	0.20	0.25	1.24	3.38	1.09	0.54	0.55	8.20
9.0-12.0	1.32	1.14	1.56	0.95	0.56	0.66	0.68	2.52	6.65	1.92	1.15	1.63	20.75
6.0-9.0	2.45	2.29	2.27	1.65	1.20	1.24	1.06	3.03	6.65	2.85	2.06	2.46	29.24
4.0-6.0	1.43	1.36	1.51	1.29	0.84	0.97	1.04	1.88	3.28	2.24	1.72	1.67	19.23
2.0-4.0	1.27	1.32	0.97	0.81	0.78	0.70	0.87	1.19	1.80	1.67	1.31	1.22	13.92
0.0-2.0	0.39	0.49	0.37	0.46	0.42	0.27	0.42	0.41	0.47	0.41	0.47	0.37	4.96
	7.53	6.84	6.95	5.23	3.91	4.05	4.42	11.26	23.84	10.28	7.44	8.25	100.00

Aug

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

Aug

**Deltares**

App. A.2.048

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.01	0.02				0.01	0.05	0.41	1.06	0.15	0.23	0.05	1.97
15.0-18.0	0.16	0.27	0.05	0.10	0.04	0.04	0.22	1.02	1.84	0.61	0.52	0.59	5.46
12.0-15.0	0.67	0.62	0.29	0.45	0.27	0.32	0.71	1.88	3.20	1.48	0.80	1.22	11.92
9.0-12.0	1.99	1.26	1.48	1.51	0.98	0.98	1.42	2.01	4.76	2.08	1.51	1.42	21.40
6.0-9.0	2.62	1.61	2.37	2.58	1.42	1.58	1.89	2.96	4.60	3.23	2.15	1.84	28.85
4.0-6.0	1.23	1.26	1.49	1.32	0.99	0.96	1.21	1.26	2.22	1.81	1.00	1.01	15.78
2.0-4.0	0.83	0.72	1.05	1.03	0.77	0.76	0.66	0.91	1.28	1.17	0.73	0.80	10.69
0.0-2.0	0.26	0.28	0.28	0.39	0.35	0.27	0.36	0.29	0.36	0.41	0.38	0.28	3.92
	7.76	6.04	7.02	7.38	4.82	4.92	6.52	10.74	19.33	10.93	7.31	7.22	100.00

Sep

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

Sep

**Deltares**

App. A.2.049

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.05	0.08	0.01			0.05	0.60	1.65	1.97	0.80	0.12	0.06	5.40
15.0-18.0	0.25	0.35	0.23	0.27	0.15	0.25	1.13	1.96	2.18	0.94	0.29	0.31	8.31
12.0-15.0	0.41	0.53	0.31	1.44	0.93	1.04	2.64	3.06	3.44	1.78	0.92	0.73	17.23
9.0-12.0	0.61	0.88	1.44	2.25	2.00	2.26	3.13	3.09	3.38	2.92	1.59	1.09	24.63
6.0-9.0	1.38	1.26	1.67	2.14	1.87	2.47	2.52	2.25	2.33	2.27	1.93	1.27	23.37
4.0-6.0	0.72	0.85	0.86	1.20	0.93	0.82	1.32	1.20	1.13	0.78	0.80	0.80	11.41
2.0-4.0	0.53	0.79	0.75	0.61	0.60	0.60	0.65	0.74	0.68	0.56	0.56	0.52	7.60
0.0-2.0	0.20	0.22	0.20	0.14	0.18	0.18	0.18	0.17	0.17	0.13	0.13	0.14	2.05
	4.16	4.96	5.49	8.04	6.67	7.68	12.17	14.11	15.29	10.18	6.34	4.91	100.00

Oct

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

Oct

**Deltares**

App. A.2.050

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.10	0.03	0.07		0.04	0.06	0.92	1.32	2.11	0.59	0.33	0.26	5.83
15.0-18.0	0.44	0.31	0.07	0.01	0.05	0.27	1.72	2.02	2.54	1.13	0.74	0.55	9.84
12.0-15.0	1.20	0.63	0.23	0.36	0.34	1.16	3.16	2.88	2.75	1.91	1.56	1.26	17.44
9.0-12.0	1.63	1.06	1.09	0.56	1.47	1.84	3.01	2.63	3.25	2.95	2.28	1.54	23.31
6.0-9.0	1.29	0.98	1.53	1.60	1.90	2.01	2.48	2.22	2.44	2.58	2.30	1.86	23.19
4.0-6.0	0.68	0.79	0.73	0.97	1.12	1.12	1.06	0.89	0.94	1.23	1.20	0.86	11.59
2.0-4.0	0.43	0.41	0.42	0.53	0.77	0.76	0.50	0.53	0.61	0.61	0.64	0.49	6.70
0.0-2.0	0.14	0.15	0.14	0.13	0.12	0.21	0.21	0.22	0.16	0.26	0.19	0.17	2.09
	5.91	4.37	4.26	4.16	5.81	7.42	13.05	12.71	14.79	11.26	9.26	7.00	100.00

Nov

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

Nov

**Deltares**

App. A.2.051

Dir90 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04	0.09	0.00	0.03		0.13	1.28	2.09	3.23	1.17	0.51	0.24	8.83
15.0-18.0	0.20	0.19	0.38	0.28	0.13	0.27	1.65	2.68	3.56	1.95	0.82	0.65	12.77
12.0-15.0	0.59	0.48	0.95	1.18	0.44	0.40	2.35	2.91	3.60	2.50	1.55	1.17	18.12
9.0-12.0	0.88	1.05	2.03	1.93	0.73	0.57	1.62	2.10	2.92	2.74	1.82	1.35	19.73
6.0-9.0	1.14	1.51	2.27	2.19	1.49	1.09	1.40	1.94	1.99	2.05	1.92	1.48	20.47
4.0-6.0	0.59	0.67	1.40	2.01	1.49	0.83	0.83	0.63	0.86	0.82	0.94	0.77	11.83
2.0-4.0	0.48	0.55	0.64	0.93	0.63	0.36	0.40	0.35	0.35	0.49	0.40	0.35	5.94
0.0-2.0	0.11	0.22	0.33	0.30	0.24	0.20	0.15	0.14	0.20	0.16	0.15	0.08	2.30
	4.04	4.76	8.01	8.86	5.16	3.86	9.69	12.83	16.70	11.89	8.10	6.09	100.00
	Dec												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 90m

Dec

Deltares

App. A.2.052

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.06	0.04	0.03	0.01	0.01	0.03	0.45	1.07	1.76	0.48	0.23	0.15	4.31
15.0-18.0	0.24	0.29	0.25	0.14	0.05	0.12	0.78	1.65	2.43	0.82	0.37	0.37	7.51
12.0-15.0	0.69	0.95	0.88	0.72	0.38	0.48	1.36	2.47	3.73	1.51	0.83	0.80	14.80
9.0-12.0	1.50	1.82	1.80	1.52	0.97	1.01	1.72	2.55	4.51	2.14	1.44	1.31	22.28
6.0-9.0	2.08	2.20	2.08	1.87	1.36	1.30	1.62	2.31	3.72	2.35	1.83	1.70	24.42
4.0-6.0	1.11	1.23	1.26	1.15	0.97	0.83	0.89	1.16	1.64	1.38	1.08	1.02	13.72
2.0-4.0	0.78	0.89	0.87	0.75	0.68	0.61	0.65	0.77	0.96	0.93	0.81	0.79	9.49
0.0-2.0	0.28	0.32	0.29	0.29	0.28	0.26	0.28	0.28	0.32	0.31	0.29	0.28	3.48
	6.73	7.74	7.45	6.47	4.70	4.65	7.74	12.24	19.07	9.92	6.87	6.42	100.00

All year

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 100m

All Year

**Deltares**

App. A.2.053

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.10	0.00	0.12			0.06	1.27	2.54	4.49	0.92	0.51	0.32	10.34
15.0-18.0	0.24	0.24	0.54	0.30	0.03	0.21	2.00	2.77	4.35	1.95	0.79	0.52	13.94
12.0-15.0	0.33	0.28	1.22	1.01	0.46	0.57	2.56	3.90	3.70	2.09	1.06	0.60	17.79
9.0-12.0	0.96	0.99	1.42	1.82	1.05	1.04	2.95	3.17	2.98	2.48	1.45	1.01	21.32
6.0-9.0	1.04	1.05	1.48	2.24	1.29	1.29	2.02	1.60	1.84	1.88	1.58	1.13	18.44
4.0-6.0	0.64	0.68	0.98	1.22	1.09	1.08	0.91	0.62	0.56	0.82	0.76	0.69	10.05
2.0-4.0	0.32	0.57	0.79	0.68	0.71	0.56	0.51	0.36	0.39	0.41	0.48	0.36	6.15
0.0-2.0	0.09	0.17	0.21	0.22	0.26	0.14	0.17	0.18	0.12	0.17	0.12	0.10	1.97
	3.72	4.00	6.77	7.49	4.90	4.96	12.39	15.14	18.44	10.71	6.76	4.72	100.00

Jan

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 100m

Jan

Deltares

App. A.2.054

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.14	0.13		0.07	0.05		0.48	2.00	3.59	1.26	0.66	0.57	8.94
15.0-18.0	0.38	0.27	0.36	0.20	0.17	0.15	1.06	2.65	3.37	1.40	0.49	0.72	11.23
12.0-15.0	0.87	1.12	1.12	0.58	0.34	0.47	1.71	3.62	4.02	2.15	1.56	1.08	18.65
9.0-12.0	0.96	1.59	1.38	1.38	0.67	0.99	2.08	2.81	3.23	2.32	1.89	1.62	20.91
6.0-9.0	1.41	1.26	1.18	1.86	1.52	1.23	2.04	1.72	2.22	1.92	1.62	1.41	19.38
4.0-6.0	0.57	0.85	1.03	1.04	1.20	0.87	0.93	0.66	1.06	1.21	0.86	0.82	11.11
2.0-4.0	0.50	0.63	0.74	0.58	0.68	0.60	0.58	0.50	0.69	0.63	0.61	0.61	7.34
0.0-2.0	0.23	0.20	0.13	0.22	0.23	0.24	0.16	0.13	0.21	0.21	0.22	0.28	2.45
	5.06	6.05	5.93	5.93	4.87	4.55	9.05	14.07	18.39	11.10	7.90	7.12	100.00

Feb

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 100m

Feb

Deltares

App. A.2.055

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.07	0.03	0.05	0.04		0.01	0.36	0.99	2.34	0.65	0.18	0.10	4.83
15.0-18.0	0.29	0.23	0.30	0.36	0.01	0.05	0.55	1.64	3.15	1.27	0.42	0.42	8.70
12.0-15.0	0.80	0.93	0.83	0.92	0.65	0.43	0.99	2.73	4.06	2.21	0.84	1.20	16.59
9.0-12.0	1.32	1.35	2.33	2.12	1.18	1.14	1.78	2.90	3.62	2.54	1.93	1.75	23.95
6.0-9.0	1.61	2.17	2.60	1.99	1.50	1.14	1.58	2.54	3.03	2.38	2.21	1.69	24.46
4.0-6.0	1.03	1.25	1.14	0.88	0.71	0.64	0.51	1.01	1.31	1.06	0.96	0.89	11.37
2.0-4.0	0.54	0.86	0.85	0.58	0.51	0.37	0.47	0.47	0.77	0.58	0.63	0.58	7.21
0.0-2.0	0.34	0.27	0.20	0.21	0.22	0.17	0.19	0.22	0.29	0.29	0.23	0.24	2.88
	6.01	7.09	8.31	7.10	4.78	3.96	6.42	12.50	18.57	10.98	7.39	6.88	100.00

Mar

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 100m

Mar

**Deltares**

App. A.2.056

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04	0.03	0.03			0.01	0.22	0.21	0.35	0.01	0.01	0.06	0.95
15.0-18.0	0.30	0.61	0.32	0.11	0.01	0.11	0.52	1.26	1.71	0.26	0.17	0.14	5.52
12.0-15.0	1.09	2.13	1.99	0.78	0.39	0.48	0.94	2.17	3.09	1.17	0.45	0.47	15.15
9.0-12.0	2.42	3.27	2.94	1.45	1.09	1.19	1.74	2.64	4.10	1.36	0.93	1.21	24.34
6.0-9.0	2.63	3.00	2.80	1.79	1.49	1.12	1.40	2.39	3.48	1.88	1.20	1.22	24.41
4.0-6.0	1.38	1.37	1.48	1.08	0.94	0.84	0.94	1.45	1.82	1.26	1.11	0.79	14.44
2.0-4.0	0.92	0.80	0.81	0.66	0.87	0.73	0.86	0.99	1.13	1.01	0.94	1.10	10.82
0.0-2.0	0.40	0.37	0.32	0.33	0.27	0.34	0.39	0.37	0.35	0.39	0.40	0.45	4.37
	9.19	11.57	10.69	6.20	5.06	4.81	7.00	11.48	16.03	7.34	5.20	5.44	100.00

Apr

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 100m

Apr

Deltares

App. A.2.057

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.05	0.02					0.01	0.34	0.47	0.05	0.01	0.01	0.98
15.0-18.0	0.28	0.54	0.54	0.08	0.01	0.04	0.15	1.06	1.81	0.03	0.05	0.07	4.67
12.0-15.0	1.37	2.13	2.09	1.01	0.19	0.31	0.59	1.80	3.95	0.37	0.12	0.61	14.53
9.0-12.0	2.59	4.23	2.70	2.06	0.72	0.62	1.09	2.44	4.30	1.00	0.73	1.19	23.68
6.0-9.0	3.29	4.57	3.05	1.95	1.19	0.77	0.95	1.81	3.71	1.85	1.22	1.63	25.99
4.0-6.0	1.63	1.99	1.68	1.04	0.84	0.64	0.51	0.99	1.74	1.41	1.16	1.17	14.80
2.0-4.0	1.19	1.32	1.13	0.76	0.59	0.53	0.62	0.70	0.96	1.02	0.90	1.05	10.75
0.0-2.0	0.50	0.49	0.40	0.36	0.29	0.32	0.34	0.32	0.35	0.40	0.38	0.43	4.59
	10.92	15.31	11.58	7.25	3.83	3.23	4.27	9.44	17.29	6.13	4.58	6.16	100.00

May

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 100m

May

Deltares

App. A.2.058

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0		0.01				0.01	0.02	0.50	0.43	0.01		0.01	0.98
15.0-18.0	0.03	0.32	0.06	0.01	0.01	0.01	0.06	1.10	1.66	0.06	0.02	0.08	3.40
12.0-15.0	0.30	1.34	0.64	0.21	0.11	0.16	0.27	1.91	4.53	0.38	0.23	0.37	10.47
9.0-12.0	2.16	2.88	1.44	0.96	0.65	0.61	0.65	1.73	7.12	1.31	0.91	1.11	21.50
6.0-9.0	3.50	4.26	1.91	0.97	0.84	1.21	1.30	2.31	5.34	2.15	1.83	2.57	28.18
4.0-6.0	1.89	2.22	1.50	0.93	0.66	0.77	0.82	1.66	1.98	1.61	1.23	1.54	16.82
2.0-4.0	1.46	1.39	1.12	0.94	0.72	0.67	0.97	1.11	1.38	1.35	1.24	1.20	13.55
0.0-2.0	0.33	0.47	0.45	0.38	0.47	0.46	0.47	0.38	0.47	0.45	0.35	0.41	5.10
	9.67	12.90	7.11	4.39	3.46	3.90	4.54	10.70	22.92	7.31	5.81	7.29	100.00

Jun

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 100m

Jun

**Deltares**

App. A.2.059

		Dir100 (° N)												
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
U100 (m/s)	>18.0			0.01					0.17	0.38	0.00	0.02	0.04	0.63
	15.0-18.0		0.06	0.07	0.01			0.03	0.81	1.56	0.18	0.08	0.07	2.89
	12.0-15.0	0.26	0.97	0.54	0.44	0.11	0.08	0.27	1.67	4.76	0.86	0.37	0.40	10.75
	9.0-12.0	1.14	2.23	1.63	1.20	0.56	0.28	0.52	2.68	7.86	1.97	1.05	0.89	22.02
	6.0-9.0	2.62	2.44	2.01	1.55	0.81	0.56	0.96	3.04	7.24	3.28	1.93	1.83	28.27
	4.0-6.0	1.55	1.57	1.37	0.99	0.81	0.69	0.66	1.71	2.82	2.29	1.23	1.18	16.87
	2.0-4.0	0.91	1.28	1.19	0.94	0.71	0.64	0.73	1.36	1.58	1.67	1.30	1.16	13.47
	0.0-2.0	0.38	0.50	0.43	0.37	0.31	0.33	0.33	0.49	0.63	0.49	0.42	0.42	5.11
		6.85	9.06	7.26	5.51	3.31	2.58	3.50	11.94	26.84	10.75	6.40	6.00	100.00
Jul													Total	

Joint Occurrence table of hourly wind speed vs. wind direction Nautical convention: coming from, clockwise from North	Height: 100m	Jul
<b>Deltares</b>		App. A.2.060

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.04	0.01					0.04	0.24	0.27	0.00	0.07	0.14	0.83
15.0-18.0	0.22	0.05	0.04			0.02	0.06	0.77	1.47	0.11	0.13	0.23	3.12
12.0-15.0	0.41	0.20	0.28	0.15	0.15	0.23	0.27	1.23	3.49	1.13	0.55	0.53	8.63
9.0-12.0	1.35	1.11	1.54	0.95	0.54	0.72	0.74	2.54	6.66	1.95	1.15	1.65	20.90
6.0-9.0	2.43	2.26	2.16	1.66	1.15	1.24	1.03	2.95	6.58	2.88	2.08	2.44	28.85
4.0-6.0	1.42	1.32	1.47	1.21	0.89	0.94	1.03	1.85	3.24	2.23	1.71	1.68	18.98
2.0-4.0	1.26	1.29	0.97	0.82	0.70	0.73	0.85	1.19	1.77	1.65	1.29	1.23	13.75
0.0-2.0	0.36	0.50	0.38	0.44	0.42	0.26	0.41	0.40	0.48	0.41	0.45	0.41	4.94
	7.50	6.75	6.85	5.24	3.86	4.14	4.43	11.18	23.96	10.36	7.43	8.31	100.00

Aug

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 100m

Aug

Deltares

App. A.2.061

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.01	0.02				0.01	0.05	0.43	1.11	0.16	0.24	0.05	2.07
15.0-18.0	0.17	0.30	0.05	0.10	0.04	0.05	0.22	1.04	1.87	0.60	0.55	0.62	5.60
12.0-15.0	0.68	0.62	0.31	0.46	0.30	0.36	0.72	1.89	3.32	1.51	0.79	1.22	12.18
9.0-12.0	2.01	1.26	1.55	1.56	0.99	1.01	1.49	1.99	4.75	2.11	1.51	1.44	21.66
6.0-9.0	2.58	1.58	2.30	2.55	1.40	1.58	1.85	2.92	4.53	3.23	2.14	1.83	28.48
4.0-6.0	1.22	1.26	1.46	1.30	0.97	0.89	1.22	1.23	2.18	1.82	0.99	0.99	15.52
2.0-4.0	0.82	0.71	1.03	1.00	0.75	0.75	0.65	0.91	1.27	1.20	0.73	0.79	10.60
0.0-2.0	0.25	0.28	0.30	0.39	0.34	0.27	0.34	0.31	0.35	0.38	0.38	0.29	3.89
	7.75	6.01	7.01	7.35	4.78	4.92	6.54	10.73	19.37	11.01	7.31	7.22	100.00

Sep

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 100m

Sep

**Deltares**

App. A.2.062

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.05	0.10	0.01			0.06	0.60	1.77	2.09	0.83	0.14	0.06	5.73
15.0-18.0	0.26	0.34	0.24	0.28	0.18	0.25	1.22	1.99	2.14	0.93	0.27	0.32	8.42
12.0-15.0	0.40	0.53	0.33	1.45	0.97	1.12	2.68	3.02	3.49	1.83	0.94	0.73	17.48
9.0-12.0	0.62	0.89	1.45	2.25	1.95	2.22	3.08	3.04	3.32	2.94	1.59	1.08	24.40
6.0-9.0	1.37	1.24	1.62	2.14	1.86	2.43	2.48	2.24	2.33	2.22	1.91	1.27	23.10
4.0-6.0	0.72	0.86	0.85	1.17	0.92	0.78	1.26	1.22	1.13	0.78	0.81	0.80	11.30
2.0-4.0	0.53	0.80	0.75	0.62	0.58	0.58	0.65	0.73	0.67	0.55	0.56	0.52	7.55
0.0-2.0	0.20	0.20	0.19	0.12	0.20	0.16	0.18	0.18	0.17	0.13	0.13	0.14	2.02
	4.17	4.95	5.45	8.02	6.67	7.61	12.16	14.19	15.32	10.21	6.34	4.91	100.00

Oct

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 100m

Oct

Deltares

App. A.2.063

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.11	0.03	0.07		0.05	0.06	0.97	1.41	2.24	0.64	0.35	0.27	6.21
15.0-18.0	0.45	0.31	0.06	0.01	0.04	0.29	1.75	2.06	2.51	1.14	0.75	0.57	9.94
12.0-15.0	1.20	0.64	0.26	0.39	0.38	1.22	3.10	2.84	2.78	1.91	1.56	1.27	17.55
9.0-12.0	1.63	1.07	1.08	0.54	1.49	1.80	3.00	2.60	3.22	2.91	2.31	1.51	23.16
6.0-9.0	1.27	0.98	1.52	1.59	1.83	1.95	2.46	2.21	2.38	2.56	2.27	1.87	22.91
4.0-6.0	0.68	0.79	0.72	0.95	1.13	1.08	1.05	0.87	0.94	1.22	1.20	0.85	11.48
2.0-4.0	0.45	0.40	0.43	0.52	0.75	0.75	0.49	0.55	0.61	0.61	0.62	0.49	6.66
0.0-2.0	0.14	0.15	0.13	0.14	0.13	0.21	0.21	0.21	0.15	0.26	0.19	0.17	2.09
	5.93	4.37	4.26	4.14	5.80	7.37	13.05	12.76	14.82	11.26	9.25	7.00	100.00

Nov

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 100m

Nov

**Deltares**

App. A.2.064

Dir100 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.05	0.10	0.00	0.04	0.00	0.13	1.32	2.23	3.41	1.29	0.54	0.24	9.37
15.0-18.0	0.20	0.20	0.40	0.28	0.13	0.30	1.69	2.67	3.56	1.95	0.80	0.67	12.87
12.0-15.0	0.59	0.49	0.93	1.22	0.45	0.38	2.28	2.89	3.58	2.48	1.56	1.17	18.03
9.0-12.0	0.89	1.04	2.05	1.89	0.73	0.57	1.59	2.03	2.85	2.72	1.82	1.34	19.51
6.0-9.0	1.14	1.51	2.27	2.19	1.48	1.09	1.38	1.94	1.91	2.01	1.91	1.48	20.29
4.0-6.0	0.59	0.65	1.40	1.99	1.49	0.80	0.84	0.61	0.85	0.83	0.93	0.77	11.74
2.0-4.0	0.49	0.54	0.65	0.92	0.63	0.36	0.40	0.35	0.34	0.46	0.41	0.36	5.91
0.0-2.0	0.10	0.22	0.34	0.28	0.24	0.19	0.16	0.14	0.19	0.17	0.15	0.08	2.28
	4.05	4.76	8.04	8.81	5.16	3.82	9.65	12.85	16.70	11.92	8.11	6.12	100.00
	Dec												Total

Joint Occurrence table of hourly wind speed vs. wind direction Nautical convention: coming from, clockwise from North	Height: 100m	Dec
<b>Deltares</b>		App. A.2.065

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.07	0.06	0.04	0.02	0.01	0.04	0.55	1.39	2.31	0.60	0.26	0.19	5.54
15.0-18.0	0.26	0.35	0.33	0.21	0.09	0.17	0.85	1.81	2.74	0.91	0.41	0.39	8.52
12.0-15.0	0.72	0.95	0.91	0.82	0.47	0.54	1.37	2.38	3.74	1.65	0.88	0.83	15.25
9.0-12.0	1.49	1.68	1.74	1.47	0.96	0.96	1.58	2.38	4.27	2.20	1.47	1.33	21.52
6.0-9.0	1.97	2.06	1.88	1.78	1.30	1.24	1.45	2.10	3.41	2.35	1.81	1.67	23.00
4.0-6.0	1.07	1.17	1.20	1.12	0.94	0.82	0.85	1.11	1.54	1.36	1.07	1.01	13.27
2.0-4.0	0.76	0.87	0.86	0.75	0.65	0.62	0.62	0.77	0.96	0.95	0.82	0.79	9.41
0.0-2.0	0.28	0.30	0.29	0.29	0.28	0.25	0.29	0.28	0.30	0.33	0.30	0.29	3.49
	6.63	7.44	7.25	6.45	4.69	4.63	7.56	12.22	19.27	10.34	7.02	6.49	100.00

All year

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

All Year

**Deltares**

App. A.2.066

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.12	0.01	0.17			0.06	1.58	3.26	5.73	1.20	0.59	0.37	13.11
15.0-18.0	0.23	0.26	0.53	0.38	0.03	0.28	2.05	2.95	4.19	2.01	0.85	0.53	14.29
12.0-15.0	0.37	0.28	1.21	1.03	0.54	0.50	2.34	3.72	3.31	2.18	1.12	0.62	17.22
9.0-12.0	1.00	1.05	1.39	1.78	0.99	0.97	2.58	2.82	2.67	2.49	1.45	1.03	20.22
6.0-9.0	0.99	1.06	1.51	2.21	1.27	1.14	1.81	1.44	1.74	1.72	1.48	1.14	17.49
4.0-6.0	0.65	0.69	1.01	1.14	1.00	1.11	0.83	0.60	0.55	0.77	0.72	0.65	9.72
2.0-4.0	0.29	0.56	0.74	0.64	0.69	0.56	0.44	0.39	0.38	0.41	0.47	0.38	5.96
0.0-2.0	0.12	0.18	0.16	0.26	0.23	0.15	0.16	0.20	0.11	0.17	0.13	0.09	1.99
	3.78	4.10	6.73	7.44	4.75	4.76	11.80	15.39	18.70	10.95	6.80	4.80	100.00

Jan

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

Jan

Deltares

App. A.2.067

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.17	0.14		0.08	0.09	0.01	0.62	2.70	4.58	1.52	0.73	0.67	11.29
15.0-18.0	0.44	0.35	0.45	0.18	0.16	0.19	1.18	3.08	3.77	1.56	0.56	0.67	12.60
12.0-15.0	0.84	1.11	1.07	0.63	0.40	0.57	1.65	2.85	3.48	2.49	1.66	1.20	17.94
9.0-12.0	1.04	1.60	1.37	1.35	0.66	0.87	2.03	2.45	2.97	2.15	1.96	1.65	20.09
6.0-9.0	1.45	1.19	1.16	1.80	1.34	1.10	1.49	1.48	2.03	1.92	1.53	1.34	17.82
4.0-6.0	0.58	0.82	0.98	0.93	1.15	0.89	0.86	0.69	0.95	1.11	0.88	0.79	10.64
2.0-4.0	0.49	0.64	0.75	0.56	0.57	0.64	0.55	0.48	0.68	0.64	0.56	0.61	7.17
0.0-2.0	0.21	0.22	0.13	0.19	0.26	0.21	0.19	0.13	0.22	0.25	0.20	0.26	2.45
	5.22	6.07	5.91	5.71	4.63	4.49	8.55	13.85	18.68	11.63	8.07	7.19	100.00

Feb

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

Feb

**Deltares**

App. A.2.068

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.09	0.04	0.07	0.06	0.00	0.00	0.48	1.46	3.38	0.86	0.21	0.15	6.82
15.0-18.0	0.31	0.31	0.34	0.40	0.09	0.08	0.59	1.80	3.73	1.55	0.47	0.47	10.16
12.0-15.0	0.87	0.87	0.98	1.04	0.71	0.66	1.09	2.54	3.65	2.51	1.02	1.34	17.28
9.0-12.0	1.37	1.24	2.17	2.05	1.23	0.89	1.46	2.51	3.34	2.32	1.99	1.77	22.35
6.0-9.0	1.58	1.96	2.31	1.90	1.42	1.09	1.33	2.14	2.83	2.14	2.09	1.75	22.52
4.0-6.0	1.04	1.18	1.19	0.81	0.66	0.58	0.55	0.89	1.21	1.05	0.93	0.87	10.96
2.0-4.0	0.52	0.81	0.80	0.61	0.47	0.44	0.40	0.50	0.71	0.62	0.60	0.55	7.03
0.0-2.0	0.32	0.25	0.21	0.19	0.19	0.16	0.19	0.20	0.22	0.37	0.27	0.30	2.89
	6.10	6.68	8.07	7.06	4.78	3.91	6.09	12.03	19.06	11.41	7.59	7.21	100.00

Mar

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

Mar

**Deltares**

App. A.2.069

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.05	0.08	0.09			0.03	0.30	0.46	0.74	0.03	0.01	0.07	1.84
15.0-18.0	0.39	0.85	0.51	0.23	0.19	0.18	0.59	1.46	2.35	0.50	0.22	0.15	7.62
12.0-15.0	1.05	2.07	2.20	0.98	0.44	0.47	1.13	2.17	3.25	1.26	0.50	0.55	16.08
9.0-12.0	2.36	2.73	2.73	1.51	0.91	1.09	1.40	2.33	3.69	1.56	1.07	1.28	22.66
6.0-9.0	2.37	2.84	2.30	1.65	1.43	1.11	1.27	2.09	3.22	1.85	1.14	1.13	22.40
4.0-6.0	1.32	1.28	1.42	1.19	0.86	0.88	0.94	1.42	1.78	1.30	1.08	0.79	14.27
2.0-4.0	0.83	0.68	0.88	0.58	0.81	0.81	0.79	0.97	1.16	0.93	1.03	1.14	10.62
0.0-2.0	0.39	0.37	0.34	0.33	0.33	0.34	0.42	0.32	0.39	0.36	0.47	0.45	4.51
	8.76	10.90	10.48	6.48	4.97	4.91	6.84	11.20	16.58	7.79	5.53	5.55	100.00

Apr

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

Apr

**Deltares**

App. A.2.070

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.11	0.05	0.02			0.01	0.05	0.53	0.81	0.06	0.03	0.01	1.70
15.0-18.0	0.34	0.70	0.78	0.36	0.04	0.11	0.24	1.15	2.60	0.09	0.06	0.08	6.57
12.0-15.0	1.51	2.11	1.74	1.32	0.30	0.30	0.72	1.93	3.90	0.57	0.14	0.61	15.17
9.0-12.0	2.49	3.68	2.62	1.95	0.86	0.68	0.92	2.19	3.91	1.21	0.77	1.21	22.49
6.0-9.0	3.10	4.25	2.62	1.83	1.17	0.87	0.87	1.46	3.20	2.05	1.30	1.56	24.28
4.0-6.0	1.51	1.84	1.62	1.12	0.80	0.66	0.48	0.84	1.63	1.35	1.10	1.21	14.16
2.0-4.0	1.20	1.33	1.11	0.84	0.59	0.51	0.66	0.78	0.97	1.12	0.82	1.06	10.98
0.0-2.0	0.48	0.40	0.44	0.32	0.32	0.36	0.34	0.30	0.37	0.39	0.45	0.47	4.64
	10.76	14.36	10.96	7.74	4.08	3.50	4.28	9.18	17.40	6.84	4.68	6.21	100.00

May

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

May

**Deltares**

App. A.2.071

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.01	0.09	0.01			0.01	0.02	0.63	0.71	0.01		0.01	1.48
15.0-18.0	0.03	0.32	0.26	0.04	0.02	0.03	0.11	1.18	2.35	0.09	0.02	0.13	4.57
12.0-15.0	0.34	1.41	0.81	0.34	0.28	0.24	0.33	1.78	5.27	0.60	0.29	0.36	12.06
9.0-12.0	2.05	2.80	1.41	0.79	0.60	0.63	0.68	1.75	6.39	1.57	1.01	1.14	20.83
6.0-9.0	3.08	3.89	1.75	0.92	0.81	1.10	1.22	2.11	4.60	2.21	1.83	2.55	26.06
4.0-6.0	1.76	2.05	1.41	0.97	0.69	0.73	0.79	1.59	1.93	1.68	1.23	1.51	16.35
2.0-4.0	1.37	1.46	1.03	0.97	0.66	0.66	1.00	1.15	1.31	1.41	1.23	1.22	13.47
0.0-2.0	0.33	0.48	0.47	0.37	0.42	0.44	0.51	0.40	0.45	0.49	0.37	0.46	5.18
	8.97	12.51	7.16	4.39	3.47	3.83	4.66	10.60	23.00	8.06	5.98	7.39	100.00
	Jun												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

Jun

Deltares

App. A.2.072

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0		0.00	0.02				0.00	0.23	0.49	0.02	0.02	0.04	0.84
15.0-18.0	0.02	0.13	0.12	0.07	0.01	0.01	0.08	0.90	2.22	0.20	0.09	0.08	3.95
12.0-15.0	0.34	1.01	0.69	0.55	0.30	0.14	0.28	1.85	5.28	1.03	0.39	0.42	12.28
9.0-12.0	1.10	1.92	1.47	1.08	0.70	0.26	0.52	2.56	7.72	2.27	1.15	0.91	21.66
6.0-9.0	2.39	2.05	1.84	1.40	0.91	0.63	0.84	2.69	6.51	3.41	2.00	1.78	26.44
4.0-6.0	1.46	1.48	1.24	0.96	0.77	0.76	0.58	1.50	2.51	2.32	1.26	1.23	16.07
2.0-4.0	0.91	1.28	1.23	0.83	0.75	0.68	0.73	1.25	1.75	1.76	1.43	1.11	13.70
0.0-2.0	0.42	0.43	0.41	0.43	0.35	0.22	0.41	0.49	0.48	0.52	0.47	0.42	5.06
	6.64	8.31	7.03	5.32	3.80	2.70	3.44	11.46	26.94	11.53	6.82	6.00	100.00

Jul

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

Jul

Deltares

App. A.2.073

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.05	0.01				0.00	0.06	0.30	0.47	0.01	0.08	0.16	1.16
15.0-18.0	0.23	0.05	0.05	0.01	0.03	0.06	0.11	0.86	1.61	0.15	0.16	0.25	3.60
12.0-15.0	0.45	0.22	0.35	0.33	0.29	0.28	0.38	1.36	3.93	1.25	0.59	0.54	9.99
9.0-12.0	1.36	1.07	1.33	0.96	0.58	0.75	0.81	2.60	6.69	2.16	1.14	1.68	21.12
6.0-9.0	2.31	2.12	1.74	1.57	1.09	1.24	1.02	2.53	6.18	2.96	2.19	2.42	27.36
4.0-6.0	1.37	1.22	1.27	1.14	0.90	0.87	1.04	1.78	3.03	2.17	1.70	1.68	18.18
2.0-4.0	1.19	1.26	0.95	0.92	0.67	0.71	0.81	1.15	1.78	1.64	1.32	1.29	13.69
0.0-2.0	0.39	0.49	0.38	0.40	0.39	0.28	0.45	0.44	0.46	0.39	0.47	0.35	4.90
	7.36	6.44	6.08	5.34	3.96	4.20	4.68	11.03	24.13	10.74	7.65	8.39	100.00

Aug

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

Aug

**Deltares**

App. A.2.074

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.01	0.02		0.01		0.01	0.07	0.54	1.36	0.20	0.25	0.09	2.55
15.0-18.0	0.21	0.38	0.05	0.10	0.07	0.10	0.25	1.16	1.95	0.66	0.58	0.64	6.15
12.0-15.0	0.71	0.60	0.37	0.51	0.41	0.38	0.80	1.94	3.42	1.53	0.82	1.21	12.68
9.0-12.0	2.02	1.16	1.64	1.53	0.98	1.08	1.47	1.97	4.89	2.19	1.47	1.44	21.82
6.0-9.0	2.57	1.53	2.03	2.38	1.28	1.51	1.86	2.96	4.14	3.28	2.17	1.80	27.51
4.0-6.0	1.23	1.21	1.45	1.20	1.00	0.79	1.15	1.23	2.13	1.83	1.00	0.92	15.15
2.0-4.0	0.81	0.61	0.96	1.00	0.68	0.80	0.63	0.94	1.16	1.17	0.73	0.80	10.28
0.0-2.0	0.28	0.27	0.30	0.37	0.33	0.24	0.33	0.32	0.39	0.37	0.37	0.30	3.86
	7.83	5.78	6.81	7.09	4.75	4.90	6.55	11.05	19.44	11.22	7.38	7.19	100.00

Sep

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

Sep

**Deltares**

App. A.2.075

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.07	0.12	0.01	0.00	0.00	0.10	0.70	2.10	2.43	0.94	0.17	0.07	6.72
15.0-18.0	0.25	0.33	0.29	0.36	0.23	0.32	1.52	2.13	2.22	0.95	0.28	0.31	9.20
12.0-15.0	0.42	0.57	0.33	1.39	1.08	1.20	2.85	3.13	3.40	1.94	0.94	0.77	18.03
9.0-12.0	0.61	0.84	1.47	2.18	1.87	2.01	2.92	3.00	3.16	2.85	1.59	1.07	23.57
6.0-9.0	1.41	1.24	1.52	1.99	1.79	2.14	2.20	2.23	2.33	2.18	1.88	1.24	22.13
4.0-6.0	0.67	0.86	0.78	1.11	0.83	0.79	1.20	1.21	1.13	0.79	0.80	0.80	10.97
2.0-4.0	0.54	0.82	0.71	0.63	0.56	0.55	0.62	0.74	0.64	0.55	0.56	0.51	7.43
0.0-2.0	0.19	0.17	0.17	0.13	0.17	0.18	0.19	0.17	0.17	0.13	0.13	0.13	1.96
	4.17	4.95	5.30	7.79	6.54	7.29	12.20	14.70	15.48	10.32	6.35	4.90	100.00

Oct

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

Oct

**Deltares**

App. A.2.076

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.12	0.03	0.07		0.06	0.08	1.13	1.72	2.78	0.80	0.43	0.33	7.54
15.0-18.0	0.52	0.34	0.08	0.03	0.06	0.35	1.84	2.30	2.42	1.10	0.73	0.62	10.40
12.0-15.0	1.19	0.68	0.27	0.39	0.42	1.34	2.93	2.76	2.74	2.05	1.63	1.24	17.63
9.0-12.0	1.57	1.02	1.09	0.55	1.34	1.80	2.75	2.52	3.06	2.85	2.26	1.49	22.30
6.0-9.0	1.31	1.00	1.50	1.56	1.63	1.86	2.25	2.20	2.27	2.49	2.23	1.85	22.15
4.0-6.0	0.67	0.75	0.67	0.87	1.14	1.06	1.03	0.91	0.89	1.19	1.20	0.86	11.24
2.0-4.0	0.45	0.42	0.44	0.49	0.72	0.73	0.45	0.57	0.63	0.60	0.64	0.49	6.63
0.0-2.0	0.13	0.11	0.15	0.15	0.14	0.22	0.21	0.22	0.16	0.28	0.15	0.19	2.11
	5.97	4.36	4.26	4.03	5.49	7.44	12.60	13.19	14.95	11.36	9.26	7.07	100.00

Nov

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

Nov

**Deltares**

App. A.2.077

Dir150 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.06	0.11	0.02	0.05	0.00	0.17	1.60	2.75	4.37	1.63	0.60	0.31	11.68
15.0-18.0	0.20	0.21	0.45	0.32	0.17	0.31	1.67	2.85	3.55	2.01	0.85	0.73	13.34
12.0-15.0	0.63	0.51	0.91	1.22	0.41	0.38	1.92	2.54	3.20	2.41	1.55	1.10	16.79
9.0-12.0	0.89	1.05	2.12	1.87	0.73	0.51	1.43	1.90	2.68	2.69	1.85	1.32	19.03
6.0-9.0	1.14	1.51	2.20	2.13	1.41	1.05	1.23	1.86	1.76	1.96	1.88	1.47	19.60
4.0-6.0	0.56	0.65	1.39	1.94	1.45	0.78	0.79	0.60	0.72	0.80	0.93	0.77	11.38
2.0-4.0	0.50	0.52	0.67	0.96	0.60	0.34	0.40	0.36	0.30	0.51	0.42	0.34	5.90
0.0-2.0	0.12	0.24	0.34	0.29	0.23	0.17	0.14	0.16	0.17	0.19	0.14	0.08	2.28
	4.10	4.80	8.09	8.78	5.01	3.72	9.18	13.02	16.75	12.21	8.22	6.12	100.00
	Dec												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 150m

Dec

Deltares

App. A.2.078

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.09	0.08	0.06	0.02	0.02	0.05	0.65	1.69	2.89	0.71	0.29	0.21	6.75
15.0-18.0	0.29	0.37	0.35	0.26	0.13	0.21	0.88	1.84	2.80	1.02	0.44	0.40	8.98
12.0-15.0	0.73	0.89	0.91	0.82	0.49	0.55	1.33	2.31	3.60	1.73	0.93	0.84	15.14
9.0-12.0	1.46	1.58	1.65	1.43	0.95	0.86	1.44	2.21	4.08	2.22	1.48	1.33	20.72
6.0-9.0	1.91	1.94	1.81	1.71	1.26	1.16	1.37	2.01	3.23	2.40	1.80	1.66	22.26
4.0-6.0	1.05	1.16	1.16	1.11	0.91	0.84	0.82	1.10	1.54	1.38	1.09	1.02	13.18
2.0-4.0	0.75	0.87	0.84	0.75	0.67	0.61	0.63	0.80	0.96	0.95	0.85	0.78	9.47
0.0-2.0	0.28	0.29	0.27	0.30	0.26	0.26	0.27	0.29	0.31	0.33	0.31	0.31	3.49
	6.56	7.18	7.06	6.41	4.70	4.53	7.38	12.26	19.40	10.75	7.20	6.57	100.00

All year

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 200m

All Year

**Deltares**

App. A.2.079

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.14	0.02	0.19			0.08	1.77	3.97	6.74	1.49	0.66	0.40	15.47
15.0-18.0	0.24	0.25	0.57	0.46	0.04	0.32	2.01	2.90	4.01	2.11	0.89	0.57	14.34
12.0-15.0	0.38	0.30	1.20	0.97	0.57	0.49	2.28	3.67	3.11	2.16	1.15	0.63	16.92
9.0-12.0	0.99	1.07	1.41	1.74	0.88	0.73	2.08	2.46	2.50	2.45	1.50	1.04	18.85
6.0-9.0	0.99	1.06	1.46	2.23	1.23	1.01	1.60	1.43	1.68	1.70	1.42	1.13	16.94
4.0-6.0	0.64	0.72	1.05	1.07	0.97	1.07	0.75	0.62	0.57	0.72	0.73	0.65	9.54
2.0-4.0	0.29	0.59	0.72	0.62	0.67	0.55	0.44	0.42	0.34	0.41	0.50	0.35	5.90
0.0-2.0	0.14	0.15	0.19	0.26	0.24	0.14	0.16	0.20	0.14	0.14	0.13	0.13	2.04
	3.81	4.16	6.79	7.34	4.60	4.39	11.11	15.66	19.09	11.18	6.97	4.89	100.00

Jan

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 200m

Jan

Deltares

App. A.2.080

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.19	0.14		0.08	0.09	0.01	0.84	3.43	5.76	1.77	0.78	0.75	13.84
15.0-18.0	0.51	0.40	0.50	0.19	0.18	0.23	1.06	2.86	3.58	1.84	0.66	0.72	12.72
12.0-15.0	0.80	1.09	1.04	0.62	0.39	0.58	1.61	2.48	3.18	2.49	1.69	1.20	17.17
9.0-12.0	1.06	1.62	1.36	1.39	0.57	0.71	1.75	2.24	2.77	2.07	1.89	1.73	19.17
6.0-9.0	1.45	1.15	1.18	1.68	1.33	0.92	1.28	1.38	1.96	1.86	1.62	1.34	17.14
4.0-6.0	0.60	0.80	0.93	0.91	1.03	0.91	0.76	0.72	0.93	1.09	0.84	0.81	10.32
2.0-4.0	0.43	0.69	0.73	0.55	0.54	0.64	0.60	0.54	0.67	0.63	0.59	0.64	7.25
0.0-2.0	0.20	0.21	0.14	0.18	0.19	0.25	0.18	0.14	0.21	0.20	0.19	0.31	2.39
	5.25	6.09	5.87	5.60	4.32	4.24	8.08	13.79	19.05	11.95	8.26	7.50	100.00

Feb

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 200m

Feb

**Deltares**

App. A.2.081

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.11	0.06	0.11	0.06	0.01	0.01	0.58	1.69	4.64	1.17	0.24	0.18	8.88
15.0-18.0	0.31	0.31	0.33	0.46	0.14	0.21	0.54	1.77	3.46	1.98	0.55	0.49	10.56
12.0-15.0	0.93	0.85	1.01	1.09	0.70	0.60	1.06	2.32	3.09	2.57	1.22	1.49	16.94
9.0-12.0	1.38	1.24	1.98	1.90	1.31	0.82	1.20	2.33	3.13	2.09	2.06	1.81	21.26
6.0-9.0	1.53	1.86	2.20	1.68	1.36	1.06	1.26	1.95	2.69	2.23	1.90	1.78	21.50
4.0-6.0	1.05	1.13	1.14	0.87	0.62	0.66	0.54	0.83	1.24	1.04	0.88	0.87	10.86
2.0-4.0	0.52	0.79	0.83	0.65	0.53	0.42	0.38	0.51	0.67	0.69	0.60	0.54	7.12
0.0-2.0	0.34	0.26	0.19	0.21	0.17	0.14	0.21	0.17	0.20	0.41	0.25	0.32	2.88
	6.18	6.49	7.79	6.92	4.85	3.92	5.77	11.59	19.13	12.17	7.71	7.49	100.00

Mar

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 200m

Mar

**Deltares**

App. A.2.082

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.08	0.12	0.17	0.03	0.03	0.05	0.42	0.75	1.32	0.07	0.03	0.07	3.14
15.0-18.0	0.42	0.87	0.57	0.33	0.19	0.22	0.62	1.53	2.35	0.64	0.31	0.16	8.22
12.0-15.0	1.05	1.82	2.39	1.06	0.46	0.49	1.06	2.21	3.04	1.19	0.59	0.59	15.95
9.0-12.0	2.38	2.27	2.49	1.54	0.92	0.98	1.38	1.98	3.47	1.64	1.10	1.29	21.43
6.0-9.0	2.18	2.70	2.08	1.62	1.36	1.18	1.24	1.95	3.06	1.99	1.15	1.13	21.64
4.0-6.0	1.23	1.33	1.37	1.32	0.86	0.89	0.87	1.39	1.83	1.32	1.12	0.78	14.31
2.0-4.0	0.80	0.70	0.85	0.67	0.82	0.83	0.78	1.02	1.18	0.98	1.04	1.16	10.86
0.0-2.0	0.34	0.38	0.28	0.37	0.30	0.33	0.37	0.43	0.34	0.40	0.46	0.46	4.45
	8.47	10.19	10.21	6.94	4.94	4.98	6.75	11.26	16.59	8.23	5.80	5.64	100.00

Apr

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 200m

Apr

**Deltares**

App. A.2.083

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.13	0.10	0.08	0.01	0.01	0.01	0.09	0.72	1.20	0.10	0.03	0.02	2.53
15.0-18.0	0.42	0.73	0.77	0.54	0.12	0.09	0.37	1.18	2.90	0.18	0.06	0.07	7.44
12.0-15.0	1.52	1.83	1.53	1.34	0.37	0.31	0.63	1.86	3.88	0.76	0.20	0.60	14.84
9.0-12.0	2.39	3.41	2.41	1.94	0.98	0.70	0.81	1.95	3.59	1.23	0.83	1.15	21.39
6.0-9.0	2.95	3.95	2.70	1.79	1.24	0.92	0.82	1.29	2.83	2.31	1.26	1.58	23.66
4.0-6.0	1.56	1.84	1.39	1.22	0.83	0.71	0.52	0.82	1.62	1.37	1.14	1.26	14.27
2.0-4.0	1.14	1.35	1.17	0.86	0.66	0.57	0.60	0.79	1.03	1.11	0.81	1.08	11.17
0.0-2.0	0.45	0.38	0.37	0.39	0.31	0.32	0.33	0.34	0.40	0.45	0.51	0.44	4.71
	10.57	13.59	10.42	8.09	4.53	3.64	4.18	8.96	17.44	7.53	4.85	6.20	100.00

May

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 200m

May

**Deltares**

App. A.2.084

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.01	0.09	0.06			0.01	0.03	0.80	1.06	0.01		0.02	2.08
15.0-18.0	0.04	0.35	0.34	0.04	0.06	0.02	0.13	1.12	2.88	0.14	0.02	0.15	5.29
12.0-15.0	0.39	1.36	0.76	0.39	0.30	0.24	0.35	1.75	5.05	0.93	0.33	0.38	12.21
9.0-12.0	1.86	2.54	1.30	0.81	0.64	0.66	0.70	1.49	6.01	1.77	1.06	1.15	19.99
6.0-9.0	2.95	3.53	1.76	0.97	0.77	1.01	1.20	2.03	4.17	2.32	1.86	2.55	25.11
4.0-6.0	1.69	2.09	1.44	0.96	0.74	0.69	0.84	1.62	2.02	1.75	1.26	1.52	16.62
2.0-4.0	1.31	1.46	1.07	0.94	0.70	0.62	0.96	1.23	1.33	1.42	1.36	1.19	13.58
0.0-2.0	0.46	0.39	0.38	0.37	0.41	0.43	0.43	0.45	0.42	0.49	0.41	0.49	5.11
	8.68	11.81	7.11	4.48	3.61	3.67	4.66	10.49	22.93	8.83	6.30	7.44	100.00
	Jun												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
 Nautical convention: coming from, clockwise from North

Height: 200m

Jun

Deltares

App. A.2.085

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0		0.01	0.02					0.34	0.70	0.03	0.03	0.04	1.18
15.0-18.0	0.02	0.18	0.12	0.16	0.07	0.01	0.12	1.02	2.61	0.24	0.12	0.09	4.79
12.0-15.0	0.29	0.86	0.80	0.49	0.38	0.12	0.28	1.78	5.39	1.26	0.41	0.42	12.48
9.0-12.0	1.09	1.85	1.31	1.00	0.75	0.27	0.52	2.45	7.18	2.42	1.23	0.93	21.00
6.0-9.0	2.23	1.80	1.65	1.38	0.98	0.72	0.82	2.39	6.12	3.63	2.02	1.71	25.44
4.0-6.0	1.36	1.44	1.23	0.94	0.77	0.84	0.58	1.41	2.45	2.44	1.31	1.29	16.06
2.0-4.0	0.99	1.27	1.14	0.75	0.81	0.65	0.79	1.29	1.76	1.82	1.52	1.03	13.82
0.0-2.0	0.39	0.44	0.43	0.48	0.37	0.27	0.39	0.42	0.51	0.57	0.47	0.48	5.22
	6.37	7.85	6.73	5.20	4.13	2.88	3.50	11.11	26.73	12.42	7.11	5.99	100.00
	Jul												Total

Joint Occurrence table of hourly wind speed vs. wind direction Nautical convention: coming from, clockwise from North	Height: 200m	Jul
<b>Deltares</b>		App. A.2.086

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.08	0.02				0.00	0.06	0.38	0.64	0.01	0.09	0.17	1.46
15.0-18.0	0.26	0.05	0.06	0.05	0.06	0.06	0.16	0.89	1.81	0.18	0.19	0.26	4.04
12.0-15.0	0.45	0.23	0.29	0.41	0.34	0.24	0.41	1.32	4.06	1.44	0.60	0.55	10.36
9.0-12.0	1.36	0.97	1.29	0.99	0.61	0.73	0.83	2.53	6.69	2.32	1.13	1.67	21.12
6.0-9.0	2.23	1.91	1.51	1.45	1.14	1.08	1.14	2.31	5.90	2.96	2.22	2.42	26.27
4.0-6.0	1.33	1.20	1.16	1.10	0.94	0.93	1.09	1.74	3.02	2.22	1.73	1.73	18.18
2.0-4.0	1.20	1.23	0.91	0.89	0.73	0.72	0.81	1.16	1.81	1.52	1.45	1.24	13.68
0.0-2.0	0.41	0.49	0.40	0.39	0.34	0.31	0.41	0.45	0.49	0.37	0.50	0.32	4.89
	7.33	6.10	5.63	5.28	4.15	4.07	4.92	10.80	24.42	11.04	7.91	8.36	100.00

Aug

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 200m

Aug

Deltares

App. A.2.087

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.02	0.03		0.01	0.01	0.01	0.09	0.61	1.55	0.22	0.28	0.14	2.94
15.0-18.0	0.23	0.40	0.06	0.11	0.13	0.11	0.30	1.28	2.04	0.73	0.59	0.62	6.60
12.0-15.0	0.72	0.60	0.42	0.52	0.42	0.44	0.91	1.95	3.47	1.55	0.81	1.23	13.03
9.0-12.0	2.01	1.14	1.54	1.45	1.16	0.94	1.48	2.05	4.87	2.22	1.46	1.39	21.70
6.0-9.0	2.55	1.50	1.99	2.16	1.22	1.42	1.84	2.84	3.98	3.33	2.19	1.76	26.80
4.0-6.0	1.22	1.18	1.39	1.12	0.94	0.81	1.12	1.24	2.04	1.84	1.06	0.95	14.90
2.0-4.0	0.81	0.59	0.88	0.99	0.70	0.77	0.67	0.97	1.12	1.18	0.74	0.79	10.21
0.0-2.0	0.25	0.24	0.29	0.37	0.29	0.32	0.25	0.38	0.37	0.39	0.38	0.30	3.82
	7.81	5.66	6.58	6.73	4.87	4.81	6.64	11.32	19.43	11.45	7.51	7.19	100.00

Sep

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 200m

Sep

**Deltares**

App. A.2.088

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.08	0.14	0.03		0.00	0.13	0.82	2.38	2.74	1.01	0.18	0.08	7.62
15.0-18.0	0.26	0.34	0.28	0.39	0.31	0.38	1.78	2.33	2.21	1.01	0.27	0.31	9.86
12.0-15.0	0.40	0.56	0.34	1.33	1.18	1.41	2.87	3.32	3.39	1.95	0.99	0.82	18.55
9.0-12.0	0.62	0.85	1.49	2.02	1.62	1.62	2.77	2.78	3.11	2.84	1.54	1.06	22.31
6.0-9.0	1.37	1.22	1.45	1.92	1.74	1.99	2.08	2.19	2.38	2.14	1.89	1.23	21.61
4.0-6.0	0.67	0.85	0.76	1.01	0.78	0.78	1.06	1.29	1.14	0.79	0.83	0.77	10.71
2.0-4.0	0.53	0.82	0.65	0.69	0.56	0.51	0.64	0.71	0.66	0.57	0.57	0.53	7.43
0.0-2.0	0.16	0.18	0.16	0.13	0.17	0.19	0.18	0.15	0.19	0.11	0.13	0.14	1.91
	4.09	4.96	5.16	7.48	6.37	7.02	12.21	15.14	15.81	10.42	6.39	4.94	100.00

Oct

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 200m

Oct

Deltares

App. A.2.089

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.13	0.04	0.07		0.06	0.10	1.34	2.02	3.18	0.92	0.49	0.38	8.72
15.0-18.0	0.54	0.36	0.09	0.03	0.08	0.48	1.77	2.37	2.35	1.10	0.73	0.61	10.49
12.0-15.0	1.22	0.70	0.25	0.37	0.37	1.35	2.83	2.74	2.70	2.11	1.64	1.21	17.51
9.0-12.0	1.55	1.00	1.10	0.55	1.22	1.75	2.58	2.51	3.02	2.85	2.25	1.52	21.91
6.0-9.0	1.30	1.03	1.48	1.52	1.43	1.71	2.13	2.31	2.20	2.39	2.23	1.86	21.58
4.0-6.0	0.66	0.72	0.68	0.88	1.05	1.03	0.98	0.93	0.90	1.19	1.21	0.84	11.07
2.0-4.0	0.46	0.42	0.44	0.44	0.75	0.67	0.48	0.56	0.64	0.60	0.60	0.53	6.59
0.0-2.0	0.10	0.10	0.14	0.17	0.14	0.20	0.21	0.23	0.20	0.28	0.14	0.21	2.12
	5.97	4.37	4.25	3.96	5.10	7.29	12.32	13.66	15.18	11.44	9.28	7.17	100.00

Nov

Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 200m

Nov

**Deltares**

App. A.2.090

Dir200 (° N)

	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
>18.0	0.06	0.13	0.02	0.05	0.00	0.18	1.71	3.28	5.23	1.79	0.66	0.35	13.47
15.0-18.0	0.22	0.21	0.48	0.35	0.21	0.35	1.67	2.85	3.40	2.13	0.91	0.80	13.58
12.0-15.0	0.67	0.53	0.88	1.21	0.38	0.29	1.65	2.35	2.85	2.35	1.63	1.04	15.82
9.0-12.0	0.88	1.06	2.14	1.81	0.74	0.45	1.26	1.79	2.57	2.67	1.79	1.32	18.48
6.0-9.0	1.14	1.49	2.20	2.13	1.31	0.96	1.00	2.02	1.71	1.96	1.83	1.48	19.22
4.0-6.0	0.54	0.66	1.40	1.87	1.42	0.75	0.75	0.61	0.65	0.79	0.96	0.79	11.18
2.0-4.0	0.53	0.53	0.69	0.98	0.60	0.35	0.37	0.37	0.29	0.50	0.45	0.31	5.99
0.0-2.0	0.12	0.28	0.31	0.29	0.20	0.16	0.14	0.13	0.20	0.19	0.16	0.08	2.27
	4.17	4.89	8.12	8.70	4.87	3.50	8.54	13.39	16.90	12.38	8.38	6.16	100.00
	Dec												Total

Joint Occurrence table of hourly wind speed vs. wind direction  
Nautical convention: coming from, clockwise from North

Height: 200m

Dec

Deltares

App. A.2.091

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.40	0.15	0.03	0.01	0.01	0.00	0.01	0.01	0.07	0.18	0.56	3.78	6.20	
	285-315	0.46	0.10	0.03	0.01	0.01	0.01	0.01	0.04	0.16	0.67	2.60	2.69	6.79	
	255-285	0.41	0.10	0.04	0.02	0.02	0.01	0.02	0.13	0.97	3.60	2.61	1.41	9.34	
	225-255	0.46	0.13	0.06	0.03	0.02	0.03	0.07	0.96	9.67	3.72	1.66	1.26	18.07	
	195-225	0.42	0.11	0.07	0.05	0.07	0.08	0.47	5.11	3.78	0.88	0.63	0.87	12.51	
	165-195	0.41	0.10	0.12	0.09	0.16	0.43	2.86	2.19	0.60	0.34	0.32	0.45	8.06	
	135-165	0.52	0.19	0.20	0.22	0.49	1.31	0.84	0.31	0.19	0.16	0.17	0.29	4.89	
	105-135	0.62	0.36	0.43	0.91	1.31	0.37	0.13	0.10	0.11	0.10	0.08	0.24	4.75	
	75-105	0.85	0.91	1.69	2.14	0.22	0.07	0.04	0.05	0.10	0.07	0.10	0.31	6.53	
	45-75	1.44	2.52	3.07	0.24	0.04	0.02	0.01	0.01	0.05	0.06	0.09	0.31	7.85	
	15-45	3.09	4.02	0.39	0.01	0.01	0.01	0.01	0.01	0.04	0.05	0.10	0.43	8.18	
	345-15	4.69	0.54	0.05	0.00	0.01	0.00	0.01	0.02	0.04	0.08	0.14	1.24	6.82	
All year		14.76	9.22	6.18	3.72	2.35	2.34	4.47	8.94	15.78	9.91	9.05	13.27	100.00	Total

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

All Year

**Deltares**

App. B.1.001

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	2.32	0.67	0.17	0.02	0.05	0.03	0.04	0.05	0.29	0.37	0.48	2.17	6.66	
	285-315	1.70	0.55	0.17	0.04	0.07	0.03	0.04	0.14	0.31	0.44	0.92	2.55	6.97	
	255-285	1.97	0.57	0.23	0.09	0.07	0.05	0.12	0.24	0.48	0.85	1.20	2.63	8.49	
	225-255	1.90	0.51	0.33	0.15	0.12	0.07	0.11	0.40	0.78	0.89	1.51	2.82	9.58	
	195-225	1.90	0.47	0.26	0.24	0.19	0.13	0.23	0.43	1.26	0.79	1.03	2.42	9.36	
	165-195	1.85	0.31	0.54	0.26	0.25	0.31	0.26	0.40	0.87	0.81	0.90	1.67	8.42	
	135-165	1.88	0.50	0.55	0.44	0.26	0.45	0.30	0.32	0.55	0.49	0.60	1.38	7.73	
	105-135	2.38	0.71	0.67	0.30	0.25	0.27	0.22	0.27	0.57	0.44	0.33	1.34	7.74	
	75-105	3.12	1.26	0.91	0.25	0.20	0.11	0.09	0.18	0.50	0.42	0.50	1.61	9.15	
	45-75	3.60	1.47	1.05	0.19	0.14	0.07	0.04	0.06	0.30	0.38	0.48	1.44	9.21	
	15-45	3.85	1.47	0.62	0.06	0.04	0.08	0.04	0.05	0.18	0.29	0.46	1.70	8.83	
	345-15	3.39	1.09	0.25	0.01	0.03	0.04	0.05	0.09	0.20	0.36	0.50	1.85	7.85	
		29.86	9.59	5.75	2.05	1.66	1.64	1.52	2.61	6.30	6.53	8.91	23.58	100.00	
1 m/s $\leq U_{10} < 3$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

1 m/s  $\leq U_{10} < 3$  m/s

**Deltares**

App. B.1.002

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.86	0.29	0.04	0.01	0.01	0.01	0.00	0.01	0.12	0.31	0.73	2.73	6.14	
	285-315	1.08	0.21	0.06	0.02	0.02	0.01	0.00	0.06	0.22	0.62	1.42	3.09	6.83	
	255-285	0.84	0.20	0.08	0.05	0.03	0.02	0.02	0.18	0.61	1.29	2.06	2.89	8.28	
	225-255	1.06	0.29	0.10	0.04	0.06	0.06	0.12	0.59	1.98	1.85	2.28	2.90	11.34	
	195-225	0.97	0.23	0.16	0.09	0.14	0.16	0.39	1.02	1.86	1.15	1.26	2.15	9.58	
	165-195	0.87	0.25	0.25	0.21	0.38	0.59	0.68	1.17	0.73	0.49	0.53	0.92	7.07	
	135-165	1.30	0.35	0.45	0.52	0.62	0.87	0.65	0.50	0.35	0.33	0.37	0.49	6.78	
	105-135	1.53	0.84	1.04	1.19	0.95	0.55	0.33	0.28	0.20	0.22	0.20	0.42	7.76	
	75-105	2.04	1.92	1.84	1.07	0.34	0.20	0.14	0.12	0.21	0.12	0.22	0.62	8.83	
	45-75	3.72	3.03	1.76	0.41	0.09	0.06	0.02	0.02	0.07	0.09	0.20	0.68	10.16	
	15-45	4.56	2.94	0.66	0.03	0.02	0.02	0.01	0.02	0.09	0.09	0.20	1.11	9.75	
	345-15	3.96	1.11	0.11	0.01	0.01	0.00	0.02	0.01	0.04	0.18	0.24	1.79	7.49	
		23.79	11.66	6.55	3.66	2.68	2.56	2.39	3.98	6.47	6.75	9.71	19.80	100.00	
		3 m/s $\leq U_{10} < 5$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

3 m/s  $\leq U_{10} < 5$  m/s

**Deltares**

App. B.1.003

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.74	0.12	0.01	0.00	0.00		0.01	0.02	0.04	0.22	0.75	3.62	6.53	
	285-315	0.37	0.03	0.01	0.00	0.01	0.00	0.01	0.04	0.18	0.70	2.39	3.19	6.93	
	255-285	0.17	0.03	0.01	0.02	0.02	0.01	0.03	0.10	0.76	2.00	3.06	2.18	8.38	
	225-255	0.29	0.09	0.03	0.01	0.01	0.02	0.11	0.63	4.14	3.62	2.76	1.77	13.48	
	195-225	0.24	0.07	0.04	0.04	0.09	0.14	0.69	2.33	2.91	1.38	1.00	1.10	10.02	
	165-195	0.22	0.09	0.10	0.10	0.22	0.77	1.69	1.75	0.72	0.45	0.39	0.33	6.85	
	135-165	0.41	0.30	0.24	0.28	0.84	1.45	1.01	0.60	0.25	0.16	0.14	0.24	5.92	
	105-135	0.45	0.59	0.67	1.67	1.78	0.51	0.18	0.11	0.07	0.05	0.06	0.09	6.21	
	75-105	0.79	1.67	2.91	2.45	0.40	0.11	0.05	0.03	0.04	0.03	0.02	0.16	8.65	
	45-75	1.84	3.76	3.15	0.38	0.04	0.01			0.02	0.01	0.04	0.15	9.39	
	15-45	4.82	3.84	0.53	0.01	0.01	0.01	0.01	0.00	0.01	0.02	0.05	0.24	9.55	
	345-15	5.57	0.65	0.02	0.01	0.00			0.01	0.02	0.05	0.12	1.64	8.09	
		16.90	11.26	7.71	4.96	3.41	3.02	3.77	5.62	9.17	8.68	10.80	14.70	100.00	
		5 m/s $\leq U_{10} < 7$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 10m

5 m/s  $\leq U_{10} < 7$  m/s

**Deltares**

App. B.1.004

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.30	0.03	0.00							0.01	0.15	0.63	4.05	6.17
	285-315	0.10	0.02	0.00	0.00		0.00	0.00	0.02	0.16	0.69	3.05	2.98	7.03	
	255-285	0.08	0.02	0.00			0.00	0.01	0.13	1.18	3.51	3.51	1.01	9.45	
	225-255	0.05	0.03	0.02	0.01	0.00	0.01	0.07	0.83	8.42	5.41	2.12	0.71	17.66	
	195-225	0.02	0.03	0.03	0.01	0.03	0.05	0.51	3.99	3.82	1.12	0.49	0.27	10.36	
	165-195	0.08	0.04	0.03	0.03	0.12	0.51	2.87	2.24	0.67	0.32	0.23	0.23	7.37	
	135-165	0.12	0.10	0.11	0.14	0.67	1.76	1.17	0.27	0.10	0.09	0.06	0.06	4.66	
	105-135	0.08	0.16	0.29	1.16	2.13	0.39	0.06	0.04	0.03	0.01	0.00	0.02	4.37	
	75-105	0.12	0.71	2.18	3.05	0.21	0.02	0.01	0.01	0.01	0.00	0.01	0.02	6.34	
	45-75	0.52	3.47	4.81	0.27	0.01	0.00		0.00		0.00	0.00	0.03	9.12	
	15-45	3.48	5.66	0.31	0.00					0.01	0.01	0.01	0.10	9.57	
345-15	6.32	0.38	0.01		0.00				0.01	0.01	0.02	0.07	1.09	7.90	
		12.25	10.64	7.80	4.67	3.18	2.74	4.70	7.55	14.42	11.32	10.17	10.56	100.00	Total

7 m/s  $\leq U_{10} < 9$  m/s

Total

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 10m

7 m/s  $\leq U_{10} < 9$  m/s

**Deltares**

App. B.1.005

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.08	0.00						0.00	0.04	0.09	0.49	4.51	6.22	
	285-315	0.03							0.02	0.09	0.73	3.48	2.57	6.91	
	255-285	0.01		0.00				0.00	0.09	1.19	5.19	3.01	0.42	9.90	
	225-255	0.01	0.01	0.02			0.01	0.05	1.29	13.73	5.53	1.11	0.15	21.92	
	195-225	0.02	0.01			0.00	0.02	0.58	6.74	5.05	0.64	0.11	0.04	13.23	
	165-195	0.01		0.02	0.02	0.03	0.27	4.24	2.80	0.49	0.19	0.10	0.04	8.21	
	135-165	0.01	0.04	0.02	0.05	0.49	1.84	1.09	0.20	0.02	0.03	0.01	0.02	3.83	
	105-135	0.00	0.03	0.09	0.72	1.79	0.33	0.03					0.00	2.99	
	75-105		0.14	1.66	3.00	0.10	0.01							4.91	
	45-75	0.09	2.44	4.76	0.14	0.00							0.01	7.44	
	15-45	2.00	5.47	0.22								0.00	0.03	7.73	
	345-15	5.41	0.18							0.01	0.02	0.06	1.04	6.72	
		8.67	8.32	6.78	3.92	2.42	2.48	6.00	11.14	20.63	12.42	8.38	8.83	100.00	
		9 m/s $\leq U_{10} < 11$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

9 m/s  $\leq U_{10} < 11$  m/s

**Deltares**

App. B.1.006

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.69									0.04	0.37	4.93	6.04	
	285-315	0.01						0.01	0.07	0.86	3.48	2.18	6.61		
	255-285							0.01	0.10	1.43	6.49	2.49	0.06	10.58	
	225-255	0.01	0.01					0.03	1.58	18.18	4.92	0.52	0.02	25.26	
	195-225		0.01					0.42	10.97	6.09	0.42	0.05	0.02	17.98	
	165-195				0.01	0.01	0.15	5.69	3.56	0.32	0.06	0.03		9.83	
	135-165		0.01	0.01	0.03	0.10	1.72	0.78	0.05	0.01		0.01		2.72	
	105-135		0.01		0.45	1.03	0.19	0.02	0.01					1.70	
	75-105			0.70	3.21	0.08								3.98	
	45-75	0.03	1.37	3.05	0.05									4.50	
	15-45	0.69	5.36	0.17						0.01	0.01		0.01	6.24	
	345-15	3.90	0.15							0.01		0.02	0.48	4.56	
		5.32	6.91	3.92	3.75	1.23	2.07	6.94	16.27	26.11	12.80	6.97	7.71	100.00	
		11 m/s $\leq U_{10} < 13$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

11 m/s  $\leq U_{10} < 13$  m/s

**Deltares**

App. B.1.007

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.51									0.04	0.16	4.92	5.62	
	285-315									0.05	0.52	3.24	1.69	5.51	
	255-285								0.05	1.11	7.55	2.09	0.02	10.82	
	225-255								1.70	24.30	3.98	0.13		30.10	
	195-225	0.01						0.29	13.88	6.27	0.13	0.01		20.59	
	165-195						0.07	5.97	4.05	0.32	0.03			10.44	
	135-165					0.02	0.90	0.59	0.01	0.02				1.53	
	105-135				0.13	0.49	0.18							0.79	
	75-105			0.56	2.04	0.09								2.69	
	45-75		0.66	2.83	0.05									3.54	
	15-45	0.49	3.68	0.15										4.32	
	345-15	3.50	0.08								0.02	0.01	0.42	4.04	
		4.50	4.42	3.55	2.21	0.60	1.16	6.84	19.70	32.07	12.26	5.64	7.05	100.00	
13 m/s $\leq U_{10} < 15$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

13 m/s  $\leq U_{10} < 15$  m/s

**Deltares**

App. B.1.008

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.59									0.02	0.34	4.80	5.74	
	285-315									0.02	0.68	4.00	1.44	6.14	
	255-285								0.04	1.59	8.57	2.57	0.02	12.79	
	225-255								2.12	30.84	2.25	0.02		35.22	
	195-225							0.28	15.11	6.89	0.04			22.32	
	165-195							6.46	4.04	0.04				10.54	
	135-165					0.04	0.64	0.76	0.02					1.45	
	105-135				0.17	0.25	0.09							0.51	
	75-105				0.60									0.60	
	45-75	0.02	0.06	0.60										0.68	
	15-45	0.23	1.42	0.15										1.79	
	345-15	1.64	0.17									0.02	0.38	2.21	
		2.47	1.64	0.76	0.77	0.28	0.74	7.50	21.32	39.38	11.56	6.95	6.63	100.00	
		15 m/s $\leq U_{10} < 17$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

15 m/s  $\leq U_{10} < 17$  m/s

**Deltares**

App. B.1.009

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.24										0.10	3.66	4.00	
	285-315							0.05	0.05	0.34	4.64	1.81	6.88		
	255-285							0.05	1.32	6.73	1.61		9.71		
	225-255							2.20	36.31	0.98			39.48		
	195-225						0.15	16.74	8.39				25.28		
	165-195						6.44	4.64					11.08		
	135-165					0.34	0.29						0.63		
	105-135				0.15								0.15		
	75-105				0.34								0.34		
	45-75														
	15-45		0.73										0.73		
	345-15	1.42											0.29	1.71	
		1.66	0.73		0.49		0.34	6.88	23.67	46.07	8.05	6.34	5.76	100.00	
		17 m/s $\leq U_{10} < 19$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

17 m/s  $\leq U_{10} < 19$  m/s

**Deltares**

App. B.1.010

Wind direction (° N)	MWD (° N)											Total	
	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315		315-345
315-345	0.19										0.19	3.35	3.72
285-315										1.12	4.09	2.60	7.81
255-285									0.74	7.43	2.60		10.78
225-255								1.30	40.15	0.93			42.38
195-225						0.37	17.47	7.81					25.65
165-195						4.46	3.90						8.36
135-165						0.19							0.19
105-135													
75-105													
45-75													
15-45		0.19											0.19
345-15	0.56											0.37	0.93
	0.74	0.19				5.02	22.68	48.70	9.48	6.88	6.32		100.00
	19 m/s $\leq U_{10} < 21$ m/s												Total

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

19 m/s  $\leq U_{10} < 21$  m/s

**Deltares**

App. B.1.011

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												1.27	1.27	
	285-315									1.91	3.18	0.64	5.73		
	255-285								1.91	12.10			14.01		
	225-255							1.27	36.94	0.64			38.85		
	195-225							21.66	7.64				29.30		
	165-195						8.28	2.55					10.83		
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
								8.28	25.48	46.50	14.65	3.18	1.91	100.00	
		21 m/s $\leq U_{10} < 23$ m/s											Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

21 m/s  $\leq U_{10} < 23$  m/s

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												3.85	3.85	
	285-315											3.85		3.85	
	255-285										7.69	3.85		11.54	
	225-255								3.85	46.15	1.92			51.92	
	195-225								21.15	1.92				23.08	
	165-195								5.77					5.77	
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
								30.77	48.08	9.62	7.69	3.85	100.00		
23 m/s $\leq U_{10} < 25$ m/s													Total		

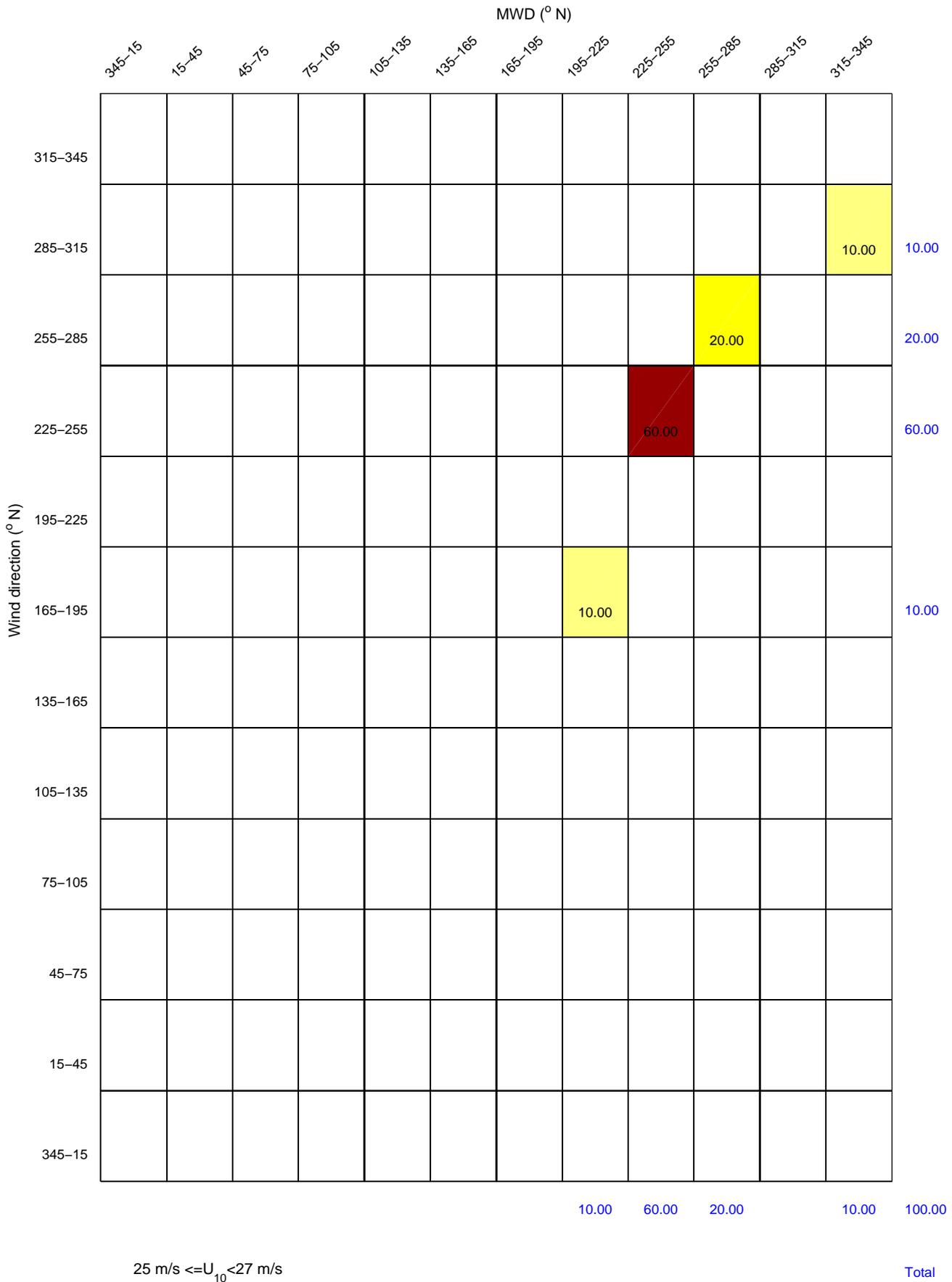
Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

23 m/s  $\leq U_{10} < 25$  m/s

**Deltares**

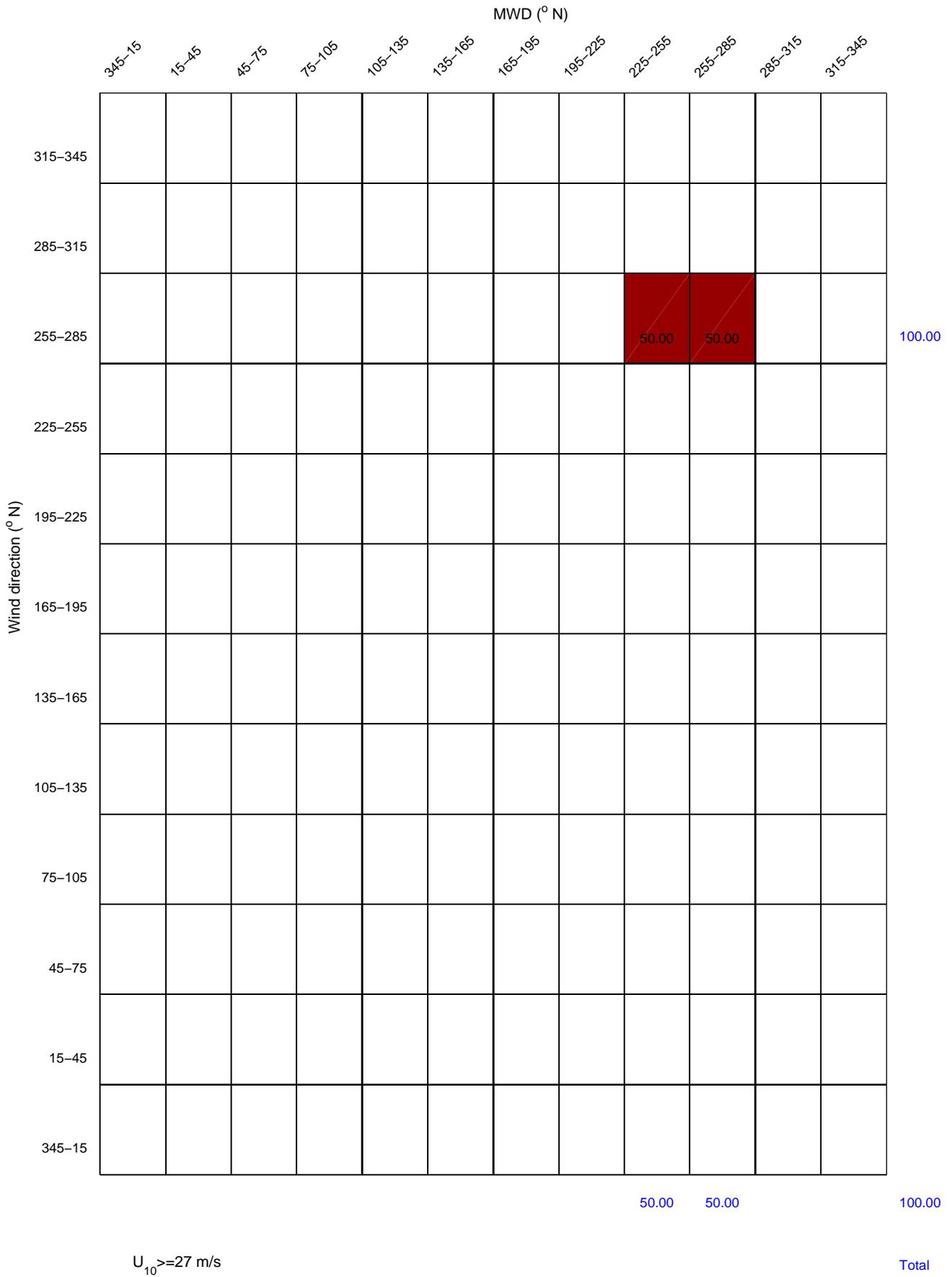
App. B.1.013



Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

25 m/s  $\leq U_{10} < 27$  m/s



$U_{10} \geq 27$  m/s

Total

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 10m

$U_{10} \geq 27$  m/s

**Deltares**

App. B.1.015

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.09	0.11	0.01	0.00	0.00	0.00	0.01	0.02	0.06	0.16	0.54	3.35	5.37	
	285-315	0.40	0.12	0.04	0.01	0.02	0.01	0.01	0.04	0.19	0.67	2.54	2.55	6.58	
	255-285	0.42	0.11	0.05	0.03	0.02	0.02	0.03	0.15	0.99	3.35	2.45	1.44	9.07	
	225-255	0.60	0.17	0.09	0.05	0.05	0.06	0.13	1.33	10.23	4.15	1.98	1.55	20.39	
	195-225	0.65	0.18	0.14	0.09	0.13	0.20	0.87	5.42	3.40	0.82	0.61	1.00	13.50	
	165-195	1.87	0.30	0.18	0.15	0.23	0.46	2.59	1.64	0.53	0.36	0.37	1.09	9.75	
	135-165	0.61	0.29	0.25	0.26	0.63	1.28	0.72	0.26	0.19	0.16	0.18	0.37	5.19	
	105-135	0.62	0.37	0.48	1.02	1.11	0.23	0.08	0.04	0.09	0.07	0.07	0.26	4.45	
	75-105	0.91	0.93	1.68	1.92	0.13	0.05	0.02	0.02	0.05	0.04	0.08	0.27	6.10	
	45-75	1.69	2.79	2.96	0.18	0.03	0.01	0.01	0.01	0.02	0.04	0.08	0.35	8.16	
	15-45	3.33	3.61	0.29	0.01	0.01	0.01	0.01	0.00	0.02	0.04	0.07	0.43	7.84	
345-15	2.58	0.24	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.07	0.62	3.60		
All year		14.76	9.22	6.18	3.72	2.35	2.34	4.47	8.94	15.78	9.91	9.05	13.27	100.00	Total

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 70m

All Year

**Deltares**

App. B.1.016

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.15	0.58	0.07	0.01	0.02	0.03	0.03	0.07	0.26	0.24	0.35	1.18	3.98	
	285-315	1.31	0.53	0.23	0.06	0.08	0.02	0.02	0.19	0.40	0.54	0.71	1.83	5.93	
	255-285	1.97	0.56	0.24	0.05	0.07	0.09	0.12	0.30	0.66	0.91	1.21	2.62	8.80	
	225-255	2.72	0.74	0.33	0.19	0.17	0.17	0.07	0.37	1.13	1.11	1.57	3.38	11.94	
	195-225	3.38	0.73	0.55	0.25	0.26	0.23	0.23	0.33	0.94	0.70	1.16	3.36	12.13	
	165-195	4.35	1.21	0.61	0.33	0.26	0.16	0.20	0.38	0.74	0.94	1.40	3.00	13.58	
	135-165	2.53	0.87	0.67	0.30	0.19	0.34	0.13	0.22	0.62	0.63	0.79	1.91	9.19	
	105-135	2.80	0.67	0.58	0.21	0.08	0.12	0.09	0.07	0.33	0.29	0.32	1.58	7.13	
	75-105	3.85	0.84	0.88	0.13	0.21	0.03	0.03	0.09	0.28	0.26	0.42	1.56	8.58	
	45-75	4.68	1.35	0.95	0.14	0.10	0.04	0.03	0.05	0.10	0.24	0.45	1.92	10.06	
	15-45	3.13	1.06	0.46	0.05	0.03	0.03	0.03	0.04	0.07	0.25	0.41	1.32	6.88	
	345-15	0.76	0.31	0.05	0.01		0.02	0.03	0.03	0.08	0.11	0.08	0.33	1.80	
		32.65	9.45	5.62	1.73	1.46	1.28	0.99	2.13	5.59	6.23	8.88	23.99	100.00	
		1 m/s $\leq U_{70} < 3$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 70m

1 m/s  $\leq U_{70} < 3$  m/s

**Deltares**

App. B.1.017

		MWD (° N)												
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
Wind direction (° N)	315-345	1.61	0.31	0.05	0.02	0.01	0.01	0.01	0.05	0.13	0.34	0.88	2.42	5.83
	285-315	1.31	0.44	0.11	0.05	0.06	0.00	0.04	0.06	0.31	0.61	1.39	2.91	7.29
	255-285	1.41	0.32	0.13	0.08	0.06	0.06	0.10	0.22	0.68	1.17	1.76	3.55	9.54
	225-255	1.87	0.38	0.23	0.13	0.12	0.13	0.19	0.61	1.55	1.83	2.48	3.83	13.34
	195-225	1.85	0.40	0.31	0.25	0.27	0.26	0.41	0.63	1.38	0.84	1.06	2.68	10.35
	165-195	2.80	0.75	0.40	0.33	0.42	0.45	0.57	0.58	0.63	0.72	0.65	2.25	10.56
	135-165	1.52	0.58	0.54	0.38	0.45	0.66	0.36	0.31	0.27	0.34	0.46	0.74	6.61
	105-135	1.72	0.81	0.90	0.69	0.63	0.33	0.17	0.10	0.21	0.20	0.20	0.64	6.61
	75-105	2.55	1.66	1.35	0.56	0.14	0.16	0.06	0.05	0.13	0.11	0.22	0.79	7.77
	45-75	4.61	2.38	1.40	0.19	0.06	0.02	0.01	0.02	0.08	0.08	0.27	1.09	10.22
	15-45	5.02	1.57	0.39	0.04	0.01	0.03	0.00		0.10	0.11	0.23	1.58	9.09
	345-15	1.32	0.35	0.04	0.00		0.02	0.01	0.01	0.04	0.14	0.18	0.69	2.80
		27.59	9.93	5.85	2.73	2.23	2.14	1.94	2.64	5.51	6.49	9.78	23.18	100.00
		3 m/s $\leq U_{70} < 5$ m/s												Total

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 70m

3 m/s  $\leq U_{70} < 5$  m/s

**Deltares**

App. B.1.018

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.52	0.17	0.02		0.01	0.01	0.01	0.02	0.10	0.27	0.79	3.03	5.96	
	285-315	0.58	0.05	0.02	0.01	0.01	0.01	0.00	0.05	0.23	0.67	2.17	3.26	7.07	
	255-285	0.38	0.09	0.05	0.04	0.03	0.02	0.03	0.20	0.72	1.46	2.48	2.70	8.20	
	225-255	0.70	0.22	0.14	0.08	0.05	0.11	0.17	0.82	3.45	3.06	3.35	3.13	15.29	
	195-225	0.68	0.24	0.20	0.15	0.24	0.37	0.70	1.81	2.11	1.16	1.13	1.62	10.42	
	165-195	2.19	0.41	0.30	0.24	0.30	0.64	0.89	0.98	0.59	0.31	0.45	1.65	8.94	
	135-165	0.85	0.55	0.36	0.49	0.80	1.15	0.63	0.40	0.35	0.23	0.20	0.46	6.47	
	105-135	0.80	0.78	0.90	1.53	1.08	0.36	0.19	0.08	0.12	0.08	0.10	0.22	6.25	
	75-105	1.43	2.02	2.29	1.47	0.20	0.09	0.03	0.03	0.03	0.03	0.07	0.23	7.92	
	45-75	3.19	4.13	1.91	0.28	0.06	0.02	0.01	0.00	0.01	0.04	0.08	0.35	10.08	
	15-45	5.38	2.81	0.39	0.01	0.01	0.02	0.01	0.00	0.02	0.05	0.05	0.62	9.39	
	345-15	2.57	0.42	0.04	0.01	0.01			0.01	0.01	0.04	0.12	0.78	4.01	
		20.27	11.90	6.62	4.30	2.81	2.80	2.67	4.42	7.76	7.41	10.99	18.04	100.00	
5 m/s $\leq U_{70} < 7$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 70m

5 m/s  $\leq U_{70} < 7$  m/s

**Deltares**

App. B.1.019

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.23	0.03		0.01	0.00		0.00	0.01	0.01	0.16	0.66	3.40	5.51	
	285-315	0.16	0.07	0.02	0.00	0.01	0.00	0.00	0.04	0.20	0.72	2.91	3.08	7.21	
	255-285	0.10	0.04	0.01	0.01	0.01	0.01	0.02	0.14	1.04	2.60	2.91	1.33	8.22	
	225-255	0.22	0.10	0.07	0.01	0.05	0.06	0.19	0.89	5.93	5.36	3.17	1.51	17.55	
	195-225	0.19	0.11	0.09	0.06	0.14	0.29	0.80	3.08	3.07	1.33	0.77	0.71	10.65	
	165-195	2.20	0.21	0.14	0.15	0.38	0.79	1.93	1.60	0.58	0.42	0.38	1.04	9.82	
	135-165	0.25	0.25	0.29	0.36	0.96	1.25	1.05	0.40	0.17	0.11	0.11	0.15	5.34	
	105-135	0.26	0.42	0.64	1.82	1.50	0.29	0.10	0.06	0.05	0.03	0.04	0.08	5.28	
	75-105	0.36	1.33	2.43	2.46	0.24	0.04	0.02	0.02	0.03	0.02	0.03	0.05	7.01	
	45-75	1.25	4.38	3.61	0.27	0.03				0.01		0.01	0.06	9.62	
	15-45	5.02	3.81	0.27	0.01	0.01	0.00	0.01		0.01	0.01	0.01	0.19	9.35	
	345-15	3.23	0.25	0.01		0.00				0.01	0.03	0.06	0.86	4.45	
		14.47	10.98	7.58	5.18	3.34	2.73	4.12	6.23	11.10	10.78	11.05	12.46	100.00	
		7 m/s ≤ U <sub>70</sub> < 9 m/s													Total

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 70m

7 m/s ≤ U<sub>70</sub> < 9 m/s

**Deltares**

App. B.1.020

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.87	0.01	0.00	0.00				0.00	0.03	0.11	0.56	3.64	5.23	
	285-315	0.06	0.01	0.00			0.00		0.02	0.13	0.75	3.09	2.76	6.82	
	255-285	0.05	0.01		0.01		0.01	0.02	0.16	1.08	3.54	2.99	0.72	8.57	
	225-255	0.06	0.05	0.01	0.00	0.01	0.03	0.15	1.22	10.32	5.87	1.85	0.36	19.93	
	195-225	0.05	0.07	0.03	0.03	0.06	0.15	1.02	4.99	3.96	0.90	0.34	0.14	11.74	
	165-195	1.38	0.07	0.05	0.05	0.18	0.46	3.09	2.16	0.64	0.34	0.17	0.51	9.11	
	135-165	0.08	0.09	0.15	0.19	0.97	2.00	1.09	0.35	0.10	0.06	0.03	0.06	5.18	
	105-135	0.04	0.18	0.39	1.22	1.96	0.21	0.04	0.01	0.01	0.03	0.01	0.02	4.11	
	75-105	0.05	0.59	2.68	3.14	0.08	0.01			0.01	0.01		0.02	6.58	
	45-75	0.24	3.52	5.05	0.19	0.01					0.00		0.01	9.02	
	15-45	3.23	5.45	0.23	0.01			0.00				0.00	0.05	8.97	
	345-15	3.83	0.17	0.00						0.02	0.02	0.03	0.68	4.74	
		9.93	10.21	8.59	4.85	3.27	2.88	5.40	8.92	16.30	11.62	9.07	8.96	100.00	
9 m/s $\leq U_{70} < 11$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 70m

9 m/s  $\leq U_{70} < 11$  m/s

**Deltares**

App. B.1.021

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.87								0.00	0.01	0.07	0.37	4.21	5.53
	285-315	0.01								0.01	0.10	0.70	3.19	2.08	6.09
	255-285						0.00		0.09	1.22	5.29	2.74	0.18		9.53
	225-255	0.00	0.01	0.02			0.01	0.11	1.84	15.59	5.89	1.06	0.08		24.62
	195-225	0.01	0.01	0.00		0.02	0.10	1.20	7.97	5.14	0.56	0.08	0.04		15.14
	165-195	0.97	0.03	0.02	0.05	0.10	0.35	4.51	2.49	0.49	0.12	0.06	0.34		9.52
	135-165	0.02	0.03	0.03	0.16	0.70	2.02	0.98	0.13	0.02	0.01	0.01	0.03		4.16
	105-135	0.01	0.01	0.09	0.90	1.61	0.17	0.00	0.00	0.00	0.00				2.80
	75-105	0.00	0.08	1.33	2.82	0.05									4.30
	45-75	0.03	2.41	4.53	0.11									0.01	7.09
	15-45	1.29	5.73	0.23											7.25
	345-15	3.25	0.11							0.01	0.00	0.02	0.58		3.97
		6.46	8.43	6.26	4.05	2.48	2.64	6.82	12.56	22.60	12.64	7.53	7.55	100.00	
11 m/s $\leq U_{70} < 13$ m/s														Total	

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 70m

11 m/s  $\leq U_{70} < 13$  m/s

**Deltares**

App. B.1.022

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.60									0.02	0.22	4.48	5.32	
	285-315								0.02	0.07	0.72	3.06	1.84	5.71	
	255-285							0.02	0.07	1.31	6.03	2.40	0.05	9.88	
	225-255	0.01	0.01	0.01				0.05	2.39	19.48	5.16	0.53	0.02	27.64	
	195-225		0.01				0.03	1.42	12.68	5.65	0.35	0.04	0.01	20.19	
	165-195	0.75	0.02			0.03	0.31	5.24	2.85	0.25	0.05	0.02	0.12	9.63	
	135-165	0.03		0.01	0.04	0.22	1.65	0.59	0.03				0.01	2.58	
	105-135			0.02	0.43	0.72	0.16			0.01				1.34	
	75-105		0.01	0.66	2.97	0.04								3.69	
	45-75	0.02	1.32	3.48	0.06	0.01								4.88	
	15-45	0.66	5.32	0.14							0.01			6.12	
	345-15	2.68	0.07									0.02	0.24	3.01	
		4.74	6.75	4.32	3.51	1.02	2.16	7.31	18.05	26.76	12.34	6.29	6.75	100.00	
		13 m/s $\leq U_{70} < 15$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 70m

13 m/s  $\leq U_{70} < 15$  m/s

**Deltares**

App. B.1.023

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.69									0.02	0.14	4.60	5.46	
	285-315									0.06	0.42	3.11	1.62	5.20	
	255-285								0.09	1.08	7.46	2.26	0.02	10.90	
	225-255							0.03	2.79	26.87	4.32	0.12		34.13	
	195-225						0.02	1.24	15.22	5.62	0.09			22.19	
	165-195	0.45	0.01				0.13	5.29	2.47	0.20	0.03		0.06	8.63	
	135-165				0.01	0.10	0.86	0.46						1.43	
	105-135				0.14	0.36	0.09							0.59	
	75-105			0.40	1.40	0.01								1.81	
	45-75		0.33	2.39	0.04									2.76	
	15-45	0.37	3.41	0.29									0.01	4.09	
	345-15	2.28	0.14										0.37	2.80	
		3.80	3.90	3.07	1.60	0.47	1.10	7.03	20.56	33.82	12.33	5.63	6.69	100.00	
		15 m/s $\leq U_{70} < 17$ m/s													Total

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 70m

15 m/s  $\leq U_{70} < 17$  m/s

**Deltares**

App. B.1.024

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.63										0.24	4.41	5.28	
	285-315									0.77	3.53	1.26	5.56		
	255-285							0.02	1.40	7.80	2.76	0.02	12.00		
	225-255						0.02	3.43	33.16	3.11			39.72		
	195-225						1.20	17.06	4.94	0.02			23.21		
	165-195	0.35				0.04	5.79	1.97	0.02	0.02			8.18		
	135-165	0.06			0.02	0.73	0.45						1.26		
	105-135				0.16	0.22	0.08						0.47		
	75-105				0.57								0.57		
	45-75			0.59									0.59		
	15-45	0.16	1.36	0.18									1.71		
	345-15	0.95	0.18									0.02	0.28	1.44	
		2.15	1.54	0.77	0.73	0.24	0.85	7.45	22.48	39.52	11.72	6.56	5.97	100.00	
17 m/s $\leq U_{70} < 19$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 70m

17 m/s  $\leq U_{70} < 19$  m/s

**Deltares**

App. B.1.025

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.29										0.08	3.45	3.82	
	285-315								0.04	0.08	0.12	3.99	1.40	5.63	
	255-285								0.08	1.81	6.54	1.73		10.15	
	225-255								3.86	39.05	1.60			44.51	
	195-225						1.07	18.00	6.17					25.24	
	165-195	0.41				0.04	5.55	1.93					0.04	7.97	
	135-165				0.04	0.25	0.29							0.58	
	105-135			0.12	0.08									0.21	
	75-105			0.29										0.29	
	45-75														
	15-45		0.62											0.62	
	345-15	0.70	0.08										0.21	0.99	
		1.40	0.70		0.41	0.12	0.29	6.91	23.92	47.10	8.26	5.80	5.10	100.00	
19 m/s $\leq U_{70} < 21$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 70m

19 m/s  $\leq U_{70} < 21$  m/s

**Deltares**

App. B.1.026

Wind direction (° N)	MWD (° N)											Total	
	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315		315-345
315-345	0.22										0.11	2.12	2.46
285-315										0.67	2.46	1.79	4.92
255-285									1.23	5.70	2.01		8.94
225-255								2.91	43.69	1.23			47.82
195-225						0.89	20.45	6.48					27.82
165-195						5.03	1.23						6.26
135-165					0.22								0.22
105-135													
75-105													
45-75													
15-45		0.56											0.56
345-15	0.89											0.11	1.01
	1.12	0.56				0.22	5.92	24.58	51.40	7.60	4.58	4.02	100.00

21 m/s  $\leq U_{70} < 23$  m/s

Total

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 70m

21 m/s  $\leq U_{70} < 23$  m/s

**Deltares**

App. B.1.027

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												1.55	1.55	
	285-315									1.55	3.42	3.11		8.07	
	255-285								3.42	9.01	1.24		13.66		
	225-255							2.48	43.17	0.31			45.96		
	195-225						2.17	18.63	4.35				25.16		
	165-195						4.97	0.62					5.59		
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
							7.14	21.74	50.93	10.87	4.66	4.66	100.00		
		23 m/s $\leq U_{70} < 25$ m/s											Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 70m

23 m/s  $\leq U_{70} < 25$  m/s

**Deltares**

App. B.1.028

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												0.98	0.98	
	285-315										1.96	0.98		2.94	
	255-285								0.98	6.86	0.98			8.82	
	225-255							6.86	46.08					52.94	
	195-225							22.55	5.88					28.43	
	165-195						5.88							5.88	
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
								5.88	29.41	52.94	8.82	1.96	0.98	100.00	
25 m/s $\leq U_{70} < 27$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 70m

25 m/s  $\leq U_{70} < 27$  m/s

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345														
	285-315											4.84	4.84	9.68	
	255-285								1.61	11.29				12.90	
	225-255							6.45	48.39	1.61				56.45	
	195-225							20.97						20.97	
	165-195														
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
									27.42	50.00	12.90	4.84	4.84	100.00	
		$U_{70} \geq 27$ m/s											Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 70m

$U_{70} \geq 27$  m/s

**Deltares**

App. B.1.030

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.36	0.12	0.03	0.01	0.01	0.00	0.01	0.02	0.07	0.19	0.60	3.86	6.26	
	285-315	0.47	0.12	0.04	0.02	0.01	0.01	0.01	0.05	0.19	0.73	2.70	2.69	7.03	
	255-285	0.46	0.11	0.05	0.02	0.02	0.02	0.02	0.16	1.10	3.73	2.65	1.48	9.83	
	225-255	0.50	0.14	0.07	0.04	0.03	0.04	0.11	1.10	10.18	3.73	1.66	1.29	18.88	
	195-225	0.42	0.12	0.10	0.05	0.08	0.11	0.54	5.29	3.32	0.77	0.54	0.82	12.15	
	165-195	0.45	0.12	0.13	0.12	0.19	0.49	2.94	1.97	0.51	0.31	0.30	0.37	7.90	
	135-165	0.51	0.23	0.24	0.25	0.58	1.29	0.72	0.25	0.16	0.14	0.14	0.29	4.80	
	105-135	0.64	0.42	0.51	1.05	1.25	0.30	0.08	0.05	0.09	0.08	0.07	0.24	4.79	
	75-105	0.84	1.04	1.93	2.00	0.14	0.05	0.02	0.02	0.05	0.05	0.09	0.25	6.47	
	45-75	1.44	2.77	2.83	0.15	0.02	0.01	0.00	0.01	0.03	0.04	0.08	0.29	7.68	
	15-45	3.16	3.62	0.24	0.01	0.01	0.01	0.01	0.01	0.04	0.05	0.09	0.43	7.67	
	345-15	4.52	0.42	0.04	0.00	0.01	0.00	0.01	0.01	0.04	0.08	0.15	1.26	6.53	
All year		14.76	9.22	6.18	3.72	2.35	2.34	4.47	8.94	15.78	9.91	9.05	13.27	100.00	Total

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 80m

All Year

**Deltares**

App. B.1.031

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	2.64	0.62	0.13	0.03	0.02	0.03	0.06	0.10	0.33	0.46	0.73	2.39	7.54	
	285-315	2.02	0.72	0.19	0.09	0.05	0.02	0.07	0.14	0.46	0.57	0.94	2.75	8.01	
	255-285	2.34	0.56	0.25	0.07	0.08	0.06	0.04	0.35	0.57	0.86	1.39	2.73	9.28	
	225-255	2.09	0.59	0.30	0.10	0.09	0.03	0.06	0.27	0.96	0.87	1.40	2.82	9.58	
	195-225	2.01	0.47	0.35	0.22	0.19	0.12	0.19	0.30	0.82	0.69	0.89	2.07	8.32	
	165-195	2.19	0.51	0.57	0.26	0.26	0.29	0.19	0.31	0.53	0.46	0.72	1.42	7.70	
	135-165	2.02	0.57	0.62	0.25	0.20	0.29	0.14	0.18	0.48	0.40	0.41	1.40	6.95	
	105-135	2.70	0.85	0.74	0.27	0.24	0.20	0.11	0.17	0.37	0.49	0.32	1.39	7.85	
	75-105	3.20	1.00	1.01	0.20	0.19	0.04	0.03	0.09	0.30	0.27	0.54	1.55	8.43	
	45-75	3.89	1.35	0.74	0.19	0.11	0.06	0.03	0.05	0.23	0.31	0.38	1.68	9.02	
	15-45	4.11	1.39	0.52	0.05	0.03	0.05	0.03	0.08	0.20	0.34	0.52	1.81	9.12	
	345-15	3.52	1.02	0.23	0.01	0.03	0.02	0.04	0.05	0.22	0.39	0.62	2.05	8.20	
		32.72	9.64	5.63	1.76	1.48	1.20	0.98	2.09	5.47	6.12	8.85	24.07	100.00	
1 m/s $\leq U_{80} < 3$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 80m

1 m/s  $\leq U_{80} < 3$  m/s

**Deltares**

App. B.1.032

		MWD (° N)												
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
Wind direction (° N)	315-345	2.27	0.31	0.06	0.02	0.02	0.01	0.02	0.02	0.16	0.34	0.88	3.37	7.48
	285-315	1.48	0.42	0.11	0.05	0.06	0.01	0.05	0.15	0.30	0.77	1.59	3.70	8.68
	255-285	1.47	0.29	0.11	0.08	0.07	0.07	0.05	0.24	0.75	1.35	2.18	3.49	10.13
	225-255	1.52	0.40	0.13	0.13	0.09	0.08	0.17	0.46	1.43	1.41	1.87	3.04	10.71
	195-225	1.29	0.22	0.28	0.13	0.17	0.19	0.29	0.63	1.34	0.90	0.89	2.16	8.50
	165-195	1.19	0.33	0.28	0.35	0.40	0.52	0.71	0.59	0.59	0.61	0.64	0.82	7.05
	135-165	1.46	0.42	0.56	0.46	0.55	0.64	0.32	0.33	0.22	0.30	0.40	0.64	6.31
	105-135	1.83	1.01	0.98	0.74	0.65	0.41	0.13	0.08	0.24	0.22	0.19	0.67	7.16
	75-105	2.41	1.84	1.56	0.54	0.12	0.17	0.07	0.05	0.13	0.12	0.20	0.71	7.91
	45-75	3.80	2.42	1.29	0.18	0.06	0.01	0.01	0.02	0.09	0.11	0.29	0.77	9.06
	15-45	4.95	1.57	0.44	0.03	0.00	0.01	0.01	0.01	0.13	0.11	0.24	1.55	9.05
	345-15	4.04	0.80	0.08	0.01		0.02	0.03	0.03	0.11	0.27	0.35	2.21	7.94
		27.72	10.03	5.88	2.73	2.20	2.16	1.87	2.61	5.49	6.50	9.71	23.12	100.00
		3 m/s $\leq U_{80} < 5$ m/s												Total

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 80m

3 m/s  $\leq U_{80} < 5$  m/s

**Deltares**

App. B.1.033

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.87	0.13	0.04		0.00	0.01	0.01	0.02	0.09	0.27	0.85	3.70	7.01	
	285-315	0.59	0.05	0.03	0.02	0.01	0.01	0.01	0.04	0.22	0.77	2.33	3.53	7.62	
	255-285	0.43	0.11	0.07	0.03	0.04	0.02	0.03	0.25	0.89	1.72	2.88	3.00	9.48	
	225-255	0.64	0.18	0.10	0.05	0.04	0.08	0.16	0.69	3.25	2.58	2.83	2.55	13.15	
	195-225	0.54	0.19	0.13	0.08	0.16	0.21	0.61	1.70	1.91	1.04	1.05	1.62	9.25	
	165-195	0.53	0.14	0.19	0.20	0.27	0.82	1.01	1.02	0.66	0.32	0.43	0.55	6.13	
	135-165	0.77	0.47	0.35	0.52	0.84	1.10	0.60	0.42	0.28	0.23	0.20	0.40	6.18	
	105-135	0.90	0.87	1.00	1.61	1.14	0.42	0.17	0.09	0.15	0.07	0.08	0.21	6.71	
	75-105	1.46	2.32	2.48	1.54	0.21	0.09	0.04	0.04	0.03	0.03	0.08	0.24	8.57	
	45-75	2.81	3.77	1.80	0.23	0.04	0.01	0.01	0.00	0.02	0.04	0.09	0.32	9.14	
	15-45	5.03	2.92	0.33	0.01	0.01	0.03	0.00	0.00	0.03	0.05	0.08	0.43	8.92	
	345-15	5.02	0.69	0.06	0.00	0.01		0.01	0.01	0.03	0.05	0.16	1.78	7.84	
		20.60	11.86	6.58	4.29	2.77	2.80	2.67	4.28	7.56	7.19	11.07	18.31	100.00	
5 m/s $\leq U_{80} < 7$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 80m

5 m/s  $\leq U_{80} < 7$  m/s

**Deltares**

App. B.1.034

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.38	0.06	0.00	0.00	0.00				0.01	0.02	0.19	0.67	4.02	6.36
	285-315	0.15	0.03	0.01	0.01	0.01	0.00	0.01	0.05	0.22	0.75	2.99	3.06		7.29
	255-285	0.12	0.06	0.03	0.03	0.02	0.02	0.02	0.15	1.17	3.18	3.37	1.41		9.56
	225-255	0.20	0.09	0.05	0.01	0.01	0.05	0.13	0.87	5.84	4.86	2.78	1.46		16.35
	195-225	0.10	0.07	0.06	0.03	0.10	0.18	0.70	2.83	2.83	1.21	0.79	0.68		9.57
	165-195	0.22	0.08	0.11	0.09	0.30	0.81	2.07	1.71	0.55	0.42	0.35	0.32		7.04
	135-165	0.23	0.26	0.27	0.31	0.97	1.34	0.94	0.32	0.13	0.11	0.10	0.13		5.11
	105-135	0.30	0.42	0.66	1.91	1.64	0.29	0.11	0.07	0.04	0.03	0.04	0.10		5.61
	75-105	0.34	1.46	2.83	2.44	0.23	0.02	0.01	0.02	0.03	0.01	0.02	0.05		7.46
	45-75	1.16	4.25	3.34	0.25	0.01	0.01			0.01	0.00	0.02	0.07		9.13
	15-45	4.52	3.84	0.15	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.02	0.14		8.72
	345-15	5.95	0.33	0.01	0.00	0.01				0.01	0.01	0.03	0.08	1.39	7.81
		14.68	10.95	7.52	5.09	3.30	2.71	4.00	6.03	10.87	10.81	11.22	12.82	100.00	
7 m/s $\leq U_{80} < 9$ m/s														Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 80m

7 m/s  $\leq U_{80} < 9$  m/s

**Deltares**

App. B.1.035

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.95	0.01	0.01	0.01				0.00	0.04	0.12	0.60	4.01	5.75	
	285-315	0.06	0.01	0.00			0.00		0.02	0.13	0.73	3.18	2.72	6.87	
	255-285	0.05	0.01		0.00	0.00	0.00	0.02	0.13	1.19	3.95	3.16	0.71	9.23	
	225-255	0.06	0.04	0.01	0.01		0.03	0.13	1.15	10.29	5.46	1.57	0.36	19.11	
	195-225	0.03	0.05	0.03	0.01	0.04	0.06	0.68	4.89	3.59	0.85	0.29	0.15	10.65	
	165-195	0.03	0.04	0.04	0.03	0.14	0.42	3.43	2.28	0.62	0.33	0.18	0.13	7.67	
	135-165	0.10	0.09	0.14	0.16	0.79	1.97	0.99	0.33	0.13	0.08	0.04	0.05	4.87	
	105-135	0.06	0.17	0.35	1.23	2.21	0.34	0.04	0.02	0.01	0.02	0.00	0.02	4.49	
	75-105	0.05	0.68	3.03	3.32	0.12	0.01	0.00		0.01	0.01	0.01	0.01	7.27	
	45-75	0.27	3.67	4.78	0.16	0.00			0.00				0.01	8.91	
	15-45	2.81	5.17	0.16	0.00	0.00		0.00		0.01	0.01		0.06	8.23	
	345-15	5.66	0.27	0.00						0.01	0.02	0.08	0.93	6.98	
		10.13	10.22	8.55	4.95	3.30	2.84	5.30	8.82	16.03	11.57	9.12	9.16	100.00	
9 m/s $\leq U_{80} < 11$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 80m

9 m/s  $\leq U_{80} < 11$  m/s

**Deltares**

App. B.1.036

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.86								0.00	0.01	0.08	0.41	4.29	5.67
	285-315	0.00								0.01	0.10	0.82	3.31	1.95	6.20
	255-285			0.00						0.08	1.37	5.76	2.77	0.16	10.14
	225-255	0.01	0.01	0.01			0.01	0.06	1.48	15.43	5.39	0.92	0.09		23.42
	195-225	0.01	0.00	0.00	0.01		0.04	0.70	7.66	4.72	0.52	0.08	0.01		13.76
	165-195	0.01	0.00	0.02	0.03	0.04	0.39	4.98	2.89	0.45	0.15	0.05	0.01		9.01
	135-165	0.01	0.02	0.03	0.10	0.53	2.03	1.16	0.18	0.02	0.02	0.01	0.01		4.13
	105-135	0.00	0.03	0.07	0.93	1.93	0.23	0.02	0.01	0.01	0.00				3.23
	75-105	0.01	0.13	1.74	2.96	0.11	0.01		0.00					0.00	4.97
	45-75	0.04	2.55	4.32	0.06									0.01	6.98
	15-45	1.28	5.62	0.18								0.00	0.01		7.10
	345-15	4.32	0.15								0.01	0.01	0.03	0.86	5.39
		6.57	8.53	6.38	4.10	2.60	2.70	6.92	12.33	22.11	12.76	7.58	7.43	100.00	
11 m/s $\leq U_{80} < 13$ m/s														Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 80m

11 m/s  $\leq U_{80} < 13$  m/s

**Deltares**

App. B.1.037

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.54									0.03	0.30	4.63	5.51	
	285-315							0.01	0.05	0.77	3.20	1.67	5.71		
	255-285							0.01	0.09	1.45	6.39	2.29	0.03	10.27	
	225-255	0.01	0.01	0.01				0.05	1.91	19.13	4.70	0.45	0.03	26.30	
	195-225		0.01					0.61	12.12	5.58	0.34	0.05	0.01	18.71	
	165-195					0.03	0.20	5.85	3.34	0.26	0.06	0.04	0.01	9.78	
	135-165	0.02	0.01	0.01	0.02	0.10	1.80	0.65	0.06	0.01		0.01	0.01	2.69	
	105-135			0.01	0.41	0.91	0.32	0.02						1.67	
	75-105		0.01	0.88	3.14	0.11								4.14	
	45-75	0.02	1.57	3.62	0.05									5.26	
	15-45	0.70	5.22	0.12						0.01	0.01			6.05	
	345-15	3.47	0.09								0.01	0.01	0.34	3.93	
		4.76	6.91	4.65	3.62	1.14	2.31	7.19	17.53	26.48	12.32	6.35	6.74	100.00	
13 m/s $\leq U_{80} < 15$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 80m

13 m/s  $\leq U_{80} < 15$  m/s

**Deltares**

App. B.1.038

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.42								0.01	0.02	0.17	4.58	5.19	
	285-315									0.05	0.50	3.16	1.54	5.26	
	255-285								0.07	1.20	7.58	2.00	0.02	10.88	
	225-255								2.17	25.56	3.98	0.13		31.84	
	195-225							0.34	14.62	6.12	0.12			21.20	
	165-195						0.06	6.15	3.84	0.34	0.03			10.43	
	135-165					0.03	0.94	0.63	0.02	0.01				1.63	
	105-135				0.13	0.43	0.14							0.69	
	75-105			0.46	1.46	0.06								1.98	
	45-75		0.52	2.62	0.04									3.18	
	15-45	0.35	3.62	0.14										4.11	
	345-15	3.09	0.07									0.01	0.44	3.61	
		3.85	4.21	3.21	1.63	0.52	1.14	7.12	20.73	33.30	12.23	5.47	6.58	100.00	
15 m/s $\leq U_{80} < 17$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 80m

15 m/s  $\leq U_{80} < 17$  m/s

**Deltares**

App. B.1.039

Wind direction (° N)	MWD (° N)											Total	
	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315		315-345
315-345	0.50									0.02	0.27	4.50	5.30
285-315										0.75	3.73	1.14	5.62
255-285								0.02	1.49	8.37	2.47	0.02	12.37
225-255								2.15	31.56	2.71	0.04		36.45
195-225	0.02						0.33	15.96	6.11	0.04			22.46
165-195							6.57	4.04	0.06				10.67
135-165						0.77	0.62	0.02					1.41
105-135				0.15	0.25	0.10							0.50
75-105				0.56									0.56
45-75	0.02	0.02	0.68										0.72
15-45	0.23	1.57	0.15										1.95
345-15	1.47	0.15									0.02	0.35	1.99
	2.24	1.74	0.83	0.72	0.25	0.87	7.52	22.19	39.22	11.89	6.53	6.01	100.00

17 m/s  $\leq U_{80} < 19$  m/s

Total

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 80m

17 m/s  $\leq U_{80} < 19$  m/s

**Deltares**

App. B.1.040

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.19										0.23	3.23	3.65	
	285-315							0.04	0.08	0.31	4.07	1.38	5.88		
	255-285							0.08	1.81	6.26	1.34		9.49		
	225-255							2.96	38.34	1.84			43.14		
	195-225						0.15	17.33	6.84				24.32		
	165-195						6.30	3.92					10.22		
	135-165				0.04	0.27	0.38						0.69		
	105-135			0.12	0.08	0.04							0.23		
	75-105			0.35									0.35		
	45-75														
	15-45		0.69										0.69		
	345-15	1.11	0.04										0.19	1.34	
		1.31	0.73		0.46	0.12	0.31	6.84	24.32	47.06	8.41	5.65	4.80	100.00	
19 m/s $\leq U_{80} < 21$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 80m

19 m/s  $\leq U_{80} < 21$  m/s

**Deltares**

App. B.1.041

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.19										0.10	2.22	2.51	
	285-315									0.58	3.38	1.26	5.22		
	255-285								0.77	6.28	1.74	8.79			
	225-255							1.35	41.74	0.87	43.96				
	195-225						0.39	18.84	8.21	27.44					
	165-195						5.70	4.15	9.86						
	135-165					0.19	0.10	0.29							
	105-135														
	75-105														
	45-75														
	15-45		0.48										0.48		
	345-15	0.97											0.48	1.45	
		1.16	0.48				0.19	6.18	24.35	50.72	7.73	5.22	3.96	100.00	
21 m/s $\leq U_{80} < 23$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 80m

21 m/s  $\leq U_{80} < 23$  m/s

**Deltares**

App. B.1.042

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												2.50	2.50	
	285-315										1.39	3.06	2.50	6.94	
	255-285									2.22	7.22	0.83		10.28	
	225-255								0.83	43.06	0.83			44.72	
	195-225							0.28	18.33	7.50				26.11	
	165-195							5.56	3.61					9.17	
	135-165							0.28						0.28	
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
								6.11	22.78	52.78	9.44	3.89	5.00	100.00	
		23 m/s $\leq U_{80} < 25$ m/s											Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 80m

23 m/s  $\leq U_{80} < 25$  m/s

**Deltares**

App. B.1.043

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												0.84	0.84	
	285-315										1.68	1.68		3.36	
	255-285								0.84	7.56				8.40	
	225-255							2.52	44.54					47.06	
	195-225							22.69	8.40					31.09	
	165-195						6.72	2.52						9.24	
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
							6.72	27.73	53.78	9.24	1.68	0.84	100.00		
25 m/s $\leq U_{80} < 27$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 80m

25 m/s  $\leq U_{80} < 27$  m/s

**Deltares**

App. B.1.044

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												2.78	2.78	
	285-315											2.78	1.39	4.17	
	255-285								1.39	11.11	2.78			15.28	
	225-255							4.17	44.44	1.39				50.00	
	195-225							18.06	4.17					22.22	
	165-195							5.56						5.56	
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
								27.78	50.00	12.50	5.56	4.17	100.00		
U <sub>80</sub> ≥ 27 m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 80m

U<sub>80</sub> ≥ 27 m/s

**Deltares**

App. B.1.045

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.36	0.12	0.03	0.01	0.01	0.01	0.01	0.02	0.07	0.19	0.61	3.87	6.29	
	285-315	0.47	0.12	0.03	0.02	0.01	0.01	0.01	0.05	0.19	0.74	2.70	2.69	7.05	
	255-285	0.46	0.11	0.05	0.03	0.02	0.02	0.02	0.16	1.12	3.76	2.65	1.49	9.90	
	225-255	0.51	0.14	0.07	0.04	0.03	0.04	0.11	1.12	10.23	3.73	1.66	1.30	18.96	
	195-225	0.43	0.12	0.10	0.05	0.08	0.11	0.56	5.32	3.26	0.75	0.53	0.80	12.12	
	165-195	0.45	0.13	0.13	0.12	0.20	0.49	2.94	1.94	0.49	0.30	0.29	0.37	7.86	
	135-165	0.52	0.24	0.25	0.27	0.61	1.30	0.69	0.23	0.16	0.14	0.14	0.29	4.83	
	105-135	0.64	0.44	0.52	1.06	1.22	0.29	0.08	0.05	0.09	0.08	0.07	0.23	4.79	
	75-105	0.84	1.04	1.97	1.97	0.14	0.04	0.02	0.02	0.05	0.04	0.08	0.25	6.46	
	45-75	1.43	2.80	2.77	0.15	0.02	0.01	0.00	0.01	0.03	0.04	0.08	0.29	7.63	
	15-45	3.17	3.56	0.23	0.01	0.01	0.01	0.01	0.01	0.04	0.05	0.08	0.43	7.60	
	345-15	4.50	0.41	0.04	0.00	0.00	0.00	0.01	0.01	0.04	0.08	0.15	1.26	6.51	
All year		14.76	9.22	6.18	3.72	2.35	2.34	4.47	8.94	15.78	9.91	9.05	13.27	100.00	Total

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 90m

All Year

**Deltares**

App. B.1.046

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	2.68	0.65	0.14	0.03	0.03	0.03	0.06	0.09	0.32	0.42	0.69	2.42	7.56	
	285-315	2.03	0.71	0.20	0.10	0.05	0.02	0.06	0.16	0.44	0.60	0.98	2.73	8.08	
	255-285	2.39	0.61	0.26	0.07	0.07	0.05	0.04	0.34	0.61	0.83	1.39	2.74	9.40	
	225-255	2.13	0.57	0.28	0.10	0.09	0.04	0.04	0.26	0.94	0.87	1.33	2.77	9.43	
	195-225	2.02	0.48	0.38	0.22	0.19	0.12	0.20	0.30	0.82	0.68	0.91	2.05	8.37	
	165-195	2.16	0.54	0.54	0.26	0.26	0.29	0.18	0.31	0.51	0.46	0.68	1.48	7.65	
	135-165	2.02	0.58	0.61	0.26	0.20	0.28	0.13	0.19	0.49	0.44	0.45	1.41	7.05	
	105-135	2.69	0.87	0.76	0.26	0.24	0.20	0.11	0.15	0.38	0.48	0.31	1.34	7.79	
	75-105	3.19	0.98	1.00	0.20	0.18	0.03	0.03	0.09	0.31	0.26	0.49	1.61	8.36	
	45-75	3.84	1.39	0.73	0.20	0.11	0.06	0.02	0.04	0.23	0.28	0.40	1.67	8.97	
	15-45	4.07	1.39	0.50	0.06	0.03	0.04	0.04	0.09	0.20	0.35	0.51	1.79	9.08	
	345-15	3.50	1.01	0.24	0.01	0.03	0.02	0.05	0.05	0.26	0.41	0.64	2.05	8.25	
		32.71	9.77	5.64	1.76	1.47	1.19	0.96	2.08	5.52	6.06	8.78	24.05	100.00	
1 m/s $\leq U_{90} < 3$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 90m

1 m/s  $\leq U_{90} < 3$  m/s

**Deltares**

App. B.1.047

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	2.30	0.31	0.06	0.02	0.02	0.01	0.01	0.02	0.16	0.37	0.92	3.38	7.60	
	285-315	1.47	0.41	0.10	0.04	0.06	0.02	0.05	0.15	0.29	0.77	1.62	3.70	8.67	
	255-285	1.51	0.30	0.11	0.08	0.07	0.06	0.04	0.22	0.76	1.33	2.20	3.49	10.17	
	225-255	1.55	0.40	0.12	0.13	0.10	0.08	0.16	0.47	1.39	1.39	1.86	3.05	10.70	
	195-225	1.29	0.25	0.29	0.12	0.17	0.21	0.30	0.61	1.29	0.87	0.88	2.13	8.40	
	165-195	1.19	0.32	0.28	0.34	0.41	0.53	0.70	0.61	0.57	0.58	0.62	0.80	6.97	
	135-165	1.48	0.44	0.56	0.47	0.56	0.64	0.31	0.29	0.22	0.29	0.38	0.67	6.31	
	105-135	1.88	1.07	1.05	0.72	0.63	0.43	0.13	0.09	0.20	0.22	0.19	0.67	7.29	
	75-105	2.40	1.86	1.55	0.55	0.12	0.15	0.06	0.04	0.12	0.11	0.20	0.68	7.86	
	45-75	3.76	2.46	1.27	0.18	0.06	0.01	0.01	0.02	0.09	0.11	0.28	0.78	9.03	
	15-45	4.99	1.60	0.42	0.03	0.00	0.01	0.01	0.01	0.11	0.12	0.23	1.54	9.08	
	345-15	4.06	0.76	0.07	0.01		0.02	0.02	0.03	0.10	0.27	0.35	2.21	7.91	
		27.87	10.18	5.89	2.71	2.20	2.17	1.82	2.56	5.31	6.43	9.74	23.11	100.00	
		3 m/s $\leq U_{90} < 5$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 90m

3 m/s  $\leq U_{90} < 5$  m/s

**Deltares**

App. B.1.048

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.89	0.13	0.04		0.00	0.01	0.01	0.02	0.10	0.27	0.84	3.71	7.03	
	285-315	0.62	0.06	0.03	0.01	0.01	0.01	0.01	0.06	0.24	0.80	2.33	3.60	7.79	
	255-285	0.42	0.12	0.08	0.04	0.04	0.02	0.04	0.25	0.90	1.73	2.90	3.07	9.59	
	225-255	0.66	0.18	0.10	0.04	0.03	0.08	0.18	0.67	3.18	2.51	2.83	2.59	13.06	
	195-225	0.56	0.17	0.13	0.08	0.16	0.21	0.61	1.68	1.83	0.97	1.01	1.58	9.01	
	165-195	0.55	0.17	0.19	0.22	0.28	0.83	1.01	0.95	0.65	0.31	0.43	0.54	6.13	
	135-165	0.78	0.50	0.38	0.52	0.85	1.11	0.57	0.38	0.28	0.23	0.21	0.42	6.23	
	105-135	0.93	0.92	0.99	1.61	1.13	0.38	0.16	0.09	0.16	0.07	0.08	0.20	6.71	
	75-105	1.53	2.30	2.46	1.55	0.19	0.10	0.04	0.04	0.02	0.03	0.07	0.24	8.58	
	45-75	2.83	3.76	1.76	0.22	0.04	0.01	0.01		0.02	0.03	0.09	0.32	9.09	
	15-45	5.07	2.81	0.34	0.01	0.01	0.03	0.00	0.00	0.03	0.05	0.07	0.46	8.89	
	345-15	5.01	0.70	0.06	0.00	0.01		0.01	0.01	0.02	0.06	0.17	1.82	7.89	
		20.85	11.82	6.57	4.32	2.76	2.77	2.66	4.16	7.44	7.07	11.03	18.56	100.00	
		5 m/s $\leq U_{90} < 7$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 90m

5 m/s  $\leq U_{90} < 7$  m/s

**Deltares**

App. B.1.049

		MWD (° N)												
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
Wind direction (° N)	315-345	1.39	0.06	0.01	0.00	0.00			0.01	0.02	0.20	0.70	4.12	6.52
	285-315	0.16	0.03	0.01	0.01	0.01	0.00	0.01	0.05	0.22	0.78	3.02	3.12	7.43
	255-285	0.13	0.05	0.02	0.02	0.02	0.02	0.02	0.17	1.17	3.20	3.41	1.50	9.74
	225-255	0.22	0.11	0.04	0.02	0.02	0.06	0.13	0.86	5.78	4.76	2.79	1.48	16.26
	195-225	0.12	0.07	0.08	0.04	0.10	0.19	0.74	2.80	2.68	1.24	0.78	0.68	9.51
	165-195	0.22	0.09	0.11	0.11	0.33	0.79	1.96	1.70	0.55	0.39	0.36	0.32	6.92
	135-165	0.26	0.27	0.28	0.35	0.99	1.30	0.90	0.29	0.12	0.11	0.10	0.14	5.11
	105-135	0.28	0.42	0.69	1.93	1.59	0.29	0.11	0.07	0.04	0.02	0.03	0.09	5.58
	75-105	0.35	1.50	2.80	2.33	0.23	0.02	0.01	0.01	0.04	0.01	0.02	0.05	7.37
	45-75	1.22	4.28	3.23	0.25	0.01	0.00			0.00	0.00	0.02	0.07	9.09
	15-45	4.53	3.72	0.15	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.03	0.14	8.63
	345-15	5.95	0.33	0.01	0.00	0.01				0.01	0.01	0.03	0.08	7.85
		14.84	10.93	7.44	5.06	3.30	2.68	3.88	5.95	10.66	10.76	11.34	13.15	100.00
7 m/s $\leq U_{90} < 9$ m/s													Total	

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 90m

7 m/s  $\leq U_{90} < 9$  m/s

**Deltares**

App. B.1.050

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.97	0.01	0.01	0.01				0.00	0.04	0.13	0.63	3.97	5.77	
	285-315	0.07	0.01	0.00			0.00		0.03	0.14	0.74	3.13	2.72	6.83	
	255-285	0.05	0.03	0.00	0.00	0.00	0.00	0.02	0.13	1.23	3.93	3.18	0.71	9.29	
	225-255	0.06	0.04	0.01	0.01	0.00	0.02	0.13	1.21	10.06	5.56	1.62	0.43	19.16	
	195-225	0.03	0.05	0.02	0.01	0.04	0.06	0.70	4.80	3.54	0.84	0.32	0.17	10.59	
	165-195	0.04	0.04	0.05	0.03	0.16	0.48	3.42	2.21	0.57	0.34	0.17	0.13	7.64	
	135-165	0.09	0.10	0.14	0.21	0.87	1.95	0.95	0.30	0.13	0.10	0.05	0.05	4.94	
	105-135	0.10	0.20	0.38	1.24	2.08	0.32	0.05	0.02	0.01	0.02	0.00	0.02	4.44	
	75-105	0.06	0.76	3.18	3.25	0.10	0.00	0.00	0.00	0.01	0.00	0.01	0.01	7.41	
	45-75	0.29	3.71	4.65	0.16	0.00		0.00	0.00				0.01	8.84	
	15-45	2.91	4.96	0.13	0.00	0.00				0.01	0.01		0.06	8.08	
	345-15	5.69	0.25	0.00						0.01	0.03	0.08	0.95	7.02	
		10.37	10.16	8.57	4.93	3.26	2.83	5.27	8.70	15.75	11.70	9.19	9.25	100.00	
9 m/s $\leq U_{90} < 11$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 90m

9 m/s  $\leq U_{90} < 11$  m/s

**Deltares**

App. B.1.051

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.85							0.00	0.01	0.07	0.42	4.30	5.66	
	285-315	0.00							0.01	0.11	0.79	3.38	1.92	6.21	
	255-285			0.00				0.00	0.08	1.38	5.76	2.74	0.19	10.16	
	225-255	0.02	0.02	0.01		0.00	0.02	0.09	1.47	15.14	5.35	0.99	0.11	23.22	
	195-225	0.01	0.01	0.01	0.01		0.05	0.74	7.55	4.64	0.52	0.08	0.02	13.64	
	165-195	0.01	0.01	0.02	0.03	0.04	0.40	4.90	2.73	0.46	0.15	0.07	0.02	8.84	
	135-165	0.01	0.02	0.04	0.11	0.62	2.04	1.05	0.21	0.03	0.02	0.01	0.01	4.18	
	105-135	0.01	0.04	0.10	1.08	1.92	0.21	0.02	0.01	0.01	0.01			3.41	
	75-105	0.01	0.15	1.93	2.96	0.10	0.00		0.00				0.00	5.16	
	45-75	0.04	2.67	4.18	0.06								0.01	6.97	
	15-45	1.40	5.59	0.14								0.00	0.01	7.15	
	345-15	4.32	0.16							0.01	0.01	0.04	0.85	5.39	
		6.70	8.67	6.44	4.25	2.69	2.72	6.81	12.07	21.80	12.69	7.72	7.44	100.00	
11 m/s $\leq U_{90} < 13$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 90m

11 m/s  $\leq U_{90} < 13$  m/s

**Deltares**

App. B.1.052

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.53									0.04	0.29	4.63	5.49	
	285-315							0.01	0.06	0.79	3.18	1.69	5.74		
	255-285							0.01	0.09	1.49	6.28	2.39	0.03	10.30	
	225-255	0.01	0.01	0.01				0.06	1.92	18.95	4.71	0.47	0.03	26.15	
	195-225		0.01					0.65	11.66	5.36	0.35	0.05	0.02	18.10	
	165-195					0.03	0.22	5.91	3.25	0.26	0.06	0.03	0.01	9.76	
	135-165	0.03	0.01	0.02	0.04	0.14	1.94	0.75	0.05	0.01		0.01	0.01	2.99	
	105-135		0.01	0.02	0.47	1.00	0.34	0.02						1.86	
	75-105		0.03	1.05	3.09	0.10								4.26	
	45-75	0.02	1.70	3.68	0.05									5.45	
	15-45	0.69	5.23	0.13						0.01	0.01			6.06	
	345-15	3.37	0.09								0.01	0.01	0.35	3.83	
		4.64	7.08	4.91	3.65	1.27	2.50	7.40	16.98	26.14	12.24	6.44	6.76	100.00	
13 m/s $\leq U_{90} < 15$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 90m

13 m/s  $\leq U_{90} < 15$  m/s

**Deltares**

App. B.1.053

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.38									0.03	0.22	4.46	5.09	
	285-315									0.05	0.55	3.06	1.49	5.15	
	255-285								0.07	1.12	7.55	1.97	0.02	10.74	
	225-255							0.01	2.23	25.21	4.12	0.13		31.70	
	195-225							0.35	14.64	6.11	0.14			21.24	
	165-195						0.09	6.06	3.84	0.32	0.04			10.35	
	135-165					0.04	0.92	0.60	0.03	0.01			0.01	1.61	
	105-135				0.12	0.45	0.14							0.72	
	75-105			0.47	1.53	0.07								2.07	
	45-75		0.65	2.78	0.04									3.47	
	15-45	0.39	3.67	0.13										4.20	
	345-15	3.14	0.07									0.01	0.44	3.66	
		3.91	4.40	3.38	1.69	0.57	1.16	7.02	20.81	32.82	12.43	5.40	6.42	100.00	
		15 m/s $\leq U_{90} < 17$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 90m

15 m/s  $\leq U_{90} < 17$  m/s

**Deltares**

App. B.1.054

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.54								0.02	0.02	0.26	4.47	5.31	
	285-315									0.68	3.61	1.13	5.42		
	255-285							0.02	1.52	8.27	2.40	0.02	12.22		
	225-255							2.14	31.62	2.66	0.04		36.46		
	195-225	0.02						0.30	16.01	5.94	0.02		22.28		
	165-195							6.55	4.01	0.07			10.63		
	135-165					0.02	0.80	0.61	0.02				1.44		
	105-135				0.15	0.26	0.09						0.50		
	75-105				0.59								0.59		
	45-75	0.02	0.04	0.72									0.78		
	15-45	0.26	1.87	0.15									2.27		
	345-15	1.57	0.15									0.02	0.35	2.09	
		2.40	2.05	0.87	0.74	0.28	0.89	7.45	22.21	39.16	11.65	6.32	5.97	100.00	
		17 m/s $\leq U_{90} < 19$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 90m

17 m/s  $\leq U_{90} < 19$  m/s

**Deltares**

App. B.1.055

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.22										0.25	3.09	3.55	
	285-315								0.07	0.39	3.91	1.33	5.71		
	255-285							0.07	1.69	6.79	1.44		9.98		
	225-255							3.16	38.13	2.08			43.38		
	195-225						0.25	17.24	6.71				24.20		
	165-195						6.21	3.77					9.98		
	135-165				0.04	0.29	0.39						0.72		
	105-135			0.14	0.07	0.04							0.25		
	75-105			0.32									0.32		
	45-75			0.04									0.04		
	15-45		0.65										0.65		
	345-15	1.04	0.04										0.14	1.22	
		1.26	0.68	0.04	0.47	0.11	0.32	6.86	24.24	46.61	9.26	5.60	4.56	100.00	
		19 m/s $\leq U_{90} < 21$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 90m

19 m/s  $\leq U_{90} < 21$  m/s

**Deltares**

App. B.1.056

Wind direction (° N)	MWD (° N)											Total	
	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315		315-345
315-345	0.17										0.09	2.31	2.57
285-315								0.09		0.43	3.51	1.28	5.30
255-285									1.03	5.82	1.63		8.47
225-255								1.37	40.12	1.03			42.51
195-225						0.34	19.93	8.13					28.40
165-195						6.24	4.19						10.44
135-165					0.17	0.09							0.26
105-135													
75-105													
45-75													
15-45		0.51											0.51
345-15	1.03											0.51	1.54
	1.20	0.51				0.17	6.67	25.58	49.27	7.27	5.22	4.11	100.00

21 m/s  $\leq U_{90} < 23$  m/s

Total

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 90m

21 m/s  $\leq U_{90} < 23$  m/s

**Deltares**

App. B.1.057

		MWD (° N)														
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345			
Wind direction (° N)	315-345												2.27	2.27		
	285-315										1.52	3.03	2.53	7.07		
	255-285									2.53	6.57	0.76		9.85		
	225-255								1.01	45.96	0.76			47.73		
	195-225							0.25	16.16	7.58				23.99		
	165-195							5.30	3.54						8.84	
	135-165							0.25							0.25	
	105-135															
	75-105															
	45-75															
	15-45															
	345-15															
								5.81	20.71	56.06	8.84	3.79	4.80	100.00		
23 m/s $\leq U_{90} < 25$ m/s													Total			

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 90m

23 m/s  $\leq U_{90} < 25$  m/s

**Deltares**

App. B.1.058

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												0.73	0.73	
	285-315										1.46	1.46		2.92	
	255-285								0.73	6.57				7.30	
	225-255							2.19	40.88					43.07	
	195-225							28.47	8.03					36.50	
	165-195						7.30	2.19						9.49	
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
								7.30	32.85	49.64	8.03	1.46	0.73	100.00	
25 m/s $\leq U_{90} < 27$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 90m

25 m/s  $\leq U_{90} < 27$  m/s

**Deltares**

App. B.1.059

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												2.38	2.38	
	285-315											2.38	1.19	3.57	
	255-285								1.19	10.71	2.38			14.29	
	225-255							3.57	48.81	1.19				53.57	
	195-225							16.67	4.76					21.43	
	165-195							4.76						4.76	
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
								25.00	54.76	11.90	4.76	3.57	100.00		
U <sub>90</sub> ≥ 27 m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 90m

U<sub>90</sub> ≥ 27 m/s

**Deltares**

App. B.1.060

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.36	0.12	0.03	0.01	0.01	0.00	0.01	0.02	0.07	0.19	0.62	3.89	6.31	
	285-315	0.47	0.12	0.03	0.02	0.01	0.01	0.01	0.05	0.19	0.75	2.71	2.68	7.08	
	255-285	0.47	0.12	0.05	0.03	0.02	0.02	0.03	0.16	1.13	3.79	2.67	1.49	9.97	
	225-255	0.51	0.15	0.07	0.04	0.03	0.04	0.11	1.14	10.29	3.71	1.64	1.30	19.03	
	195-225	0.43	0.12	0.10	0.05	0.08	0.12	0.58	5.34	3.20	0.74	0.52	0.79	12.08	
	165-195	0.45	0.13	0.13	0.12	0.20	0.50	2.94	1.90	0.49	0.30	0.29	0.37	7.85	
	135-165	0.52	0.24	0.26	0.28	0.62	1.29	0.67	0.23	0.15	0.14	0.14	0.29	4.84	
	105-135	0.64	0.45	0.53	1.07	1.20	0.28	0.07	0.05	0.09	0.08	0.07	0.23	4.77	
	75-105	0.84	1.06	1.99	1.95	0.13	0.04	0.02	0.02	0.05	0.04	0.08	0.25	6.46	
	45-75	1.44	2.81	2.73	0.14	0.02	0.01	0.00	0.01	0.03	0.04	0.08	0.29	7.60	
	15-45	3.16	3.51	0.21	0.01	0.00	0.01	0.01	0.01	0.04	0.05	0.08	0.43	7.53	
	345-15	4.47	0.40	0.04	0.00	0.00	0.01	0.01	0.01	0.04	0.08	0.15	1.27	6.48	
		14.76	9.22	6.18	3.72	2.35	2.34	4.47	8.94	15.78	9.91	9.05	13.27	100.00	
All year													Total		

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 100m

All Year

**Deltares**

App. B.1.061

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	2.76	0.63	0.15	0.03	0.03	0.03	0.06	0.09	0.33	0.40	0.68	2.46	7.66	
	285-315	2.07	0.71	0.21	0.11	0.04	0.03	0.06	0.17	0.42	0.58	1.00	2.71	8.12	
	255-285	2.35	0.62	0.27	0.07	0.08	0.04	0.03	0.33	0.65	0.85	1.37	2.74	9.39	
	225-255	2.12	0.55	0.27	0.10	0.09	0.06	0.04	0.26	0.95	0.90	1.33	2.86	9.54	
	195-225	2.03	0.53	0.41	0.22	0.19	0.11	0.20	0.30	0.80	0.63	0.84	1.98	8.23	
	165-195	2.17	0.51	0.53	0.29	0.27	0.31	0.19	0.34	0.51	0.46	0.69	1.50	7.77	
	135-165	2.01	0.58	0.63	0.24	0.20	0.27	0.12	0.16	0.51	0.49	0.43	1.40	7.05	
	105-135	2.69	0.86	0.74	0.27	0.24	0.17	0.09	0.15	0.33	0.44	0.34	1.31	7.65	
	75-105	3.13	1.01	1.04	0.19	0.18	0.05	0.03	0.09	0.32	0.27	0.47	1.63	8.41	
	45-75	3.85	1.48	0.68	0.20	0.13	0.04	0.01	0.03	0.20	0.30	0.40	1.63	8.96	
	15-45	4.07	1.34	0.46	0.07	0.03	0.04	0.04	0.10	0.22	0.37	0.54	1.76	9.06	
	345-15	3.43	1.00	0.24	0.01	0.03	0.03	0.06	0.05	0.24	0.39	0.64	2.05	8.17	
		32.68	9.84	5.66	1.80	1.51	1.19	0.92	2.09	5.49	6.07	8.74	24.02	100.00	
		1 m/s ≤ U <sub>100</sub> < 3 m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 100m

1 m/s ≤ U<sub>100</sub> < 3 m/s

**Deltares**

App. B.1.062

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	2.29	0.31	0.07	0.03	0.01	0.01	0.01	0.02	0.16	0.37	0.92	3.41	7.63	
	285-315	1.48	0.43	0.09	0.04	0.07	0.02	0.05	0.15	0.29	0.78	1.59	3.67	8.66	
	255-285	1.57	0.32	0.11	0.08	0.07	0.06	0.06	0.22	0.75	1.33	2.23	3.53	10.33	
	225-255	1.60	0.41	0.13	0.13	0.10	0.07	0.15	0.46	1.39	1.39	1.84	2.97	10.66	
	195-225	1.28	0.26	0.26	0.13	0.15	0.20	0.31	0.61	1.25	0.85	0.91	2.14	8.36	
	165-195	1.20	0.34	0.28	0.32	0.42	0.53	0.69	0.60	0.57	0.58	0.62	0.80	6.95	
	135-165	1.43	0.43	0.57	0.48	0.56	0.63	0.31	0.26	0.19	0.26	0.37	0.69	6.19	
	105-135	1.84	1.12	1.07	0.74	0.60	0.43	0.13	0.09	0.22	0.23	0.19	0.63	7.27	
	75-105	2.41	1.92	1.53	0.54	0.13	0.14	0.06	0.05	0.10	0.11	0.21	0.65	7.84	
	45-75	3.84	2.47	1.28	0.18	0.05	0.01	0.01	0.02	0.09	0.10	0.27	0.79	9.12	
	15-45	5.00	1.62	0.40	0.02	0.00	0.02	0.01	0.01	0.11	0.12	0.23	1.55	9.11	
	345-15	4.03	0.74	0.07	0.00		0.02	0.02	0.03	0.11	0.28	0.37	2.23	7.89	
		27.96	10.38	5.88	2.70	2.17	2.15	1.82	2.52	5.23	6.40	9.73	23.07	100.00	
		3 m/s ≤ U <sub>100</sub> < 5 m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 100m

3 m/s ≤ U<sub>100</sub> < 5 m/s

**Deltares**

App. B.1.063

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.91	0.14	0.05		0.00	0.00	0.02	0.02	0.10	0.29	0.86	3.76	7.15	
	285-315	0.64	0.06	0.03	0.02	0.01	0.01	0.01	0.06	0.26	0.79	2.35	3.62	7.86	
	255-285	0.41	0.13	0.08	0.05	0.04	0.01	0.04	0.25	0.90	1.73	2.94	3.09	9.67	
	225-255	0.66	0.17	0.11	0.05	0.03	0.09	0.18	0.70	3.11	2.42	2.71	2.62	12.86	
	195-225	0.58	0.15	0.15	0.08	0.17	0.23	0.60	1.64	1.80	0.96	1.00	1.55	8.91	
	165-195	0.58	0.17	0.20	0.24	0.27	0.86	1.00	0.90	0.67	0.30	0.43	0.55	6.17	
	135-165	0.82	0.52	0.39	0.50	0.86	1.08	0.53	0.36	0.27	0.25	0.22	0.43	6.21	
	105-135	0.98	0.94	1.00	1.61	1.11	0.37	0.15	0.08	0.15	0.06	0.08	0.21	6.76	
	75-105	1.59	2.34	2.49	1.54	0.17	0.10	0.04	0.04	0.01	0.03	0.06	0.24	8.64	
	45-75	2.89	3.74	1.71	0.22	0.05	0.01	0.00		0.02	0.03	0.09	0.35	9.10	
	15-45	5.03	2.68	0.33	0.01	0.01	0.02	0.01	0.00	0.03	0.05	0.07	0.47	8.72	
	345-15	4.99	0.69	0.06	0.00	0.01	0.00	0.02	0.01	0.02	0.06	0.18	1.88	7.93	
		21.09	11.74	6.58	4.32	2.73	2.78	2.60	4.06	7.35	6.98	10.99	18.78	100.00	
		5 m/s ≤ U <sub>100</sub> < 7 m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 100m

5 m/s ≤ U<sub>100</sub> < 7 m/s

**Deltares**

App. B.1.064

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.43	0.07	0.01	0.00	0.00			0.01	0.02	0.22	0.71	4.19	6.66	
	285-315	0.17	0.04	0.01	0.01	0.01	0.00	0.01	0.05	0.23	0.81	3.05	3.19	7.58	
	255-285	0.15	0.05	0.03	0.02	0.02	0.02	0.02	0.18	1.18	3.27	3.47	1.58	10.00	
	225-255	0.26	0.12	0.05	0.02	0.02	0.07	0.12	0.87	5.66	4.60	2.80	1.54	16.12	
	195-225	0.14	0.07	0.09	0.03	0.12	0.20	0.79	2.71	2.51	1.22	0.77	0.70	9.35	
	165-195	0.25	0.09	0.10	0.11	0.31	0.79	1.91	1.64	0.55	0.38	0.36	0.33	6.82	
	135-165	0.27	0.27	0.32	0.41	1.01	1.29	0.90	0.30	0.10	0.11	0.10	0.14	5.21	
	105-135	0.27	0.45	0.68	1.91	1.53	0.28	0.10	0.06	0.06	0.02	0.03	0.09	5.49	
	75-105	0.36	1.53	2.79	2.29	0.22	0.02	0.01	0.01	0.04	0.01	0.02	0.05	7.35	
	45-75	1.28	4.26	3.10	0.24	0.01	0.00			0.01	0.00	0.02	0.07	8.99	
	15-45	4.57	3.64	0.16	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03	0.14	8.58	
	345-15	5.96	0.32	0.01		0.01				0.01	0.01	0.03	0.08	1.43	7.85
		15.10	10.91	7.35	5.06	3.27	2.67	3.86	5.82	10.39	10.68	11.45	13.45	100.00	
7 m/s ≤ U <sub>100</sub> < 9 m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 100m

7 m/s ≤ U<sub>100</sub> < 9 m/s

**Deltares**

App. B.1.065

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.96	0.01	0.00	0.01				0.00	0.04	0.13	0.62	3.97	5.75	
	285-315	0.07	0.01	0.00			0.00		0.03	0.14	0.76	3.12	2.74	6.88	
	255-285	0.06	0.03	0.00	0.00	0.00	0.01	0.03	0.13	1.23	3.94	3.14	0.72	9.29	
	225-255	0.07	0.05	0.01	0.01	0.01	0.01	0.14	1.19	9.96	5.67	1.71	0.48	19.31	
	195-225	0.03	0.05	0.03	0.02	0.03	0.07	0.74	4.69	3.49	0.84	0.36	0.18	10.52	
	165-195	0.04	0.05	0.06	0.03	0.20	0.51	3.28	2.14	0.54	0.38	0.17	0.13	7.54	
	135-165	0.10	0.12	0.16	0.23	0.91	1.90	0.89	0.28	0.14	0.10	0.06	0.07	4.96	
	105-135	0.10	0.23	0.45	1.26	2.02	0.29	0.06	0.01	0.01	0.03	0.00	0.03	4.48	
	75-105	0.07	0.79	3.14	3.25	0.11	0.00	0.00	0.00	0.01	0.00	0.01	0.01	7.42	
	45-75	0.31	3.75	4.52	0.16	0.01		0.00	0.00				0.02	8.77	
	15-45	2.99	4.78	0.12	0.00					0.01	0.01		0.08	7.99	
345-15	5.72	0.25	0.01	0.00					0.01	0.03	0.09	0.98	7.08		
		10.52	10.13	8.51	4.99	3.28	2.78	5.15	8.49	15.58	11.88	9.29	9.40	100.00	
9 m/s <=U <sub>100</sub> <11 m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 100m

9 m/s <=U<sub>100</sub><11 m/s

**Deltares**

App. B.1.066

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.84							0.00	0.01	0.07	0.46	4.32	5.71	
	285-315	0.00							0.01	0.11	0.82	3.43	1.90	6.28	
	255-285	0.00		0.00				0.00	0.09	1.43	5.64	2.78	0.19	10.13	
	225-255	0.03	0.02	0.01		0.00	0.02	0.09	1.52	14.81	5.21	1.03	0.12	22.86	
	195-225	0.02	0.01	0.01	0.01	0.00	0.07	0.74	7.42	4.54	0.56	0.07	0.02	13.48	
	165-195	0.01	0.01	0.03	0.03	0.06	0.40	4.90	2.61	0.47	0.15	0.07	0.03	8.77	
	135-165	0.02	0.02	0.06	0.14	0.69	2.10	0.98	0.22	0.04	0.02	0.01	0.02	4.34	
	105-135	0.04	0.06	0.12	1.17	1.94	0.20	0.01	0.02	0.01	0.01			3.57	
	75-105	0.02	0.21	2.16	2.85	0.08	0.00						0.00	5.32	
	45-75	0.05	2.74	4.08	0.05									0.01	6.92
	15-45	1.53	5.49	0.12								0.00	0.01	7.16	
	345-15	4.35	0.16							0.00	0.01	0.04	0.88	5.45	
		6.90	8.72	6.61	4.25	2.79	2.79	6.73	11.89	21.42	12.50	7.88	7.52	100.00	
11 m/s ≤ U <sub>100</sub> < 13 m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 100m

11 m/s ≤ U<sub>100</sub> < 13 m/s

**Deltares**

App. B.1.067

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.50									0.03	0.30	4.55	5.39	
	285-315							0.01	0.08	0.77	3.20	1.73	5.80		
	255-285							0.01	0.09	1.51	6.20	2.43	0.05	10.29	
	225-255	0.01	0.01					0.06	1.88	18.72	4.88	0.48	0.03	26.06	
	195-225		0.01					0.69	11.25	5.11	0.35	0.06	0.02	17.49	
	165-195	0.01			0.01	0.03	0.25	5.96	3.18	0.27	0.06	0.03	0.01	9.81	
	135-165	0.03	0.01	0.04	0.06	0.15	1.90	0.85	0.05	0.01		0.01	0.01	3.11	
	105-135			0.01	0.54	1.12	0.33	0.01	0.01					2.02	
	75-105		0.04	1.23	3.07	0.09								4.42	
	45-75	0.02	1.87	3.75	0.04									5.68	
	15-45	0.67	5.30	0.10						0.01	0.01			6.09	
	345-15	3.38	0.09							0.01		0.01	0.35	3.84	
		4.62	7.32	5.13	3.72	1.39	2.49	7.59	16.47	25.71	12.29	6.52	6.75	100.00	
		13 m/s $\leq U_{100} < 15$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 100m

13 m/s  $\leq U_{100} < 15$  m/s

**Deltares**

App. B.1.068

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.40									0.03	0.22	4.29	4.93	
	285-315									0.05	0.58	3.03	1.41	5.07	
	255-285								0.07	1.12	7.61	2.00	0.02	10.82	
	225-255			0.01				0.02	2.30	24.95	4.02	0.16		31.46	
	195-225							0.40	14.73	6.02	0.12			21.27	
	165-195						0.13	5.86	3.79	0.28	0.05			10.11	
	135-165					0.09	1.06	0.59	0.03	0.01			0.01	1.79	
	105-135				0.15	0.48	0.17	0.01						0.80	
	75-105			0.49	1.57	0.07								2.12	
	45-75		0.76	2.95	0.04									3.75	
	15-45	0.44	3.68	0.15									0.01	4.27	
	345-15	3.10	0.04								0.02	0.01	0.43	3.60	
		3.93	4.48	3.60	1.75	0.63	1.36	6.88	20.92	32.43	12.43	5.42	6.16	100.00	
		15 m/s ≤ U <sub>100</sub> < 17 m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 100m

15 m/s ≤ U<sub>100</sub> < 17 m/s

**Deltares**

App. B.1.069

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.48								0.02	0.04	0.27	4.53	5.33	
	285-315									0.62	3.31	1.14	5.08		
	255-285							0.02	1.50	8.03	2.37	0.02	11.94		
	225-255							2.23	30.89	2.89	0.05		36.06		
	195-225	0.02						0.30	16.53	5.86	0.04		22.75		
	165-195							6.54	3.92	0.20			10.65		
	135-165					0.02	0.86	0.57	0.02				1.46		
	105-135				0.14	0.27	0.05						0.46		
	75-105				0.61								0.61		
	45-75	0.02	0.05	0.80									0.87		
	15-45	0.27	2.24	0.14									2.65		
	345-15	1.59	0.20									0.02	0.34	2.14	
		2.37	2.49	0.94	0.75	0.29	0.91	7.41	22.72	38.46	11.62	6.02	6.02	100.00	
		17 m/s ≤ U <sub>100</sub> < 19 m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 100m

17 m/s ≤ U<sub>100</sub> < 19 m/s

**Deltares**

App. B.1.070

Wind direction (° N)	MWD (° N)											Total	
	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315		315-345
315-345	0.27										0.23	2.88	3.39
285-315									0.03	0.44	4.06	1.27	5.80
255-285								0.07	1.68	6.81	1.48		10.03
225-255								3.05	38.31	2.15			43.51
195-225							0.30	16.64	6.61				23.55
165-195							6.31	3.96					10.27
135-165					0.03	0.27	0.47						0.77
105-135				0.13	0.07	0.10							0.30
75-105				0.37									0.37
45-75			0.07										0.07
15-45		0.64											0.64
345-15	1.11	0.03										0.17	1.31
	1.38	0.67	0.07	0.50	0.10	0.37	7.08	23.72	46.63	9.39	5.77	4.33	100.00

19 m/s  $\leq U_{100} < 21$  m/s

Total

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 100m

19 m/s  $\leq U_{100} < 21$  m/s

**Deltares**

App. B.1.071

Wind direction (° N)	MWD (° N)											Total	
	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315		315-345
315-345	0.16										0.08	2.75	2.99
285-315								0.08	0.08	0.31	3.30	1.18	4.96
255-285									1.26	6.22	1.42		8.89
225-255								1.73	40.83	1.02			43.59
195-225						0.24	19.28	7.47					26.99
165-195						6.53	3.93						10.46
135-165					0.16	0.08							0.24
105-135													
75-105													
45-75													
15-45		0.47											0.47
345-15	0.94											0.47	1.42
	1.10	0.47				0.16	6.85	25.02	49.65	7.55	4.80	4.41	100.00

21 m/s  $\leq U_{100} < 23$  m/s

Total

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 100m

21 m/s  $\leq U_{100} < 23$  m/s

Deltares

App. B.1.072

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												2.27	2.27	
	285-315										1.59	2.95	2.27	6.80	
	255-285									2.04	5.44	1.13		8.62	
	225-255								1.59	43.76	1.13			46.49	
	195-225							0.23	17.46	9.98				27.66	
	165-195							4.31	3.40					7.71	
	135-165							0.23						0.23	
	105-135														
	75-105														
	45-75														
	15-45														
	345-15	0.23													0.23
		0.23						4.76	22.45	55.78	8.16	4.08	4.54	100.00	
		23 m/s $\leq U_{100} < 25$ m/s											Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 100m

23 m/s  $\leq U_{100} < 25$  m/s

**Deltares**

App. B.1.073

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												0.61	0.61	
	285-315										1.23	1.23	0.61	3.07	
	255-285									1.23	7.36			8.59	
	225-255								1.84	42.94				44.79	
	195-225							0.61	25.15	7.36				33.13	
	165-195							7.36	2.45					9.82	
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
								7.98	29.45	51.53	8.59	1.23	1.23	100.00	
25 m/s $\leq U_{100} < 27$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 100m

25 m/s  $\leq U_{100} < 27$  m/s

**Deltares**

App. B.1.074

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												2.04	2.04	
	285-315											2.04	1.02	3.06	
	255-285								1.02	10.20	2.04			13.27	
	225-255							3.06	46.94	1.02				51.02	
	195-225							20.41	5.10					25.51	
	165-195							5.10						5.10	
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
								28.57	53.06	11.22	4.08	3.06	100.00		
U <sub>100</sub> >= 27 m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 100m

U<sub>100</sub> >= 27 m/s

**Deltares**

App. B.1.075

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.33	0.12	0.04	0.01	0.00	0.00	0.01	0.01	0.07	0.21	0.65	3.94	6.40	
	285-315	0.51	0.12	0.03	0.02	0.01	0.01	0.01	0.06	0.21	0.78	2.78	2.69	7.24	
	255-285	0.50	0.13	0.05	0.03	0.02	0.02	0.03	0.17	1.27	3.95	2.70	1.52	10.38	
	225-255	0.53	0.15	0.07	0.04	0.04	0.05	0.13	1.26	10.50	3.58	1.57	1.29	19.19	
	195-225	0.45	0.12	0.12	0.06	0.09	0.15	0.69	5.52	2.93	0.70	0.50	0.75	12.08	
	165-195	0.45	0.15	0.16	0.14	0.24	0.59	2.93	1.66	0.44	0.28	0.27	0.37	7.69	
	135-165	0.55	0.27	0.28	0.33	0.70	1.24	0.58	0.19	0.15	0.14	0.13	0.29	4.84	
	105-135	0.64	0.50	0.63	1.12	1.10	0.23	0.06	0.04	0.08	0.07	0.06	0.22	4.74	
	75-105	0.82	1.18	2.08	1.84	0.10	0.03	0.01	0.01	0.03	0.04	0.07	0.24	6.44	
	45-75	1.44	2.87	2.51	0.13	0.02	0.01	0.00	0.00	0.03	0.03	0.07	0.27	7.39	
	15-45	3.18	3.26	0.19	0.01	0.00	0.01	0.01	0.01	0.03	0.05	0.08	0.41	7.24	
	345-15	4.36	0.36	0.03	0.00	0.01	0.01	0.01	0.01	0.04	0.09	0.16	1.29	6.36	
All year		14.76	9.22	6.18	3.72	2.35	2.34	4.47	8.94	15.78	9.91	9.05	13.27	100.00	Total

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

All Year

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	2.88	0.68	0.18	0.02	0.01	0.02	0.06	0.09	0.30	0.44	0.74	2.50	7.92	
	285-315	2.36	0.70	0.22	0.10	0.08	0.03	0.05	0.18	0.43	0.53	1.04	2.62	8.35	
	255-285	2.53	0.73	0.29	0.08	0.07	0.06	0.04	0.27	0.62	0.88	1.41	2.87	9.84	
	225-255	2.24	0.57	0.27	0.14	0.13	0.08	0.06	0.30	0.96	0.88	1.26	2.59	9.49	
	195-225	2.10	0.62	0.45	0.19	0.19	0.16	0.20	0.35	0.71	0.66	0.85	1.81	8.29	
	165-195	2.15	0.50	0.60	0.29	0.28	0.33	0.19	0.34	0.53	0.51	0.60	1.66	7.98	
	135-165	2.06	0.62	0.64	0.30	0.20	0.27	0.11	0.16	0.58	0.49	0.46	1.30	7.20	
	105-135	2.67	0.87	0.77	0.17	0.15	0.17	0.08	0.15	0.28	0.36	0.20	1.26	7.13	
	75-105	2.91	1.30	0.96	0.23	0.16	0.04	0.02	0.06	0.25	0.24	0.49	1.60	8.26	
	45-75	3.71	1.56	0.76	0.16	0.10	0.05	0.03	0.03	0.21	0.23	0.42	1.54	8.79	
	15-45	4.04	1.37	0.44	0.08	0.03	0.01	0.04	0.09	0.13	0.33	0.56	1.69	8.81	
	345-15	3.34	0.96	0.18	0.02	0.03	0.02	0.04	0.04	0.23	0.39	0.71	1.99	7.94	
		32.99	10.47	5.76	1.78	1.42	1.25	0.93	2.05	5.22	5.95	8.73	23.44	100.00	
		1 m/s ≤ U <sub>150</sub> < 3 m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

1 m/s ≤ U<sub>150</sub> < 3 m/s

**Deltares**

App. B.1.077

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	2.37	0.33	0.07	0.03	0.01	0.01	0.02	0.01	0.17	0.40	0.85	3.47	7.75	
	285-315	1.54	0.42	0.09	0.04	0.05	0.01	0.06	0.13	0.33	0.79	1.65	3.79	8.90	
	255-285	1.67	0.40	0.11	0.08	0.07	0.07	0.08	0.23	0.75	1.30	2.26	3.53	10.54	
	225-255	1.60	0.42	0.14	0.16	0.09	0.06	0.11	0.45	1.34	1.33	1.75	2.95	10.39	
	195-225	1.41	0.27	0.32	0.16	0.18	0.22	0.33	0.65	1.20	0.83	0.91	2.08	8.56	
	165-195	1.21	0.35	0.31	0.30	0.41	0.49	0.59	0.55	0.52	0.51	0.60	0.78	6.63	
	135-165	1.53	0.55	0.55	0.49	0.58	0.61	0.31	0.24	0.21	0.27	0.34	0.72	6.40	
	105-135	1.92	1.21	1.15	0.69	0.57	0.40	0.09	0.07	0.18	0.18	0.15	0.51	7.12	
	75-105	2.37	2.02	1.61	0.55	0.12	0.11	0.05	0.06	0.07	0.12	0.19	0.62	7.89	
	45-75	4.07	2.49	1.17	0.18	0.05	0.02	0.01	0.02	0.05	0.09	0.24	0.79	9.18	
	15-45	4.93	1.70	0.39	0.02		0.03	0.00	0.01	0.10	0.11	0.19	1.50	9.00	
	345-15	3.89	0.66	0.09		0.01	0.02	0.01	0.03	0.08	0.29	0.37	2.19	7.65	
		28.52	10.83	6.00	2.71	2.13	2.06	1.67	2.45	5.00	6.23	9.49	22.92	100.00	
3 m/s ≤ U <sub>150</sub> < 5 m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

3 m/s ≤ U<sub>150</sub> < 5 m/s

**Deltares**

App. B.1.078

		MWD (° N)												
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345	
Wind direction (° N)	315-345	1.88	0.13	0.05		0.00	0.00	0.01	0.02	0.12	0.32	0.94	3.84	7.33
	285-315	0.72	0.06	0.02	0.04	0.01	0.01	0.01	0.07	0.26	0.83	2.35	3.71	8.09
	255-285	0.46	0.11	0.09	0.05	0.05	0.02	0.03	0.26	0.98	1.77	3.15	3.21	10.19
	225-255	0.72	0.18	0.11	0.05	0.06	0.10	0.22	0.66	2.90	2.22	2.51	2.62	12.34
	195-225	0.62	0.15	0.15	0.09	0.19	0.25	0.63	1.49	1.68	0.89	0.95	1.48	8.57
	165-195	0.64	0.24	0.24	0.26	0.33	0.93	1.00	0.76	0.58	0.32	0.42	0.58	6.29
	135-165	0.91	0.57	0.47	0.57	0.85	1.03	0.48	0.28	0.25	0.22	0.21	0.45	6.30
	105-135	0.98	1.06	1.07	1.56	0.99	0.29	0.13	0.08	0.14	0.07	0.11	0.23	6.72
	75-105	1.65	2.51	2.42	1.51	0.15	0.05	0.03	0.01	0.01	0.02	0.05	0.25	8.66
	45-75	3.02	3.72	1.60	0.20	0.03	0.01			0.02	0.03	0.07	0.35	9.05
	15-45	5.06	2.47	0.32	0.01	0.02	0.01	0.02		0.04	0.05	0.07	0.51	8.57
	345-15	4.87	0.64	0.05	0.00	0.01	0.00	0.00	0.01	0.04	0.08	0.20	1.99	7.90
		21.55	11.83	6.60	4.34	2.70	2.71	2.55	3.66	7.01	6.81	11.03	19.21	100.00
		5 m/s ≤ U <sub>150</sub> < 7 m/s												Total

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

5 m/s ≤ U<sub>150</sub> < 7 m/s

**Deltares**

App. B.1.079

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	1.44	0.06	0.01	0.00	0.00				0.02	0.03	0.26	0.81	4.38	7.02
	285-315	0.19	0.05	0.01	0.01	0.01	0.00	0.00	0.06	0.27	0.88	3.21	3.34	8.04	
	255-285	0.17	0.04	0.03	0.01	0.01	0.02	0.02	0.18	1.38	3.45	3.49	1.77	10.58	
	225-255	0.31	0.13	0.06	0.02	0.04	0.09	0.17	0.88	5.25	4.16	2.80	1.66	15.57	
	195-225	0.16	0.09	0.09	0.06	0.15	0.27	0.87	2.66	2.12	1.09	0.73	0.74	9.02	
	165-195	0.28	0.09	0.16	0.16	0.36	0.92	1.62	1.27	0.53	0.33	0.33	0.31	6.36	
	135-165	0.32	0.30	0.37	0.55	1.07	1.09	0.77	0.28	0.13	0.13	0.10	0.16	5.26	
	105-135	0.30	0.56	0.86	1.97	1.44	0.25	0.10	0.04	0.07	0.01	0.03	0.09	5.73	
	75-105	0.41	1.74	2.87	2.10	0.19	0.03	0.01	0.00	0.01	0.01	0.02	0.04	7.43	
	45-75	1.23	4.08	2.85	0.23	0.01				0.01	0.00	0.01	0.05	8.48	
	15-45	4.72	3.43	0.15	0.00		0.00		0.00	0.00	0.01	0.03	0.15	8.51	
	345-15	5.93	0.34	0.01	0.00	0.00			0.00	0.01	0.04	0.10	1.56	8.00	
		15.46	10.93	7.47	5.12	3.29	2.66	3.56	5.40	9.81	10.37	11.66	14.25	100.00	Total

7 m/s ≤ U<sub>150</sub> < 9 m/s

Total

Joint Occurrence table of wind direction vs. wave direction  
Nautical convention: coming from, clockwise from North

Height: 150m

7 m/s ≤ U<sub>150</sub> < 9 m/s

**Deltares**

App. B.1.080

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.99	0.02	0.00	0.01					0.04	0.19	0.68	4.25	6.19	
	285-315	0.07	0.02	0.01			0.00	0.00	0.03	0.18	0.85	3.32	2.84	7.33	
	255-285	0.08	0.02	0.01	0.00	0.00	0.00	0.03	0.16	1.38	4.11	3.32	0.81	9.93	
	225-255	0.07	0.06	0.02	0.02	0.01	0.02	0.17	1.33	9.26	5.69	1.82	0.60	19.06	
	195-225	0.06	0.06	0.06	0.03	0.04	0.14	0.84	4.35	3.15	0.91	0.36	0.21	10.22	
	165-195	0.05	0.08	0.08	0.09	0.30	0.70	3.04	1.78	0.48	0.39	0.24	0.14	7.37	
	135-165	0.09	0.15	0.18	0.29	1.00	1.50	0.74	0.20	0.11	0.09	0.07	0.06	4.49	
	105-135	0.11	0.28	0.58	1.40	1.74	0.23	0.04	0.01	0.01	0.02	0.00	0.04	4.48	
	75-105	0.08	1.07	3.15	2.99	0.08	0.00			0.01	0.00	0.00	0.01	7.41	
	45-75	0.37	3.97	4.09	0.14	0.01		0.00					0.02	8.61	
	15-45	3.26	4.18	0.11					0.00	0.01	0.01		0.08	7.65	
	345-15	5.81	0.19	0.01					0.00	0.01	0.02	0.10	1.11	7.26	
		11.06	10.11	8.30	4.97	3.19	2.60	4.88	7.88	14.63	12.28	9.92	10.17	100.00	
9 m/s ≤ U <sub>150</sub> < 11 m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

9 m/s ≤ U<sub>150</sub> < 11 m/s

**Deltares**

App. B.1.081

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.85							0.01	0.03	0.07	0.49	4.23	5.68	
	285-315	0.00						0.00	0.01	0.14	0.87	3.66	1.99	6.68	
	255-285	0.00						0.01	0.14	1.64	5.59	2.72	0.24	10.34	
	225-255	0.05	0.04	0.01		0.00	0.02	0.12	1.74	13.80	4.98	0.99	0.19	21.96	
	195-225	0.03	0.00	0.02	0.01	0.02	0.09	0.94	7.50	3.92	0.58	0.14	0.06	13.32	
	165-195	0.02	0.04	0.06	0.05	0.14	0.55	4.70	2.19	0.41	0.16	0.08	0.05	8.47	
	135-165	0.07	0.07	0.10	0.23	1.02	2.13	0.83	0.22	0.07	0.03	0.01	0.02	4.80	
	105-135	0.04	0.09	0.40	1.35	1.78	0.14	0.01	0.01	0.00	0.01	0.00	0.00	3.84	
	75-105	0.03	0.37	2.53	2.75	0.05	0.00						0.00	5.74	
	45-75	0.08	3.11	3.57	0.06								0.00	6.84	
	15-45	1.83	4.82	0.09								0.00	0.02	6.75	
	345-15	4.45	0.14							0.01	0.02	0.04	0.92	5.58	
		7.45	8.67	6.79	4.46	3.03	2.93	6.62	11.83	20.02	12.33	8.14	7.74	100.00	
11 m/s ≤ U <sub>150</sub> < 13 m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

11 m/s ≤ U<sub>150</sub> < 13 m/s

**Deltares**

App. B.1.082

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.47									0.04	0.41	4.60	5.53	
	285-315								0.02	0.09	0.86	3.20	1.68	5.85	
	255-285							0.01	0.09	1.80	6.43	2.58	0.07	10.99	
	225-255	0.01	0.02	0.01		0.01	0.01	0.10	1.84	18.06	4.79	0.62	0.07	25.53	
	195-225	0.01	0.01		0.01		0.04	0.83	10.12	4.48	0.35	0.05	0.01	15.89	
	165-195	0.01	0.01	0.01	0.04	0.05	0.36	5.84	2.52	0.30	0.09	0.02	0.01	9.24	
	135-165	0.02	0.01	0.04	0.06	0.41	2.14	0.73	0.08	0.01		0.01	0.01	3.53	
	105-135		0.02	0.12	0.92	1.19	0.21	0.02	0.01	0.01				2.49	
	75-105		0.11	1.91	2.97	0.07								5.06	
	45-75	0.02	2.38	3.49	0.05									5.95	
	15-45	0.95	4.99	0.06						0.01			0.01	6.01	
	345-15	3.40	0.08							0.01		0.01	0.44	3.94	
		4.89	7.63	5.65	4.04	1.74	2.77	7.53	14.67	24.74	12.55	6.91	6.90	100.00	
		13 m/s $\leq U_{150} < 15$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

13 m/s  $\leq U_{150} < 15$  m/s

**Deltares**

App. B.1.083

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.36									0.03	0.19	3.97	4.55	
	285-315									0.05	0.56	2.92	1.30	4.83	
	255-285								0.08	1.26	7.39	1.97	0.01	10.71	
	225-255			0.01				0.04	2.46	24.02	3.97	0.27		30.77	
	195-225						0.01	0.93	14.09	5.34	0.17	0.03	0.03	20.58	
	165-195					0.03	0.24	6.25	3.44	0.24	0.03			10.22	
	135-165	0.02		0.01	0.04	0.13	1.44	0.56	0.04				0.02	2.26	
	105-135			0.03	0.30	0.79	0.22							1.33	
	75-105		0.04	0.89	1.73	0.04								2.70	
	45-75	0.01	1.16	3.06	0.04									4.26	
	15-45	0.47	3.84	0.07							0.01		0.01	4.40	
	345-15	2.95	0.04								0.02	0.01	0.39	3.40	
		3.80	5.07	4.07	2.11	0.99	1.91	7.78	20.11	30.91	12.16	5.38	5.72	100.00	
15 m/s $\leq U_{150} < 17$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

15 m/s  $\leq U_{150} < 17$  m/s

**Deltares**

App. B.1.084

Wind direction (° N)	MWD (° N)											Total	
	345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315		315-345
315-345	0.43								0.01	0.03	0.30	4.44	5.21
285-315									0.01	0.64	2.74	1.11	4.50
255-285								0.03	1.41	7.88	2.12	0.01	11.45
225-255								2.69	30.71	3.46	0.06		36.92
195-225							0.38	16.55	5.65	0.09			22.68
165-195						0.07	6.09	3.31	0.16				9.64
135-165					0.01	0.92	0.49	0.01					1.43
105-135				0.13	0.31	0.09							0.53
75-105			0.04	0.53	0.01								0.59
45-75	0.01	0.27	1.41										1.69
15-45	0.24	2.66	0.16										3.06
345-15	1.76	0.19									0.01	0.33	2.29
	2.44	3.12	1.61	0.67	0.34	1.08	6.97	22.60	37.96	12.10	5.22	5.89	100.00
	17 m/s ≤ U <sub>150</sub> < 19 m/s												Total

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

17 m/s ≤ U<sub>150</sub> < 19 m/s

**Deltares**

App. B.1.085

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.19										0.22	2.53	2.94	
	285-315									0.03	0.52	4.09	1.12	5.75	
	255-285								0.03	1.72	7.14	1.55		10.44	
	225-255								2.97	36.85	2.73	0.03		42.57	
	195-225	0.03						0.33	17.93	5.12				23.41	
	165-195							6.35	3.95	0.03				10.33	
	135-165					0.03	0.38	0.57						0.98	
	105-135				0.22	0.11	0.08							0.41	
	75-105				0.41									0.41	
	45-75		0.11	0.22										0.33	
	15-45	0.05	1.09											1.14	
	345-15	1.06	0.05											0.16	1.28
		1.34	1.25	0.22	0.63	0.14	0.46	7.25	24.88	43.74	10.38	5.89	3.82	100.00	
		19 m/s ≤ U <sub>150</sub> < 21 m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

19 m/s ≤ U<sub>150</sub> < 21 m/s

**Deltares**

App. B.1.086

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345	0.11										0.06	2.76	2.92	
	285-315							0.06	0.06	0.34	2.92	0.90	4.27		
	255-285							0.06	1.52	5.23	1.46		8.27		
	225-255							2.36	41.45	1.57			45.39		
	195-225						0.22	19.80	6.64				26.66		
	165-195						6.86	3.49					10.35		
	135-165					0.22	0.06						0.28		
	105-135														
	75-105														
	45-75														
	15-45	0.51											0.51		
	345-15	1.07											0.28	1.35	
		1.18	0.51			0.22	7.14	25.76	49.66	7.14	4.44	3.94	100.00		
21 m/s ≤ U <sub>150</sub> < 23 m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

21 m/s ≤ U<sub>150</sub> < 23 m/s

**Deltares**

App. B.1.087

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												1.44	1.44	
	285-315										1.15	3.16	1.29	5.60	
	255-285									1.44	5.32	0.72		7.47	
	225-255								2.16	48.99	0.72			51.87	
	195-225							0.43	18.97	7.61				27.01	
	165-195							3.30	3.02					6.32	
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15	0.14												0.14	0.29
		0.14						3.74	24.14	58.05	7.18	3.88	2.87	100.00	
23 m/s $\leq U_{150} < 25$ m/s													Total		

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

23 m/s  $\leq U_{150} < 25$  m/s

**Deltares**

App. B.1.088

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												0.75	0.75	
	285-315										0.38	0.75	1.13	2.26	
	255-285									2.64	6.79	0.75		10.19	
	225-255								1.51	48.30	0.75			50.57	
	195-225							0.38	20.75	6.79				27.92	
	165-195							6.79	1.13					7.92	
	135-165							0.38						0.38	
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
								7.55	23.40	57.74	7.92	1.51	1.89	100.00	
		25 m/s $\leq U_{150} < 27$ m/s												Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

25 m/s  $\leq U_{150} < 27$  m/s

**Deltares**

App. B.1.089

		MWD (° N)													
		345-15	15-45	45-75	75-105	105-135	135-165	165-195	195-225	225-255	255-285	285-315	315-345		
Wind direction (° N)	315-345												1.88	1.88	
	285-315										1.25	1.25	0.63	3.13	
	255-285									0.63	7.50	1.25		9.38	
	225-255								3.13	44.38	0.63			48.13	
	195-225							23.75	6.25					30.00	
	165-195						3.13	4.38						7.50	
	135-165														
	105-135														
	75-105														
	45-75														
	15-45														
	345-15														
							3.13	31.25	51.25	9.38	2.50	2.50	100.00		
													$U_{150} \geq 27$ m/s	Total	

Joint Occurrence table of wind direction vs. wave direction  
 Nautical convention: coming from, clockwise from North

Height: 150m

$U_{150} \geq 27$  m/s

**Deltares**

App. B.1.090

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0
315-345	0.47	1.47	1.46	1.06	0.70	0.37	0.30	0.14	0.11	0.05	0.02	0.02	0.01			6.20
285-315	0.47	1.55	1.85	1.14	0.75	0.43	0.26	0.15	0.11	0.03	0.02	0.01	0.00			6.79
255-285	0.74	2.24	2.55	1.55	1.03	0.59	0.34	0.19	0.07	0.04	0.01	0.01	0.00	0.00		9.34
225-255	1.17	4.96	4.83	2.78	1.85	1.16	0.76	0.36	0.13	0.06	0.01	0.00	0.00			18.07
195-225	1.12	3.83	3.12	1.94	1.26	0.66	0.34	0.17	0.05	0.02	0.00					12.51
165-195	1.04	3.06	1.91	1.03	0.56	0.28	0.13	0.04	0.01	0.00	0.00					8.06
135-165	1.16	2.45	0.90	0.27	0.08	0.04	0.01	0.00								4.89
105-135	1.18	2.52	0.79	0.21	0.04	0.01	0.01									4.75
75-105	1.33	3.08	1.30	0.48	0.24	0.08	0.02	0.00								6.53
45-75	1.31	3.37	1.90	0.75	0.36	0.11	0.04	0.01								7.85
15-45	1.11	2.97	2.39	0.98	0.45	0.16	0.07	0.03	0.01	0.01	0.00					8.18
345-15	0.70	1.97	1.81	1.13	0.57	0.31	0.17	0.08	0.04	0.02	0.00	0.00				6.82
	11.80	33.47	24.80	13.33	7.88	4.21	2.44	1.17	0.53	0.22	0.07	0.04	0.01	0.00		100.00
All year																Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 10m

All Year

**Deltares**

App. B.2.001

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	2.30	3.26	0.94	0.15	0.01											6.66
285-315	2.46	3.29	1.00	0.22												6.97
255-285	3.66	3.77	0.92	0.13	0.01											8.49
225-255	4.26	4.40	0.79	0.11	0.01	0.01										9.58
195-225	4.43	4.21	0.67	0.05												9.36
165-195	4.27	3.72	0.40	0.02												8.42
135-165	4.39	2.97	0.30	0.06	0.01	0.01										7.73
105-135	4.02	3.17	0.47	0.06	0.01											7.74
75-105	4.77	3.78	0.54	0.06												9.15
45-75	4.33	4.09	0.74	0.04	0.01											9.21
15-45	3.94	3.81	1.00	0.08	0.01											8.83
345-15	3.35	3.48	0.92	0.10	0.01											7.85
	46.17	43.97	8.70	1.09	0.06	0.02										100.00
	1 m/s ≤ U <sub>10</sub> < 3 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 10m

1 m/s ≤ U<sub>10</sub> < 3 m/s

**Deltares**

App. B.2.002

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	1.07	2.93	1.69	0.41	0.05											6.14
285-315	1.09	3.34	1.88	0.46	0.06											6.83
255-285	1.75	4.38	1.83	0.30	0.01	0.00										8.28
225-255	3.17	6.43	1.57	0.15	0.00											11.34
195-225	2.97	5.50	1.04	0.06	0.01											9.58
165-195	2.68	3.85	0.50	0.03												7.07
135-165	2.92	3.52	0.31	0.03												6.78
105-135	3.29	4.05	0.42	0.01												7.76
75-105	3.55	4.69	0.55	0.03	0.00											8.83
45-75	3.78	5.35	0.96	0.08												10.16
15-45	3.37	4.87	1.40	0.09	0.02											9.75
345-15	1.77	3.58	1.90	0.22	0.02											7.49
	31.40	52.49	14.04	1.89	0.17	0.00										100.00
	3 m/s ≤ U <sub>10</sub> < 5 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 10m

3 m/s ≤ U<sub>10</sub> < 5 m/s

**Deltares**

App. B.2.003

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.19	2.45	2.54	1.16	0.19	0.00	0.00									6.53
285-315	0.11	2.50	2.97	1.08	0.25	0.02	0.00									6.93
255-285	0.28	4.08	3.19	0.72	0.11	0.00		0.00								8.38
225-255	0.87	9.08	3.19	0.32	0.02	0.01										13.48
195-225	0.81	7.08	2.04	0.09	0.00											10.02
165-195	0.73	5.25	0.78	0.09	0.00											6.85
135-165	1.06	4.30	0.52	0.03												5.92
105-135	1.03	4.57	0.59	0.02	0.00											6.21
75-105	1.20	6.34	1.06	0.05	0.00											8.65
45-75	1.18	6.37	1.67	0.15	0.02											9.39
15-45	0.75	5.45	2.93	0.39	0.03	0.00										9.55
345-15	0.28	3.60	3.03	1.04	0.12	0.01										8.09
	8.49	61.06	24.51	5.14	0.76	0.04	0.01	0.00								100.00
	5 m/s ≤ U <sub>10</sub> < 7 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 10m

5 m/s ≤ U<sub>10</sub> < 7 m/s

**Deltares**

App. B.2.004

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.01	0.87	2.42	1.98	0.79	0.10	0.01									6.17
285-315	0.00	0.88	3.45	1.80	0.77	0.11	0.02									7.03
255-285	0.01	1.81	5.27	1.89	0.42	0.05										9.45
225-255	0.08	7.46	8.75	1.25	0.10	0.02										17.66
195-225	0.03	5.26	4.69	0.35	0.03											10.36
165-195	0.02	4.71	2.51	0.13	0.00											7.37
135-165	0.05	3.39	1.16	0.05												4.66
105-135	0.04	3.19	1.11	0.02	0.01											4.37
75-105	0.05	3.64	2.50	0.15	0.01											6.34
45-75	0.06	4.41	3.95	0.68	0.02											9.12
15-45	0.01	3.71	4.71	1.03	0.09	0.01	0.00									9.57
345-15	0.01	1.68	3.30	2.23	0.61	0.06	0.01	0.00								7.90
	0.34	41.02	43.81	11.59	2.84	0.35	0.03	0.00								100.00
	7 m/s ≤ U <sub>10</sub> < 9 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 10m

7 m/s ≤ U<sub>10</sub> < 9 m/s

**Deltares**

App. B.2.005

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.12	1.09	2.13	1.95	0.71	0.18	0.03								6.22
285-315		0.13	1.62	2.54	1.77	0.65	0.18	0.01								6.91
255-285		0.11	3.71	4.05	1.72	0.28	0.03	0.00								9.90
225-255	0.01	2.41	12.31	6.20	0.95	0.05										21.92
195-225	0.00	1.29	8.53	3.18	0.21	0.02										13.23
165-195		1.30	5.96	0.91	0.05	0.00										8.21
135-165		0.89	2.70	0.24												3.83
105-135	0.01	0.50	2.05	0.42	0.01											2.99
75-105		0.39	3.18	1.28	0.06											4.91
45-75		0.51	4.14	2.46	0.32	0.01	0.00									7.44
15-45		0.45	3.95	2.54	0.72	0.05	0.02									7.73
345-15		0.18	1.58	2.58	1.65	0.66	0.05	0.00								6.72
		0.02	8.27	50.83	28.54	9.41	2.42	0.46	0.05							100.00
		9 m/s ≤ U <sub>10</sub> < 11 m/s														Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 10m

9 m/s ≤ U<sub>10</sub> < 11 m/s

**Deltares**

App. B.2.006

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.01	0.15	0.81	1.87	1.64	1.30	0.23	0.03	0.01						6.04
285-315		0.01	0.23	1.26	2.28	1.87	0.77	0.16	0.04							6.61
255-285		0.01	0.54	3.68	4.42	1.66	0.26	0.01								10.58
225-255		0.28	4.59	12.30	6.77	1.23	0.07	0.02								25.26
195-225		0.10	3.58	10.46	3.62	0.20	0.01									17.98
165-195		0.04	2.85	6.15	0.76	0.03	0.01									9.83
135-165		0.02	1.02	1.59	0.09											2.72
105-135		0.01	0.51	1.00	0.19											1.70
75-105		0.01	0.31	2.20	1.37	0.10										3.98
45-75		0.01	0.31	2.00	2.03	0.15	0.01	0.01								4.50
15-45		0.01	0.67	2.87	2.10	0.52	0.05	0.02								6.24
345-15			0.10	1.02	1.52	1.17	0.65	0.08	0.01							4.56
		0.49	14.85	45.33	27.02	8.58	3.12	0.52	0.08	0.01						100.00
		11 m/s ≤ U <sub>10</sub> < 13 m/s														Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 10m

11 m/s ≤ U<sub>10</sub> < 13 m/s

**Deltares**

App. B.2.007

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0
315-345				0.12	0.51	1.09	1.66	1.22	0.80	0.15	0.04	0.02	0.01			5.62
285-315			0.02	0.20	0.73	1.52	1.61	1.03	0.34	0.06						5.51
255-285		0.01	0.04	0.42	3.11	4.64	2.20	0.37	0.04							10.82
225-255			0.37	4.04	13.59	9.79	2.18	0.12	0.02							30.10
195-225		0.01	0.41	4.35	11.50	4.03	0.27	0.03								20.59
165-195			0.08	3.27	6.09	0.93	0.06									10.44
135-165			0.01	0.59	0.84	0.10										1.53
105-135		0.01	0.04	0.42	0.23	0.09	0.01									0.79
75-105			0.02	0.30	1.34	0.97	0.06									2.69
45-75			0.01	0.18	1.46	1.51	0.35	0.03								3.54
15-45			0.02	0.35	1.59	1.51	0.68	0.14	0.05							4.32
345-15				0.06	0.50	1.18	1.20	0.79	0.28	0.02						4.04
			0.03	1.00	14.29	41.50	27.36	10.28	3.72	1.53	0.23	0.04	0.02	0.01		100.00
			13 m/s ≤ U <sub>10</sub> < 15 m/s													Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 10m

13 m/s ≤ U<sub>10</sub> < 15 m/s

**Deltares**

App. B.2.008

		H <sub>s</sub> (m)															
		0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0	>7.0	
Wind direction (° N)	315-345				0.04	0.17	0.34	0.89	1.13	1.55	1.08	0.32	0.21	0.02		5.74	
	285-315				0.06	0.38	0.49	1.42	1.83	1.57	0.26	0.11	0.02			6.14	
	255-285				0.04	0.59	2.21	5.12	3.78	0.87	0.19					12.79	
	225-255				0.55	3.81	12.20	14.33	4.00	0.32						35.22	
	195-225		0.02	0.47	3.91	11.54	5.70	0.64	0.04							22.32	
	165-195			0.15	2.76	6.14	1.44	0.06								10.54	
	135-165				0.40	0.89	0.17									1.45	
	105-135				0.04	0.28	0.19									0.51	
	75-105					0.30	0.30									0.60	
	45-75			0.04	0.02	0.02	0.38	0.23								0.68	
	15-45				0.08	0.17	0.68	0.60	0.15	0.11						1.79	
	345-15				0.02	0.21	0.55	0.55	0.57	0.28	0.04					2.21	
			0.02	1.34	12.16	34.79	31.16	12.82	5.06	1.93	0.47	0.23	0.02		100.00		
15 m/s ≤ U <sub>10</sub> < 17 m/s		Total															

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 10m

15 m/s ≤ U<sub>10</sub> < 17 m/s

**Deltares**

App. B.2.009

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345						0.15	0.34	0.20	0.59	0.73	1.02	0.68	0.29		4.00	
285-315					0.20	0.24	0.49	0.88	2.73	0.98	0.63	0.68	0.05		6.88	
255-285				0.05		0.39	1.37	3.66	3.07	1.02	0.15				9.71	
225-255					0.44	2.34	15.13	16.59	4.29	0.63	0.05				39.48	
195-225				0.10	0.34	2.88	11.62	8.54	1.76	0.05					25.28	
165-195					0.29	2.54	6.49	1.71	0.05						11.08	
135-165						0.29	0.34								0.63	
105-135							0.15								0.15	
75-105							0.20	0.15							0.34	
45-75																
15-45								0.10		0.39	0.24				0.73	
345-15						0.10	0.20	0.20	0.39	0.49	0.20	0.15			1.71	
						0.15	1.27	8.93	36.31	32.02	12.88	4.29	2.29	1.51	0.34	100.00
						17 m/s ≤ U <sub>10</sub> < 19 m/s										Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 10m

17 m/s ≤ U<sub>10</sub> < 19 m/s

**Deltares**

App. B.2.010

Wind direction (° N)	H <sub>s</sub> (m)																	
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0		
315-345								0.37	0.93	0.56	0.19	0.37	1.30		3.72			
285-315					0.19	0.19	0.19	0.19	2.60	2.04	1.12	0.93	0.37		7.81			
255-285						0.19	0.37	1.30	2.23	5.02	1.30	0.37			10.78			
225-255							1.49	11.71	19.33	9.29	0.56				42.38			
195-225					0.19	0.37	4.46	14.87	5.39	0.37					25.65			
165-195						0.19	1.49	5.76	0.93						8.36			
135-165								0.19							0.19			
105-135																		
75-105																		
45-75																		
15-45											0.19				0.19			
345-15								0.19	0.19			0.56			0.93			
								0.37	0.93	7.99	34.57	31.60	17.29	3.35	2.23	1.67	100.00	
																	19 m/s ≤ U <sub>10</sub> < 21 m/s	Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 10m

19 m/s ≤ U<sub>10</sub> < 21 m/s

**Deltares**

App. B.2.011

Wind direction (° N)	H <sub>s</sub> (m)													Total	
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0
315-345													1.27		1.27
285-315							0.64		1.27	0.64	1.27	1.27	0.64		5.73
255-285							0.64		0.64	6.37	1.27	5.10			14.01
225-255				0.64			0.64	2.55	11.46	19.11	3.18	1.27			38.85
195-225							0.64	4.46	10.83	13.38					29.30
165-195								4.46	5.73	0.64					10.83
135-165															
105-135															
75-105															
45-75															
15-45															
345-15															
							0.64	2.55	11.46	29.94	40.13	5.73	7.64	1.91	100.00
	21 m/s ≤ U <sub>10</sub> < 23 m/s														Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 10m

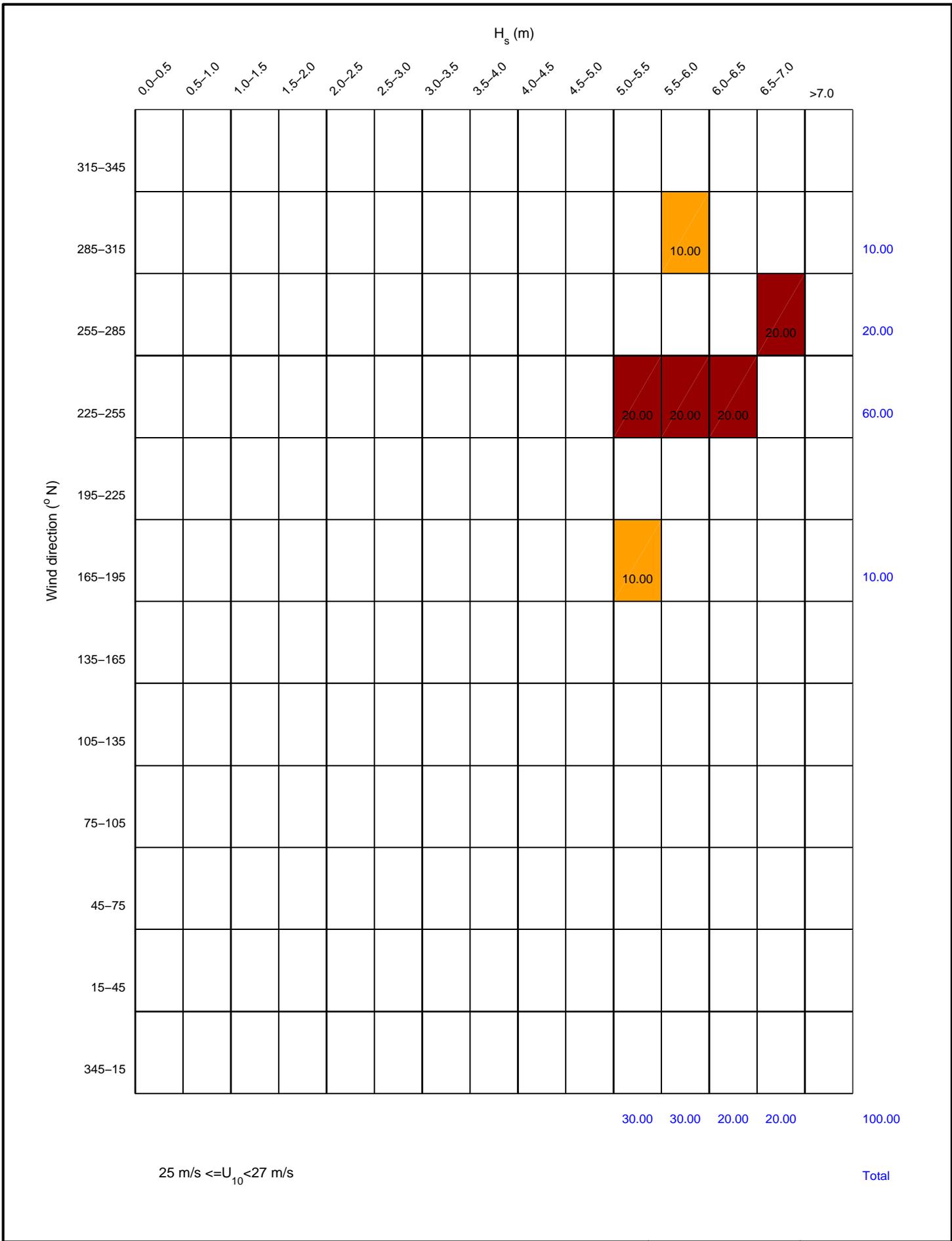
21 m/s ≤ U<sub>10</sub> < 23 m/s

		H <sub>s</sub> (m)																	
		0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0	>7.0			
Wind direction (° N)	315-345													3.85			3.85		
	285-315									1.92			1.92				3.85		
	255-285								3.85	1.92	1.92	1.92	1.92				11.54		
	225-255									17.31	26.92	7.69					51.92		
	195-225								1.92	9.62	11.54						23.08		
	165-195									3.85	1.92						5.77		
	135-165																		
	105-135																		
	75-105																		
	45-75																		
	15-45																		
	345-15																		
													5.77	34.62	42.31	11.54	5.77	100.00	
													23 m/s ≤ U <sub>10</sub> < 25 m/s		Total				

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 10m

23 m/s ≤ U<sub>10</sub> < 25 m/s



Joint Occurrence table of wind direction vs. wave height Nautical convention: coming from, clockwise from North	Height: 10m	
	$25 \text{ m/s} \leq U_{10} < 27 \text{ m/s}$	
<b>Deltares</b>		App. B.2.014



Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0
315-345	0.36	1.16	1.26	0.91	0.65	0.37	0.30	0.14	0.11	0.05	0.03	0.02	0.01			5.37
285-315	0.49	1.48	1.78	1.10	0.75	0.41	0.26	0.15	0.11	0.03	0.01	0.01	0.00			6.58
255-285	0.83	2.13	2.34	1.49	1.00	0.60	0.35	0.19	0.08	0.04	0.01	0.01	0.00	0.00		9.07
225-255	1.64	5.74	5.21	3.09	2.04	1.24	0.81	0.40	0.13	0.06	0.01	0.00	0.00			20.39
195-225	1.40	4.28	3.35	1.97	1.28	0.68	0.33	0.15	0.05	0.01	0.00					13.50
165-195	1.35	3.61	2.42	1.32	0.61	0.27	0.12	0.04	0.01	0.00						9.75
135-165	1.21	2.62	0.97	0.28	0.07	0.03	0.01									5.19
105-135	1.13	2.33	0.73	0.20	0.04	0.01	0.01									4.45
75-105	1.11	2.97	1.24	0.46	0.23	0.08	0.01	0.00								6.10
45-75	1.31	3.52	2.06	0.77	0.36	0.10	0.03	0.01								8.16
15-45	0.75	2.80	2.51	1.03	0.46	0.17	0.08	0.03	0.01	0.01	0.00					7.84
345-15	0.22	0.84	0.94	0.71	0.40	0.23	0.14	0.07	0.03	0.01	0.00	0.00				3.60
	11.80	33.47	24.80	13.33	7.88	4.21	2.44	1.17	0.53	0.22	0.07	0.04	0.01	0.00		100.00
	All year															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

All Year

**Deltares**

App. B.2.016

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	1.61	1.81	0.47	0.09												3.98
285-315	2.50	2.72	0.60	0.10	0.01											5.93
255-285	3.92	3.77	0.98	0.13		0.01										8.80
225-255	5.23	5.27	1.20	0.23	0.01	0.01										11.94
195-225	4.91	5.73	1.35	0.12	0.02	0.01										12.13
165-195	5.86	6.19	1.34	0.19												13.58
135-165	4.61	3.84	0.66	0.09												9.19
105-135	3.27	3.24	0.58	0.04												7.13
75-105	3.71	3.98	0.80	0.09												8.58
45-75	3.80	4.73	1.39	0.13	0.01											10.06
15-45	2.42	3.57	0.79	0.09	0.01											6.88
345-15	0.69	0.88	0.22	0.01	0.01											1.80
	42.52	45.72	10.37	1.30	0.06	0.03										100.00
	1 m/s ≤ U <sub>70</sub> < 3 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

1 m/s ≤ U<sub>70</sub> < 3 m/s

**Deltares**

App. B.2.017

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	1.28	3.01	1.26	0.27	0.02											5.83
285-315	1.84	3.64	1.45	0.32	0.04											7.29
255-285	2.81	4.60	1.73	0.35	0.04	0.00										9.54
225-255	4.35	6.97	1.75	0.26	0.02											13.34
195-225	3.72	5.11	1.34	0.18	0.00											10.35
165-195	3.72	5.13	1.48	0.21	0.01											10.56
135-165	2.74	3.38	0.43	0.07												6.61
105-135	2.75	3.44	0.40	0.02												6.61
75-105	2.76	4.30	0.66	0.05												7.77
45-75	3.40	5.46	1.26	0.09	0.00											10.22
15-45	2.38	4.81	1.74	0.15	0.01											9.09
345-15	0.74	1.38	0.62	0.05	0.01											2.80
	32.50	51.21	14.10	2.02	0.16	0.00										100.00
	3 m/s ≤ U <sub>70</sub> < 5 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

3 m/s ≤ U<sub>70</sub> < 5 m/s

**Deltares**

App. B.2.018

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.42	2.37	2.30	0.77	0.10											5.96
285-315	0.39	3.00	2.62	0.86	0.19	0.01		0.00								7.07
255-285	0.92	4.15	2.42	0.61	0.10	0.00										8.20
225-255	3.08	9.24	2.66	0.30	0.02											15.29
195-225	2.31	6.53	1.43	0.12	0.02											10.42
165-195	1.52	5.09	1.72	0.51	0.10	0.01										8.94
135-165	1.89	3.99	0.56	0.03												6.47
105-135	1.84	3.86	0.53	0.01	0.00											6.25
75-105	1.58	5.49	0.82	0.03												7.92
45-75	2.42	5.81	1.71	0.13	0.01											10.08
15-45	1.32	4.87	2.86	0.32	0.01											9.39
345-15	0.30	1.78	1.43	0.45	0.05											4.01
	17.98	56.20	21.06	4.14	0.60	0.02		0.00								100.00
	5 m/s ≤ U <sub>70</sub> < 7 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

5 m/s ≤ U<sub>70</sub> < 7 m/s

**Deltares**

App. B.2.019

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.08	1.28	2.33	1.33	0.44	0.03	0.01									5.51
285-315	0.05	1.60	3.51	1.41	0.58	0.05	0.01									7.21
255-285	0.14	2.71	3.97	1.16	0.20	0.03	0.01									8.22
225-255	1.00	9.88	5.91	0.72	0.04	0.01										17.55
195-225	0.80	6.78	2.88	0.19	0.01											10.65
165-195	0.82	5.42	2.38	0.99	0.18	0.03										9.82
135-165	0.75	3.80	0.73	0.05	0.01											5.34
105-135	0.96	3.60	0.67	0.05												5.28
75-105	0.88	4.40	1.65	0.08	0.01											7.01
45-75	1.00	5.28	2.85	0.47	0.02											9.62
15-45	0.34	4.16	3.92	0.84	0.08	0.00										9.35
345-15	0.09	1.31	1.75	1.07	0.21	0.02										4.45
	6.91	50.22	32.54	8.35	1.79	0.16	0.02									100.00
	7 m/s ≤ U <sub>70</sub> < 9 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

7 m/s ≤ U<sub>70</sub> < 9 m/s

**Deltares**

App. B.2.020

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.01	0.34	1.40	1.85	1.21	0.36	0.06	0.00								5.23
285-315	0.00	0.36	2.68	2.24	1.17	0.32	0.05									6.82
255-285	0.01	0.78	4.31	2.45	0.90	0.12										8.57
225-255	0.22	6.26	10.65	2.41	0.34	0.04	0.00									19.93
195-225	0.23	4.90	5.99	0.60	0.03		0.00									11.74
165-195	0.20	3.81	3.76	0.94	0.32	0.07	0.01									9.11
135-165	0.37	2.89	1.81	0.10	0.01	0.00										5.18
105-135	0.40	1.98	1.63	0.09												4.11
75-105	0.44	2.38	3.21	0.51	0.03											6.58
45-75	0.28	2.93	4.37	1.36	0.09											9.02
15-45	0.05	2.27	4.53	1.79	0.29	0.04	0.00									8.97
345-15	0.02	0.52	1.63	1.61	0.81	0.14	0.01									4.74
	2.23	29.42	45.96	15.95	5.21	1.09	0.14	0.00								100.00
	9 m/s ≤ U <sub>70</sub> < 11 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

9 m/s ≤ U<sub>70</sub> < 11 m/s

**Deltares**

App. B.2.021

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.02	0.56	1.47	1.86	1.11	0.47	0.04								5.53
285-315		0.05	0.71	2.04	1.93	0.95	0.38	0.05								6.09
255-285		0.07	2.19	4.39	2.24	0.58	0.06	0.00								9.53
225-255	0.03	2.07	11.51	9.24	1.63	0.13	0.00									24.62
195-225	0.04	1.42	8.78	4.54	0.34	0.02										15.14
165-195	0.03	0.93	5.73	2.02	0.55	0.23	0.01	0.00								9.52
135-165	0.07	0.88	2.52	0.67	0.01	0.00										4.16
105-135	0.09	0.65	1.27	0.77	0.01											2.80
75-105	0.04	0.70	1.33	1.98	0.24											4.30
45-75	0.03	1.29	2.38	2.51	0.85	0.02	0.00									7.09
15-45	0.00	0.63	2.66	2.70	1.06	0.19	0.01									7.25
345-15		0.04	0.47	1.33	1.20	0.75	0.16	0.03								3.97
	0.34	8.75	40.10	33.67	11.93	3.98	1.10	0.13								100.00
	11 m/s ≤ U <sub>70</sub> < 13 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

11 m/s ≤ U<sub>70</sub> < 13 m/s

**Deltares**

App. B.2.022

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.01	0.04	0.44	1.29	1.42	1.59	0.39	0.12	0.02	0.01					5.32
285-315		0.01	0.12	0.75	1.80	1.83	0.87	0.28	0.06							5.71
255-285		0.01	0.27	2.43	4.43	2.22	0.48	0.04								9.88
225-255	0.01	0.40	4.13	12.58	8.85	1.58	0.08	0.02								27.64
195-225	0.01	0.29	3.70	11.39	4.55	0.24	0.01									20.19
165-195	0.01	0.13	1.75	5.91	1.29	0.28	0.22	0.03	0.01							9.63
135-165		0.20	0.68	1.52	0.18	0.01										2.58
105-135		0.11	0.25	0.68	0.30											1.34
75-105		0.20	0.07	1.28	1.85	0.29										3.69
45-75		0.18	0.60	1.43	2.22	0.42	0.03	0.01								4.88
15-45		0.03	0.59	2.00	2.52	0.82	0.14	0.02								6.12
345-15			0.02	0.35	0.83	0.85	0.72	0.23	0.02							3.01
		0.03	1.56	12.21	40.75	30.11	9.95	4.14	1.02	0.22	0.02	0.01				100.00
		13 m/s ≤ U <sub>70</sub> < 15 m/s														Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

13 m/s ≤ U<sub>70</sub> < 15 m/s

**Deltares**

App. B.2.023

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0
315-345			0.01	0.06	0.52	0.87	1.26	1.39	1.08	0.21	0.03	0.03	0.01			5.46
285-315			0.01	0.12	0.54	1.26	1.63	1.12	0.42	0.10						5.20
255-285			0.08	0.36	2.65	4.68	2.53	0.54	0.06							10.90
225-255		0.02	0.57	5.51	15.52	10.51	1.89	0.09	0.02							34.13
195-225			0.65	5.08	12.56	3.72	0.17	0.02								22.19
165-195		0.08	0.12	2.53	4.88	0.67	0.19	0.09	0.07	0.01						8.63
135-165		0.02	0.01	0.47	0.81	0.11										1.43
105-135			0.03	0.31	0.14	0.09	0.02									0.59
75-105				0.07	0.76	0.91	0.07									1.81
45-75		0.01	0.03	0.14	0.93	1.29	0.34	0.02								2.76
15-45			0.02	0.51	1.09	1.35	0.90	0.17	0.04							4.09
345-15				0.02	0.25	0.76	0.77	0.70	0.26	0.02						2.80
			0.13	1.54	15.18	40.65	26.22	9.77	4.14	1.95	0.34	0.03	0.03	0.01		100.00
			15 m/s ≤ U <sub>70</sub> < 17 m/s													Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

15 m/s ≤ U<sub>70</sub> < 17 m/s

**Deltares**

App. B.2.024



Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345						0.12	0.41	0.21	0.41	0.70	0.90	0.82	0.25		3.82	
285-315					0.21	0.16	0.37	0.86	2.47	0.90	0.33	0.29	0.04		5.63	
255-285				0.04	0.25	0.74	2.14	3.66	2.55	0.66	0.12				10.15	
225-255				0.25	1.36	7.36	20.63	13.15	1.64	0.12					44.51	
195-225				0.08	0.99	7.48	11.96	4.19	0.53						25.24	
165-195				0.04	0.21	3.08	3.99	0.41	0.16	0.08					7.97	
135-165					0.04	0.37	0.16								0.58	
105-135						0.08	0.12								0.21	
75-105							0.16	0.12							0.29	
45-75																
15-45								0.08		0.49	0.04				0.62	
345-15							0.16	0.25	0.16	0.25	0.16				0.99	
						0.41	3.04	19.40	40.12	22.93	7.93	3.21	1.56	1.11	0.29	100.00
						19 m/s ≤ U <sub>70</sub> < 21 m/s										Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

19 m/s ≤ U<sub>70</sub> < 21 m/s

**Deltares**

App. B.2.026

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345							0.11	0.22	0.45	0.45	0.78	0.45			2.46	
285-315				0.11	0.22	0.22	0.22	1.79	0.89	0.45	0.89	0.11			4.92	
255-285					0.34	0.22	2.46	2.68	2.35	0.89					8.94	
225-255				0.11	1.23	8.83	23.24	11.06	3.13	0.22					47.82	
195-225				0.11	2.12	10.39	11.84	3.24	0.11						27.82	
165-195						3.24	3.02								6.26	
135-165					0.22										0.22	
105-135																
75-105																
45-75																
15-45										0.56					0.56	
345-15							0.22	0.34	0.34		0.11				1.01	
							0.34	3.91	23.13	41.12	19.33	7.26	2.57	1.79	0.56	100.00
	21 m/s ≤ U <sub>70</sub> < 23 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

21 m/s ≤ U<sub>70</sub> < 23 m/s

**Deltares**

App. B.2.027

Wind direction (° N)	H <sub>s</sub> (m)													Total	
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		>7.0
315-345												1.55		1.55	
285-315						0.31		3.11	2.48	1.24	0.62	0.31		8.07	
255-285						0.93	0.93	1.24	7.45	1.24	1.86			13.66	
225-255					0.31	2.17	9.94	21.43	11.49	0.62				45.96	
195-225				0.31		1.24	11.80	9.63	2.17					25.16	
165-195						0.31	3.42	1.86						5.59	
135-165															
105-135															
75-105															
45-75															
15-45															
345-15															
						0.31	0.31	4.97	26.09	37.27	23.60	3.11	2.48	1.86	100.00
	23 m/s ≤ U <sub>70</sub> < 25 m/s													Total	

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 70m

23 m/s ≤ U<sub>70</sub> < 25 m/s

Wind direction (° N)	H <sub>s</sub> (m)													Total	
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		>7.0
315-345													0.98		0.98
285-315							0.98					0.98	0.98		2.94
255-285								0.98	2.94	1.96	2.94				8.82
225-255				0.98		1.96	4.90	8.82	27.45	6.86	1.96				52.94
195-225							2.94	13.73	11.76						28.43
165-195							4.90	0.98							5.88
135-165															
105-135															
75-105															
45-75															
15-45															
345-15															
						0.98	2.94	12.75	24.51	42.16	8.82	5.88	1.96		100.00
	25 m/s ≤ U <sub>70</sub> < 27 m/s													Total	

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 70m

25 m/s ≤ U<sub>70</sub> < 27 m/s

		H <sub>s</sub> (m)																
		0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0	>7.0		
Wind direction (° N)	315-345																	
	285-315								1.61	1.61			3.23	3.23			9.68	
	255-285									1.61			3.23	1.61	6.45		12.90	
	225-255							1.61	1.61	17.74	22.58	9.68	3.23				56.45	
	195-225							1.61	1.61	4.84	12.90						20.97	
	165-195																	
	135-165																	
	105-135																	
	75-105																	
	45-75																	
	15-45																	
	345-15																	
									3.23	4.84	25.81	35.48	16.13	8.06	6.45		100.00	
		U <sub>70</sub> ≥ 27 m/s														Total		

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 70m

U<sub>70</sub> ≥ 27 m/s

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0
315-345	0.48	1.48	1.48	1.07	0.71	0.38	0.30	0.14	0.11	0.05	0.03	0.02	0.01			6.26
285-315	0.56	1.65	1.91	1.15	0.75	0.42	0.26	0.15	0.11	0.03	0.01	0.01	0.00			7.03
255-285	0.94	2.43	2.60	1.56	1.04	0.60	0.34	0.19	0.07	0.04	0.01	0.01	0.00	0.00		9.83
225-255	1.38	5.33	4.90	2.85	1.88	1.18	0.77	0.37	0.13	0.06	0.01	0.00	0.00			18.88
195-225	1.11	3.68	3.04	1.89	1.24	0.64	0.33	0.16	0.05	0.02	0.00					12.15
165-195	1.10	3.00	1.84	0.98	0.53	0.27	0.12	0.04	0.01	0.00	0.00					7.90
135-165	1.18	2.39	0.87	0.26	0.07	0.03	0.01	0.00								4.80
105-135	1.26	2.50	0.76	0.21	0.04	0.01	0.01									4.79
75-105	1.16	3.16	1.32	0.49	0.24	0.08	0.02	0.00								6.47
45-75	1.19	3.29	1.94	0.75	0.35	0.11	0.04	0.01								7.68
15-45	0.88	2.74	2.34	0.98	0.45	0.16	0.07	0.03	0.01	0.01	0.00					7.67
345-15	0.57	1.82	1.80	1.14	0.57	0.31	0.17	0.08	0.04	0.02	0.00	0.00				6.53
	11.80	33.47	24.80	13.33	7.88	4.21	2.44	1.17	0.53	0.22	0.07	0.04	0.01	0.00		100.00
All year																Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 80m

All Year

**Deltares**

App. B.2.031

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	2.58	3.62	1.15	0.18	0.01											7.54
285-315	2.85	3.69	1.23	0.24												8.01
255-285	4.02	4.08	1.03	0.14												9.28
225-255	4.25	4.31	0.87	0.14		0.02										9.58
195-225	3.60	3.97	0.69	0.06												8.32
165-195	3.89	3.24	0.52	0.04												7.70
135-165	3.53	2.97	0.37	0.06	0.01	0.01										6.95
105-135	3.85	3.42	0.45	0.11	0.02											7.85
75-105	3.90	3.68	0.78	0.08												8.43
45-75	3.65	4.46	0.84	0.06	0.01											9.02
15-45	3.45	4.26	1.31	0.10	0.01											9.12
345-15	2.89	4.00	1.17	0.12	0.01											8.20
	42.46	45.71	10.43	1.32	0.06	0.03										100.00
	1 m/s ≤ U <sub>80</sub> < 3 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 80m

1 m/s ≤ U<sub>80</sub> < 3 m/s

**Deltares**

App. B.2.032

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	1.52	3.63	1.83	0.44	0.05											7.48
285-315	2.06	4.19	1.91	0.48	0.05											8.68
255-285	3.07	4.97	1.73	0.33	0.02	0.00										10.13
225-255	3.41	5.71	1.45	0.15	0.00											10.71
195-225	3.16	4.35	0.94	0.05	0.00											8.50
165-195	3.11	3.56	0.35	0.04												7.05
135-165	3.01	2.95	0.31	0.03												6.31
105-135	2.88	3.87	0.40	0.01												7.16
75-105	2.88	4.44	0.55	0.04	0.00											7.91
45-75	3.00	4.86	1.11	0.09												9.06
15-45	2.65	4.73	1.53	0.13	0.01											9.05
345-15	1.86	3.82	2.02	0.23	0.01											7.94
	32.62	51.06	14.12	2.03	0.16	0.00										100.00
	3 m/s ≤ U <sub>80</sub> < 5 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 80m

3 m/s ≤ U<sub>80</sub> < 5 m/s

**Deltares**

App. B.2.033

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.50	2.76	2.52	1.07	0.17											7.01
285-315	0.48	3.18	2.83	0.91	0.20	0.01		0.00								7.62
255-285	1.28	4.94	2.65	0.54	0.07											9.48
225-255	2.64	7.95	2.30	0.24	0.02											13.15
195-225	1.96	5.85	1.36	0.07	0.00											9.25
165-195	1.44	4.13	0.50	0.07												6.13
135-165	1.91	3.81	0.44	0.01												6.18
105-135	2.07	4.05	0.58	0.01	0.00											6.71
75-105	1.68	5.88	0.97	0.04												8.57
45-75	2.21	5.37	1.45	0.11	0.01											9.14
15-45	1.46	4.62	2.51	0.30	0.03											8.92
345-15	0.55	3.40	3.00	0.77	0.10	0.01										7.84
	18.18	55.94	21.10	4.15	0.60	0.02		0.00								100.00
	5 m/s ≤ U <sub>80</sub> < 7 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 80m

5 m/s ≤ U<sub>80</sub> < 7 m/s

**Deltares**

App. B.2.034

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.09	1.52	2.65	1.57	0.49	0.04	0.01									6.36
285-315	0.08	1.64	3.55	1.41	0.54	0.05	0.02									7.29
255-285	0.26	3.39	4.54	1.17	0.17	0.02										9.56
225-255	1.00	9.51	5.23	0.58	0.03	0.00										16.35
195-225	0.66	6.16	2.64	0.11	0.01											9.57
165-195	0.78	4.90	1.27	0.07	0.00											7.04
135-165	0.94	3.52	0.62	0.03												5.11
105-135	1.12	3.76	0.70	0.02	0.00											5.61
75-105	0.91	4.74	1.71	0.09	0.01											7.46
45-75	0.95	4.98	2.70	0.47	0.03											9.13
15-45	0.31	4.03	3.62	0.68	0.07	0.01										8.72
345-15	0.15	2.22	3.01	2.01	0.38	0.04										7.81
	7.25	50.36	32.25	8.22	1.73	0.16	0.02									100.00
	7 m/s ≤ U <sub>80</sub> < 9 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 80m

7 m/s ≤ U<sub>80</sub> < 9 m/s

**Deltares**

App. B.2.035

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.03	0.39	1.55	2.09	1.30	0.34	0.05	0.00								5.75
285-315		0.41	2.65	2.22	1.19	0.35	0.05									6.87
255-285	0.03	0.92	4.70	2.61	0.88	0.09										9.23
225-255	0.30	6.64	9.91	2.00	0.24	0.01										19.11
195-225	0.18	4.45	5.47	0.51	0.04											10.65
165-195	0.29	4.06	3.14	0.18	0.01											7.67
135-165	0.41	2.81	1.57	0.08												4.87
105-135	0.52	2.24	1.63	0.10	0.00											4.49
75-105	0.51	2.86	3.38	0.48	0.04											7.27
45-75	0.27	2.96	4.32	1.30	0.06											8.91
15-45	0.05	2.20	4.06	1.63	0.26	0.03	0.00									8.23
345-15	0.01	0.79	2.47	2.34	1.12	0.23	0.02									6.98
	2.59	30.73	44.85	15.52	5.13	1.05	0.13	0.00								100.00
	9 m/s ≤ U <sub>80</sub> < 11 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 80m

9 m/s ≤ U<sub>80</sub> < 11 m/s

**Deltares**

App. B.2.036

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.03	0.63	1.54	1.95	1.03	0.43	0.06								5.67
285-315		0.09	0.81	2.13	1.85	0.94	0.34	0.04								6.20
255-285		0.11	2.79	4.45	2.23	0.50	0.05	0.00								10.14
225-255	0.05	2.64	11.31	8.00	1.31	0.12										23.42
195-225	0.01	1.20	8.10	4.15	0.28	0.01										13.76
165-195	0.07	1.33	6.09	1.44	0.08	0.00										9.01
135-165	0.10	1.01	2.45	0.56												4.13
105-135	0.14	0.87	1.45	0.76	0.01											3.23
75-105	0.08	1.03	1.61	2.01	0.24											4.97
45-75	0.03	1.41	2.33	2.38	0.78	0.04	0.00									6.98
15-45		0.64	2.68	2.57	1.04	0.15	0.01									7.10
345-15	0.01	0.11	0.74	1.84	1.53	0.97	0.19	0.01								5.39
	0.50	10.47	41.00	31.84	11.29	3.77	1.02	0.11								100.00
	11 m/s ≤ U <sub>80</sub> < 13 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 80m

11 m/s ≤ U<sub>80</sub> < 13 m/s

**Deltares**

App. B.2.037

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.01	0.05	0.51	1.38	1.49	1.59	0.34	0.11	0.02						5.51
285-315		0.01	0.13	0.81	1.83	1.75	0.84	0.29	0.05							5.71
255-285		0.01	0.40	2.82	4.55	2.06	0.41	0.02								10.27
225-255	0.01	0.67	4.76	12.09	7.49	1.19	0.07	0.02								26.30
195-225		0.25	3.60	10.73	3.93	0.19	0.01									18.71
165-195	0.01	0.25	2.37	6.22	0.89	0.03	0.01									9.78
135-165	0.01	0.31	0.83	1.42	0.13											2.69
105-135	0.01	0.23	0.36	0.78	0.29											1.67
75-105		0.35	0.16	1.47	1.88	0.27										4.14
45-75		0.34	0.88	1.48	2.15	0.39	0.03	0.01								5.26
15-45	0.01	0.07	0.72	2.08	2.28	0.72	0.11	0.05	0.01							6.05
345-15			0.03	0.55	1.20	1.05	0.84	0.22	0.03							3.93
		0.04	2.49	14.29	40.96	27.99	9.15	3.91	0.94	0.20	0.02					100.00
		13 m/s ≤ U <sub>80</sub> < 15 m/s														Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 80m

13 m/s ≤ U<sub>80</sub> < 15 m/s

**Deltares**

App. B.2.038



Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345				0.04	0.15	0.33	0.89	1.01	1.43	1.01	0.31	0.14				5.30
285-315				0.08	0.41	0.56	1.43	1.68	1.24	0.15	0.06	0.02				5.62
255-285		0.02	0.02	0.04	0.73	2.74	4.87	3.17	0.66	0.12						12.37
225-255			0.12	1.16	7.31	15.08	11.07	1.62	0.10							36.45
195-225		0.02	0.06	1.04	7.27	11.11	2.86	0.08	0.02							22.46
165-195			0.10	0.29	4.27	5.39	0.60	0.02								10.67
135-165				0.08	0.46	0.72	0.15									1.41
105-135				0.02	0.06	0.23	0.19									0.50
75-105						0.27	0.29									0.56
45-75				0.04	0.08		0.37	0.23								0.72
15-45				0.02	0.21	0.33	0.64	0.58	0.15	0.02						1.95
345-15					0.04	0.25	0.52	0.46	0.44	0.23	0.04					1.99
		0.04	0.29	2.80	20.99	37.01	23.89	8.85	4.04	1.53	0.41	0.15				100.00
	17 m/s ≤ U <sub>80</sub> < 19 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 80m

17 m/s ≤ U<sub>80</sub> < 19 m/s

**Deltares**

App. B.2.040

Wind direction (° N)	H <sub>s</sub> (m)																
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0	
315-345					0.08	0.15	0.46	0.31	0.50	0.61	0.81	0.54	0.19			3.65	
285-315					0.23	0.23	0.35	1.00	2.46	0.92	0.38	0.27	0.04			5.88	
255-285					0.15	0.81	2.19	3.69	2.15	0.50						9.49	
225-255			0.04	0.27	1.54	7.99	20.28	11.53	1.38	0.12						43.14	
195-225				0.15	1.23	7.95	10.87	3.80	0.31							24.32	
165-195				0.04	0.54	4.61	4.69	0.35								10.22	
135-165					0.04	0.46	0.19									0.69	
105-135						0.12	0.12									0.23	
75-105						0.04	0.19	0.12								0.35	
45-75																	
15-45								0.15		0.50	0.04					0.69	
345-15						0.08	0.19	0.23	0.31	0.38	0.12	0.04				1.34	
						0.04	0.46	3.80	22.44	39.53	21.17	7.11	3.03	1.34	0.85	0.23	100.00
						19 m/s ≤ U <sub>80</sub> < 21 m/s											Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 80m

19 m/s ≤ U<sub>80</sub> < 21 m/s

**Deltares**

App. B.2.041



Wind direction (° N)	H <sub>s</sub> (m)													Total	
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0
315-345								0.56	0.28				1.67		2.50
285-315						0.28		2.78	1.94	1.11	0.56	0.28			6.94
255-285						0.83	0.28	0.83	5.83	1.11	1.39				10.28
225-255					0.28	1.39	10.83	21.67	10.00	0.56					44.72
195-225				0.28	0.56	3.06	12.78	7.78	1.67						26.11
165-195						1.11	5.56	2.50							9.17
135-165							0.28								0.28
105-135															
75-105															
45-75															
15-45															
345-15															
						0.28	0.83	6.67	29.72	36.11	19.72	2.78	1.94	1.94	100.00
	23 m/s ≤ U <sub>80</sub> < 25 m/s														Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 80m

23 m/s ≤ U<sub>80</sub> < 25 m/s

Wind direction (° N)	H <sub>s</sub> (m)													Total	
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0
315-345													0.84		0.84
285-315						0.84		0.84				0.84	0.84		3.36
255-285							0.84	0.84	3.36	0.84	2.52				8.40
225-255				0.84		0.84	3.36	10.92	26.05	4.20	0.84				47.06
195-225						0.84	6.72	11.76	11.76						31.09
165-195							5.04	3.36	0.84						9.24
135-165															
105-135															
75-105															
45-75															
15-45															
345-15															
						0.84	2.52	15.97	27.73	42.02	5.04	4.20	1.68		100.00
	25 m/s ≤ U <sub>80</sub> < 27 m/s													Total	

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 80m

25 m/s ≤ U<sub>80</sub> < 27 m/s

Wind direction (° N)	H <sub>s</sub> (m)													Total		
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345													2.78		2.78	
285-315									1.39			2.78			4.17	
255-285								1.39	1.39	1.39	4.17	1.39	5.56		15.28	
225-255							1.39	1.39	12.50	22.22	9.72	2.78			50.00	
195-225							1.39	4.17	8.33	8.33					22.22	
165-195									2.78	2.78					5.56	
135-165																
105-135																
75-105																
45-75																
15-45																
345-15																
									2.78	6.94	26.39	34.72	16.67	6.94	5.56	100.00
	U <sub>80</sub> ≥ 27 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 80m

U<sub>80</sub> ≥ 27 m/s

**Deltares**

App. B.2.045

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0
315-345	0.48	1.49	1.49	1.07	0.71	0.38	0.30	0.14	0.11	0.05	0.03	0.02	0.01			6.29
285-315	0.57	1.65	1.91	1.15	0.75	0.42	0.26	0.15	0.11	0.03	0.01	0.01	0.00			7.05
255-285	0.96	2.47	2.61	1.57	1.04	0.60	0.34	0.19	0.07	0.04	0.01	0.01	0.00	0.00		9.90
225-255	1.39	5.38	4.92	2.85	1.89	1.18	0.78	0.37	0.13	0.06	0.01	0.00	0.00			18.96
195-225	1.11	3.66	3.03	1.89	1.24	0.63	0.33	0.16	0.05	0.02	0.00					12.12
165-195	1.12	2.98	1.83	0.97	0.53	0.27	0.12	0.04	0.01	0.00	0.00					7.86
135-165	1.19	2.41	0.86	0.25	0.07	0.03	0.01	0.00								4.83
105-135	1.25	2.50	0.76	0.21	0.04	0.01	0.01									4.79
75-105	1.14	3.17	1.33	0.49	0.24	0.08	0.02	0.00								6.46
45-75	1.17	3.26	1.95	0.75	0.35	0.11	0.04	0.01								7.63
15-45	0.86	2.72	2.32	0.97	0.45	0.16	0.07	0.03	0.01	0.01	0.00					7.60
345-15	0.56	1.80	1.80	1.15	0.57	0.31	0.17	0.08	0.04	0.02	0.00	0.00				6.51
	11.80	33.47	24.80	13.33	7.88	4.21	2.44	1.17	0.53	0.22	0.07	0.04	0.01	0.00		100.00
All year																Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

All Year

**Deltares**

App. B.2.046

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	2.63	3.61	1.14	0.18	0.01											7.56
285-315	2.90	3.71	1.24	0.23												8.08
255-285	4.05	4.16	1.05	0.14												9.40
225-255	4.18	4.23	0.88	0.14		0.02										9.43
195-225	3.59	4.03	0.69	0.06												8.37
165-195	3.91	3.21	0.49	0.04												7.65
135-165	3.57	3.03	0.37	0.06	0.01	0.01										7.05
105-135	3.87	3.34	0.45	0.11	0.02											7.79
75-105	3.82	3.67	0.79	0.08												8.36
45-75	3.60	4.46	0.85	0.06	0.01											8.97
15-45	3.49	4.18	1.31	0.10	0.01											9.08
345-15	2.96	4.01	1.15	0.12	0.01											8.25
	42.56	45.63	10.41	1.32	0.06	0.03										100.00
	1 m/s ≤ U <sub>90</sub> < 3 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

1 m/s ≤ U<sub>90</sub> < 3 m/s

**Deltares**

App. B.2.047

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	1.56	3.68	1.85	0.45	0.05											7.60
285-315	2.06	4.19	1.88	0.50	0.05											8.67
255-285	3.10	4.98	1.73	0.34	0.02	0.00										10.17
225-255	3.46	5.63	1.46	0.14	0.00											10.70
195-225	3.14	4.28	0.93	0.05	0.00											8.40
165-195	3.10	3.49	0.34	0.04												6.97
135-165	2.97	3.00	0.31	0.03												6.31
105-135	2.93	3.93	0.42	0.01												7.29
75-105	2.87	4.39	0.55	0.04	0.00											7.86
45-75	2.95	4.89	1.10	0.09												9.03
15-45	2.68	4.75	1.52	0.12	0.01											9.08
345-15	1.81	3.81	2.06	0.22	0.01											7.91
	32.62	51.03	14.14	2.04	0.17	0.00										100.00
	3 m/s ≤ U <sub>90</sub> < 5 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 90m

3 m/s ≤ U<sub>90</sub> < 5 m/s

**Deltares**

App. B.2.048

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.50	2.79	2.54	1.04	0.16											7.03
285-315	0.55	3.25	2.85	0.93	0.19	0.01		0.00								7.79
255-285	1.37	4.96	2.64	0.55	0.07											9.59
225-255	2.65	7.90	2.25	0.25	0.02											13.06
195-225	1.95	5.64	1.34	0.07	0.00											9.01
165-195	1.48	4.08	0.51	0.06												6.13
135-165	1.94	3.83	0.45	0.01												6.23
105-135	2.04	4.07	0.58	0.01	0.00											6.71
75-105	1.67	5.88	0.98	0.05												8.58
45-75	2.22	5.28	1.46	0.11	0.01											9.09
15-45	1.38	4.64	2.54	0.30	0.03											8.89
345-15	0.55	3.40	3.05	0.77	0.10	0.01										7.89
	18.30	55.72	21.20	4.17	0.59	0.02		0.00								100.00
	5 m/s ≤ U <sub>90</sub> < 7 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

5 m/s ≤ U<sub>90</sub> < 7 m/s

**Deltares**

App. B.2.049

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.10	1.57	2.71	1.59	0.50	0.04	0.01									6.52
285-315	0.10	1.68	3.61	1.41	0.56	0.05	0.02									7.43
255-285	0.31	3.54	4.56	1.15	0.16	0.02										9.74
225-255	1.07	9.53	5.07	0.56	0.03	0.00										16.26
195-225	0.72	6.16	2.51	0.11	0.00											9.51
165-195	0.85	4.77	1.23	0.07	0.00											6.92
135-165	1.02	3.47	0.60	0.03												5.11
105-135	1.12	3.73	0.70	0.02	0.00											5.58
75-105	0.88	4.70	1.68	0.10	0.01											7.37
45-75	0.93	4.98	2.68	0.47	0.03											9.09
15-45	0.31	3.95	3.63	0.66	0.07	0.01										8.63
345-15	0.16	2.23	3.02	2.02	0.38	0.04										7.85
	7.58	50.33	31.99	8.19	1.73	0.16	0.02									100.00
	7 m/s ≤ U <sub>90</sub> < 9 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

7 m/s ≤ U<sub>90</sub> < 9 m/s

**Deltares**

App. B.2.050

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.03	0.43	1.58	2.06	1.27	0.33	0.05	0.00								5.77
285-315		0.44	2.65	2.21	1.15	0.34	0.05									6.83
255-285	0.05	1.08	4.66	2.55	0.87	0.08										9.29
225-255	0.39	7.01	9.63	1.92	0.21	0.01										19.16
195-225	0.21	4.56	5.31	0.46	0.04											10.59
165-195	0.33	4.18	2.95	0.17	0.01											7.64
135-165	0.45	2.90	1.51	0.08												4.94
105-135	0.53	2.24	1.56	0.09	0.00											4.44
75-105	0.50	3.00	3.41	0.46	0.04											7.41
45-75	0.27	2.96	4.30	1.24	0.06											8.84
15-45	0.05	2.18	3.96	1.62	0.25	0.03	0.00									8.08
345-15	0.01	0.81	2.50	2.36	1.11	0.21	0.02									7.02
	2.84	31.81	44.02	15.21	5.01	1.00	0.12	0.00								100.00
	9 m/s ≤ U <sub>90</sub> < 11 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

9 m/s ≤ U<sub>90</sub> < 11 m/s

**Deltares**

App. B.2.051

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.04	0.66	1.60	1.93	0.99	0.37	0.06								5.66
285-315		0.11	0.91	2.09	1.84	0.89	0.33	0.04								6.21
255-285		0.17	3.04	4.33	2.12	0.47	0.04									10.16
225-255	0.07	3.07	11.38	7.38	1.21	0.12										23.22
195-225	0.02	1.50	8.07	3.80	0.25	0.01										13.64
165-195	0.09	1.48	5.95	1.25	0.06	0.00										8.84
135-165	0.14	1.17	2.38	0.50												4.18
105-135	0.19	0.97	1.50	0.74	0.01											3.41
75-105	0.15	1.19	1.65	1.96	0.21											5.16
45-75	0.01	1.42	2.35	2.39	0.75	0.04	0.00									6.97
15-45		0.82	2.71	2.47	1.00	0.14	0.01									7.15
345-15	0.01	0.11	0.78	1.84	1.51	0.95	0.18	0.01								5.39
	0.68	12.03	41.38	30.35	10.89	3.61	0.94	0.11								100.00
	11 m/s ≤ U <sub>90</sub> < 13 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

11 m/s ≤ U<sub>90</sub> < 13 m/s

**Deltares**

App. B.2.052

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.01	0.05	0.52	1.40	1.47	1.61	0.32	0.10	0.01						5.49
285-315		0.02	0.17	0.90	1.81	1.74	0.78	0.28	0.05							5.74
255-285		0.01	0.45	3.07	4.44	1.93	0.37	0.03								10.30
225-255	0.01	0.89	5.50	12.06	6.64	0.98	0.06	0.01								26.15
195-225		0.32	3.91	10.44	3.28	0.15	0.01									18.10
165-195	0.03	0.36	2.70	5.86	0.78	0.03	0.01									9.76
135-165	0.02	0.41	1.02	1.42	0.12											2.99
105-135	0.01	0.40	0.42	0.76	0.27											1.86
75-105		0.46	0.24	1.49	1.81	0.26										4.26
45-75	0.01	0.47	1.04	1.50	2.05	0.35	0.03	0.01								5.45
15-45	0.01	0.12	0.82	2.15	2.16	0.68	0.10	0.03								6.06
345-15		0.01	0.03	0.57	1.20	1.03	0.79	0.19	0.03							3.83
		0.08	3.46	16.35	40.74	25.97	8.59	3.76	0.86	0.17	0.01					100.00
		13 m/s ≤ U <sub>90</sub> < 15 m/s														Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

13 m/s ≤ U<sub>90</sub> < 15 m/s

**Deltares**

App. B.2.053

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345				0.08	0.48	1.00	1.23	1.24	0.84	0.15	0.04	0.01	0.01			5.09
285-315			0.02	0.17	0.70	1.26	1.63	0.92	0.37	0.08						5.15
255-285			0.08	0.54	3.18	4.51	2.04	0.36	0.03							10.74
225-255	0.01	0.09	1.12	6.50	14.65	8.01	1.25	0.05	0.01							31.70
195-225		0.07	1.07	6.19	11.30	2.51	0.09	0.01								21.24
165-195		0.09	0.35	4.22	5.18	0.50	0.01									10.35
135-165		0.05	0.06	0.66	0.75	0.08										1.61
105-135		0.02	0.04	0.38	0.19	0.08	0.01									0.72
75-105		0.04	0.02	0.14	0.89	0.91	0.07									2.07
45-75		0.03	0.29	0.26	1.10	1.36	0.40	0.02								3.47
15-45			0.12	0.68	1.30	1.29	0.63	0.12	0.05							4.20
345-15				0.06	0.40	1.02	1.03	0.78	0.33	0.02			0.01			3.66
	0.01	0.40	3.19	19.88	40.13	22.52	8.40	3.51	1.63	0.26	0.04	0.02	0.01			100.00
	15 m/s ≤ U <sub>90</sub> < 17 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

15 m/s ≤ U<sub>90</sub> < 17 m/s

**Deltares**

App. B.2.054

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345				0.04	0.18	0.37	0.89	1.05	1.41	0.94	0.30	0.13				5.31
285-315				0.06	0.35	0.65	1.31	1.65	1.18	0.15	0.06	0.02				5.42
255-285		0.02	0.02	0.06	0.87	3.03	4.79	2.79	0.55	0.09						12.22
225-255			0.13	1.55	8.47	15.38	9.67	1.16	0.09							36.46
195-225		0.02	0.09	1.37	8.38	10.23	2.11	0.07	0.02							22.28
165-195		0.02	0.09	0.28	4.88	4.86	0.50									10.63
135-165		0.04	0.02	0.07	0.50	0.70	0.11									1.44
105-135				0.02	0.06	0.26	0.17									0.50
75-105					0.02	0.30	0.28									0.59
45-75				0.02	0.07	0.06	0.41	0.22								0.78
15-45				0.17	0.28	0.35	0.74	0.59	0.15							2.27
345-15					0.04	0.24	0.61	0.48	0.44	0.22	0.04	0.02				2.09
		0.09	0.35	3.62	24.09	36.43	21.58	8.03	3.85	1.41	0.39	0.17				100.00
	17 m/s ≤ U <sub>90</sub> < 19 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

17 m/s ≤ U<sub>90</sub> < 19 m/s

**Deltares**

App. B.2.055

Wind direction (° N)	H <sub>s</sub> (m)																
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0	
315-345					0.07	0.18	0.47	0.32	0.54	0.57	0.75	0.47	0.18			3.55	
285-315				0.04	0.25	0.25	0.50	1.15	2.19	0.83	0.29	0.22				5.71	
255-285					0.18	0.93	2.59	3.73	2.05	0.50						9.98	
225-255			0.04	0.32	2.01	9.23	20.39	10.31	1.04	0.04						43.38	
195-225				0.18	1.40	9.34	10.34	2.84	0.11							24.20	
165-195				0.07	0.68	4.99	3.95	0.29								9.98	
135-165					0.04	0.47	0.22									0.72	
105-135						0.11	0.14									0.25	
75-105						0.04	0.18	0.11								0.32	
45-75				0.04												0.04	
15-45								0.14		0.50						0.65	
345-15						0.07	0.14	0.22	0.29	0.36	0.11	0.04				1.22	
						0.04	0.65	4.63	25.60	38.92	19.10	6.21	2.80	1.15	0.72	0.18	100.00
						19 m/s ≤ U <sub>90</sub> < 21 m/s											Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

19 m/s ≤ U<sub>90</sub> < 21 m/s

**Deltares**

App. B.2.056

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0
315-345							0.09	0.17	0.43	0.60	0.43	0.51	0.34			2.57
285-315					0.17	0.26	0.43	0.34	1.63	0.60	0.77	0.94	0.17			5.30
255-285				0.09		0.17	0.17	2.65	2.74	2.05	0.60					8.47
225-255					0.26	1.28	11.21	20.79	7.10	1.71	0.17					42.51
195-225					0.26	2.48	12.06	10.69	2.91							28.40
165-195					0.26	1.11	5.82	3.08	0.17							10.44
135-165							0.26									0.26
105-135																
75-105																
45-75																
15-45											0.51					0.51
345-15							0.09	0.17	0.43	0.34	0.09	0.43				1.54
					0.09	0.94	5.30	30.11	37.90	15.40	5.30	2.57	1.88	0.51		100.00
	21 m/s ≤ U <sub>90</sub> < 23 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

21 m/s ≤ U<sub>90</sub> < 23 m/s

**Deltares**

App. B.2.057

Wind direction (° N)	H <sub>s</sub> (m)														
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0
315-345								0.51	0.25				1.52		2.27
285-315						0.25		2.78	2.02	1.01	0.76	0.25			7.07
255-285						0.76	0.51	0.76	5.81	1.01	1.01				9.85
225-255					0.25	2.27	12.88	22.98	8.84	0.51					47.73
195-225			0.25	0.51	4.04	12.37	6.06	0.76							23.99
165-195					1.26	5.81	1.77								8.84
135-165						0.25									0.25
105-135															
75-105															
45-75															
15-45															
345-15															
					0.25	0.76	8.59	31.82	34.85	17.68	2.53	1.77	1.77		100.00
					23 m/s ≤ U <sub>90</sub> < 25 m/s										Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 90m

23 m/s ≤ U<sub>90</sub> < 25 m/s

**Deltares**

App. B.2.058

Wind direction (° N)	H <sub>s</sub> (m)													Total	
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0
315-345													0.73		0.73
285-315						0.73		0.73				0.73	0.73		2.92
255-285							0.73		2.92	0.73	2.92				7.30
225-255				0.73		0.73	3.65	11.68	21.90	3.65	0.73				43.07
195-225						0.73	9.49	14.60	11.68						36.50
165-195							4.38	4.38	0.73						9.49
135-165															
105-135															
75-105															
45-75															
15-45															
345-15															
						0.73	2.19	18.25	31.39	37.23	4.38	4.38	1.46		100.00

25 m/s ≤ U<sub>90</sub> < 27 m/s

Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 90m

25 m/s ≤ U<sub>90</sub> < 27 m/s

**Deltares**

App. B.2.059



Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0
315-345	0.50	1.49	1.49	1.07	0.71	0.38	0.30	0.14	0.11	0.05	0.03	0.02	0.01			6.31
285-315	0.58	1.66	1.91	1.16	0.75	0.42	0.26	0.15	0.11	0.03	0.01	0.01	0.00			7.08
255-285	0.97	2.51	2.63	1.57	1.04	0.60	0.34	0.19	0.07	0.04	0.01	0.01	0.00	0.00		9.97
225-255	1.41	5.41	4.92	2.85	1.89	1.18	0.78	0.37	0.13	0.06	0.01	0.00	0.00			19.03
195-225	1.11	3.64	3.02	1.89	1.24	0.63	0.32	0.15	0.05	0.02	0.00					12.08
165-195	1.13	2.97	1.81	0.97	0.52	0.27	0.12	0.04	0.01	0.00	0.00					7.85
135-165	1.20	2.41	0.86	0.25	0.07	0.03	0.01	0.00								4.84
105-135	1.24	2.49	0.76	0.21	0.04	0.01	0.01									4.77
75-105	1.13	3.17	1.33	0.49	0.24	0.08	0.02	0.00								6.46
45-75	1.14	3.25	1.94	0.75	0.35	0.11	0.04	0.01								7.60
15-45	0.83	2.68	2.31	0.97	0.45	0.16	0.07	0.03	0.01	0.01	0.00					7.53
345-15	0.55	1.78	1.80	1.15	0.57	0.31	0.18	0.08	0.04	0.02	0.00	0.00				6.48
	11.80	33.47	24.80	13.33	7.88	4.21	2.44	1.17	0.53	0.22	0.07	0.04	0.01	0.00		100.00
All year																Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

All Year

**Deltares**

App. B.2.061

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	2.71	3.59	1.16	0.19	0.01											7.66
285-315	2.93	3.73	1.23	0.22												8.12
255-285	4.03	4.14	1.06	0.15												9.39
225-255	4.13	4.39	0.86	0.13		0.02										9.54
195-225	3.56	3.93	0.68	0.06												8.23
165-195	4.04	3.18	0.51	0.04												7.77
135-165	3.59	3.00	0.39	0.06	0.01	0.01										7.05
105-135	3.75	3.30	0.47	0.11	0.02											7.65
75-105	3.91	3.63	0.79	0.08												8.41
45-75	3.52	4.53	0.85	0.06	0.01											8.96
15-45	3.57	4.08	1.29	0.10	0.01											9.06
345-15	2.84	4.03	1.16	0.12	0.01											8.17
	42.59	45.54	10.46	1.33	0.06	0.03										100.00
	1 m/s ≤ U <sub>100</sub> < 3 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 100m

1 m/s ≤ U<sub>100</sub> < 3 m/s

**Deltares**

App. B.2.062

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	1.57	3.69	1.86	0.45	0.05											7.63
285-315	2.10	4.15	1.85	0.50	0.05											8.66
255-285	3.18	5.04	1.74	0.34	0.02	0.00										10.33
225-255	3.50	5.58	1.44	0.14	0.00											10.66
195-225	3.07	4.28	0.94	0.05	0.00											8.36
165-195	3.10	3.48	0.33	0.04												6.95
135-165	2.93	2.94	0.28	0.03												6.19
105-135	2.92	3.92	0.42	0.01												7.27
75-105	2.84	4.39	0.57	0.03	0.00											7.84
45-75	2.97	4.95	1.10	0.10												9.12
15-45	2.64	4.77	1.56	0.13	0.01											9.11
345-15	1.80	3.79	2.07	0.23	0.01											7.89
	32.65	50.97	14.16	2.05	0.17	0.00										100.00
	3 m/s ≤ U <sub>100</sub> < 5 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

3 m/s ≤ U<sub>100</sub> < 5 m/s

**Deltares**

App. B.2.063

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.51	2.86	2.56	1.06	0.17											7.15
285-315	0.58	3.30	2.83	0.94	0.20	0.01		0.00								7.86
255-285	1.42	4.99	2.67	0.53	0.08											9.67
225-255	2.60	7.76	2.23	0.26	0.02											12.86
195-225	1.97	5.53	1.33	0.08	0.00											8.91
165-195	1.55	4.03	0.53	0.06												6.17
135-165	1.92	3.83	0.44	0.02												6.21
105-135	2.08	4.08	0.59	0.02	0.00											6.76
75-105	1.67	5.94	0.98	0.05												8.64
45-75	2.20	5.29	1.50	0.11	0.01											9.10
15-45	1.30	4.55	2.54	0.30	0.03											8.72
345-15	0.56	3.41	3.06	0.78	0.10	0.01										7.93
	18.35	55.56	21.26	4.21	0.61	0.02		0.00								100.00
	5 m/s ≤ U <sub>100</sub> < 7 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

5 m/s ≤ U<sub>100</sub> < 7 m/s

**Deltares**

App. B.2.064

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.12	1.60	2.80	1.60	0.49	0.03	0.01									6.66
285-315	0.11	1.77	3.68	1.40	0.56	0.05	0.02									7.58
255-285	0.37	3.78	4.55	1.15	0.15	0.02										10.00
225-255	1.20	9.43	4.91	0.54	0.03	0.00										16.12
195-225	0.79	6.02	2.43	0.11	0.00											9.35
165-195	0.88	4.69	1.18	0.07	0.00											6.82
135-165	1.13	3.47	0.58	0.02												5.21
105-135	1.08	3.69	0.68	0.02	0.00											5.49
75-105	0.88	4.69	1.67	0.10	0.01											7.35
45-75	0.87	4.96	2.67	0.46	0.03											8.99
15-45	0.30	3.94	3.61	0.67	0.07	0.01										8.58
345-15	0.17	2.20	3.04	2.03	0.37	0.04										7.85
	7.89	50.25	31.79	8.17	1.72	0.15	0.02									100.00
	7 m/s ≤ U <sub>100</sub> < 9 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

7 m/s ≤ U<sub>100</sub> < 9 m/s

**Deltares**

App. B.2.065

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.03	0.48	1.58	2.04	1.25	0.32	0.04	0.00								5.75
285-315	0.01	0.49	2.68	2.23	1.10	0.33	0.04									6.88
255-285	0.06	1.17	4.66	2.48	0.84	0.08										9.29
225-255	0.48	7.37	9.45	1.80	0.20	0.01										19.31
195-225	0.25	4.75	5.07	0.42	0.04											10.52
165-195	0.40	4.18	2.78	0.17	0.01											7.54
135-165	0.50	2.90	1.48	0.08												4.96
105-135	0.57	2.26	1.55	0.09	0.00											4.48
75-105	0.48	3.02	3.42	0.45	0.04											7.42
45-75	0.30	2.97	4.23	1.22	0.06											8.77
15-45	0.04	2.15	3.94	1.59	0.24	0.03	0.00									7.99
345-15	0.03	0.85	2.57	2.33	1.08	0.21	0.02									7.08
	3.16	32.60	43.41	14.90	4.85	0.97	0.10	0.00								100.00
	9 m/s ≤ U <sub>100</sub> < 11 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

9 m/s ≤ U<sub>100</sub> < 11 m/s

**Deltares**

App. B.2.066

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.06	0.71	1.64	1.92	0.96	0.37	0.06								5.71
285-315		0.13	1.01	2.10	1.83	0.86	0.33	0.03								6.28
255-285		0.25	3.23	4.16	2.01	0.45	0.04									10.13
225-255	0.09	3.44	11.28	6.88	1.07	0.10										22.86
195-225	0.05	1.79	7.98	3.43	0.22	0.01										13.48
165-195	0.11	1.77	5.75	1.09	0.06	0.00										8.77
135-165	0.17	1.35	2.36	0.46												4.34
105-135	0.21	1.17	1.50	0.68	0.01											3.57
75-105	0.20	1.35	1.70	1.89	0.18											5.32
45-75	0.01	1.48	2.36	2.33	0.70	0.04	0.00									6.92
15-45		0.89	2.79	2.36	0.97	0.12	0.01									7.16
345-15	0.01	0.13	0.80	1.87	1.51	0.93	0.17	0.01								5.45
	0.85	13.80	41.48	28.89	10.49	3.47	0.93	0.10								100.00
	11 m/s ≤ U <sub>100</sub> < 13 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

11 m/s ≤ U<sub>100</sub> < 13 m/s

**Deltares**

App. B.2.067

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.01	0.05	0.55	1.41	1.48	1.52	0.28	0.08	0.01						5.39
285-315		0.02	0.21	0.93	1.85	1.68	0.76	0.28	0.05							5.80
255-285		0.03	0.60	3.31	4.25	1.80	0.28	0.03								10.29
225-255	0.01	1.10	6.18	11.84	6.02	0.86	0.04	0.01								26.06
195-225		0.39	4.29	9.89	2.78	0.13	0.01									17.49
165-195	0.04	0.49	3.07	5.48	0.70	0.03	0.01									9.81
135-165	0.04	0.53	1.09	1.34	0.10											3.11
105-135	0.03	0.50	0.47	0.78	0.24											2.02
75-105		0.56	0.33	1.52	1.79	0.23										4.42
45-75	0.01	0.65	1.11	1.54	2.04	0.32	0.02	0.01								5.68
15-45	0.01	0.18	0.89	2.23	2.02	0.64	0.09	0.03								6.09
345-15		0.01	0.05	0.62	1.22	1.00	0.74	0.17	0.03							3.84
		0.13	4.45	18.35	40.05	24.41	8.18	3.47	0.81	0.15	0.01					100.00
		13 m/s ≤ U <sub>100</sub> < 15 m/s														Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

13 m/s ≤ U<sub>100</sub> < 15 m/s

**Deltares**

App. B.2.068

		H <sub>s</sub> (m)															
		0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0	>7.0	
Wind direction (° N)	315-345				0.10	0.49	0.98	1.25	1.17	0.77	0.12	0.04	0.01	0.01		4.93	
	285-315			0.03	0.20	0.71	1.28	1.55	0.87	0.36	0.08					5.07	
	255-285			0.09	0.61	3.47	4.42	1.93	0.27	0.03						10.82	
	225-255	0.02	0.22	1.45	7.35	14.27	7.11	0.99	0.05							31.46	
	195-225		0.15	1.32	6.91	10.84	1.98	0.06	0.01							21.27	
	165-195		0.13	0.44	4.63	4.57	0.35	0.01								10.11	
	135-165		0.11	0.15	0.76	0.69	0.08									1.79	
	105-135		0.04	0.05	0.42	0.22	0.07	0.01								0.80	
	75-105		0.10	0.02	0.18	0.88	0.87	0.07								2.12	
	45-75		0.11	0.47	0.37	1.09	1.33	0.38	0.02							3.75	
	15-45		0.03	0.16	0.72	1.43	1.26	0.53	0.11	0.03						4.27	
	345-15				0.06	0.43	1.03	1.01	0.75	0.30	0.01			0.01		3.60	
		0.02	0.88	4.16	22.31	39.08	20.75	7.79	3.25	1.49	0.21	0.04	0.02	0.01		100.00	
		15 m/s ≤ U <sub>100</sub> < 17 m/s														Total	

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

15 m/s ≤ U<sub>100</sub> < 17 m/s

**Deltares**

App. B.2.069

		H <sub>s</sub> (m)															
		0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0	>7.0	
Wind direction (° N)	315-345				0.05	0.21	0.39	0.84	1.12	1.44	0.89	0.29	0.09			5.33	
	285-315				0.05	0.32	0.66	1.26	1.55	1.02	0.14	0.05	0.02			5.08	
	255-285		0.02	0.04	0.05	0.94	3.05	4.69	2.58	0.50	0.07					11.94	
	225-255		0.02	0.12	1.91	9.41	15.23	8.37	0.91	0.09						36.06	
	195-225		0.02	0.20	1.78	9.10	9.83	1.73	0.07	0.02						22.75	
	165-195		0.02	0.07	0.39	5.36	4.42	0.39								10.65	
	135-165		0.04	0.02	0.09	0.57	0.64	0.11								1.46	
	105-135				0.02	0.05	0.23	0.16								0.46	
	75-105					0.05	0.30	0.25								0.61	
	45-75				0.02	0.12	0.11	0.43	0.20							0.87	
	15-45				0.27	0.32	0.43	0.86	0.61	0.18						2.65	
	345-15					0.05	0.21	0.68	0.46	0.46	0.23	0.02	0.02			2.14	
		0.11	0.45	4.63	26.53	35.51	19.76	7.50	3.71	1.34	0.36	0.12			100.00		
17 m/s ≤ U <sub>100</sub> < 19 m/s															Total		

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

17 m/s ≤ U<sub>100</sub> < 19 m/s

**Deltares**

App. B.2.070

Wind direction (° N)	H <sub>s</sub> (m)																
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0	
315-345					0.10	0.17	0.50	0.27	0.44	0.60	0.70	0.44	0.17			3.39	
285-315				0.03	0.27	0.27	0.64	1.17	2.28	0.67	0.27	0.20				5.80	
255-285					0.20	0.87	2.78	3.76	1.91	0.50						10.03	
225-255			0.07	0.50	2.52	10.43	20.26	8.96	0.74	0.03						43.51	
195-225				0.30	1.85	9.73	9.39	2.25	0.03							23.55	
165-195			0.07	0.10	0.97	5.50	3.35	0.27								10.27	
135-165					0.07	0.50	0.20									0.77	
105-135						0.17	0.13									0.30	
75-105						0.07	0.20	0.10								0.37	
45-75				0.03				0.03								0.07	
15-45							0.03	0.13		0.47						0.64	
345-15						0.10	0.20	0.27	0.27	0.34	0.13					1.31	
						0.13	0.97	5.97	27.81	37.71	17.21	5.67	2.62	1.11	0.64	0.17	100.00
						19 m/s ≤ U <sub>100</sub> < 21 m/s											Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

19 m/s ≤ U<sub>100</sub> < 21 m/s

**Deltares**

App. B.2.071

Wind direction (° N)	H <sub>s</sub> (m)																
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0	
315-345							0.16	0.24	0.55	0.71	0.39	0.63	0.31			2.99	
285-315					0.24	0.24	0.39	0.31	1.42	0.79	0.71	0.79	0.08			4.96	
255-285				0.08		0.47	0.39	2.91	2.83	1.65	0.55					8.89	
225-255				0.08	0.39	1.73	13.53	20.61	5.90	1.18	0.16					43.59	
195-225					0.31	2.99	12.27	9.21	2.20							26.99	
165-195					0.24	1.10	6.22	2.75	0.16							10.46	
135-165							0.24									0.24	
105-135																	
75-105																	
45-75																	
15-45											0.47					0.47	
345-15							0.08	0.16	0.31	0.31	0.08	0.47				1.42	
							0.16	1.18	6.53	33.28	36.19	13.38	4.64	2.36	1.89	0.39	100.00
	21 m/s ≤ U <sub>100</sub> < 23 m/s															Total	

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

21 m/s ≤ U<sub>100</sub> < 23 m/s

**Deltares**

App. B.2.072



Wind direction (° N)	H <sub>s</sub> (m)													Total	
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0
315-345													0.61		0.61
285-315						0.61		1.23				0.61	0.61		3.07
255-285							0.61		3.68	1.23	3.07				8.59
225-255				0.61		0.61	4.29	15.95	19.63	3.07	0.61				44.79
195-225						0.61	8.59	15.95	7.98						33.13
165-195							4.29	4.91	0.61						9.82
135-165															
105-135															
75-105															
45-75															
15-45															
345-15															
						0.61	1.84	17.79	38.04	31.90	4.29	4.29	1.23		100.00

25 m/s ≤ U<sub>100</sub> < 27 m/s

Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

25 m/s ≤ U<sub>100</sub> < 27 m/s

**Deltares**

App. B.2.074

Wind direction (° N)	H <sub>s</sub> (m)													Total	
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0
315-345													2.04		2.04
285-315									1.02			2.04			3.06
255-285								2.04	1.02	1.02	4.08	1.02	4.08		13.27
225-255							1.02	4.08	20.41	16.33	7.14	2.04			51.02
195-225							3.06	4.08	12.24	6.12					25.51
165-195								1.02	2.04	2.04					5.10
135-165															
105-135															
75-105															
45-75															
15-45															
345-15															
							4.08	11.22	36.73	25.51	13.27	5.10	4.08		100.00

U<sub>100</sub> ≥ 27 m/s

Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 100m

U<sub>100</sub> ≥ 27 m/s

Deltares

App. B.2.075

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0		>7.0
315-345	0.52	1.52	1.51	1.08	0.71	0.38	0.30	0.14	0.11	0.05	0.03	0.02	0.01			6.40
285-315	0.61	1.74	1.96	1.16	0.76	0.42	0.27	0.15	0.12	0.03	0.01	0.01	0.00			7.24
255-285	1.06	2.69	2.71	1.59	1.05	0.61	0.34	0.19	0.07	0.04	0.01	0.01	0.00	0.00		10.38
225-255	1.44	5.43	4.95	2.90	1.90	1.19	0.79	0.38	0.13	0.06	0.01	0.00	0.00			19.19
195-225	1.18	3.71	2.95	1.87	1.22	0.63	0.31	0.15	0.05	0.01	0.00					12.08
165-195	1.19	2.91	1.76	0.92	0.50	0.25	0.12	0.04	0.01	0.00	0.00					7.69
135-165	1.26	2.40	0.83	0.25	0.07	0.03	0.01	0.00								4.84
105-135	1.18	2.53	0.75	0.21	0.04	0.01	0.01									4.74
75-105	1.07	3.17	1.37	0.49	0.24	0.08	0.01	0.00								6.44
45-75	0.99	3.13	1.98	0.77	0.35	0.11	0.04	0.01								7.39
15-45	0.77	2.54	2.24	0.96	0.45	0.16	0.07	0.03	0.01	0.01	0.00					7.24
345-15	0.52	1.68	1.79	1.15	0.58	0.32	0.18	0.08	0.04	0.02	0.00	0.00				6.36
	11.80	33.47	24.80	13.33	7.88	4.21	2.44	1.17	0.53	0.22	0.07	0.04	0.01	0.00		100.00
All year																Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 150m

All Year

Deltares

App. B.2.076

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	2.83	3.70	1.20	0.18	0.01											7.92
285-315	3.10	3.87	1.19	0.19												8.35
255-285	4.26	4.32	1.10	0.16												9.84
225-255	4.21	4.37	0.75	0.13		0.02										9.49
195-225	3.72	3.85	0.66	0.06												8.29
165-195	4.21	3.18	0.54	0.05												7.98
135-165	3.70	3.08	0.36	0.04	0.02	0.01										7.20
105-135	3.47	3.04	0.50	0.11	0.01											7.13
75-105	3.79	3.63	0.75	0.08	0.01											8.26
45-75	3.53	4.34	0.87	0.06												8.79
15-45	3.29	4.20	1.20	0.10	0.01											8.81
345-15	2.75	3.85	1.21	0.11	0.01											7.94
	42.86	45.44	10.33	1.28	0.06	0.03										100.00
	1 m/s ≤ U <sub>150</sub> < 3 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 150m

1 m/s ≤ U<sub>150</sub> < 3 m/s

**Deltares**

App. B.2.077

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	1.69	3.70	1.84	0.46	0.05											7.75
285-315	2.20	4.27	1.89	0.49	0.05											8.90
255-285	3.52	4.96	1.71	0.32	0.03	0.00										10.54
225-255	3.41	5.44	1.40	0.14	0.00											10.39
195-225	3.30	4.33	0.88	0.05	0.00											8.56
165-195	3.02	3.25	0.32	0.04												6.63
135-165	3.03	3.06	0.28	0.03												6.40
105-135	2.72	3.95	0.43	0.01												7.12
75-105	2.90	4.36	0.59	0.04	0.00											7.89
45-75	2.94	5.01	1.15	0.08												9.18
15-45	2.66	4.66	1.55	0.12	0.01											9.00
345-15	1.65	3.72	2.05	0.22	0.01											7.65
	33.04	50.70	14.07	2.01	0.17	0.00										100.00
	3 m/s ≤ U <sub>150</sub> < 5 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 150m

3 m/s ≤ U<sub>150</sub> < 5 m/s

**Deltares**

App. B.2.078

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.56	2.92	2.61	1.07	0.17											7.33
285-315	0.60	3.52	2.80	0.97	0.19	0.01		0.00								8.09
255-285	1.67	5.31	2.60	0.53	0.07											10.19
225-255	2.68	7.22	2.19	0.24	0.02											12.34
195-225	1.97	5.26	1.26	0.08	0.00											8.57
165-195	1.76	3.97	0.50	0.06												6.29
135-165	2.13	3.71	0.44	0.02												6.30
105-135	1.97	4.13	0.60	0.01	0.00											6.72
75-105	1.67	5.94	1.00	0.05												8.66
45-75	1.94	5.45	1.51	0.13	0.01											9.05
15-45	1.17	4.49	2.59	0.29	0.02											8.57
345-15	0.61	3.32	3.07	0.79	0.10	0.01										7.90
	18.75	55.22	21.17	4.23	0.60	0.02		0.00								100.00
	5 m/s ≤ U <sub>150</sub> < 7 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 150m

5 m/s ≤ U<sub>150</sub> < 7 m/s

**Deltares**

App. B.2.079

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.17	1.76	2.97	1.62	0.47	0.03	0.01									7.02
285-315	0.15	2.02	3.84	1.41	0.56	0.05	0.01									8.04
255-285	0.47	4.31	4.55	1.10	0.14	0.01										10.58
225-255	1.42	9.07	4.54	0.50	0.03	0.00										15.57
195-225	0.94	5.83	2.13	0.11	0.00											9.02
165-195	1.02	4.21	1.06	0.07	0.00											6.36
135-165	1.32	3.40	0.52	0.01	0.00											5.26
105-135	1.18	3.83	0.69	0.02												5.73
75-105	0.84	4.82	1.67	0.10	0.01											7.43
45-75	0.63	4.75	2.64	0.44	0.02											8.48
15-45	0.24	3.76	3.75	0.68	0.07	0.01	0.00									8.51
345-15	0.17	2.07	3.20	2.12	0.39	0.04										8.00
	8.57	49.84	31.55	8.17	1.70	0.14	0.03									100.00
	7 m/s ≤ U <sub>150</sub> < 9 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 150m

7 m/s ≤ U<sub>150</sub> < 9 m/s

**Deltares**

App. B.2.080

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345	0.02	0.65	1.77	2.11	1.29	0.32	0.03	0.00								6.19
285-315	0.01	0.66	2.98	2.24	1.09	0.31	0.05									7.33
255-285	0.08	1.73	4.84	2.39	0.82	0.07										9.93
225-255	0.61	7.98	8.77	1.51	0.18	0.00										19.06
195-225	0.38	5.11	4.39	0.32	0.02											10.22
165-195	0.52	4.25	2.43	0.16	0.01											7.37
135-165	0.54	2.67	1.22	0.06												4.49
105-135	0.55	2.41	1.43	0.09	0.00											4.48
75-105	0.44	3.02	3.48	0.44	0.03											7.41
45-75	0.11	2.95	4.28	1.20	0.06											8.61
15-45	0.02	2.09	3.76	1.55	0.20	0.02										7.65
345-15	0.02	0.94	2.65	2.37	1.07	0.20	0.02									7.26
	3.29	34.47	41.99	14.44	4.77	0.93	0.09	0.00								100.00
	9 m/s ≤ U <sub>150</sub> < 11 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 150m

9 m/s ≤ U<sub>150</sub> < 11 m/s

**Deltares**

App. B.2.081

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.12	0.76	1.73	1.83	0.86	0.34	0.05								5.68
285-315		0.28	1.34	2.16	1.78	0.81	0.29	0.01								6.68
255-285	0.01	0.62	3.65	3.98	1.68	0.38	0.02									10.34
225-255	0.15	4.76	10.63	5.48	0.85	0.09										21.96
195-225	0.16	2.99	7.46	2.52	0.18	0.01										13.32
165-195	0.18	2.48	5.02	0.76	0.03	0.00										8.47
135-165	0.26	2.00	2.17	0.36												4.80
105-135	0.32	1.42	1.47	0.61	0.01											3.84
75-105	0.15	1.80	1.89	1.75	0.14											5.74
45-75	0.00	1.43	2.59	2.19	0.59	0.04	0.00									6.84
15-45	0.01	0.89	2.60	2.20	0.94	0.09	0.02									6.75
345-15	0.01	0.14	0.93	1.94	1.52	0.89	0.15	0.01								5.58
	1.25	18.94	40.52	25.67	9.56	3.17	0.82	0.07								100.00
	11 m/s ≤ U <sub>150</sub> < 13 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 150m

11 m/s ≤ U<sub>150</sub> < 13 m/s

**Deltares**

App. B.2.082

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345		0.02	0.17	0.73	1.52	1.45	1.33	0.24	0.05	0.01						5.53
285-315		0.02	0.40	1.04	1.90	1.57	0.66	0.22	0.04							5.85
255-285		0.15	1.55	3.83	3.75	1.47	0.23	0.01								10.99
225-255	0.05	1.99	8.36	10.53	4.04	0.54	0.01	0.01								25.53
195-225		0.97	5.27	7.97	1.61	0.06	0.01									15.89
165-195	0.09	0.87	3.92	3.92	0.44	0.01	0.01									9.24
135-165	0.06	0.75	1.44	1.18	0.09											3.53
105-135	0.03	0.84	0.65	0.76	0.21											2.49
75-105	0.01	0.87	0.71	1.64	1.63	0.20										5.06
45-75		0.71	1.46	1.65	1.88	0.23	0.01	0.01								5.95
15-45		0.35	1.08	2.19	1.77	0.54	0.06	0.02								6.01
345-15	0.01	0.05	0.10	0.76	1.24	0.96	0.69	0.11	0.02							3.94
	0.24	7.61	25.12	36.19	20.09	7.02	3.00	0.62	0.10	0.01						100.00
	13 m/s ≤ U <sub>150</sub> < 15 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 150m

13 m/s ≤ U<sub>150</sub> < 15 m/s

**Deltares**

App. B.2.083

Wind direction (° N)	H <sub>s</sub> (m)														
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0
315-345	0.01		0.15	0.53	0.99	1.27	0.89	0.58	0.09	0.03	0.01				4.55
285-315	0.01	0.05	0.34	0.79	1.19	1.39	0.71	0.28	0.05						4.83
255-285	0.02	0.33	1.24	4.08	3.65	1.24	0.14	0.01							10.71
225-255	0.02	0.80	3.87	9.98	11.39	4.14	0.54	0.04							30.77
195-225	0.01	0.40	2.55	8.41	8.23	0.94	0.04								20.58
165-195	0.01	0.46	1.24	5.15	3.16	0.20									10.22
135-165		0.35	0.49	0.89	0.47	0.06									2.26
105-135	0.01	0.42	0.21	0.45	0.18	0.06									1.33
75-105		0.37	0.22	0.29	0.99	0.77	0.06								2.70
45-75		0.14	0.72	0.71	1.19	1.23	0.26								4.26
15-45		0.01	0.40	0.83	1.54	1.17	0.36	0.08	0.02						4.40
345-15		0.03		0.11	0.48	1.00	0.89	0.64	0.24			0.01			3.40
	0.04	3.02	10.08	28.56	33.01	15.40	6.07	2.50	1.13	0.14	0.03	0.02			100.00
	15 m/s ≤ U <sub>150</sub> < 17 m/s														Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 150m

15 m/s ≤ U<sub>150</sub> < 17 m/s

**Deltares**

App. B.2.084

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345				0.04	0.24	0.49	0.86	1.27	1.38	0.67	0.19	0.06	0.01			5.21
285-315				0.07	0.34	0.72	1.12	1.33	0.74	0.12	0.03	0.01				4.50
255-285		0.01	0.10	0.12	1.48	3.74	4.01	1.70	0.22	0.06						11.45
225-255		0.07	0.92	4.84	12.93	13.21	4.48	0.46	0.01							36.92
195-225		0.06	0.83	3.95	10.40	6.83	0.56	0.04								22.68
165-195		0.10	0.19	1.64	5.31	2.22	0.18									9.64
135-165		0.04	0.04	0.22	0.65	0.46	0.01									1.43
105-135		0.07		0.12	0.07	0.18	0.09									0.53
75-105		0.03	0.01		0.09	0.28	0.18									0.59
45-75			0.36	0.16	0.31	0.22	0.50	0.13								1.69
15-45			0.09	0.40	0.56	0.52	0.89	0.46	0.15							3.06
345-15				0.01	0.10	0.31	0.67	0.56	0.43	0.19		0.01				2.29
		0.40	2.54	11.58	32.49	29.19	13.55	5.96	2.93	1.04	0.22	0.09	0.01			100.00
	17 m/s ≤ U <sub>150</sub> < 19 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 150m

17 m/s ≤ U<sub>150</sub> < 19 m/s

**Deltares**

App. B.2.085





Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345									0.43	0.14			0.86			1.44
285-315					0.14	0.14	0.29		1.87	1.15	0.86	0.86	0.29			5.60
255-285						0.29	0.43	1.72	1.15	3.30	0.43	0.14				7.47
225-255				0.14	0.14	1.15	9.48	22.99	13.65	3.88	0.43					51.87
195-225					0.14	2.01	10.20	11.78	2.59	0.29						27.01
165-195						0.29	1.87	4.02	0.14							6.32
135-165																
105-135																
75-105																
45-75																
15-45																
345-15									0.14			0.14				0.29
					0.14	0.43	3.88	22.27	40.52	19.97	8.76	1.72	1.15	1.15		100.00
	23 m/s ≤ U <sub>150</sub> < 25 m/s															Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 150m

23 m/s ≤ U<sub>150</sub> < 25 m/s

**Deltares**

App. B.2.088

Wind direction (° N)	H <sub>s</sub> (m)															
	0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5		6.5-7.0	>7.0
315-345									0.38				0.38		0.75	
285-315									0.75	1.13		0.38			2.26	
255-285							0.38	0.38	0.75	6.04	0.75	1.89			10.19	
225-255					0.38	0.38	2.26	9.81	23.77	12.83	1.13				50.57	
195-225					0.38	0.38	1.89	12.83	10.19	2.26					27.92	
165-195								4.15	3.77						7.92	
135-165								0.38							0.38	
105-135																
75-105																
45-75																
15-45																
345-15																
							0.75	0.75	4.53	27.55	39.62	22.26	1.89	2.26	0.38	100.00
							25 m/s ≤ U <sub>150</sub> < 27 m/s									Total

Joint Occurrence table of wind direction vs. wave height  
 Nautical convention: coming from, clockwise from North

Height: 150m

25 m/s ≤ U<sub>150</sub> < 27 m/s

**Deltares**

App. B.2.089

		H <sub>s</sub> (m)																						
		0.0-0.5	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	6.5-7.0	>7.0								
Wind direction (° N)	315-345													1.88			1.88							
	285-315							0.63			0.63		1.25	0.63			3.13							
	255-285									1.25	0.63	1.25	3.13	0.63	2.50		9.38							
	225-255							0.63	3.75	5.63	20.00	11.88	5.00	1.25			48.13							
	195-225							0.63	4.38	10.00	11.25	3.75					30.00							
	165-195								3.13	1.25	1.88	1.25					7.50							
	135-165																							
	105-135																							
	75-105																							
	45-75																							
	15-45																							
	345-15																							
																1.88	11.25	18.13	34.38	18.13	9.38	4.38	2.50	100.00
																U <sub>150</sub> ≥ 27 m/s							Total	

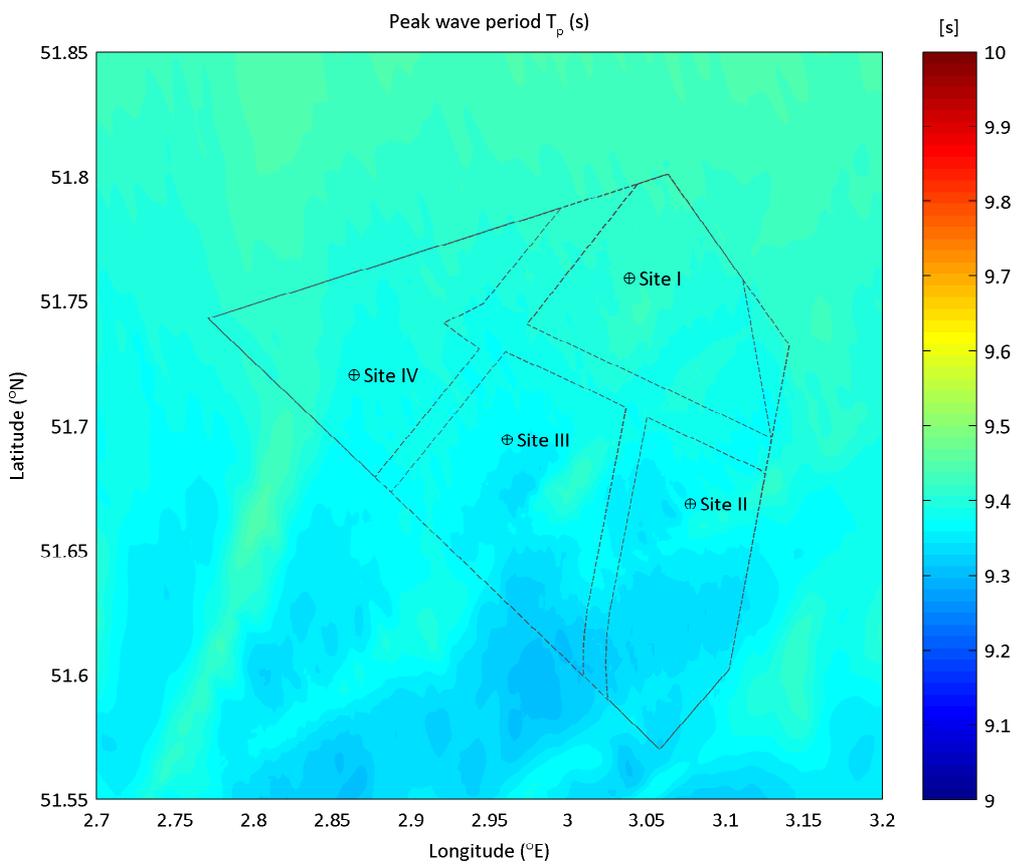
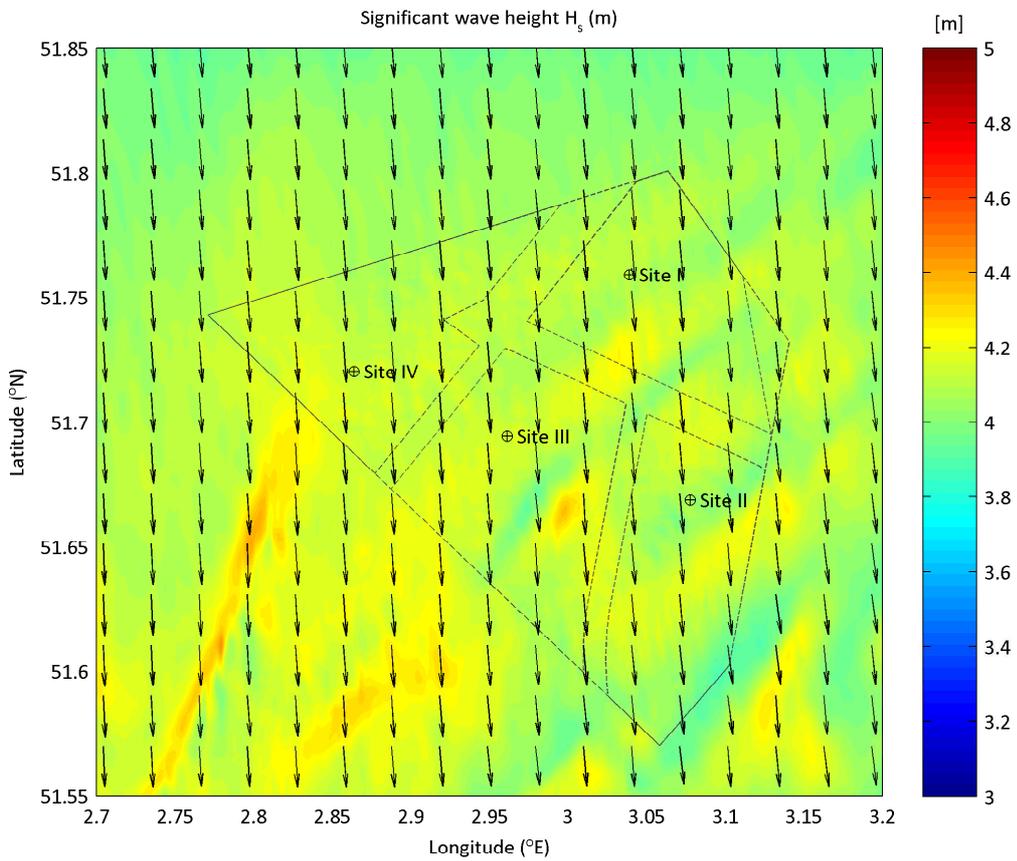
Joint Occurrence table of wind direction vs. wave height  
Nautical convention: coming from, clockwise from North

Height: 150m

U<sub>150</sub> ≥ 27 m/s

**Deltares**

App. B.2.090



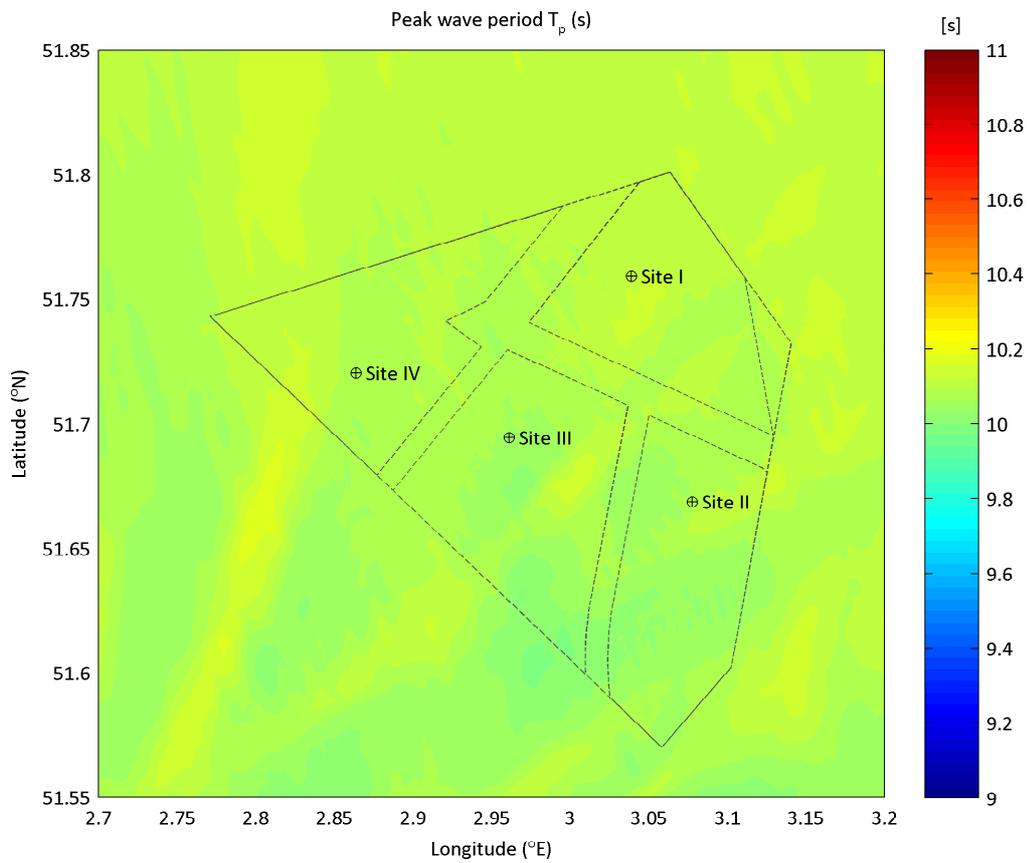
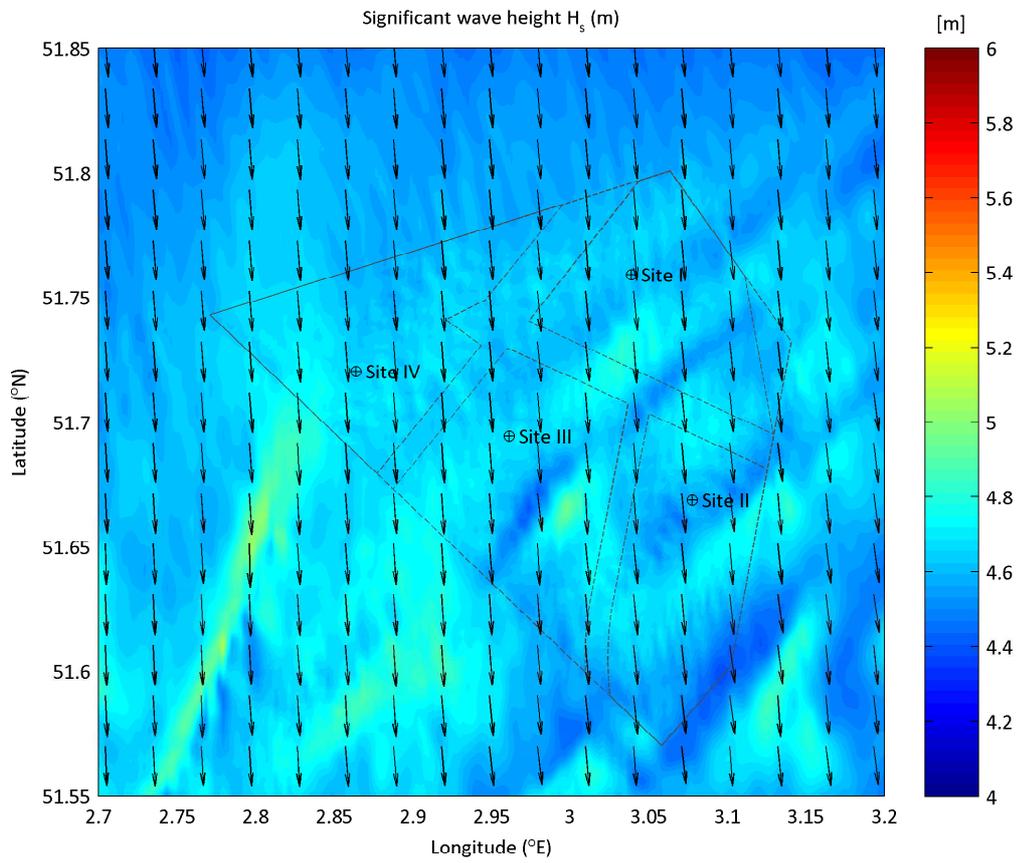
Extreme wave condition from Sector345 ( $^{\circ}$ N) - 15 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.001



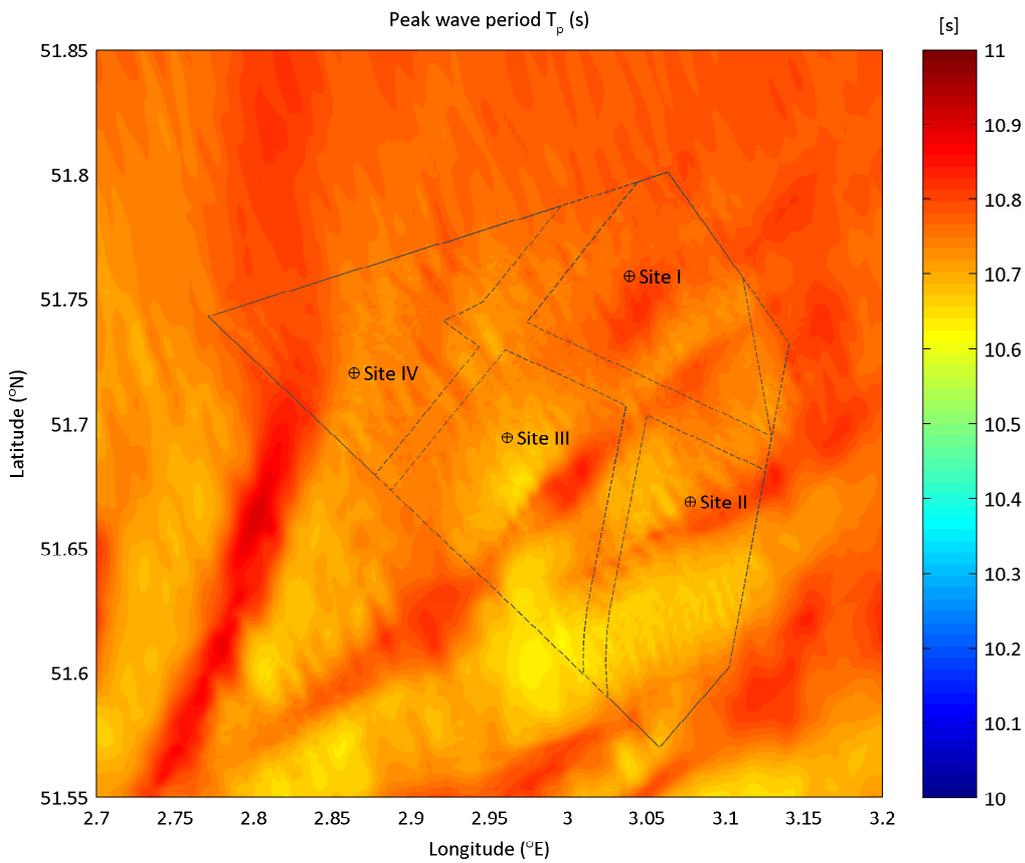
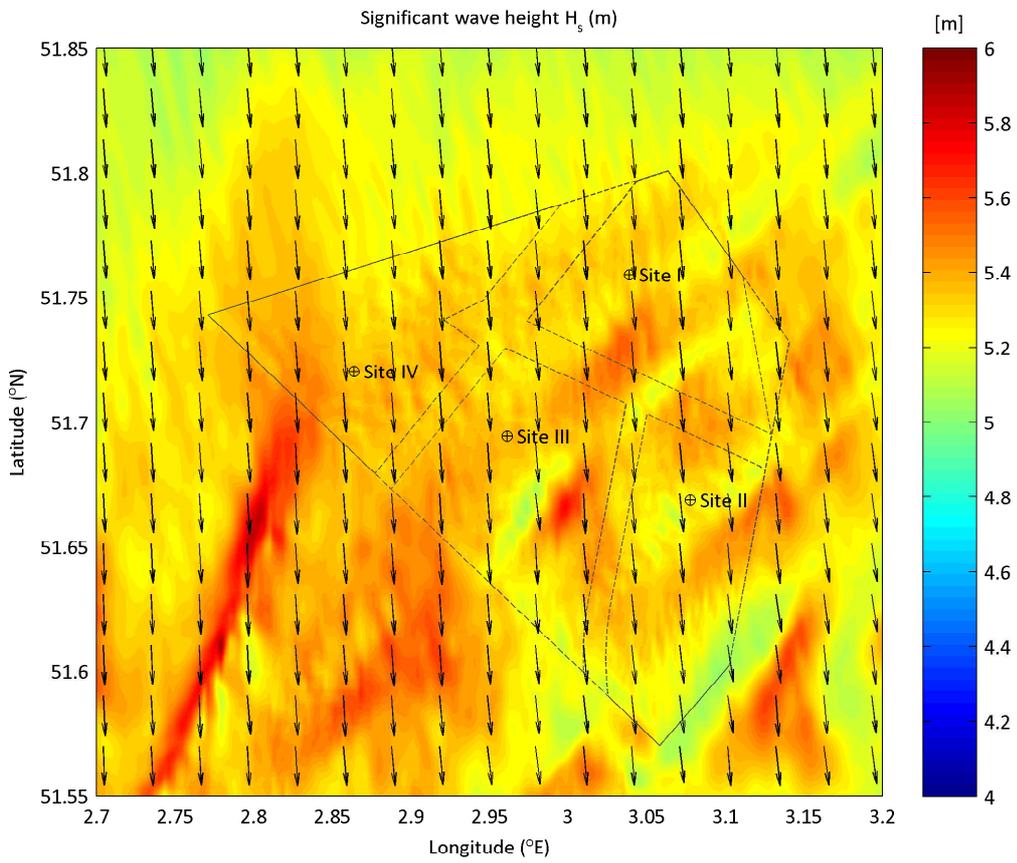
Extreme wave condition from Sector345 (°N) - 15 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.002



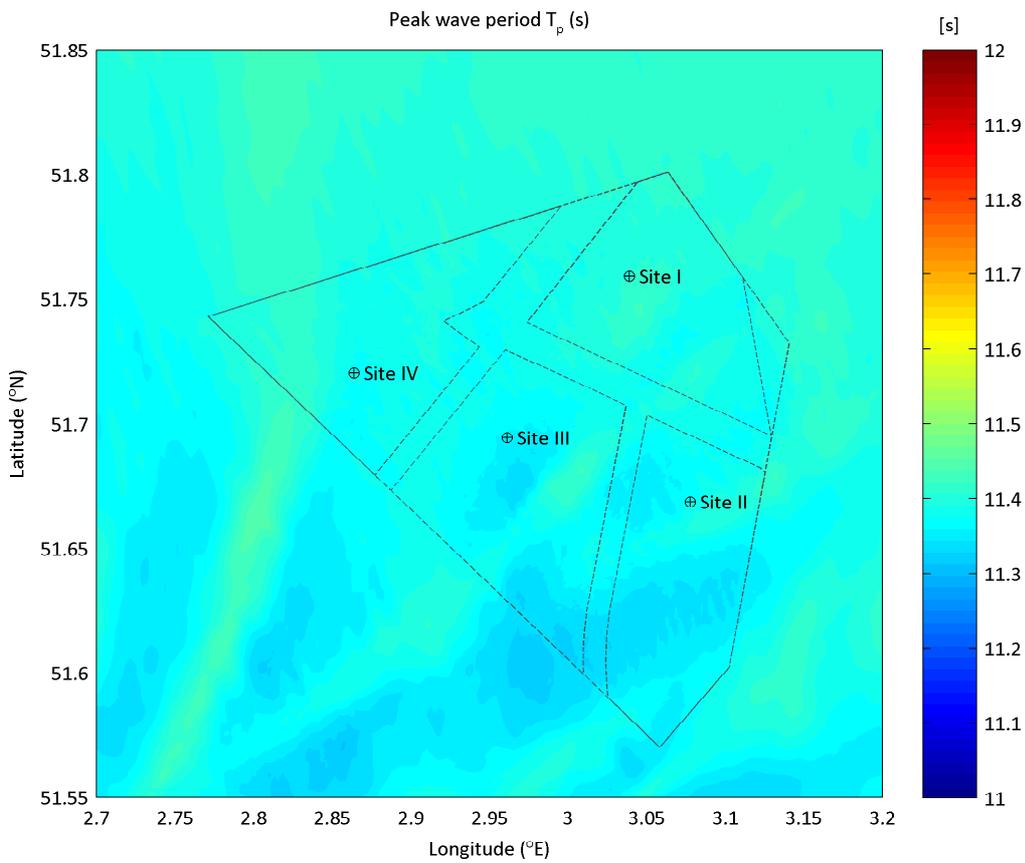
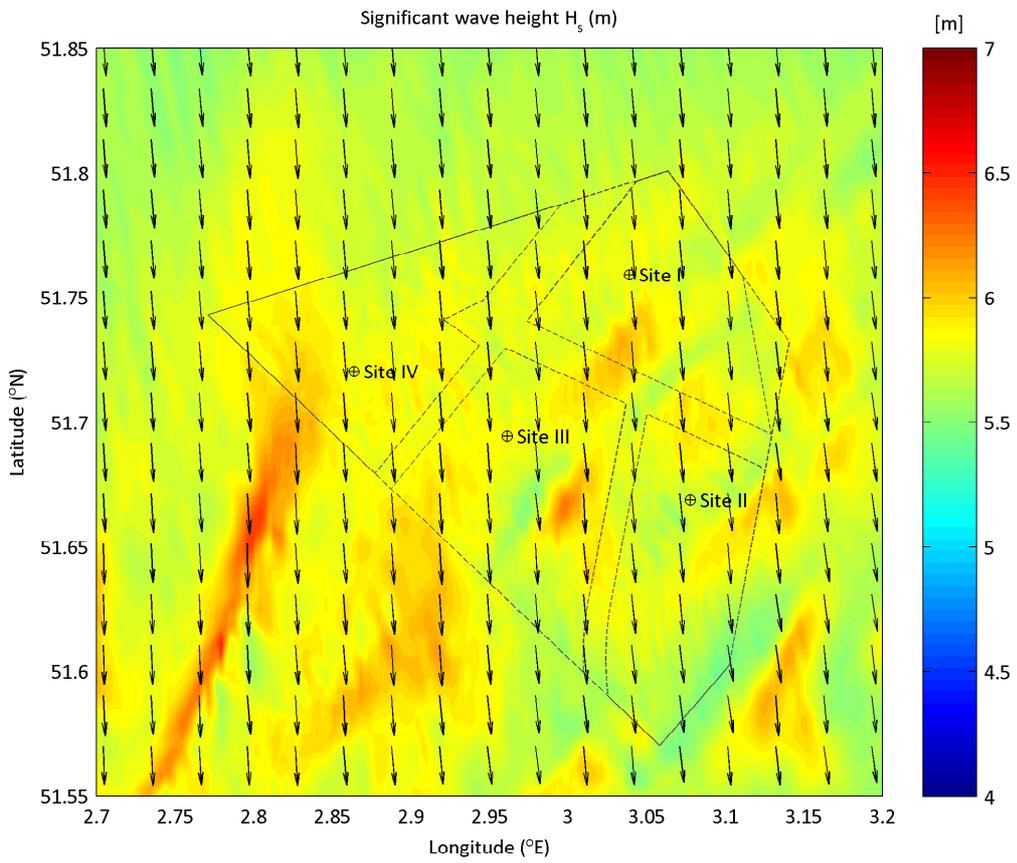
Extreme wave condition from Sector345 ( $^{\circ}$ N) - 15 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.003



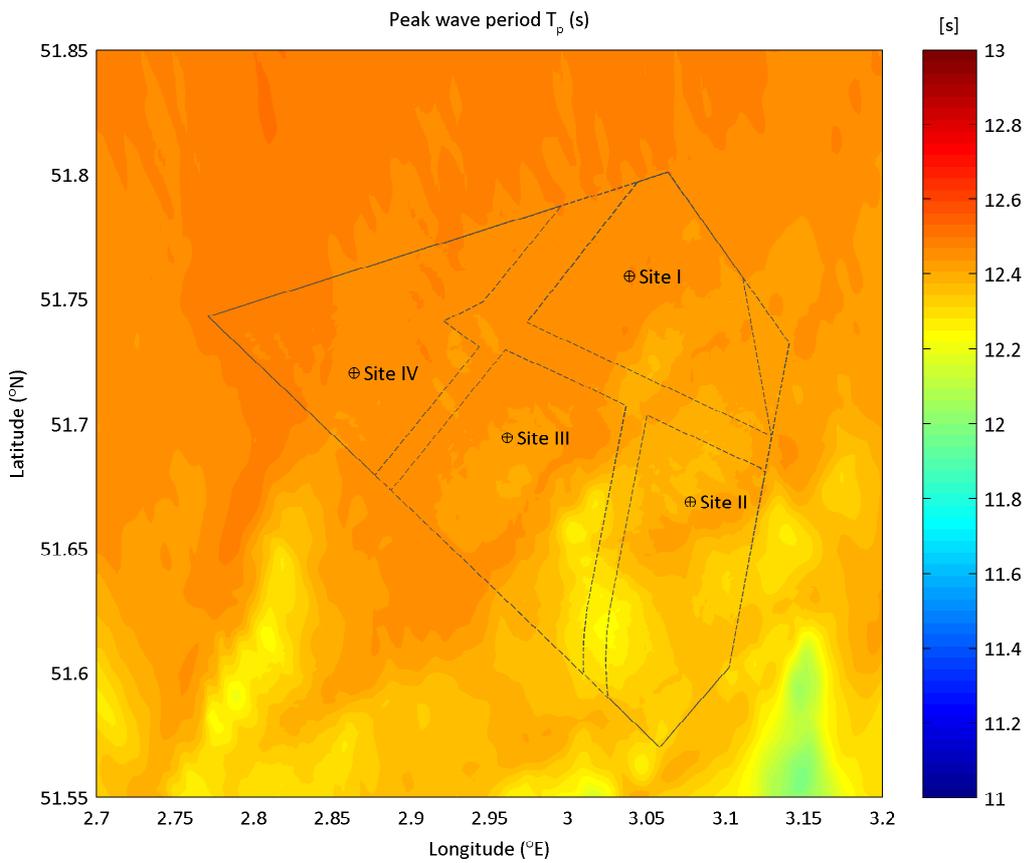
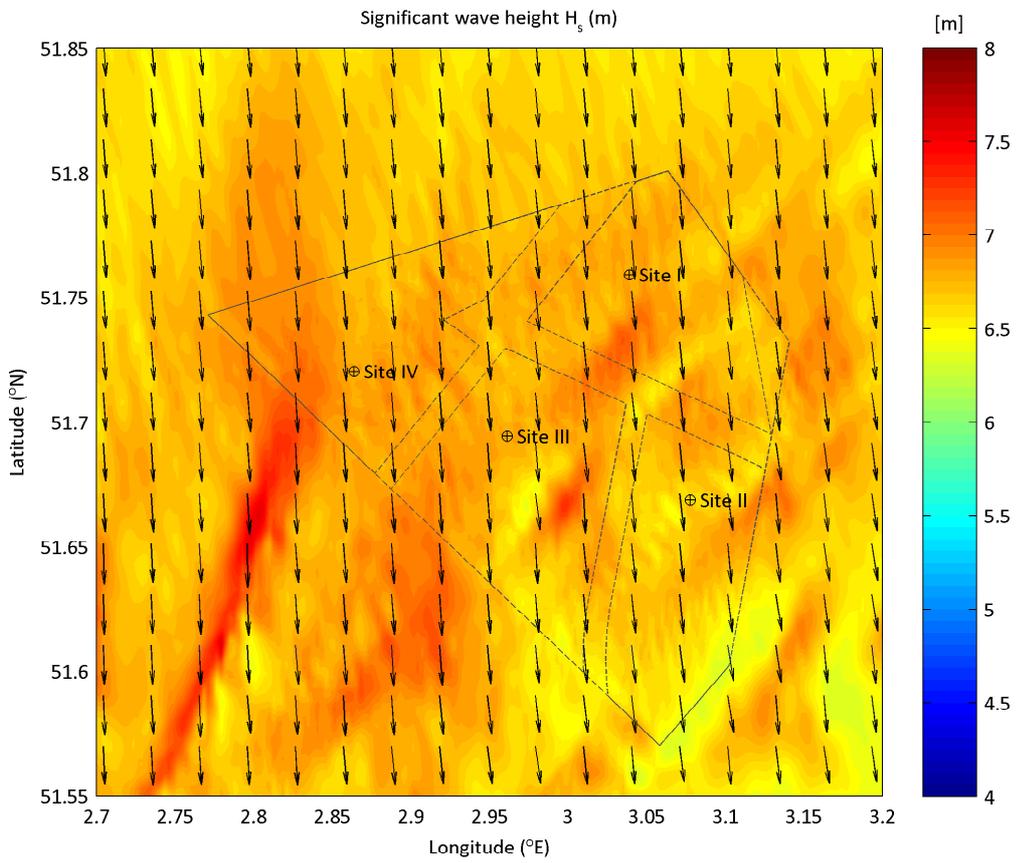
Extreme wave condition from Sector345 ( $^{\circ}$ N) - 15 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.004



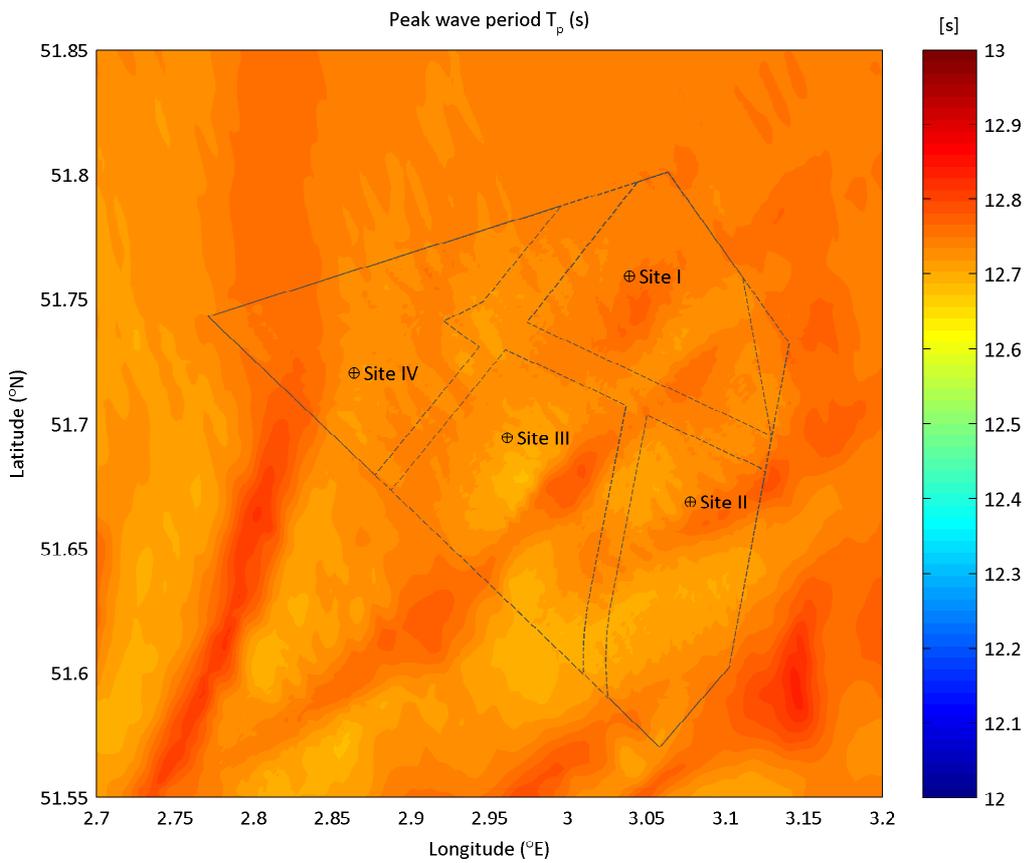
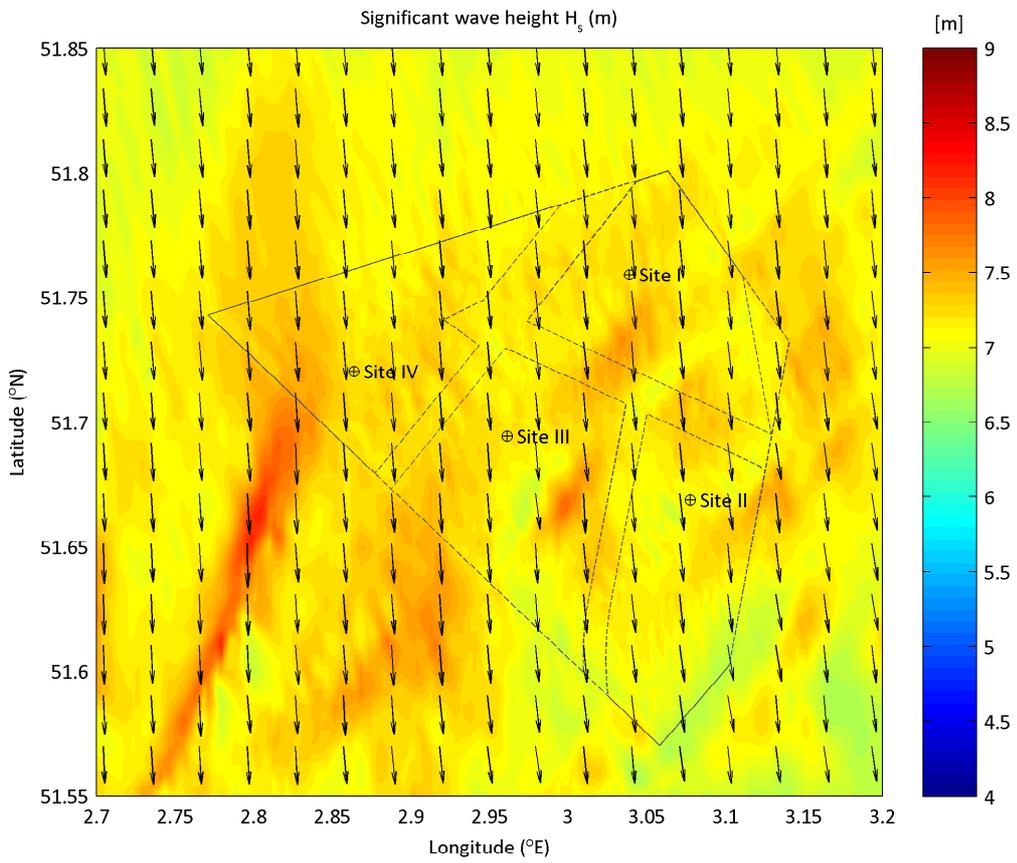
Extreme wave condition from Sector345 ( $^{\circ}$ N) - 15 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.005



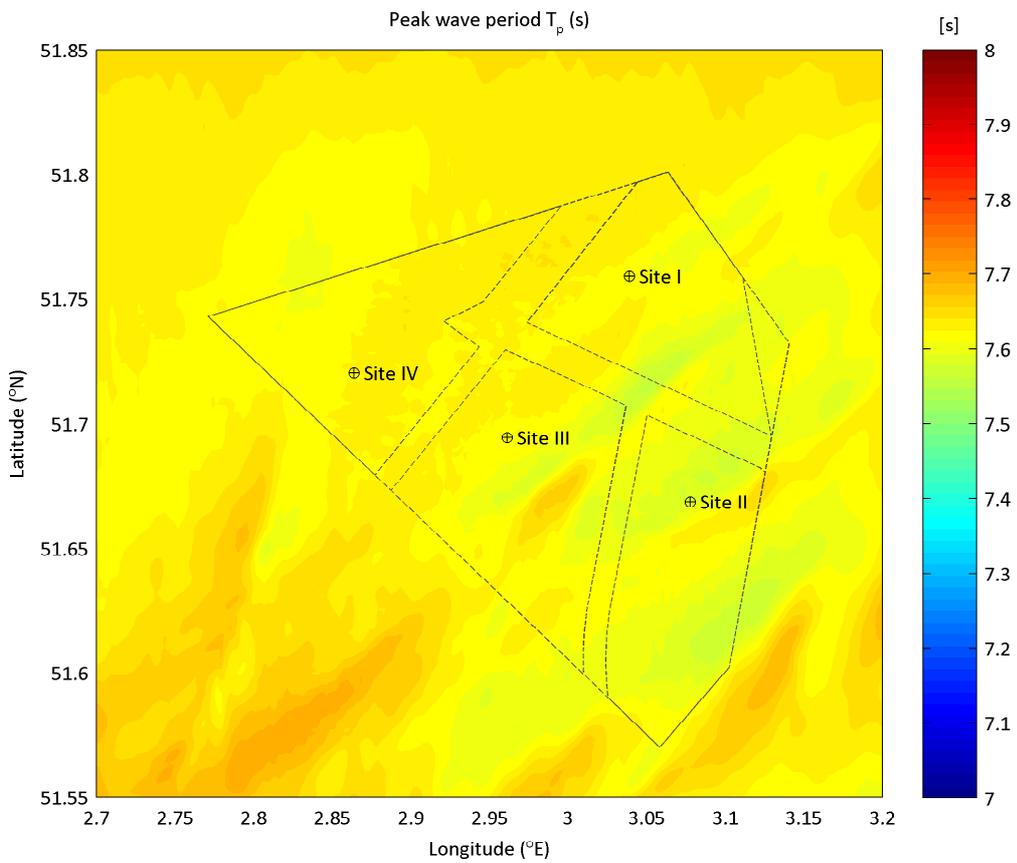
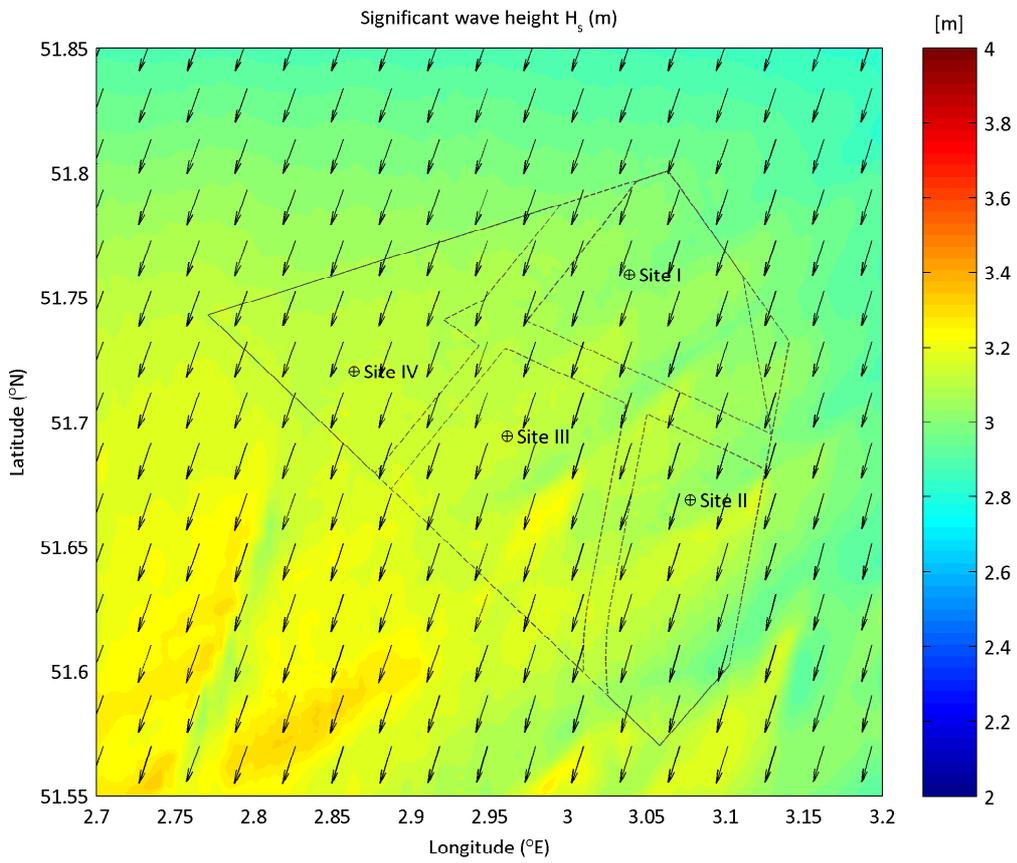
Extreme wave condition from Sector345 ( $^{\circ}$ N) - 15 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.006



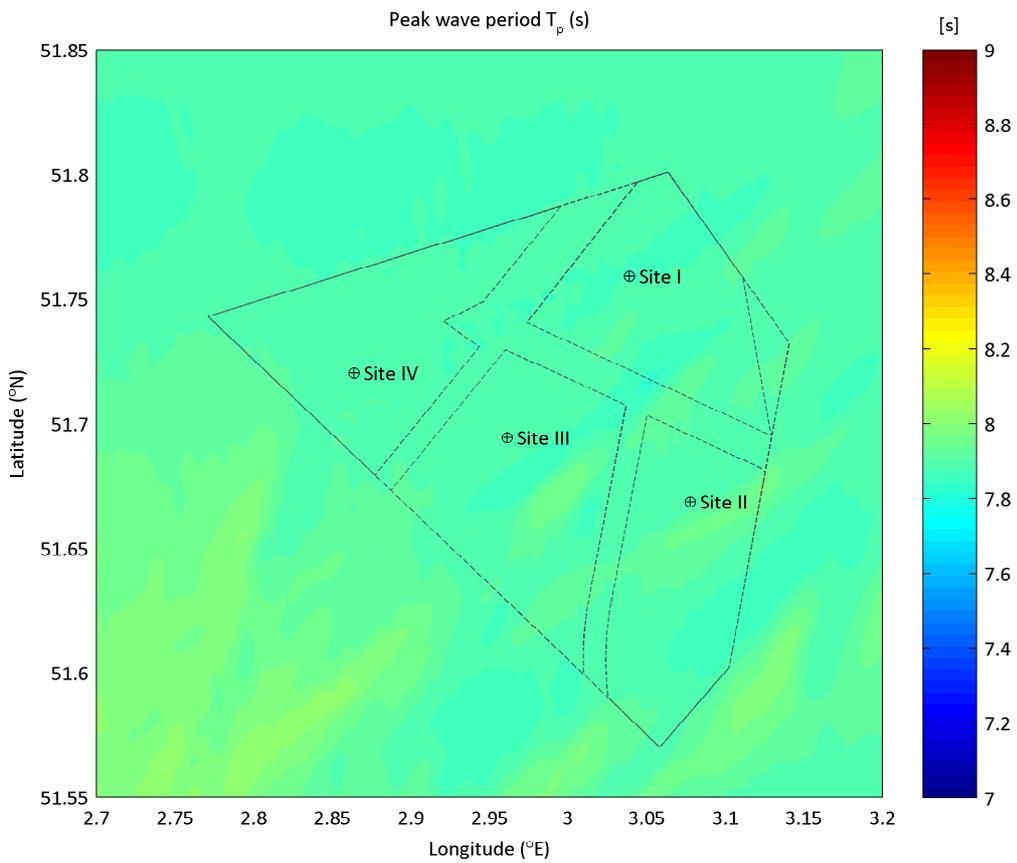
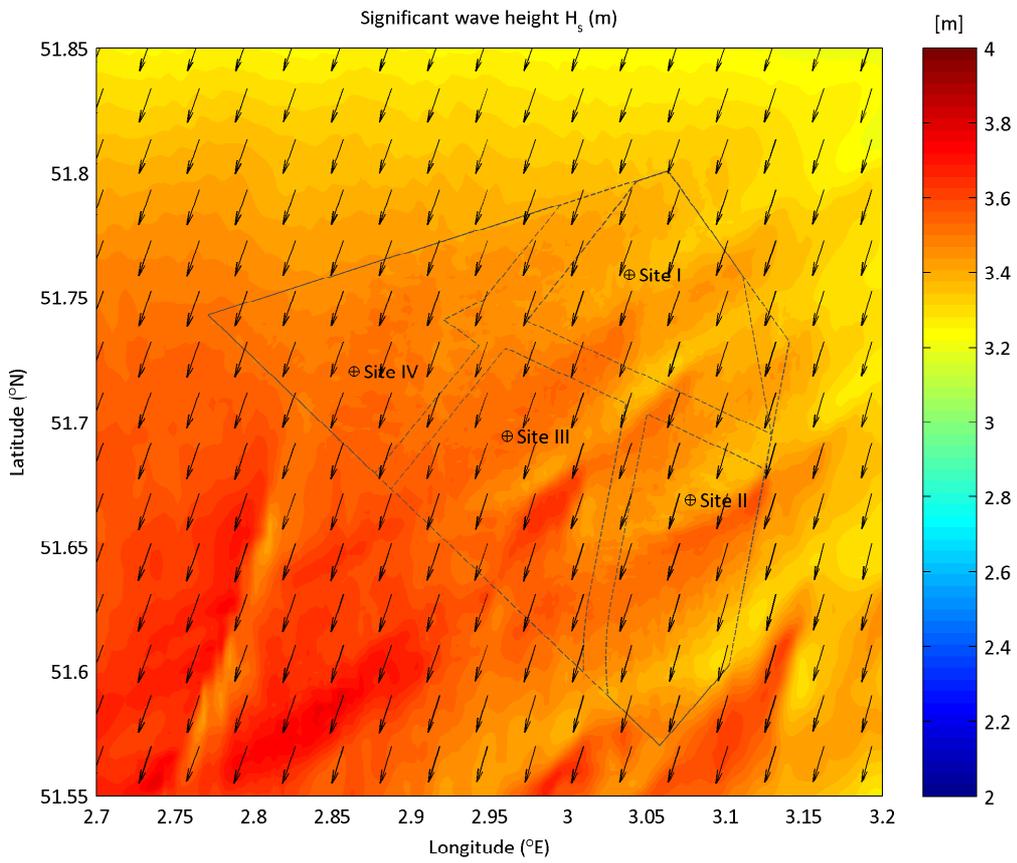
Extreme wave condition from Sector15 ( $^{\circ}$ N) - 45 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.007



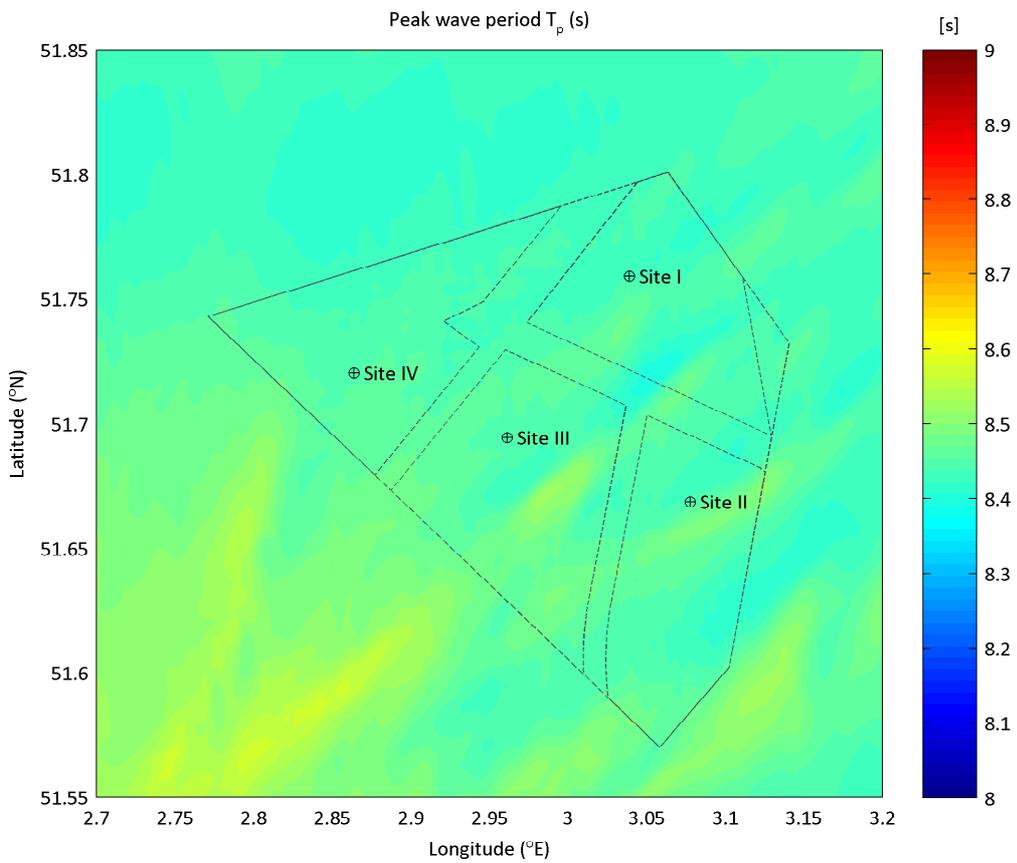
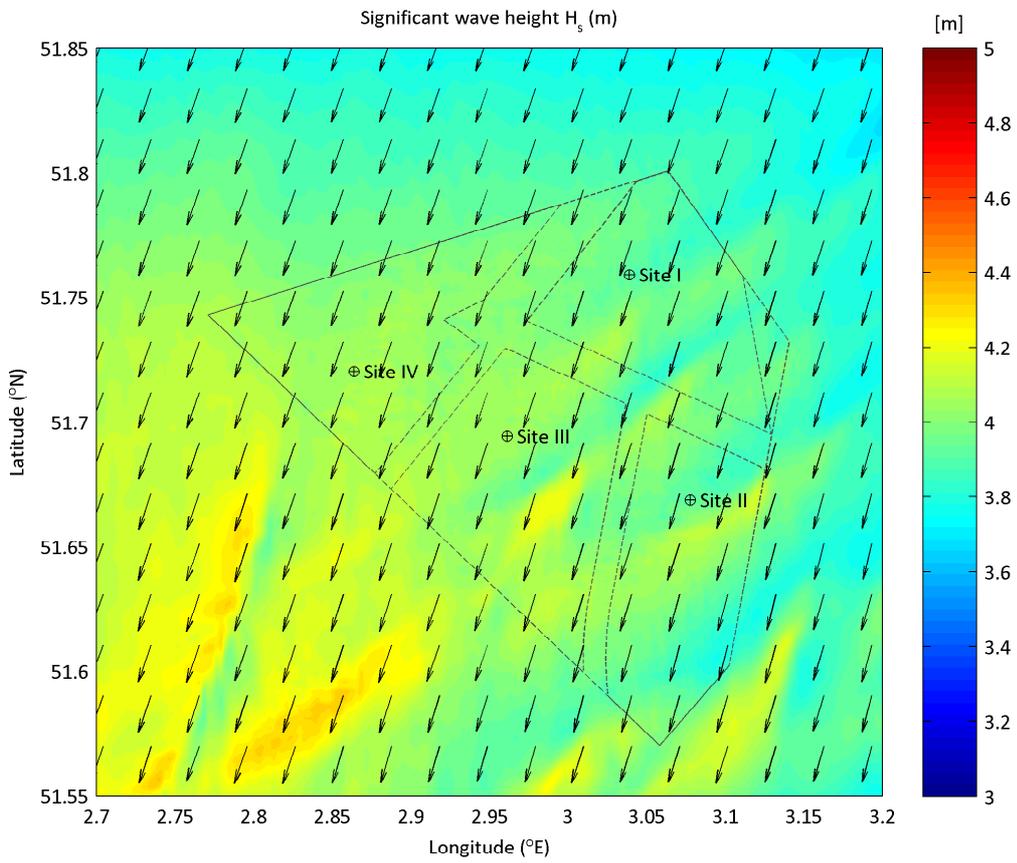
Extreme wave condition from Sector15 ( $^{\circ}$ N) - 45 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.008



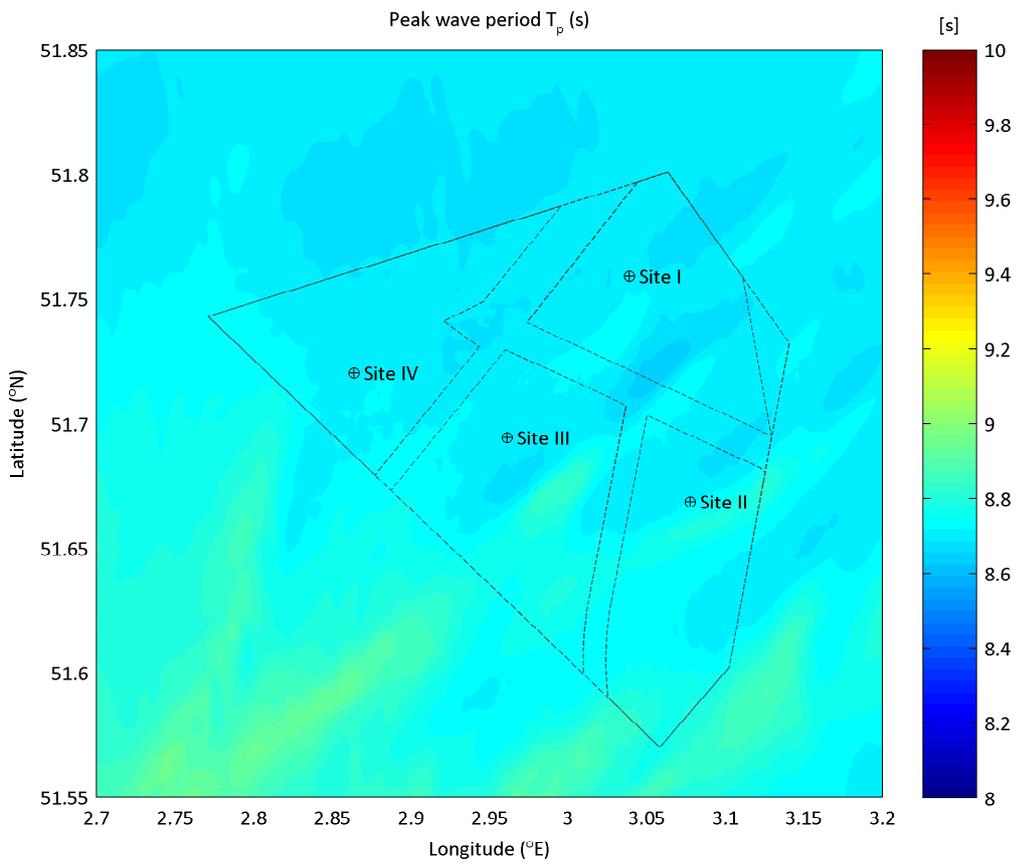
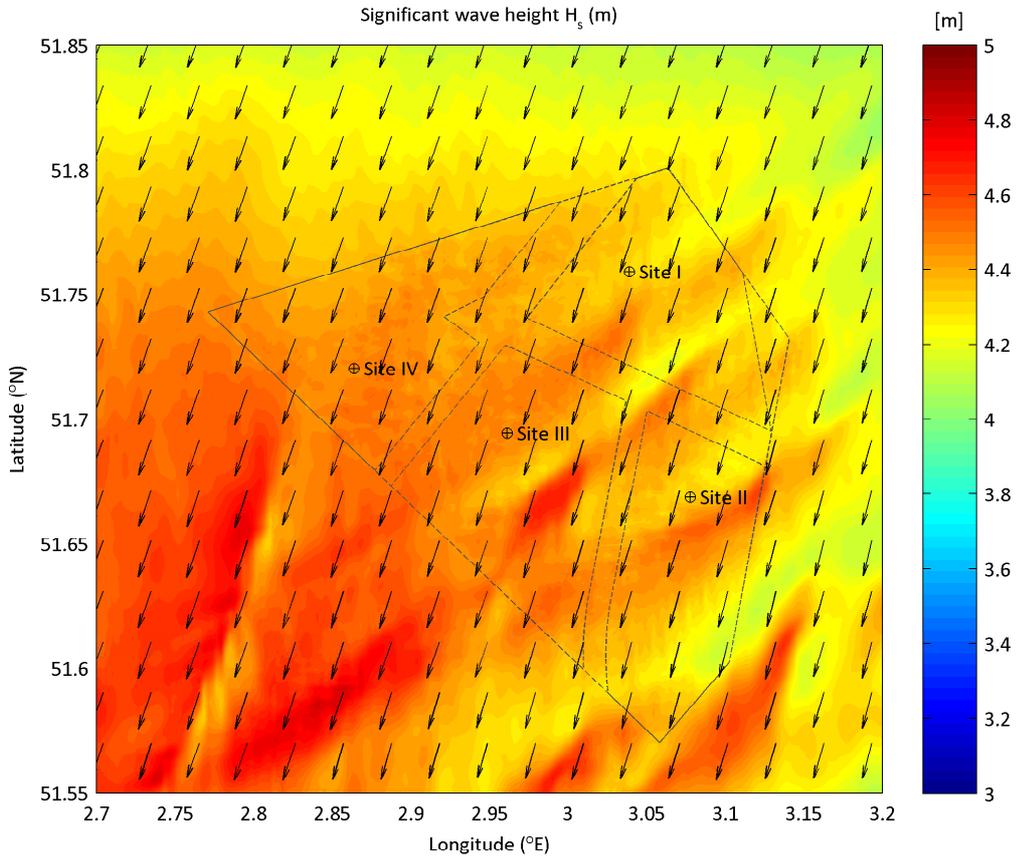
Extreme wave condition from Sector15 (°N) - 45 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.009



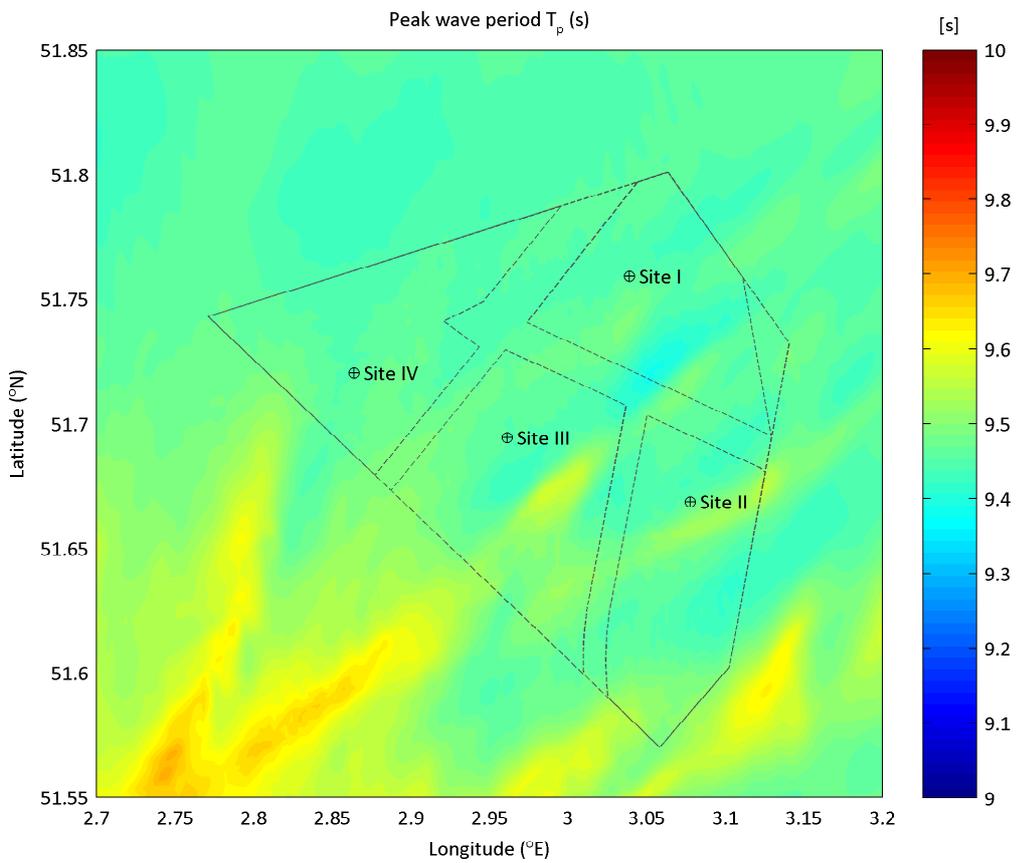
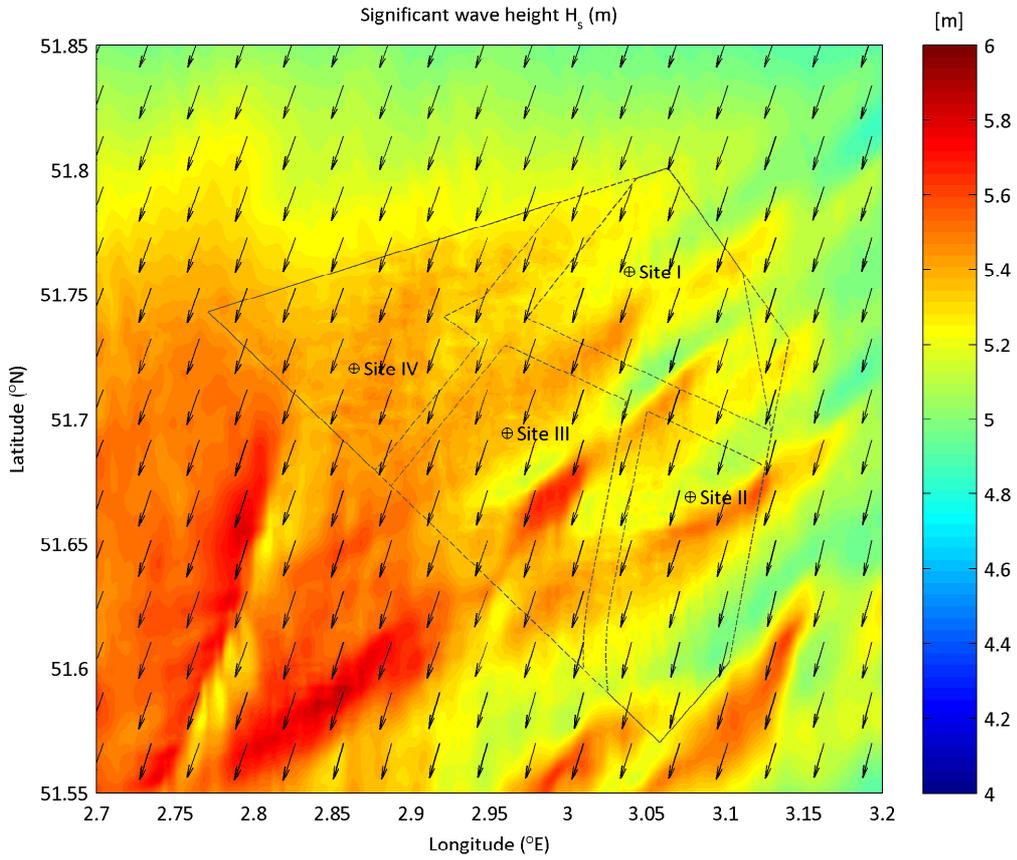
Extreme wave condition from Sector15 ( $^{\circ}$ N) - 45 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.010



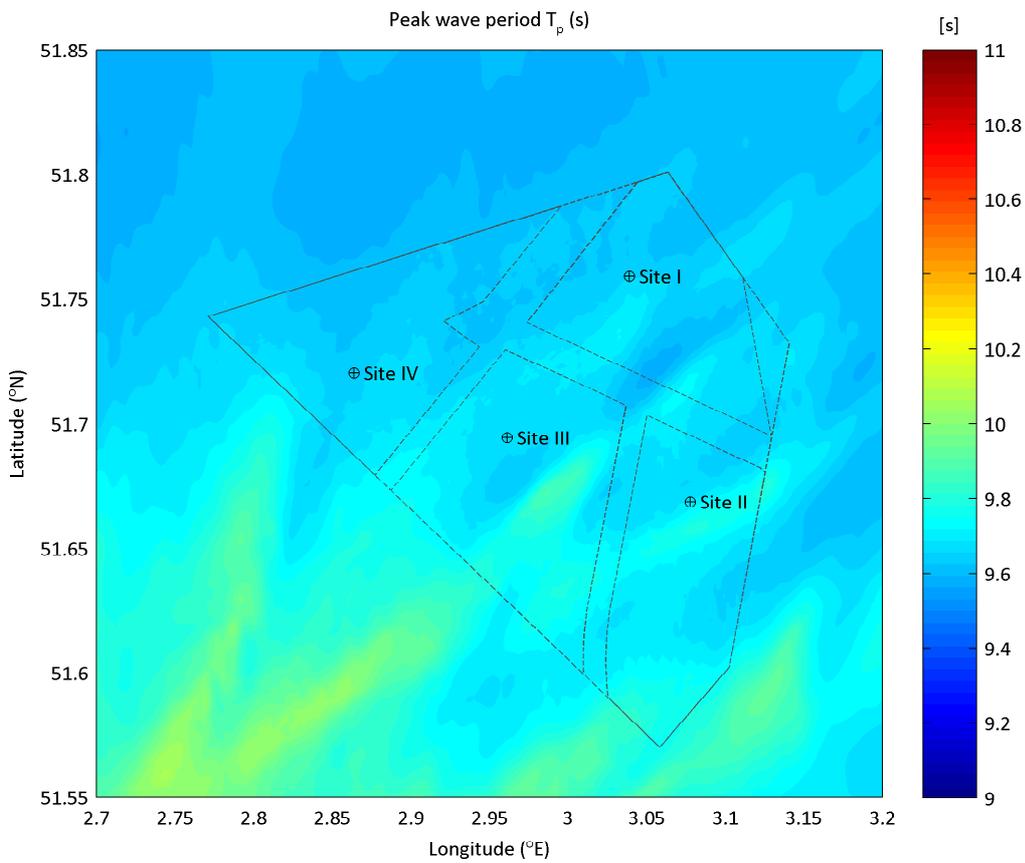
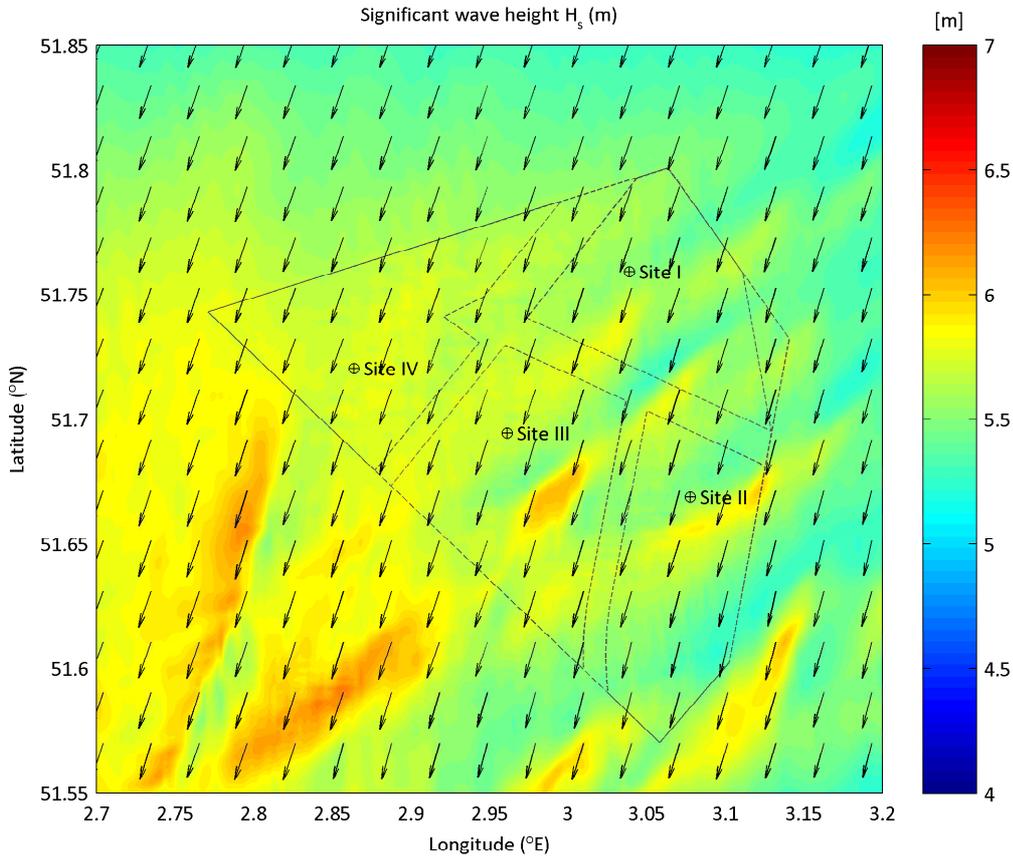
Extreme wave condition from Sector15 ( $^{\circ}$ N) - 45 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.011



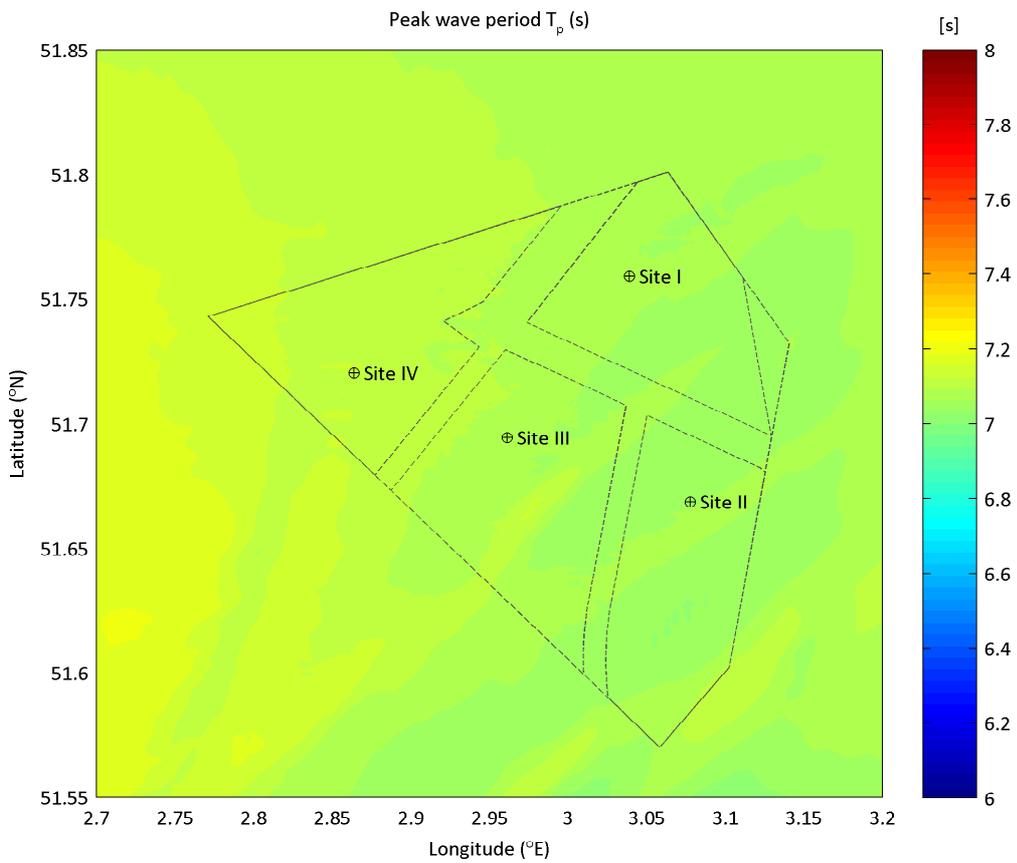
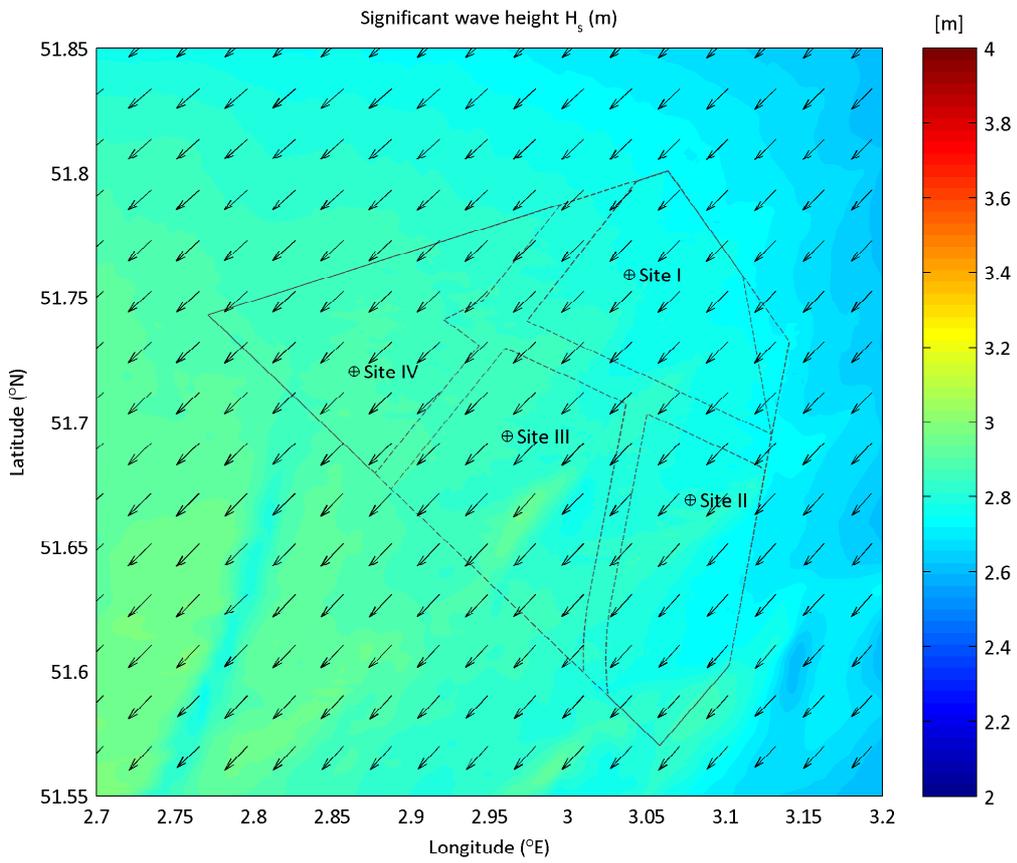
Extreme wave condition from Sector15 ( $^{\circ}$ N) - 45 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.012



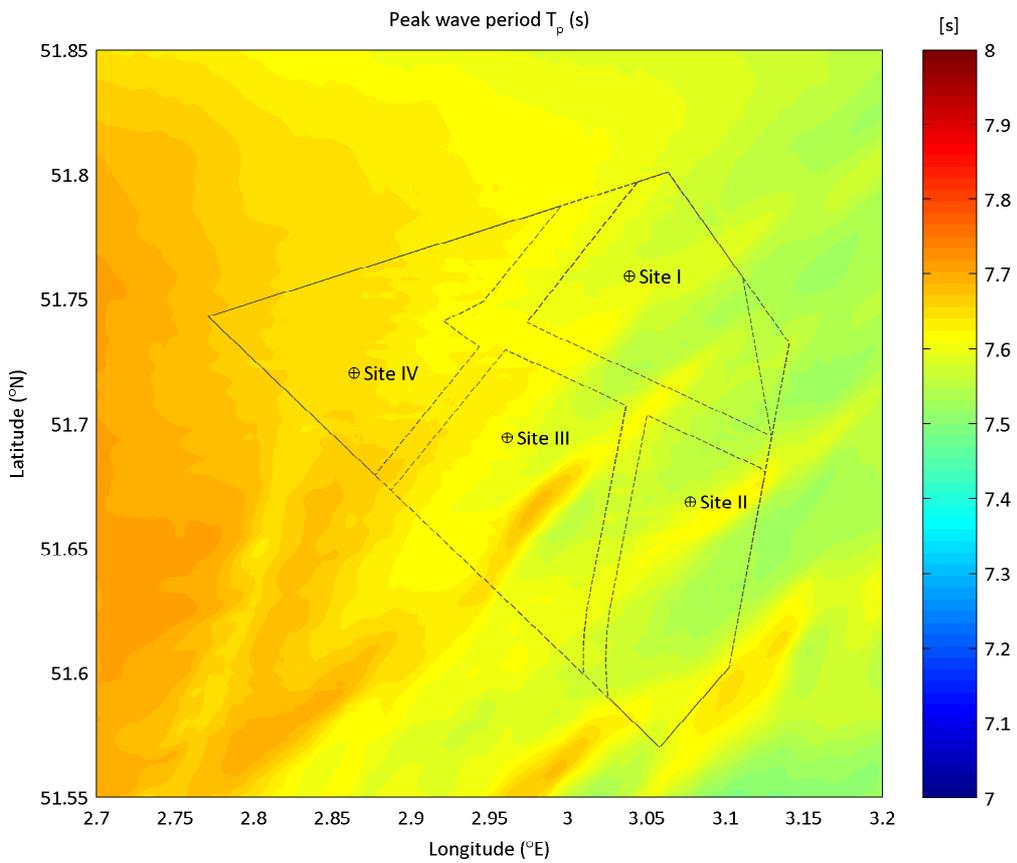
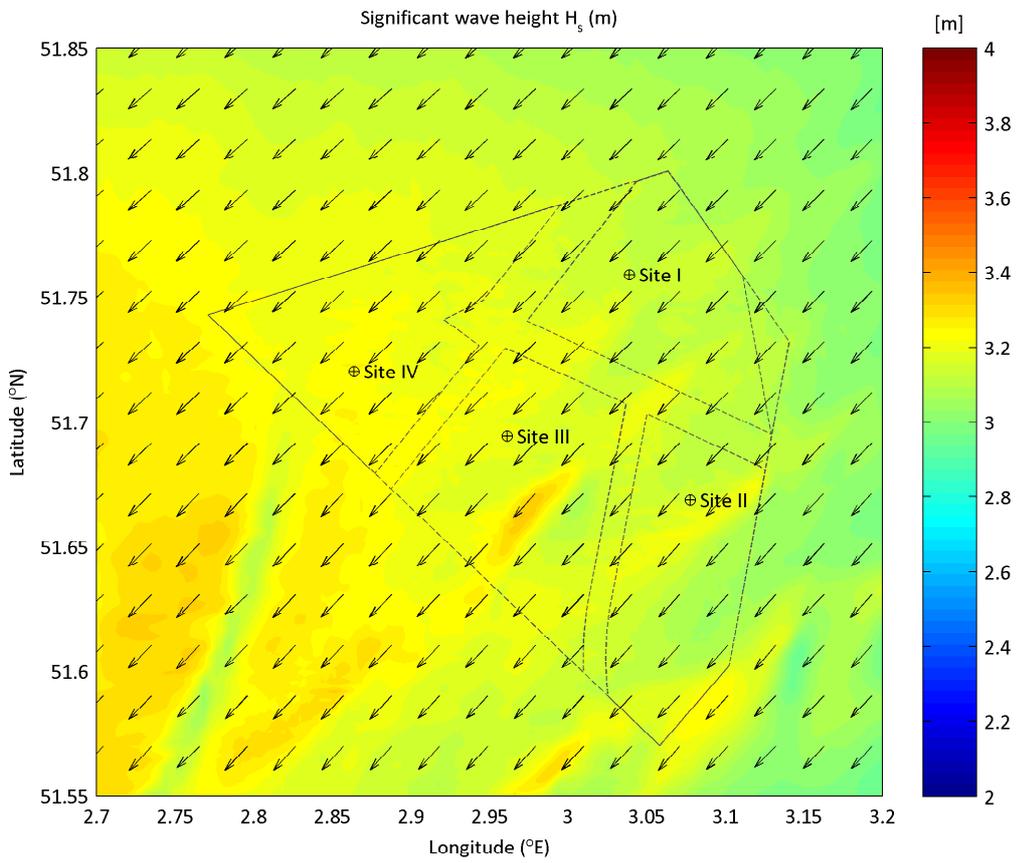
Extreme wave condition from Sector45 ( $^{\circ}$ N) - 75 ( $^{\circ}$ E)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.013



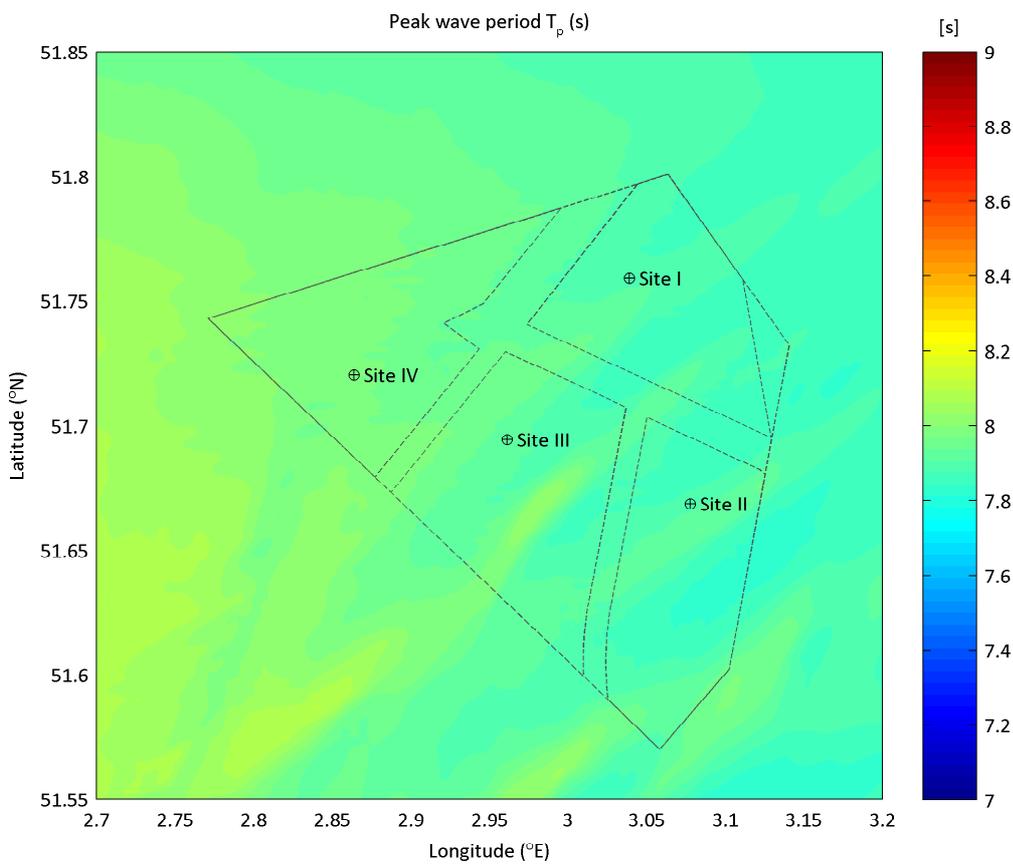
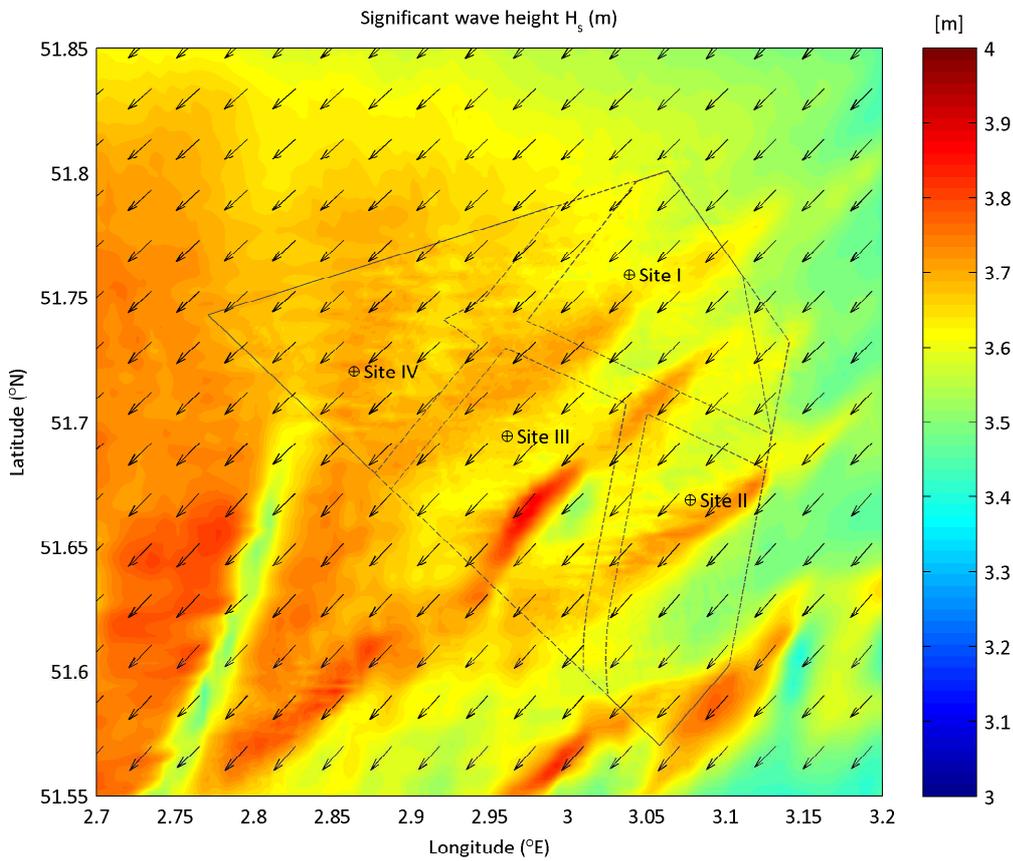
Extreme wave condition from Sector45 (°N) - 75 (°E)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.014



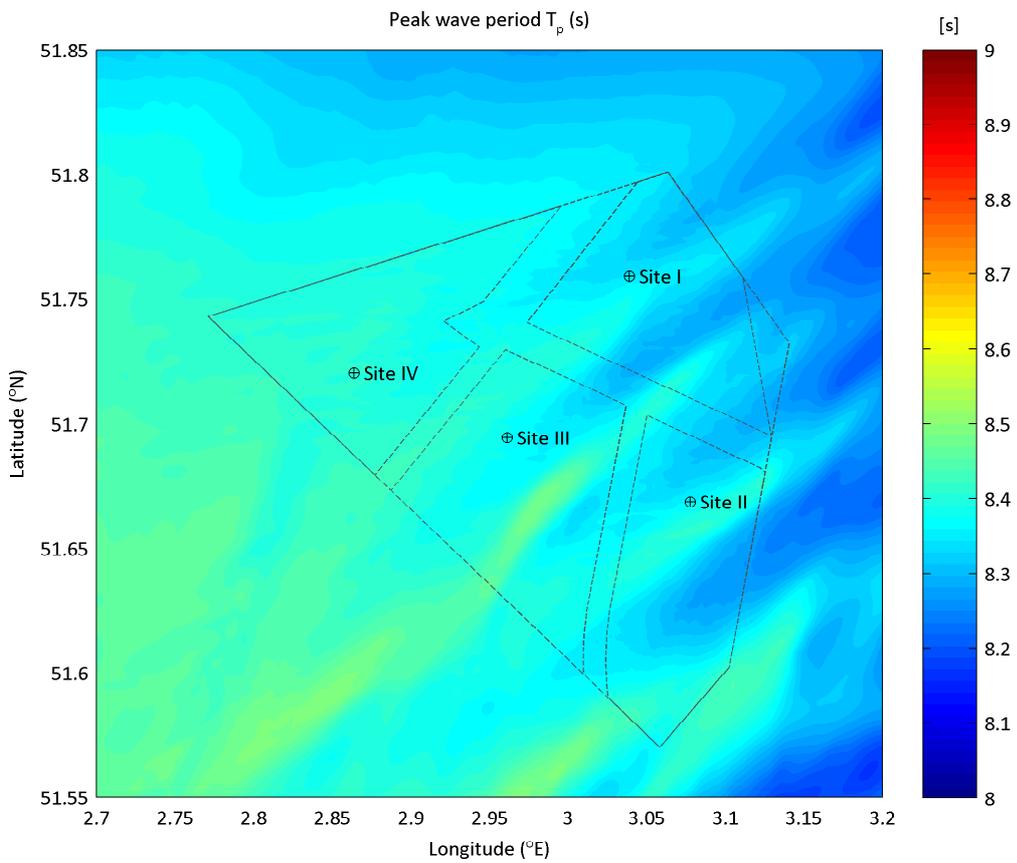
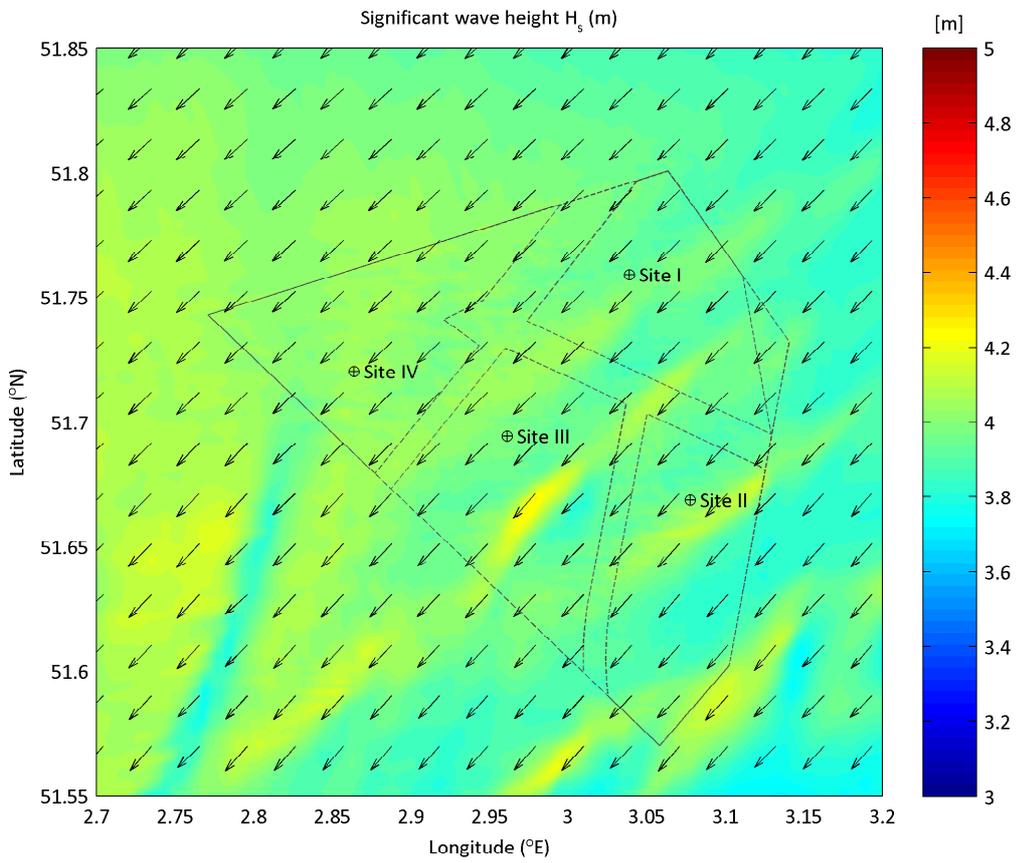
Extreme wave condition from Sector45 (°N) - 75 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.015



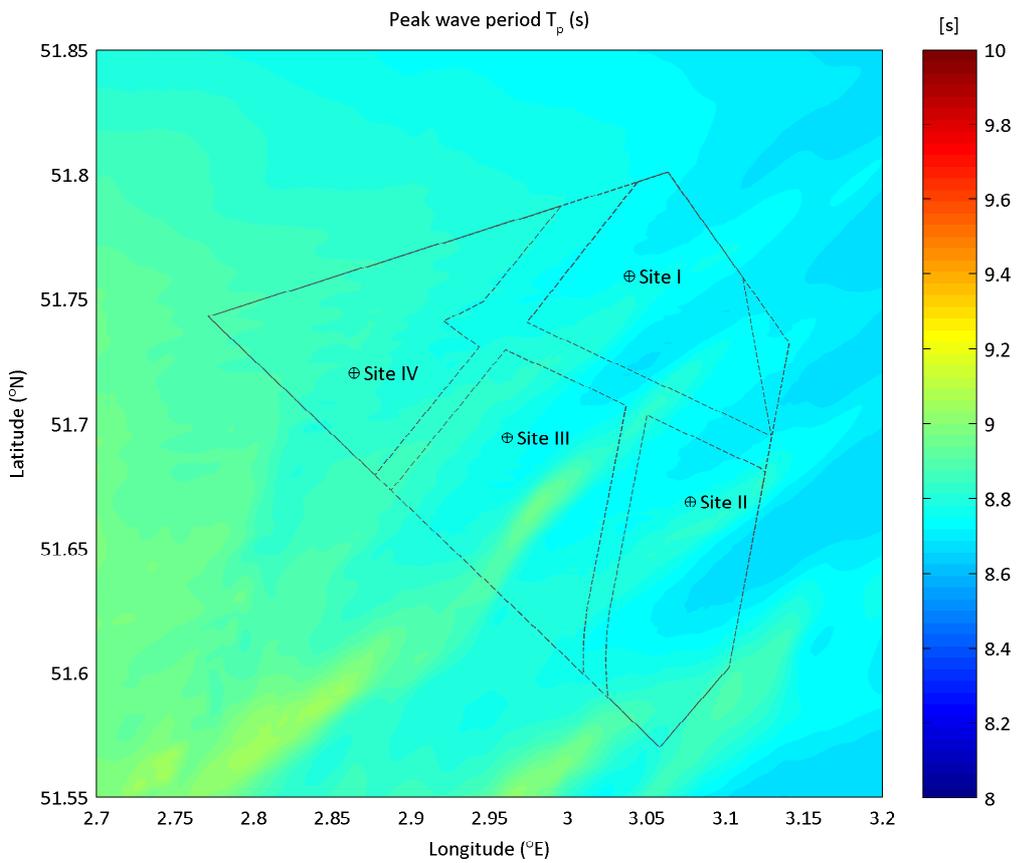
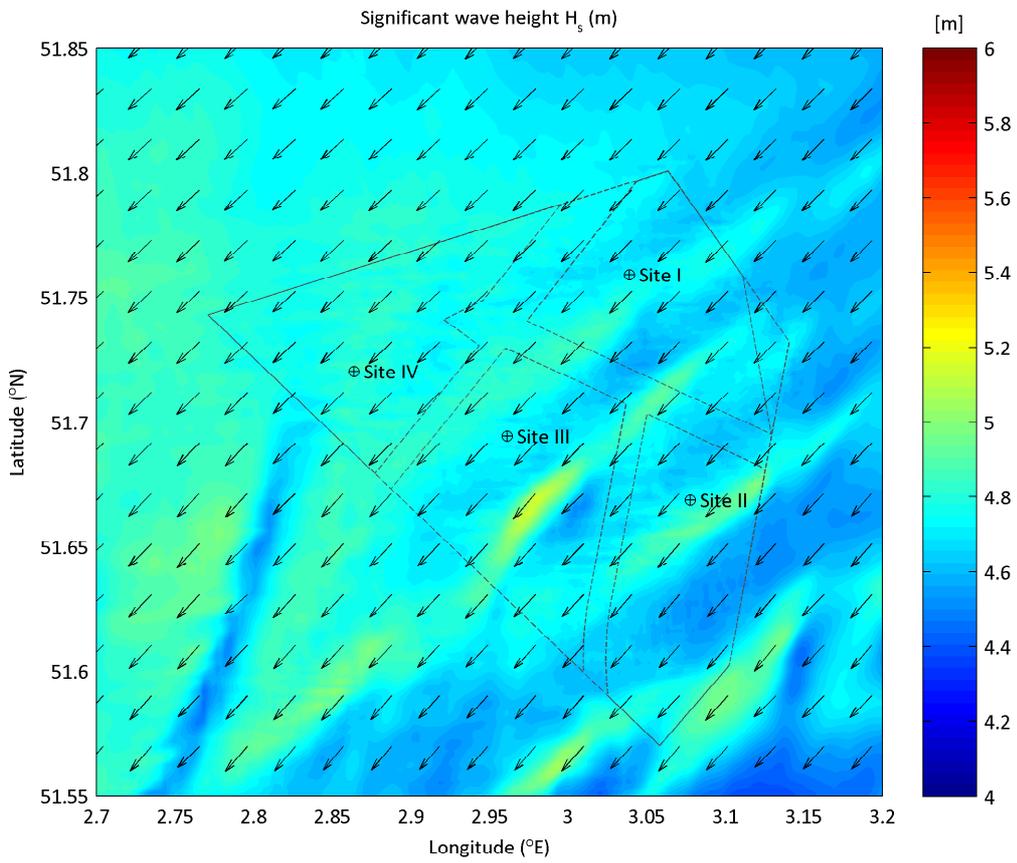
Extreme wave condition from Sector45 ( $^{\circ}$ N) - 75 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.016



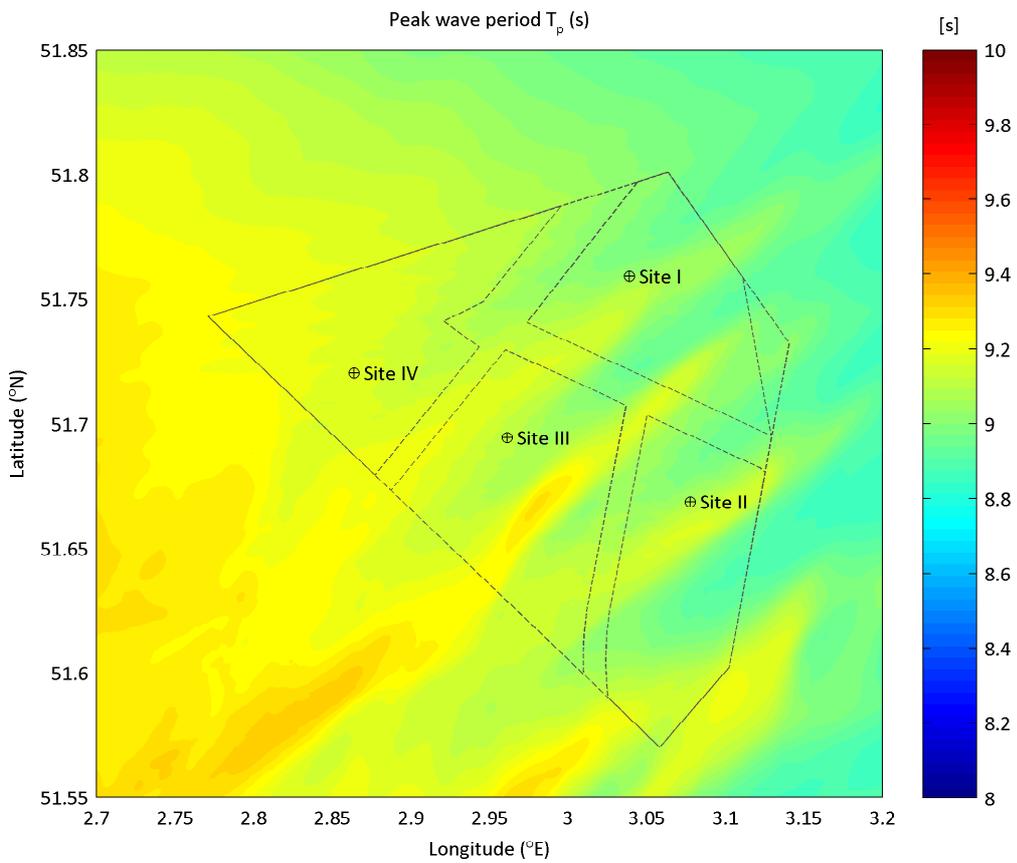
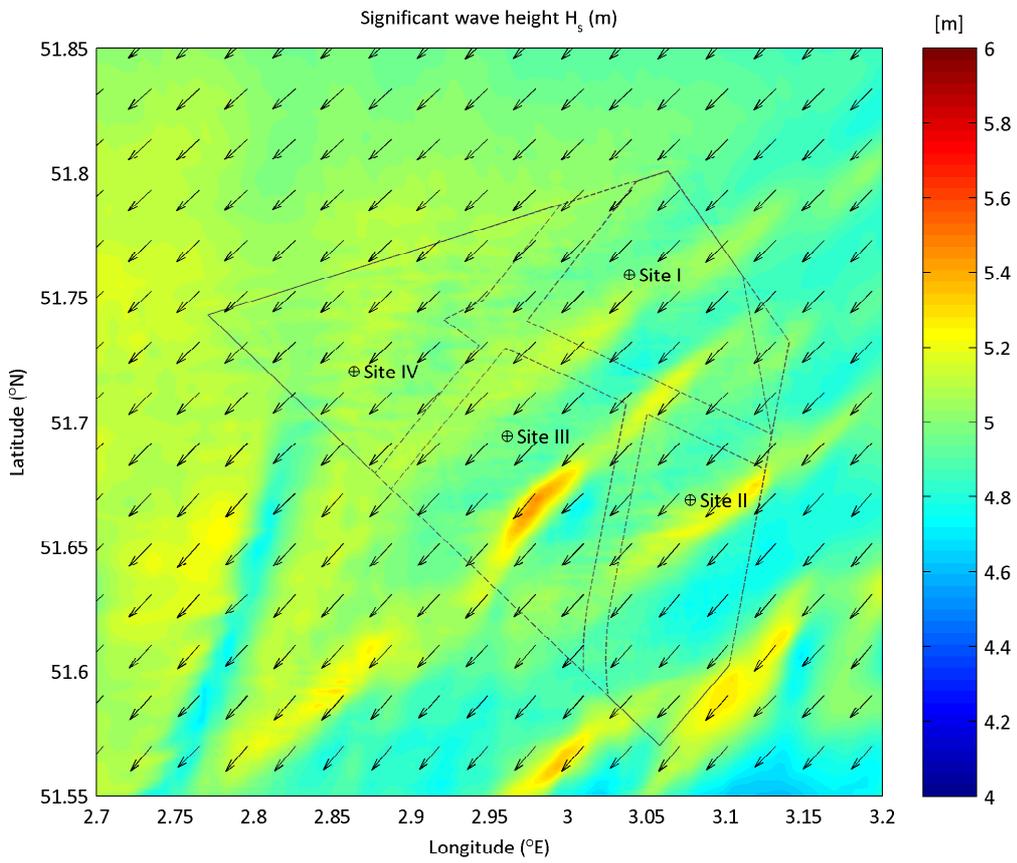
Extreme wave condition from Sector45 ( $^{\circ}$ N) - 75 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.017



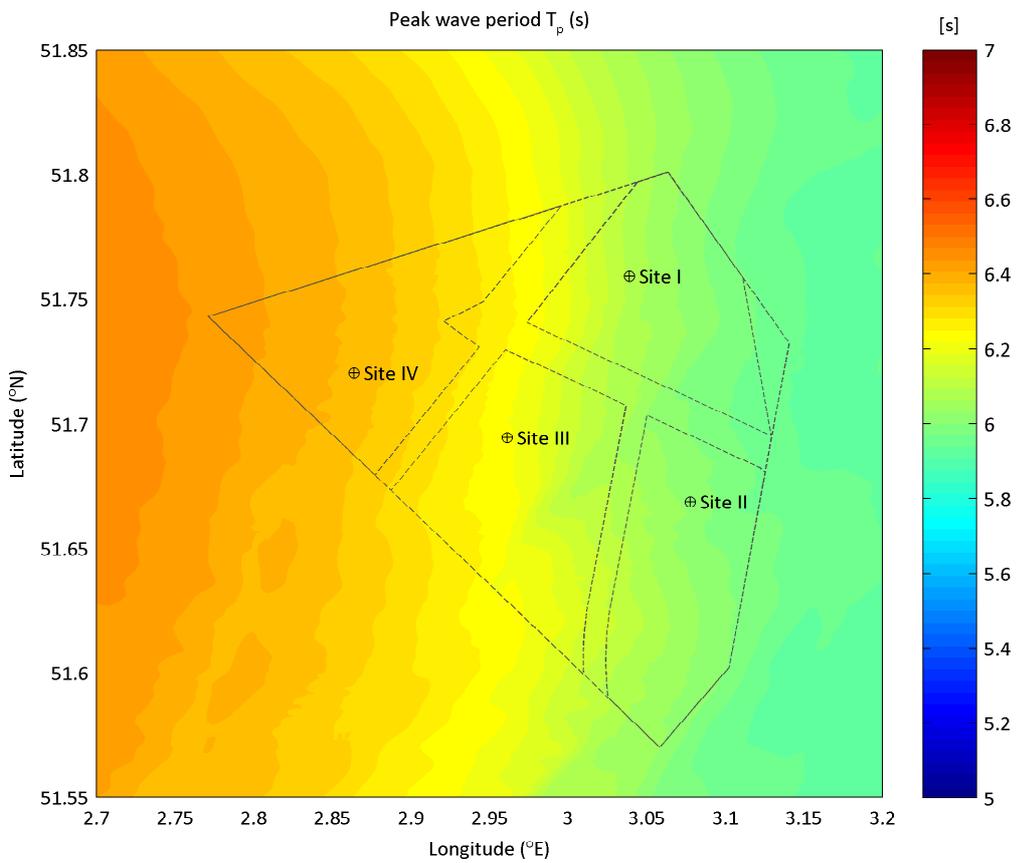
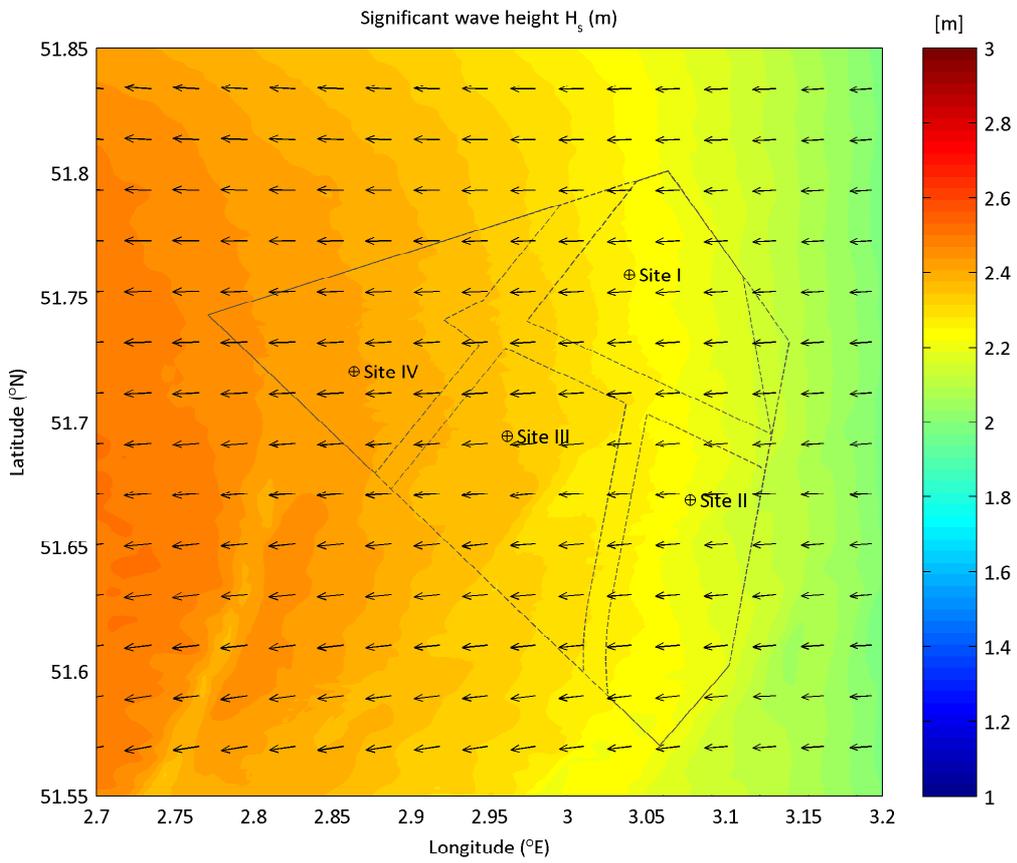
Extreme wave condition from Sector45 ( $^{\circ}$ N) - 75 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.018



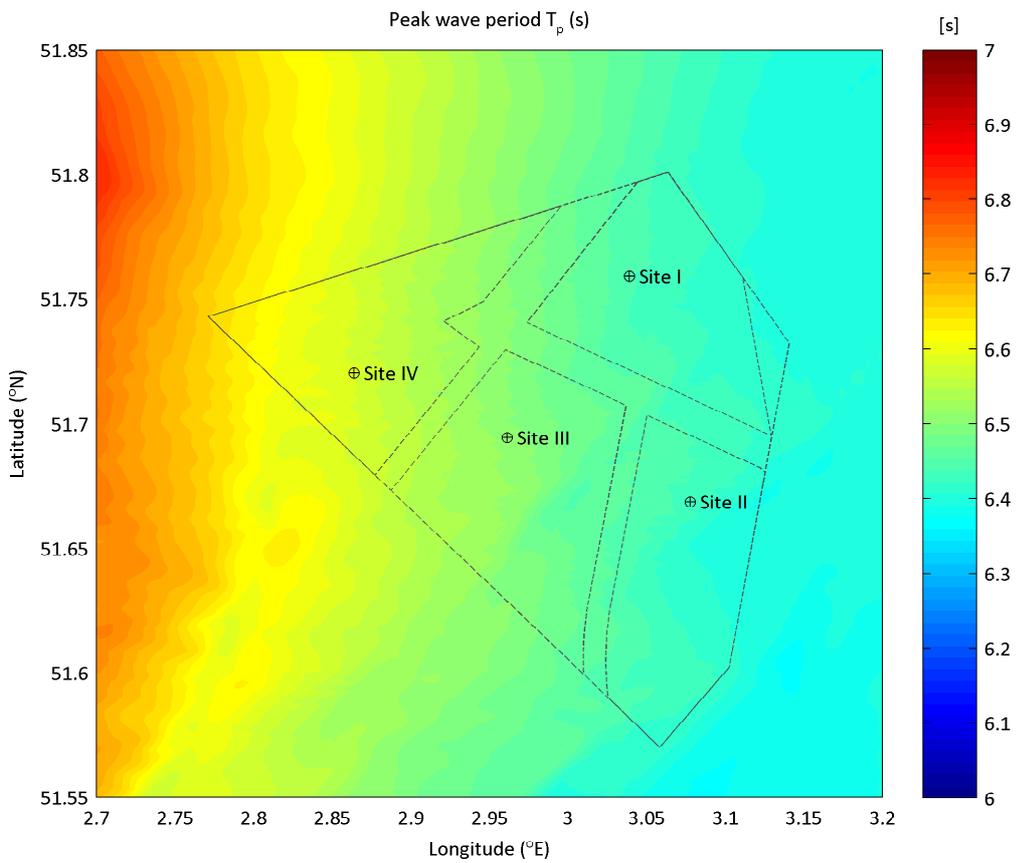
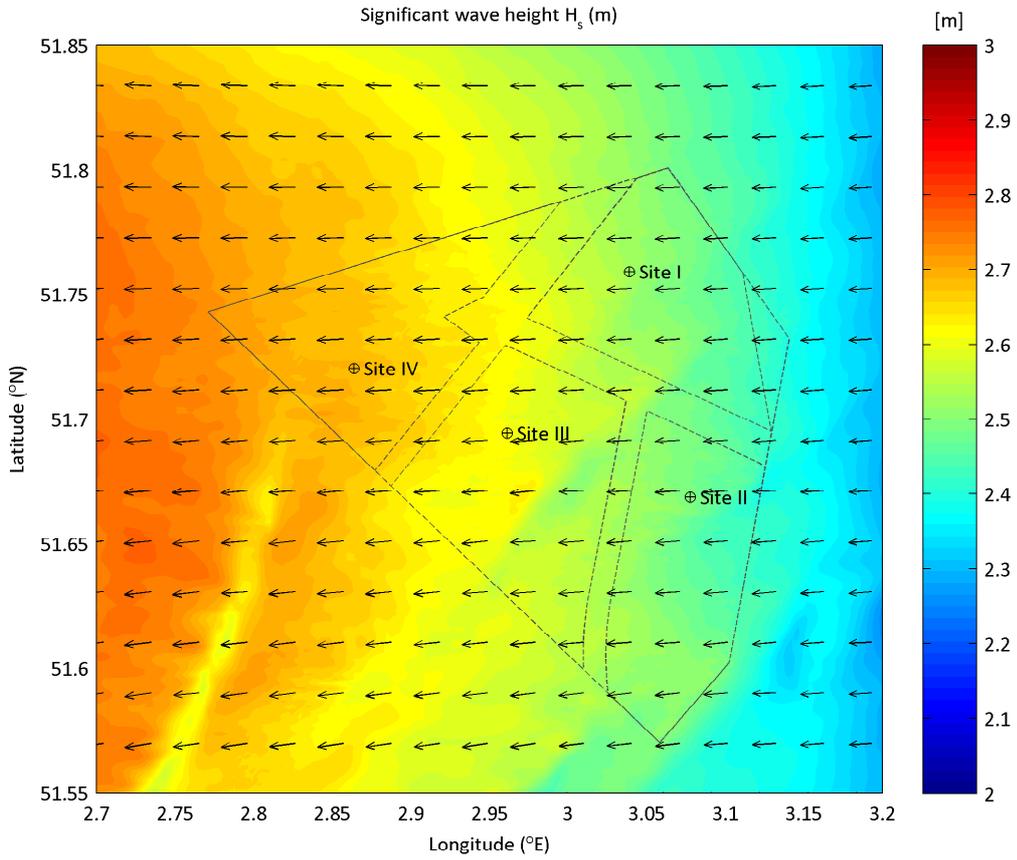
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.019



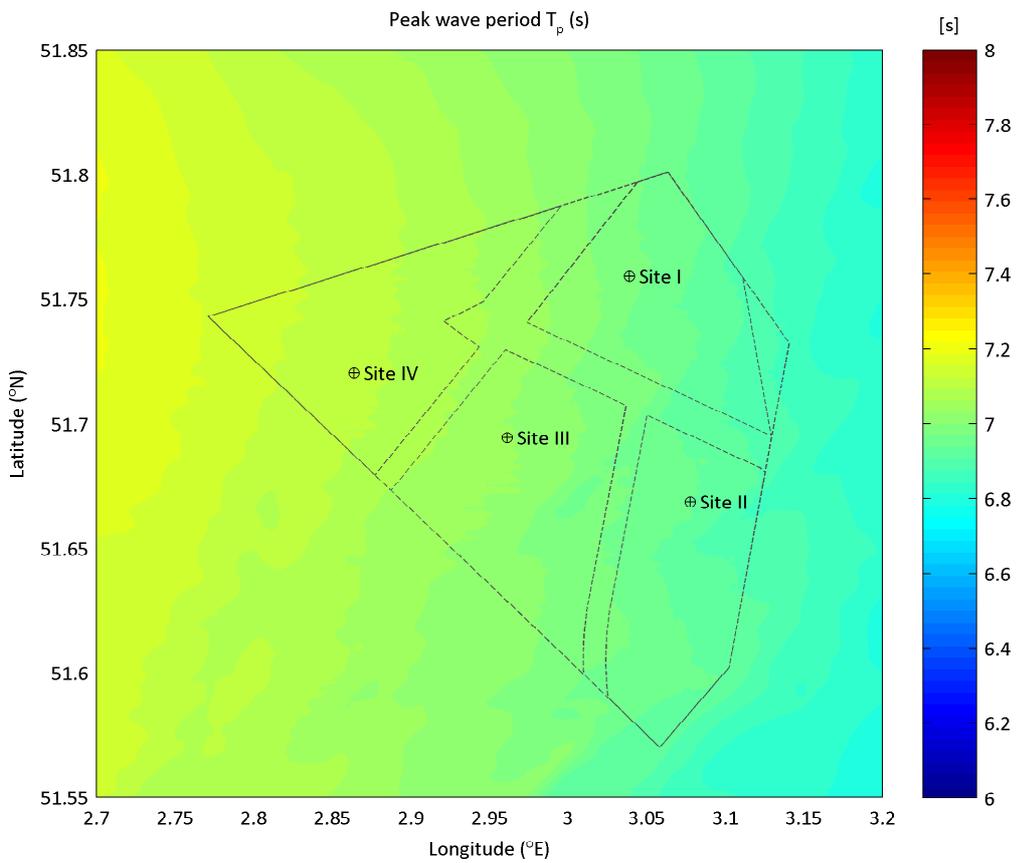
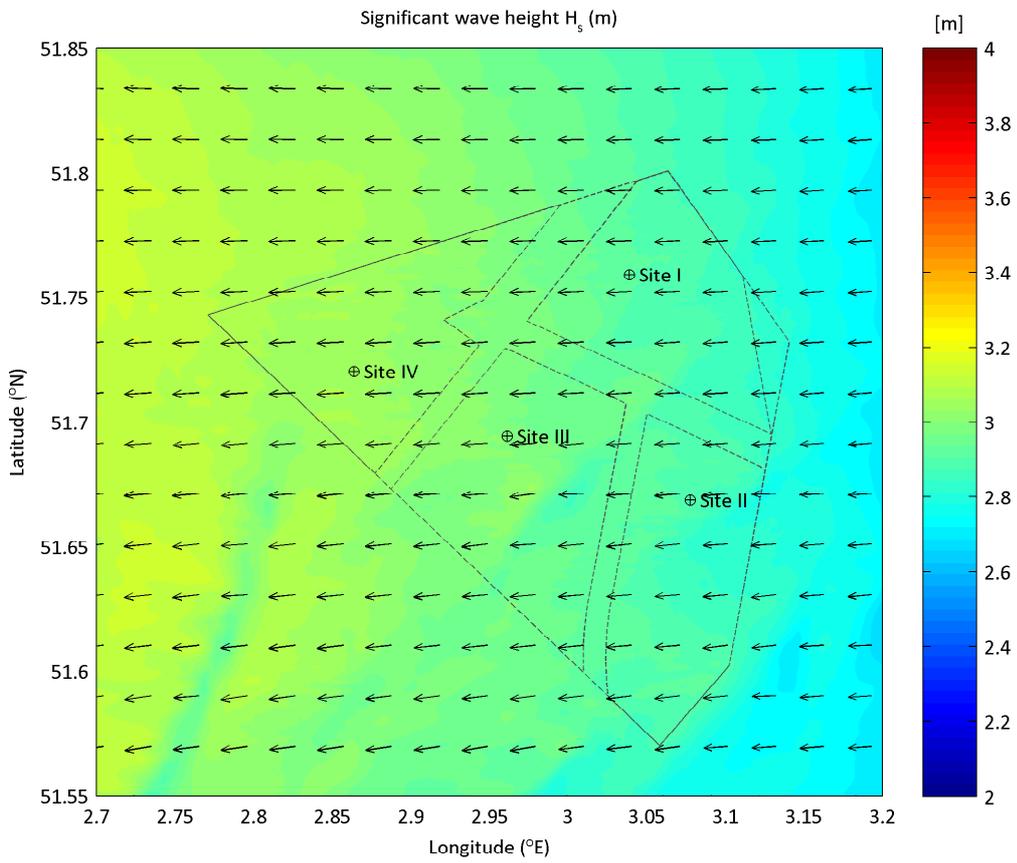
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.020



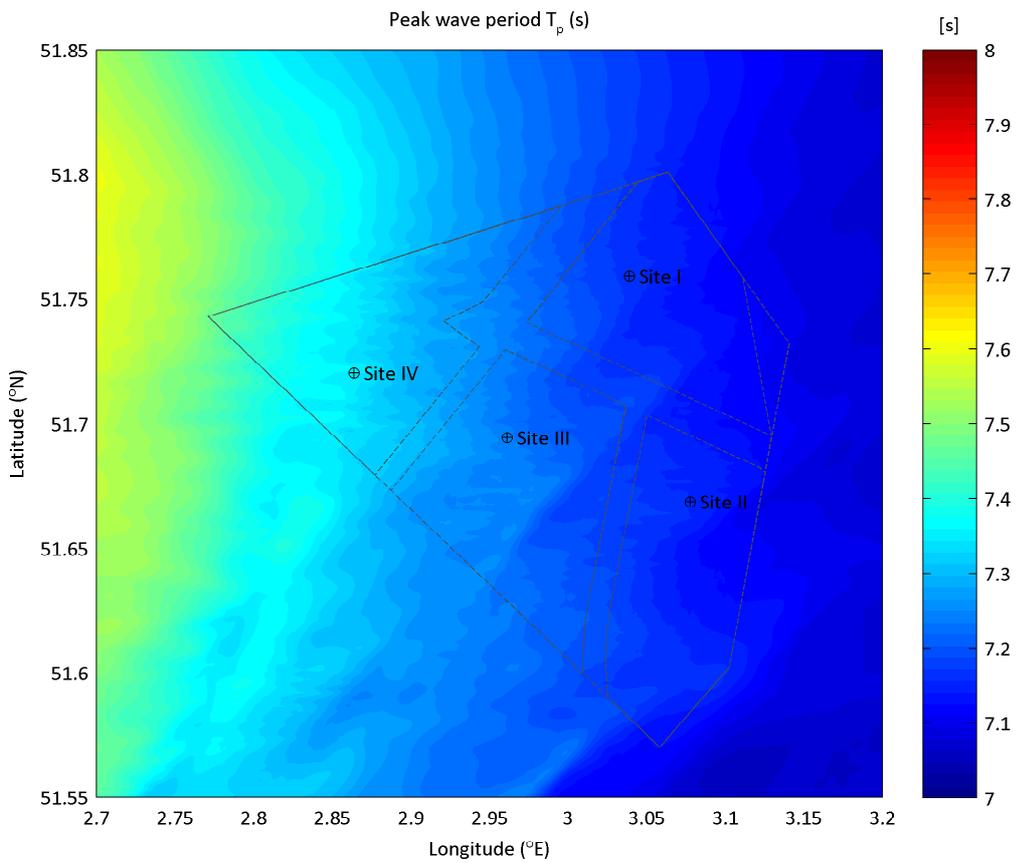
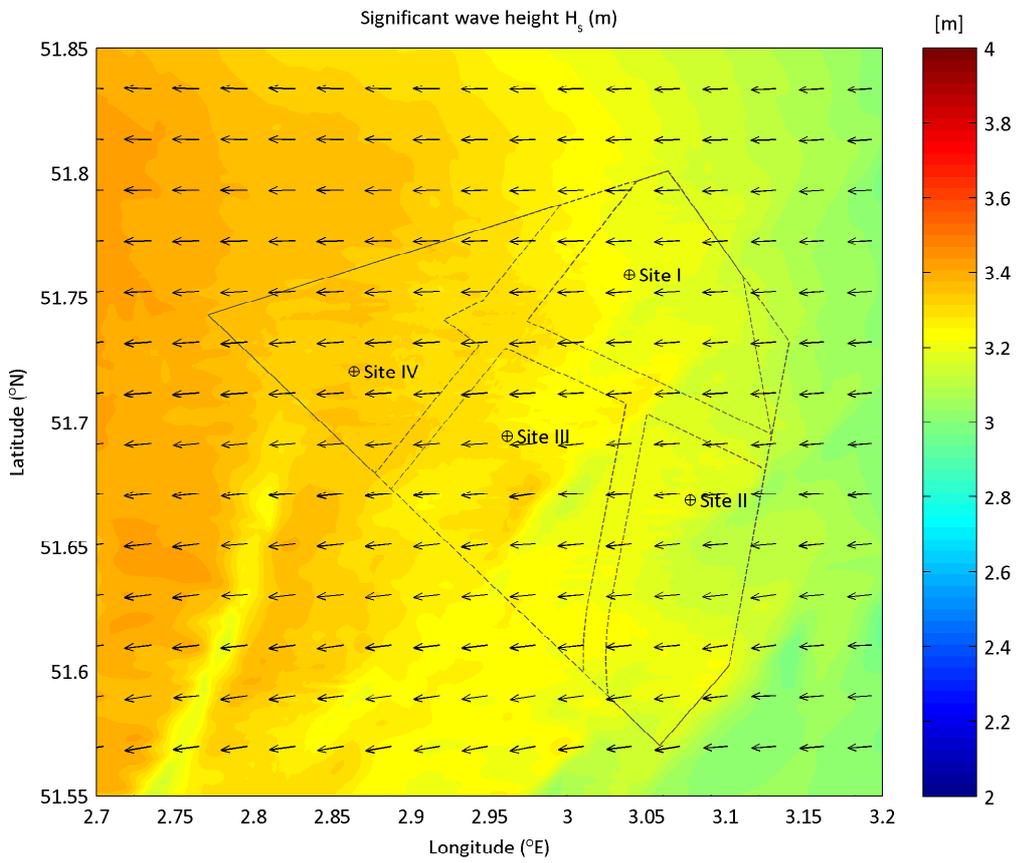
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.021



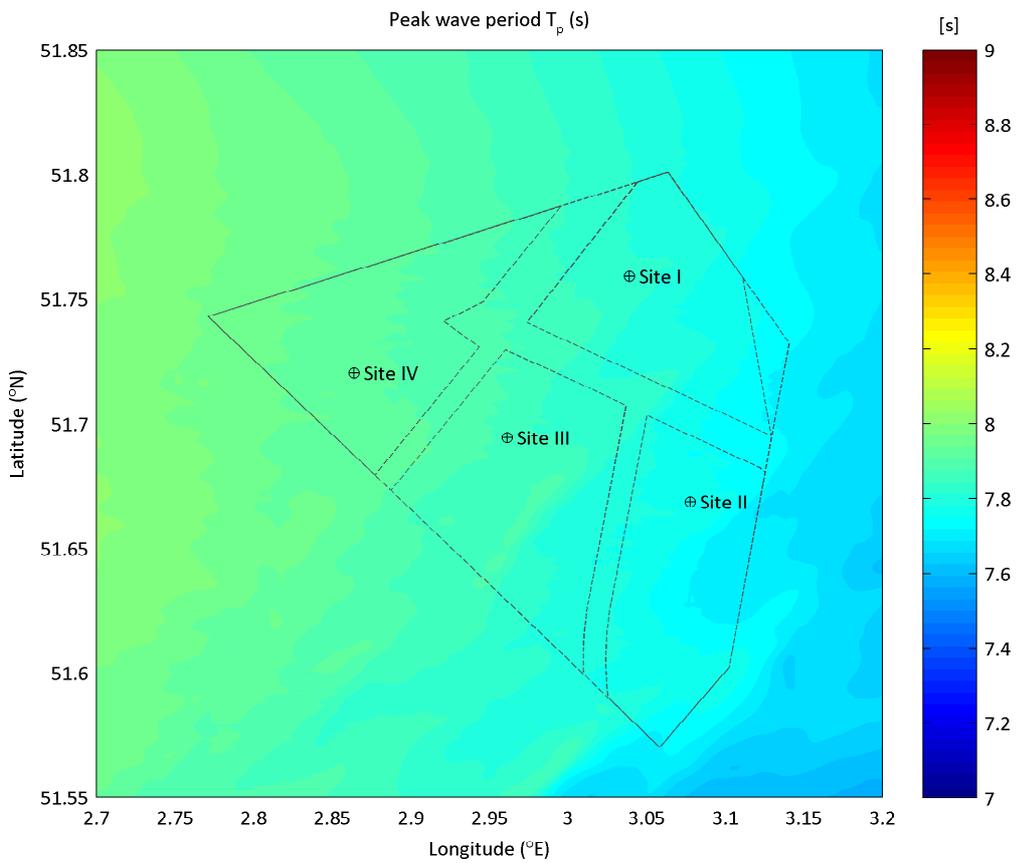
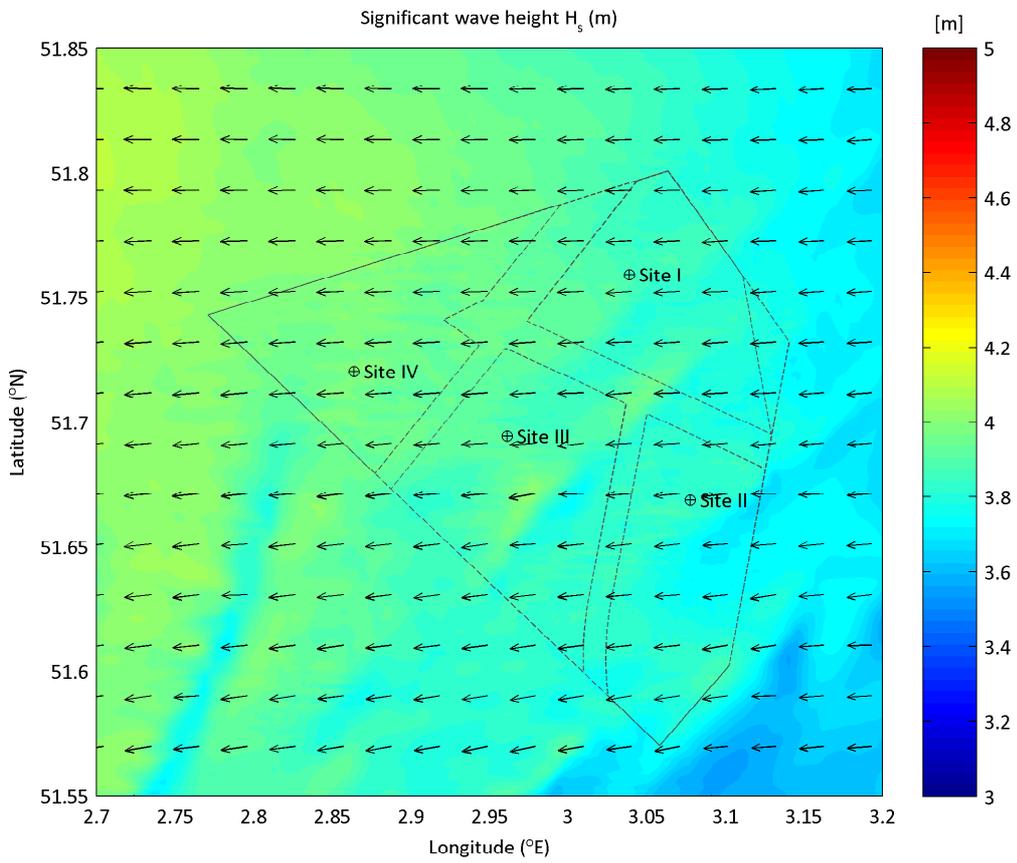
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.022



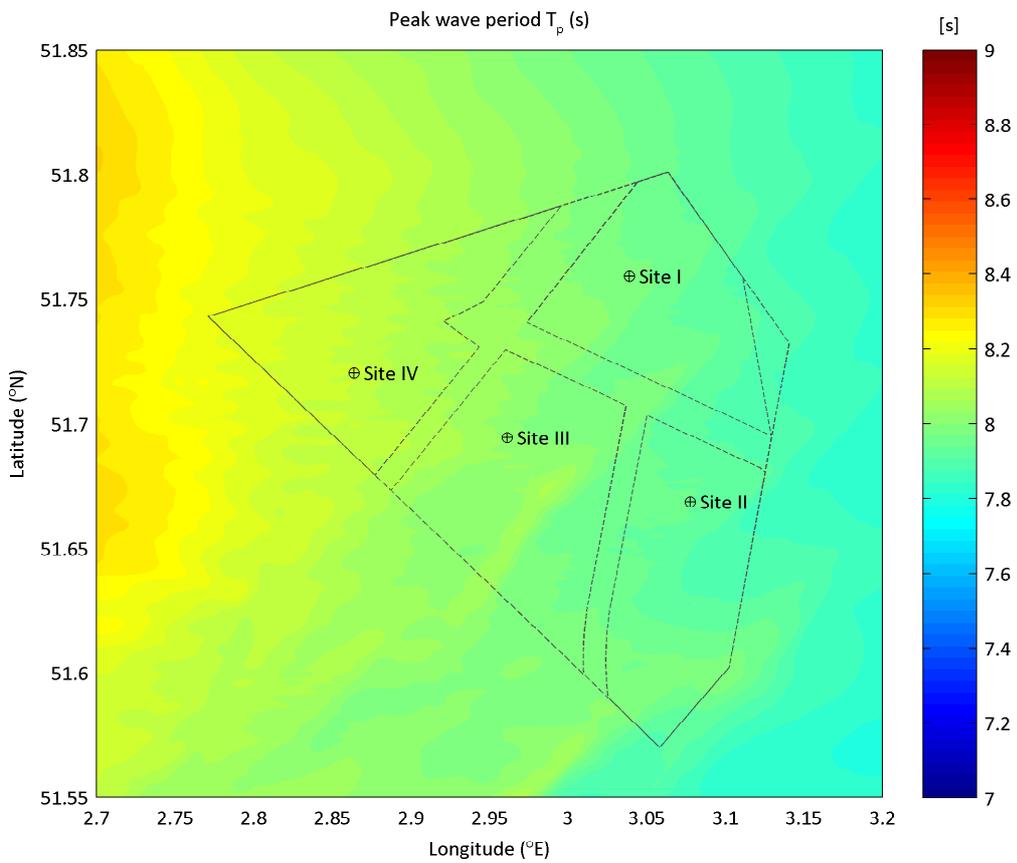
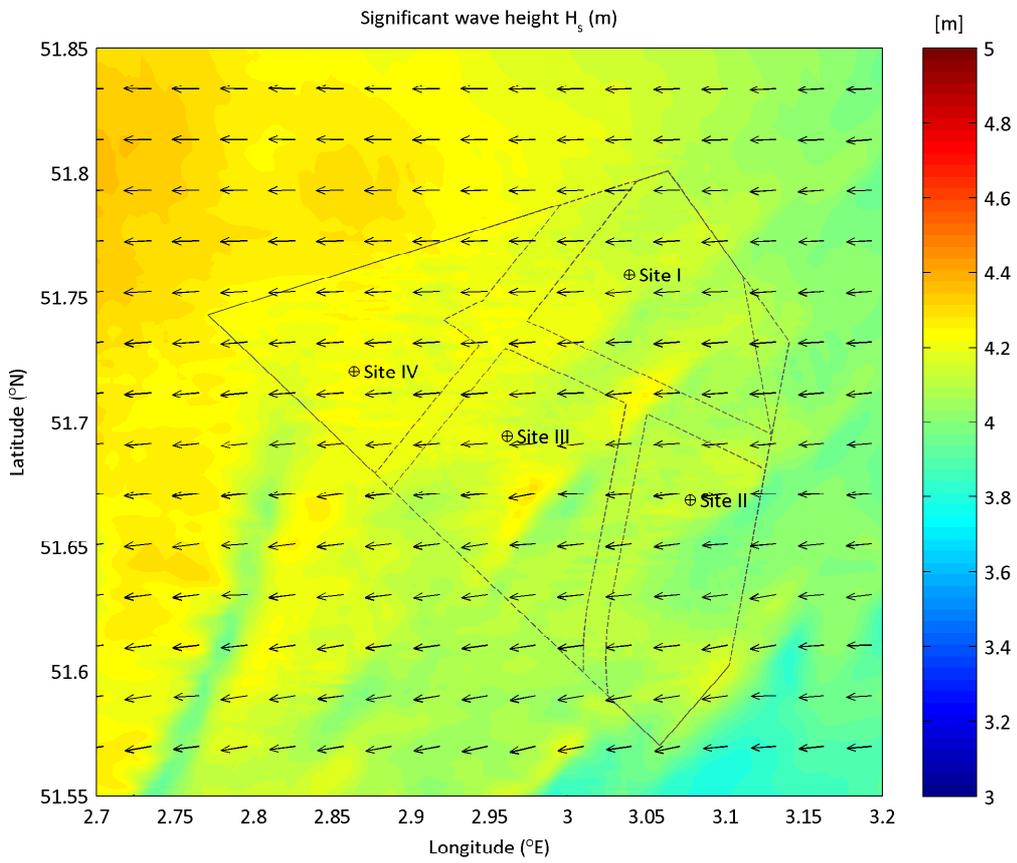
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.023



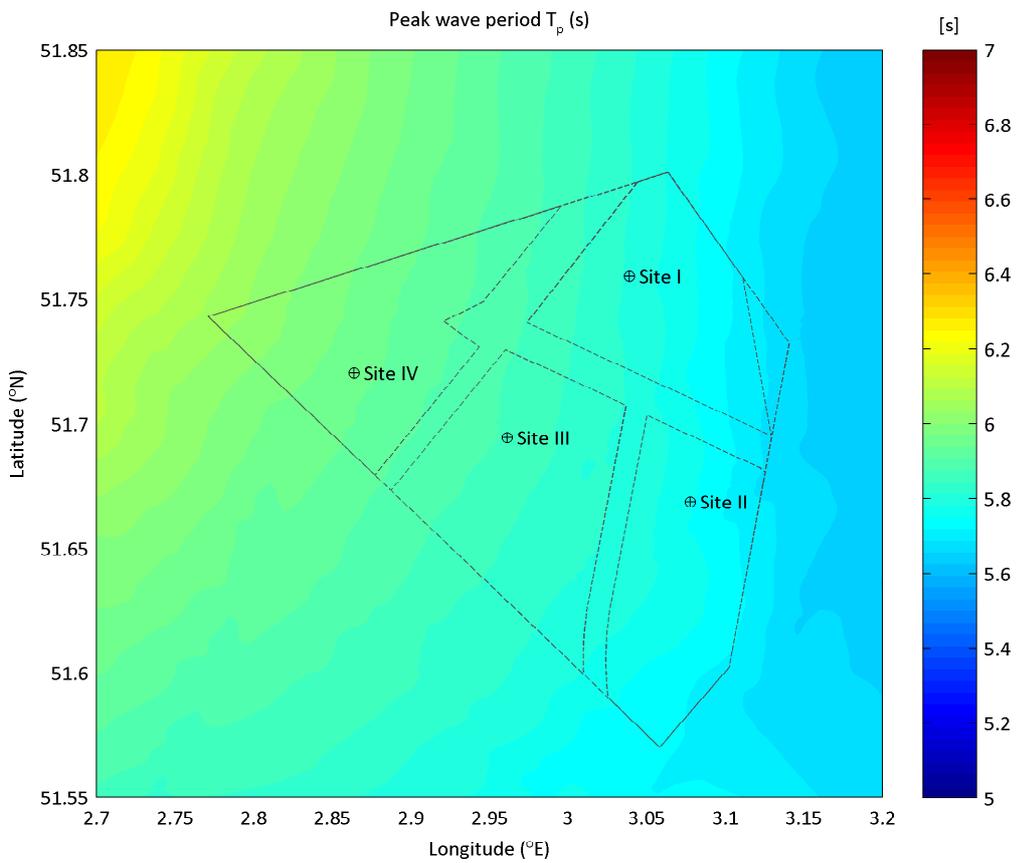
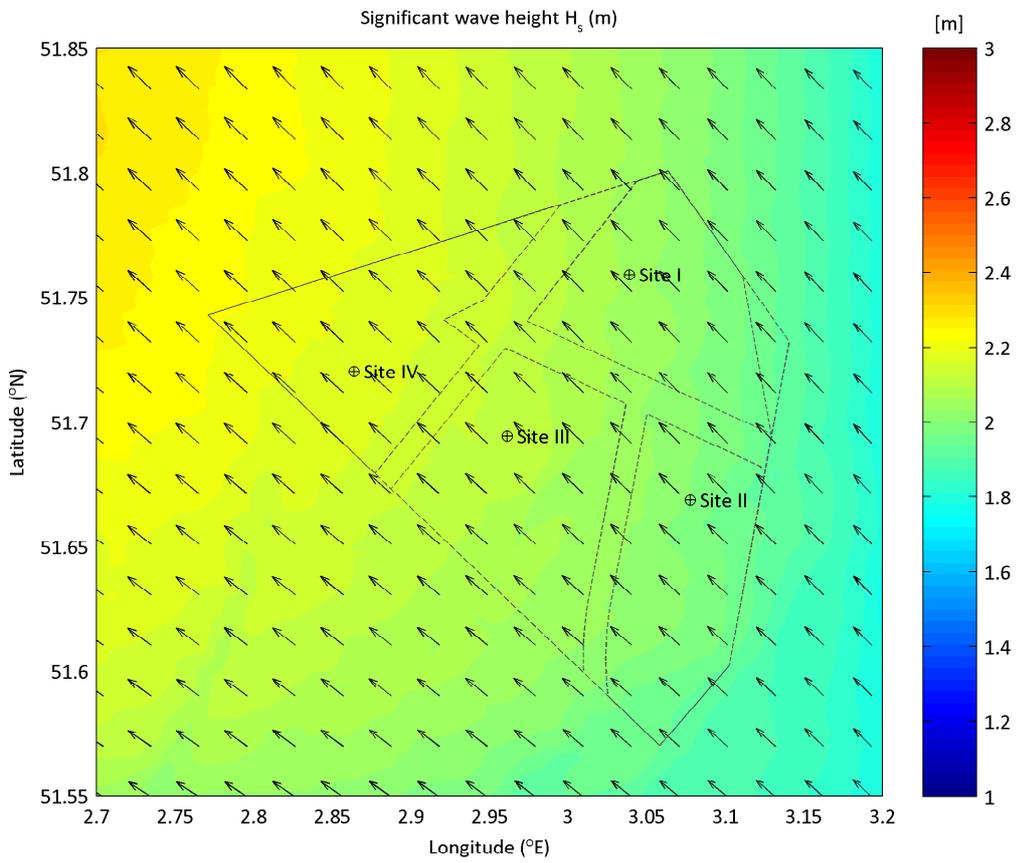
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.024



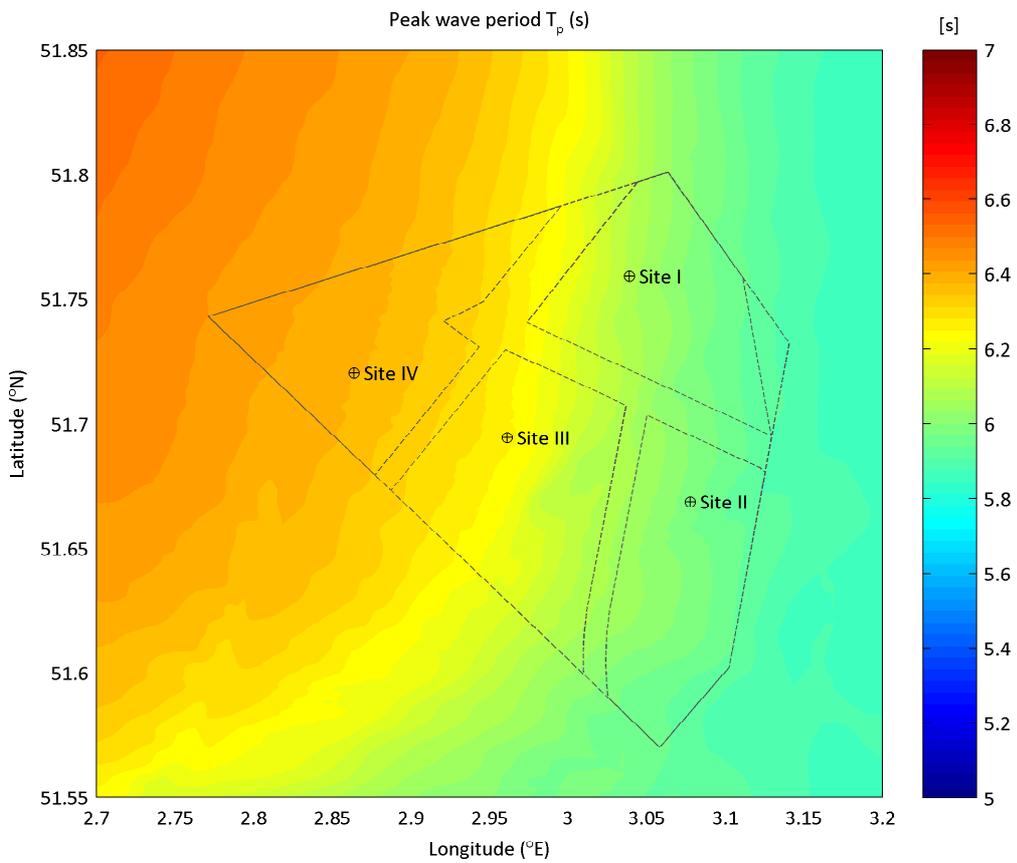
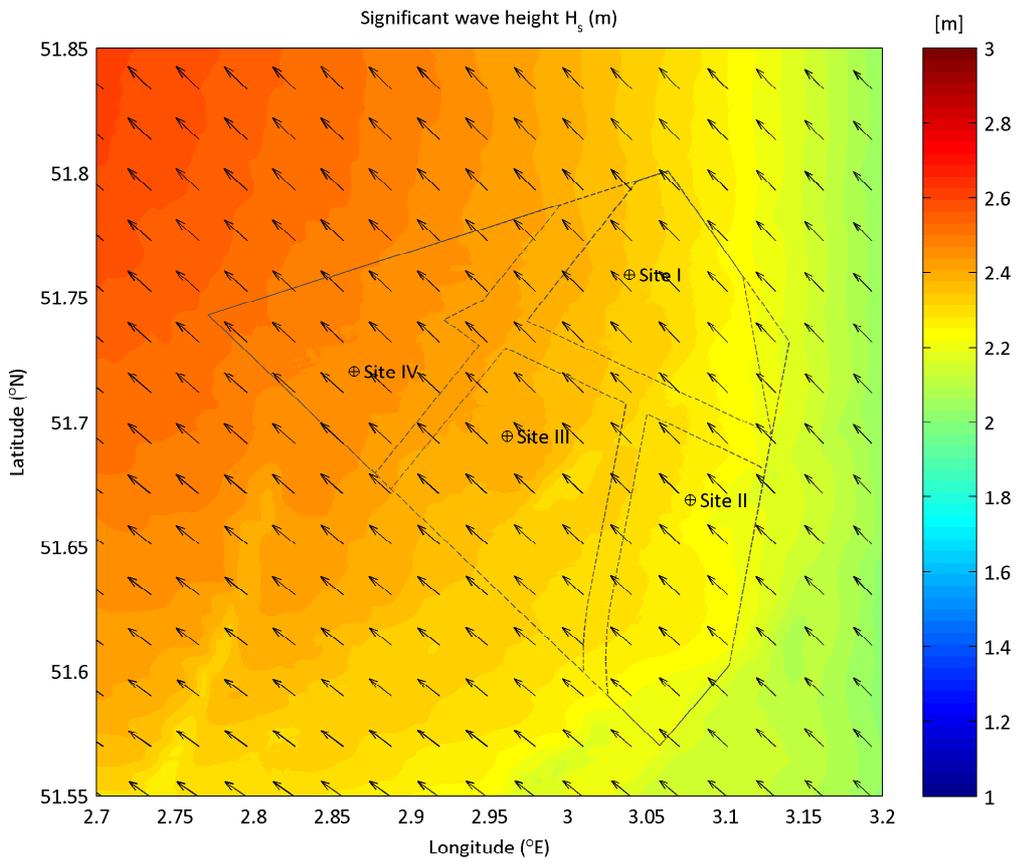
Extreme wave condition from Sector105 ( $^{\circ}$ N) - 135 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.025



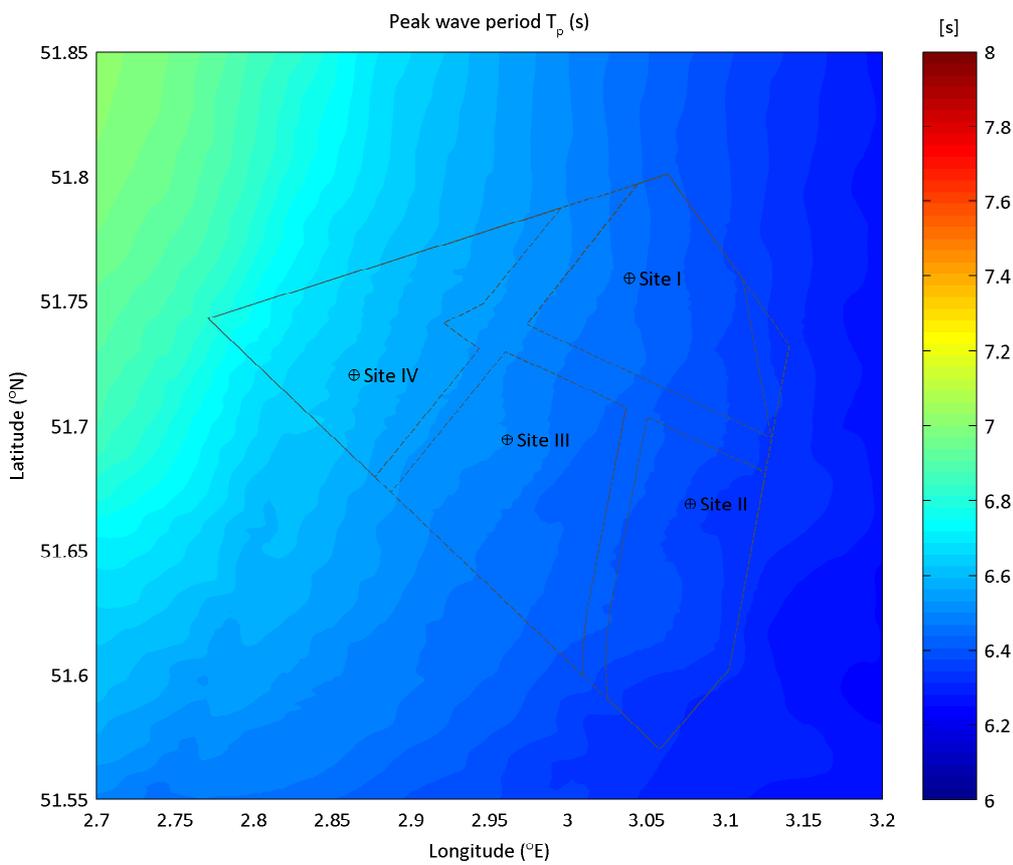
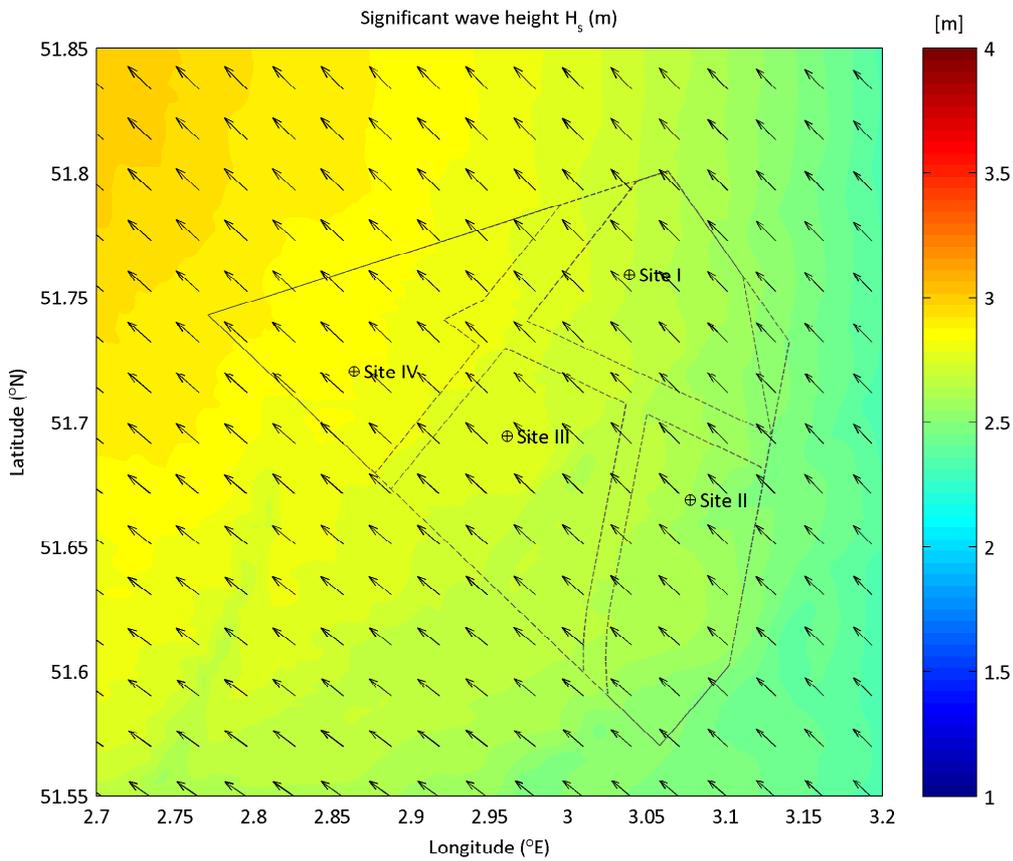
Extreme wave condition from Sector105 ( $^{\circ}$ N) - 135 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.026



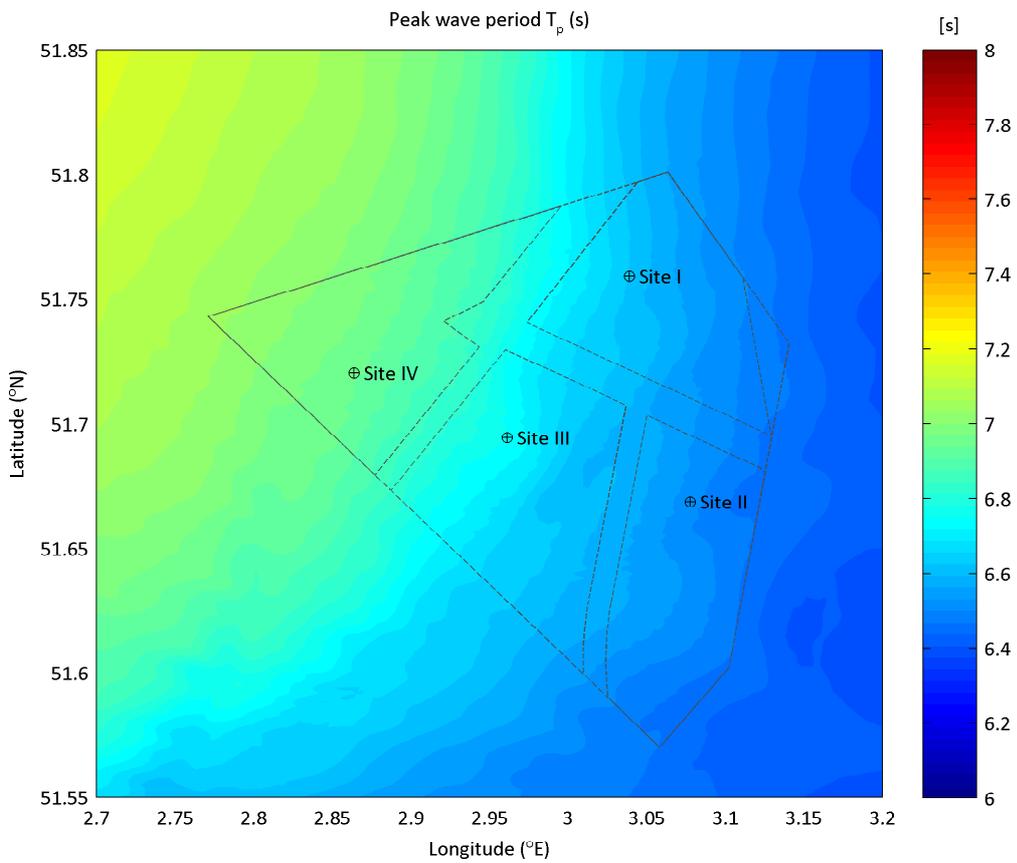
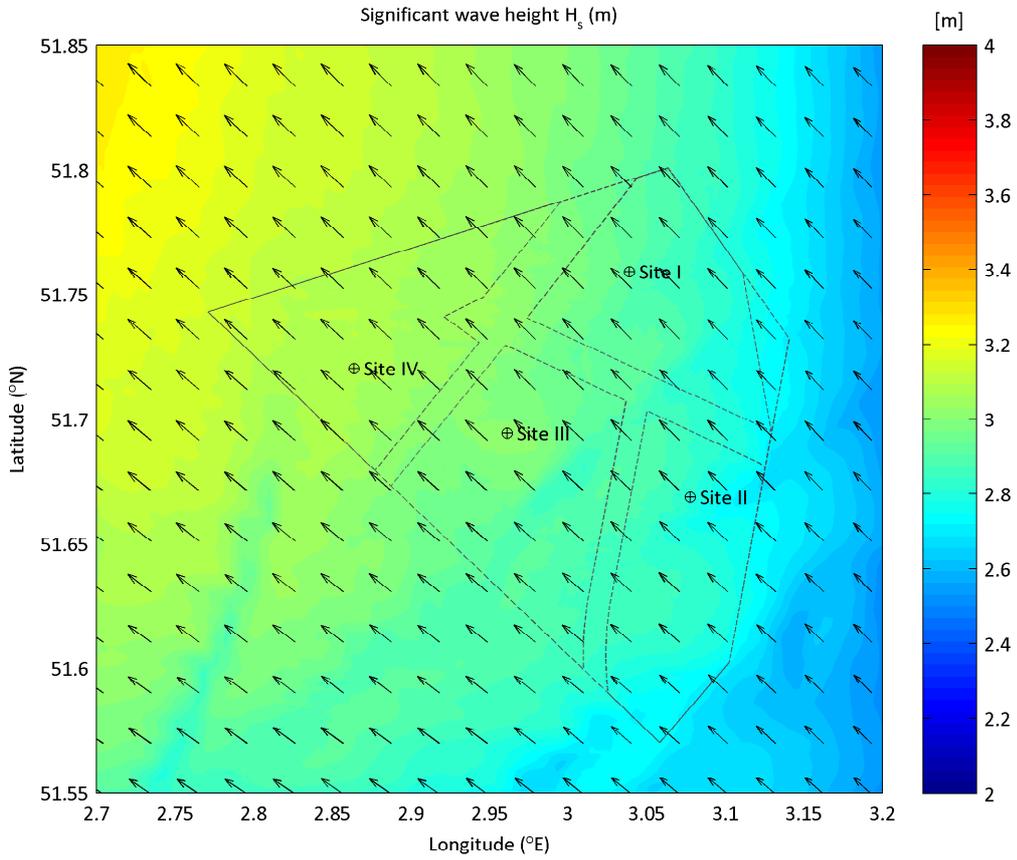
Extreme wave condition from Sector105 ( $^{\circ}$ N) - 135 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.027



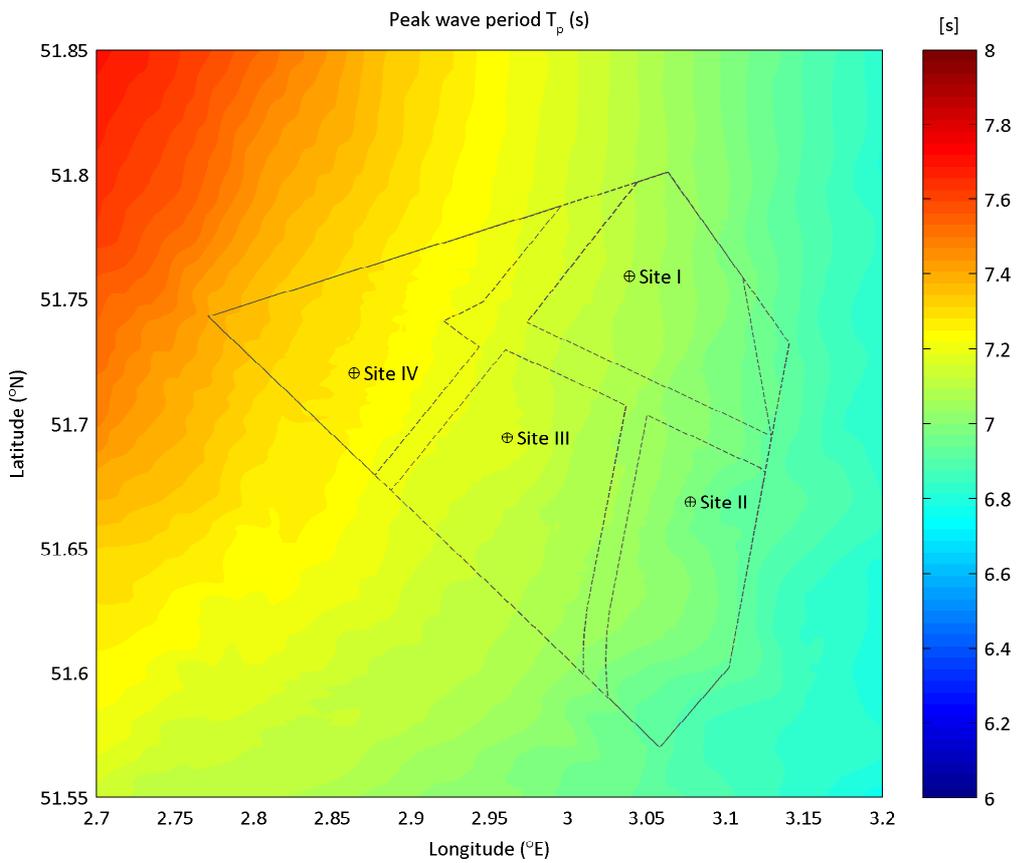
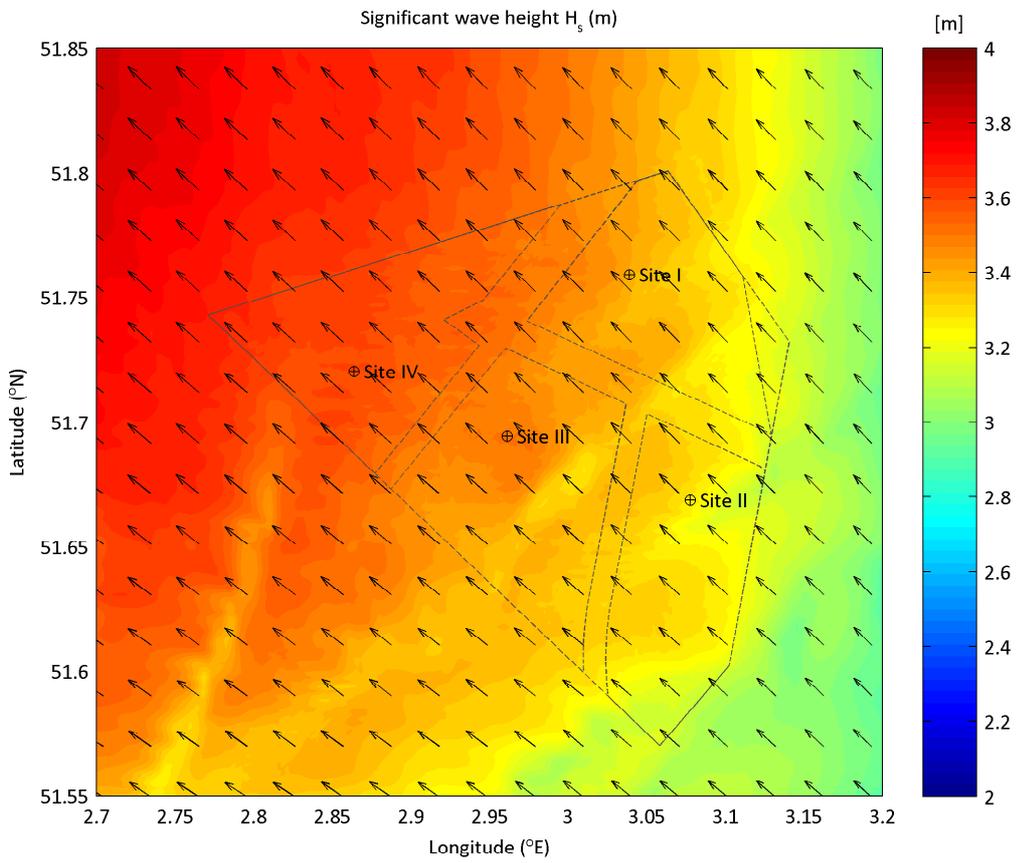
Extreme wave condition from Sector105 ( $^{\circ}$ N) - 135 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.028



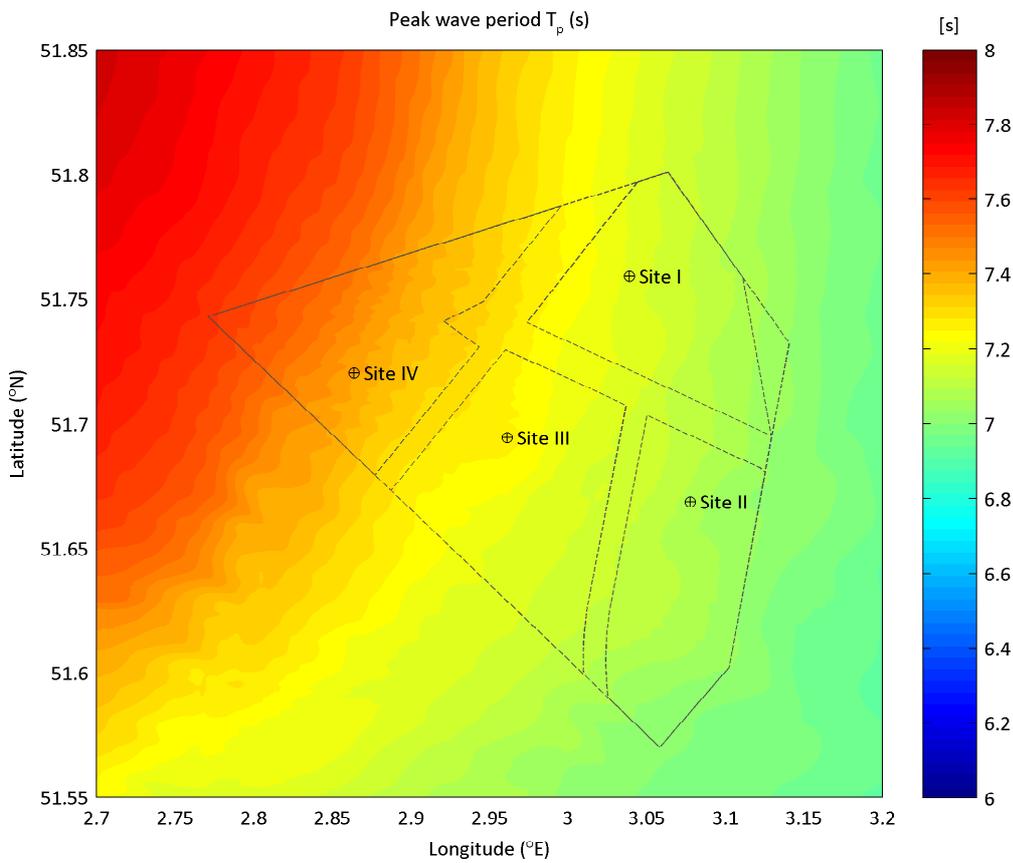
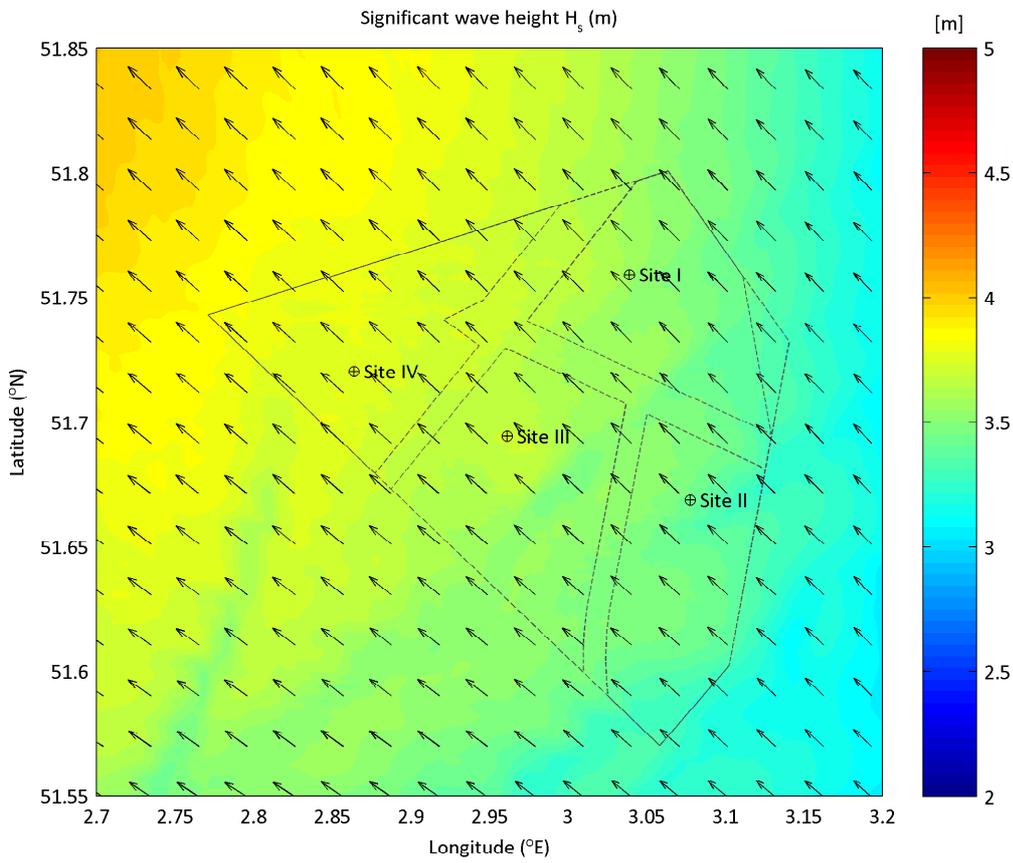
Extreme wave condition from Sector105 ( $^{\circ}$ N) - 135 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.029



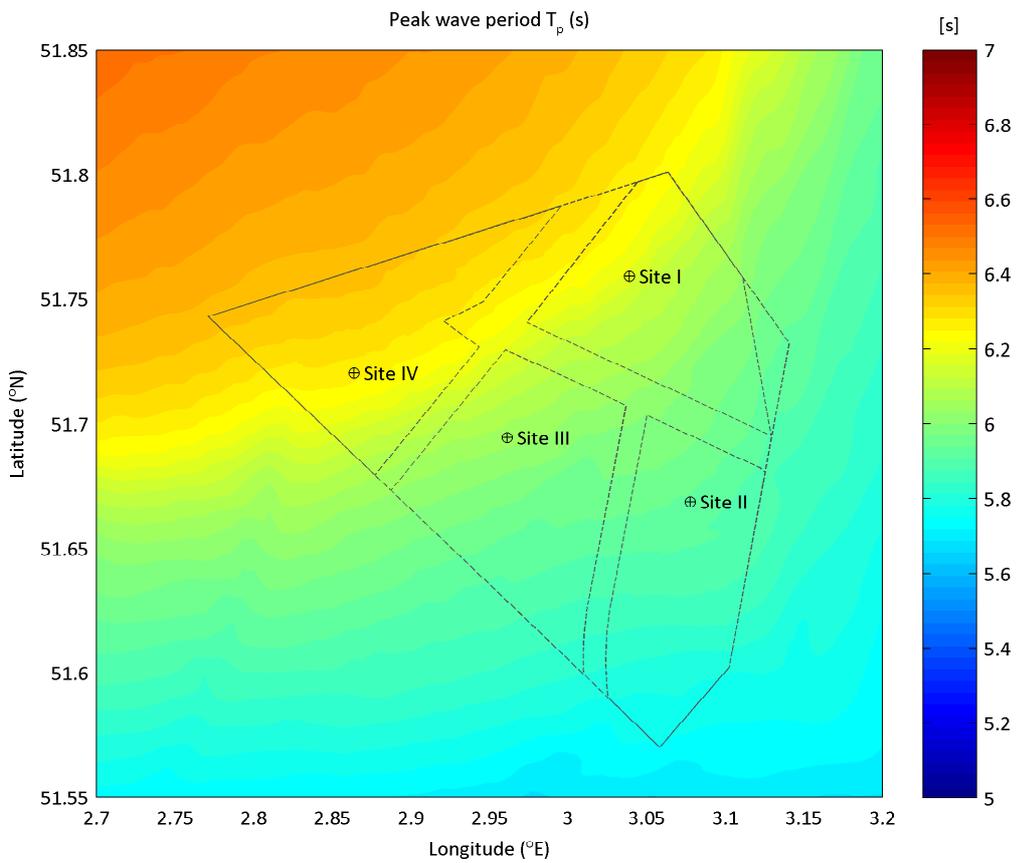
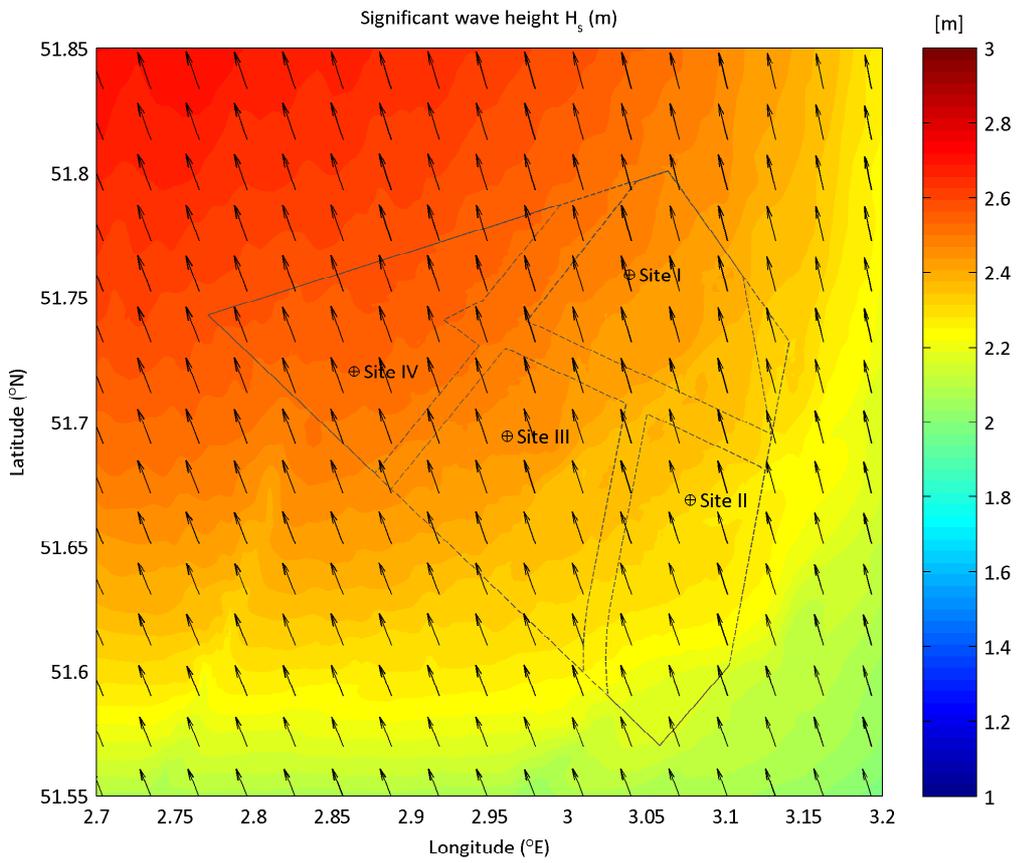
Extreme wave condition from Sector105 ( $^{\circ}$ N) - 135 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.030



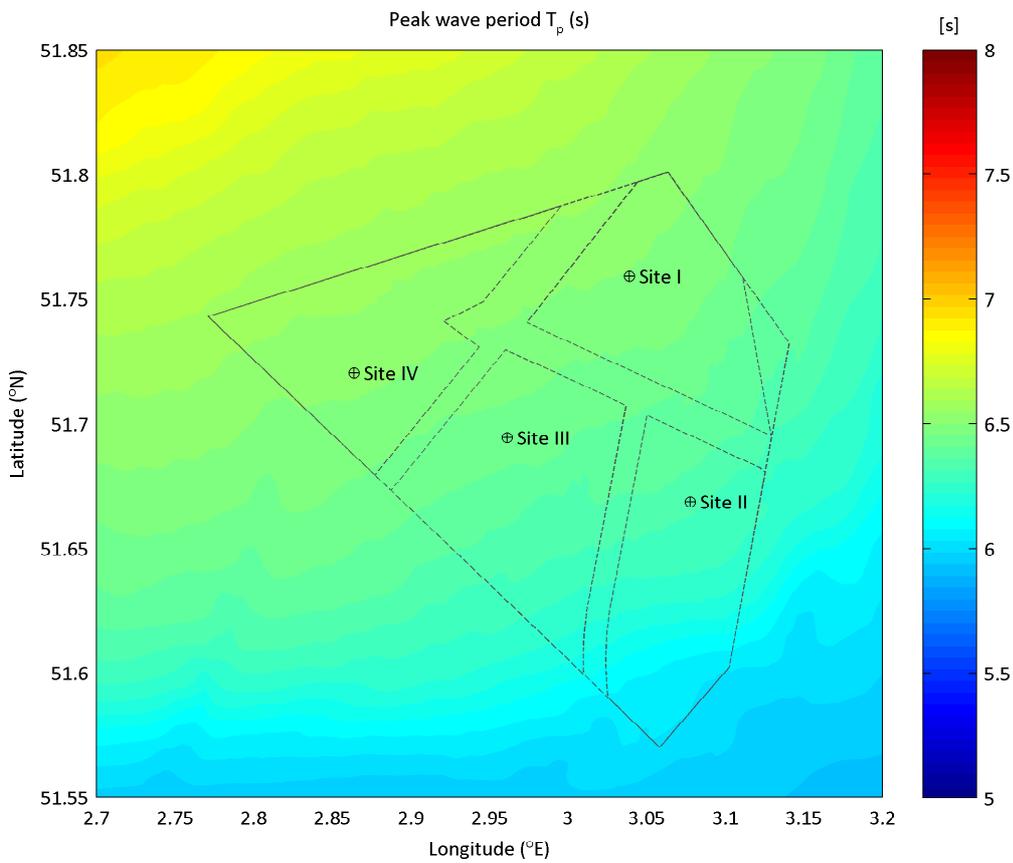
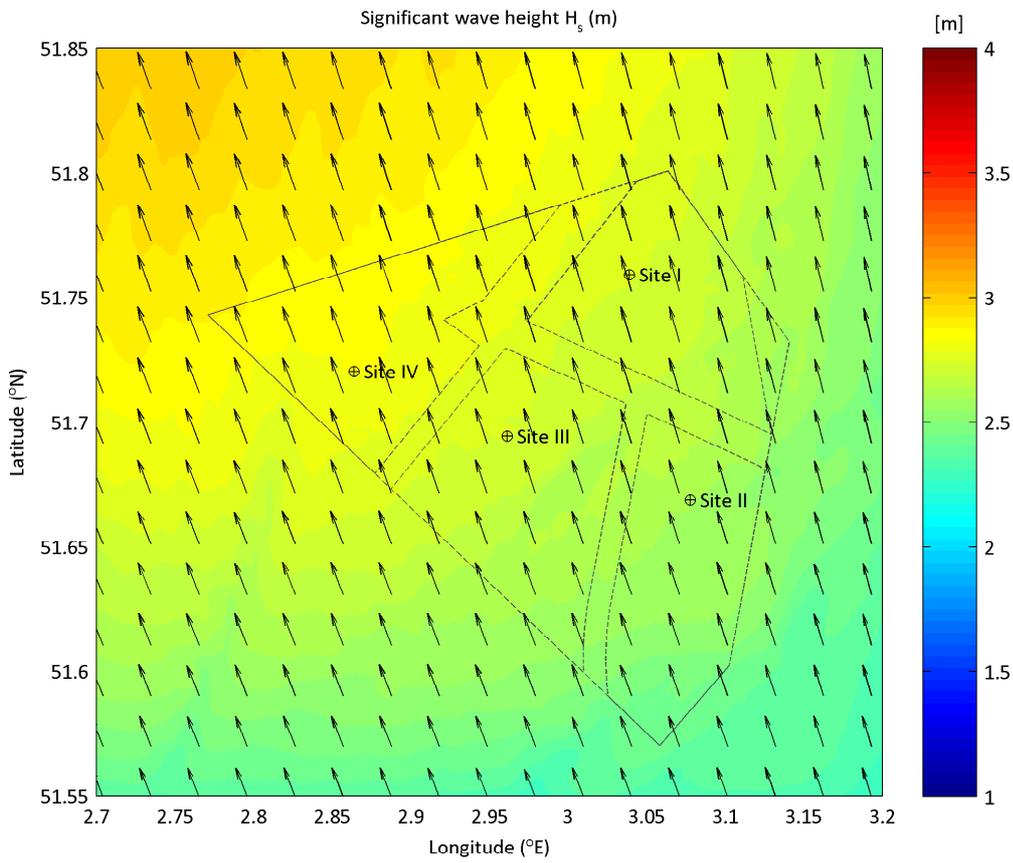
Extreme wave condition from Sector135 (°N) - 165 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.031



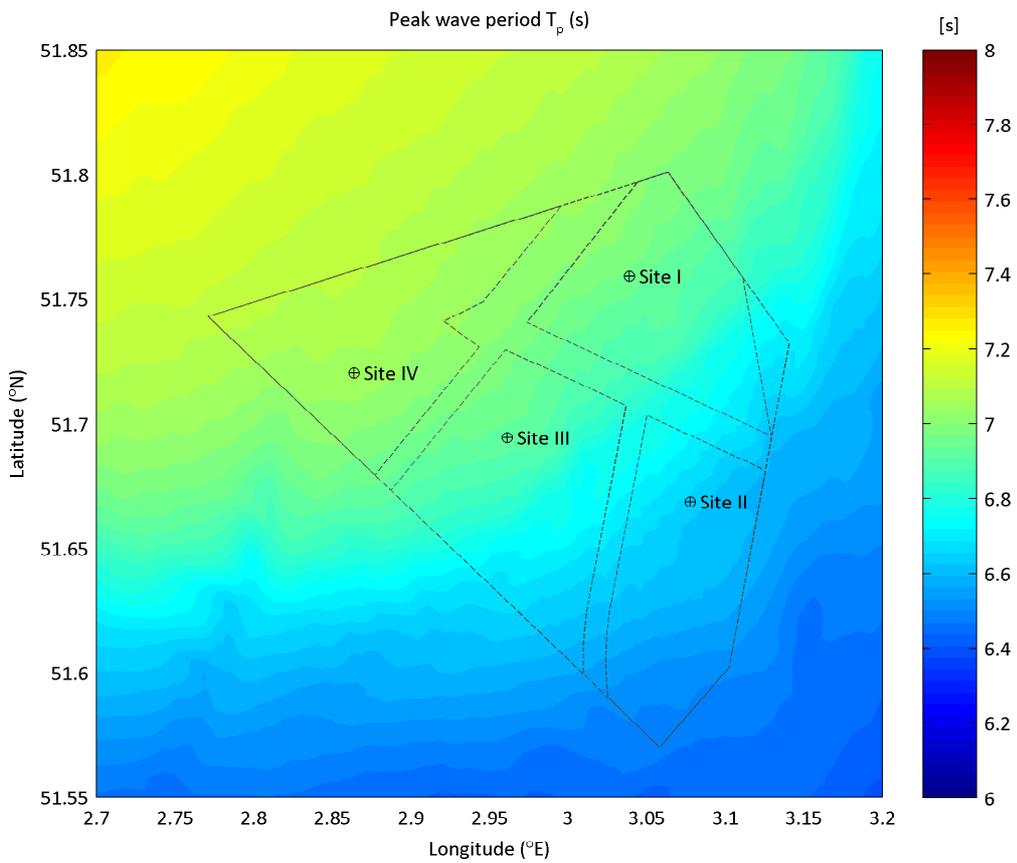
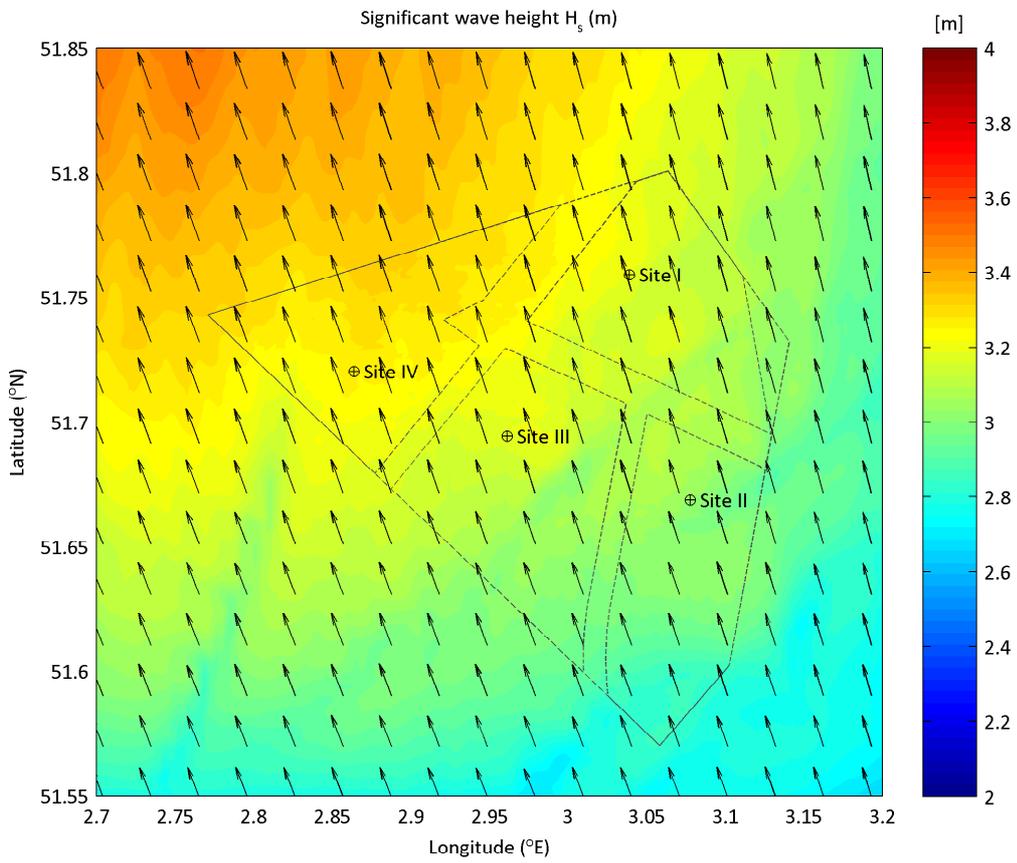
Extreme wave condition from Sector135 ( $^{\circ}$ N) - 165 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.032



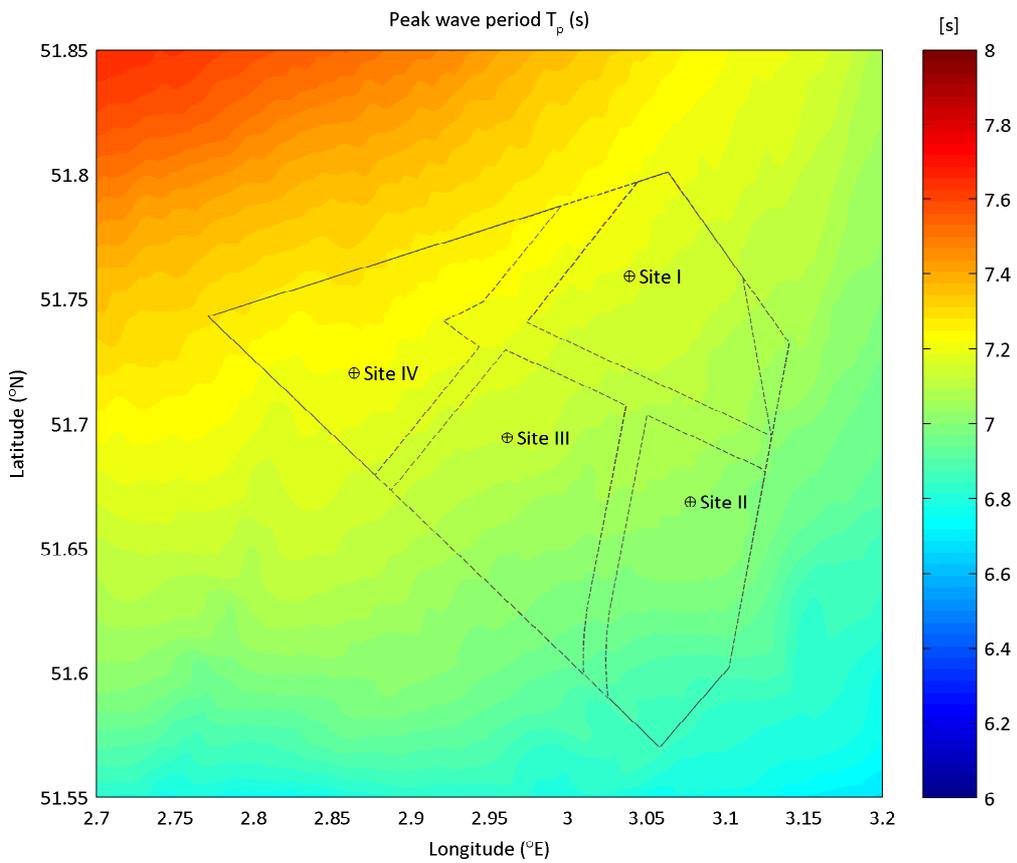
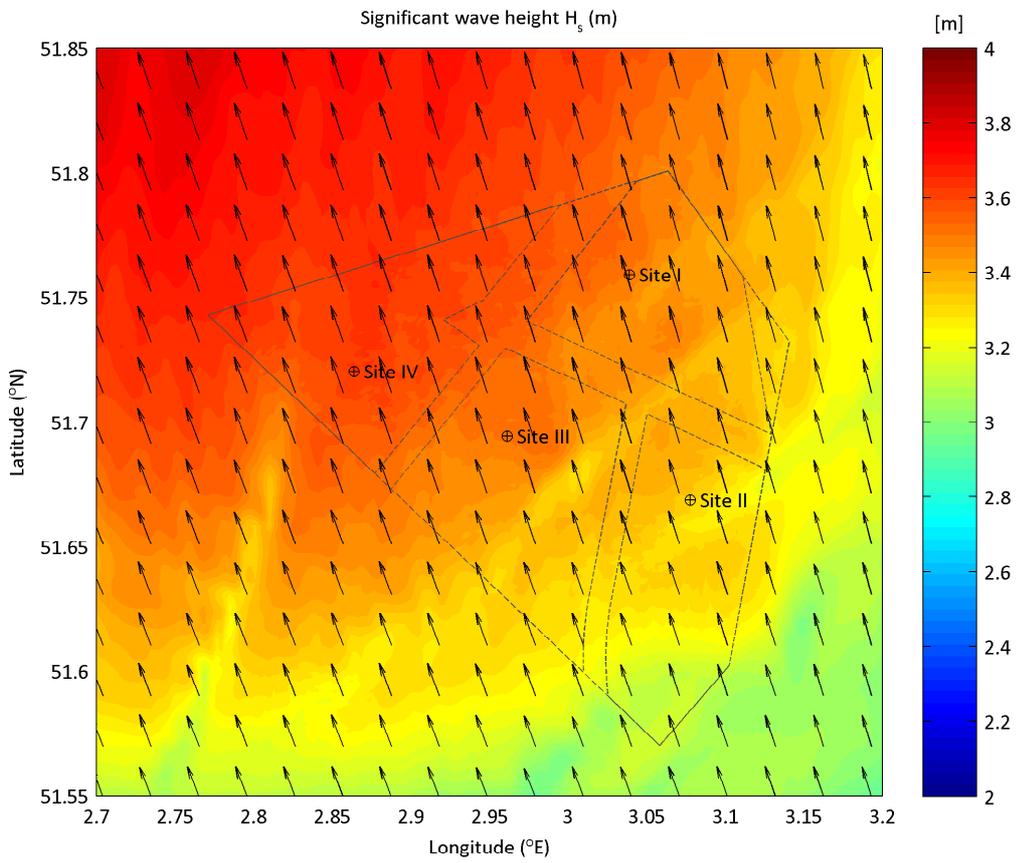
Extreme wave condition from Sector135 ( $^{\circ}$ N) - 165 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.033



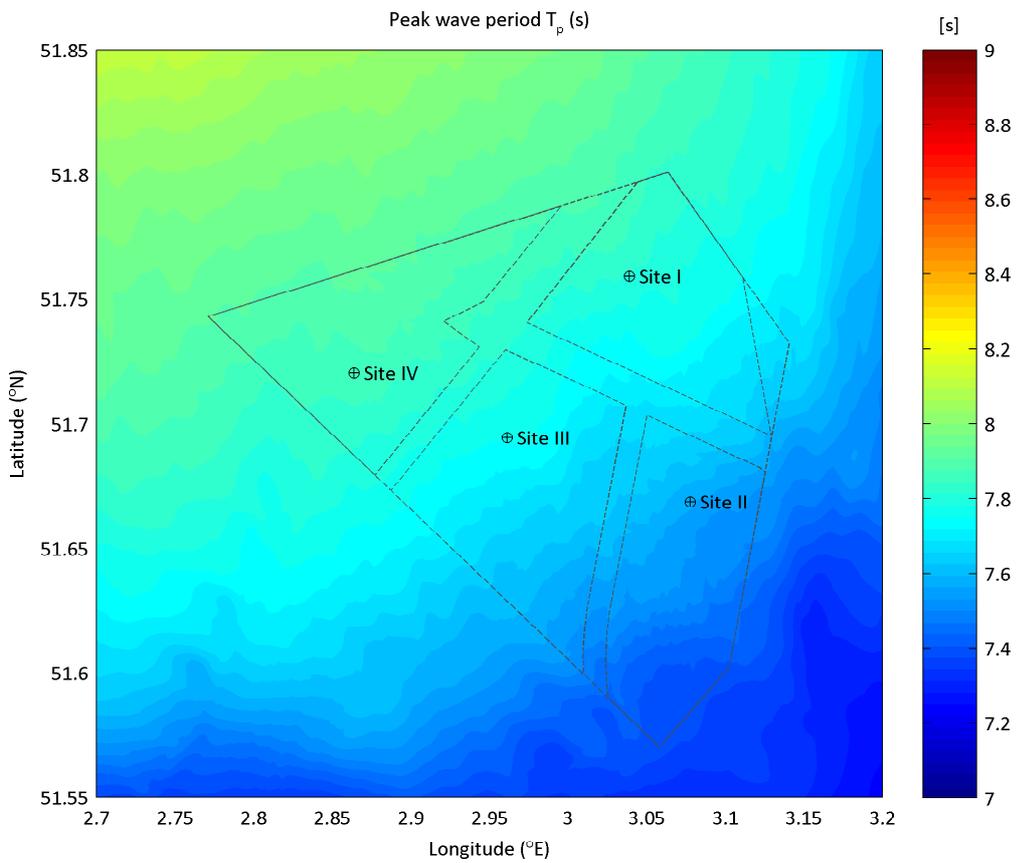
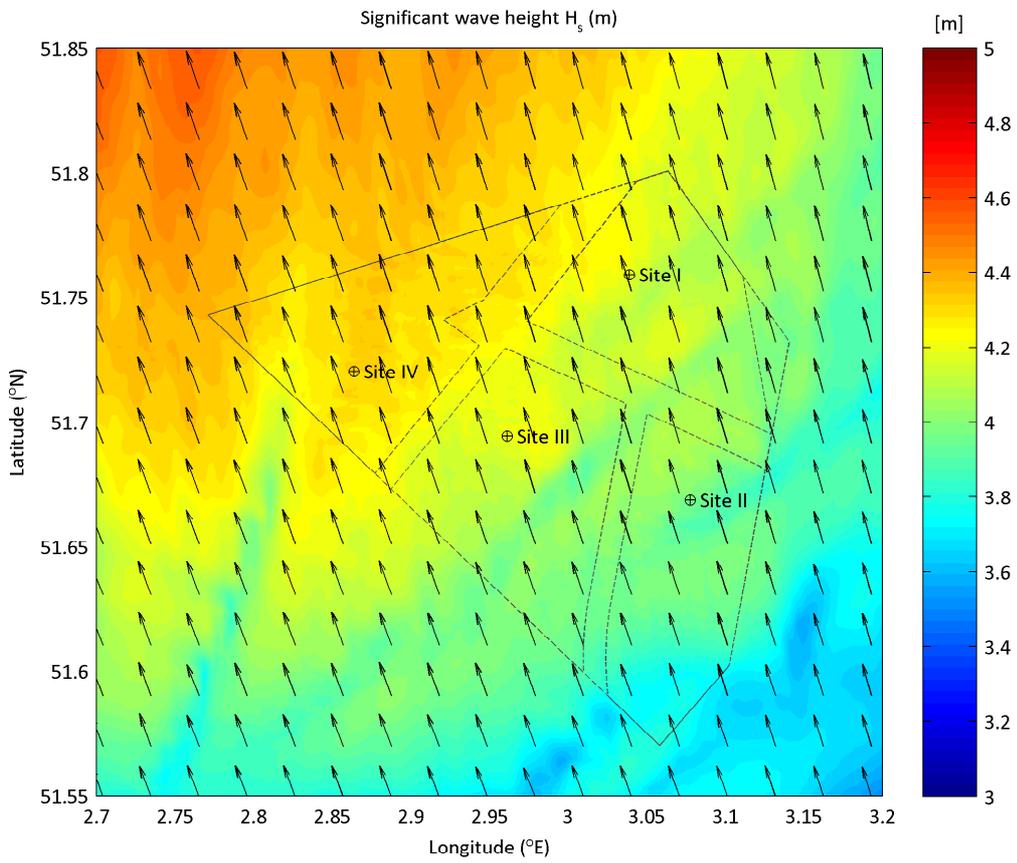
Extreme wave condition from Sector135 ( $^{\circ}$ N) - 165 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.034



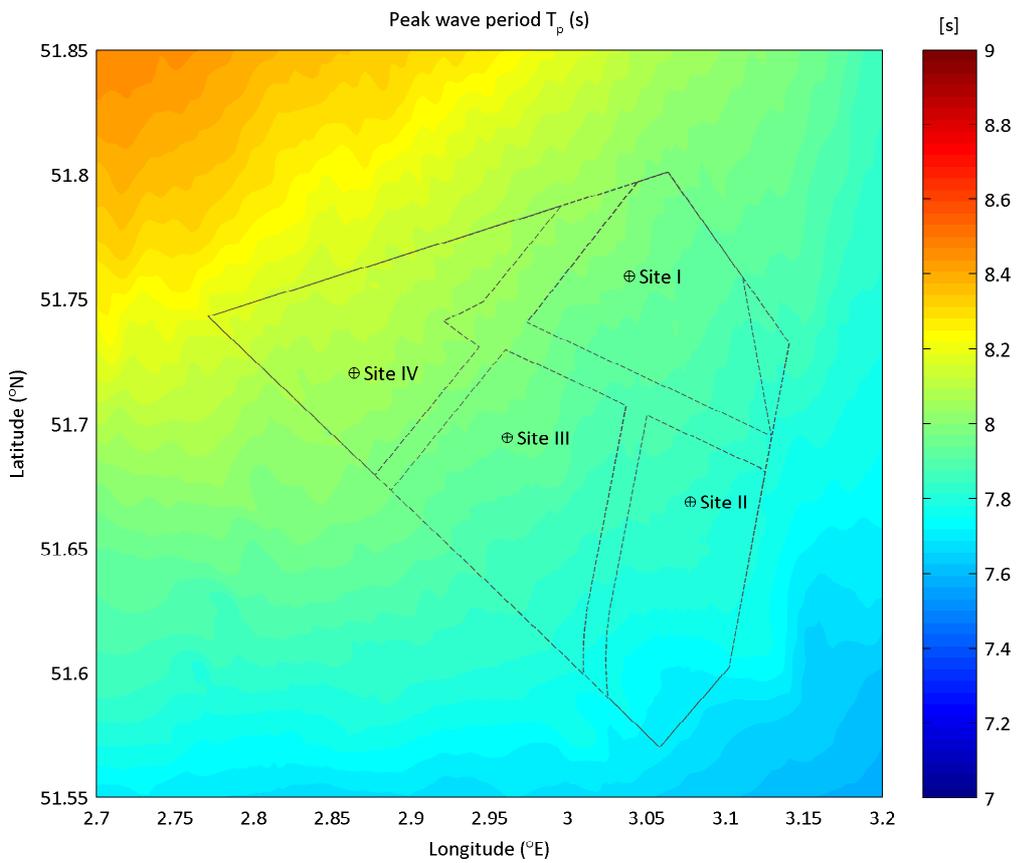
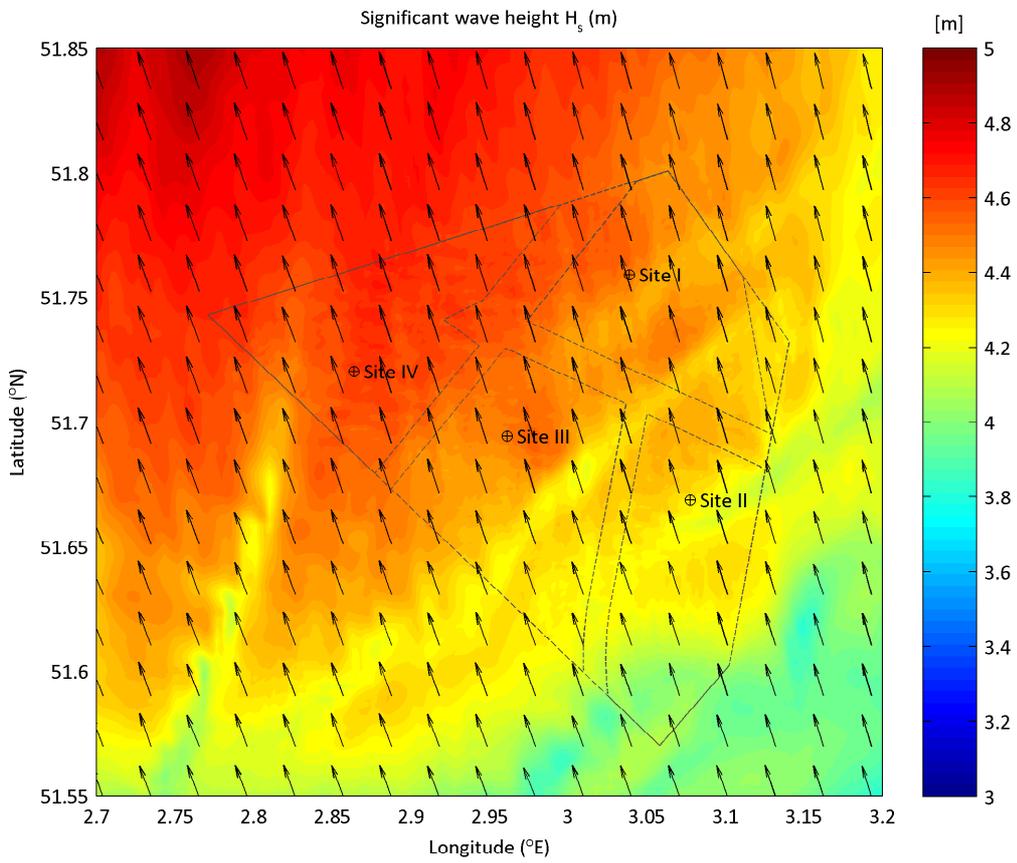
Extreme wave condition from Sector135 ( $^{\circ}$ N) - 165 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.035



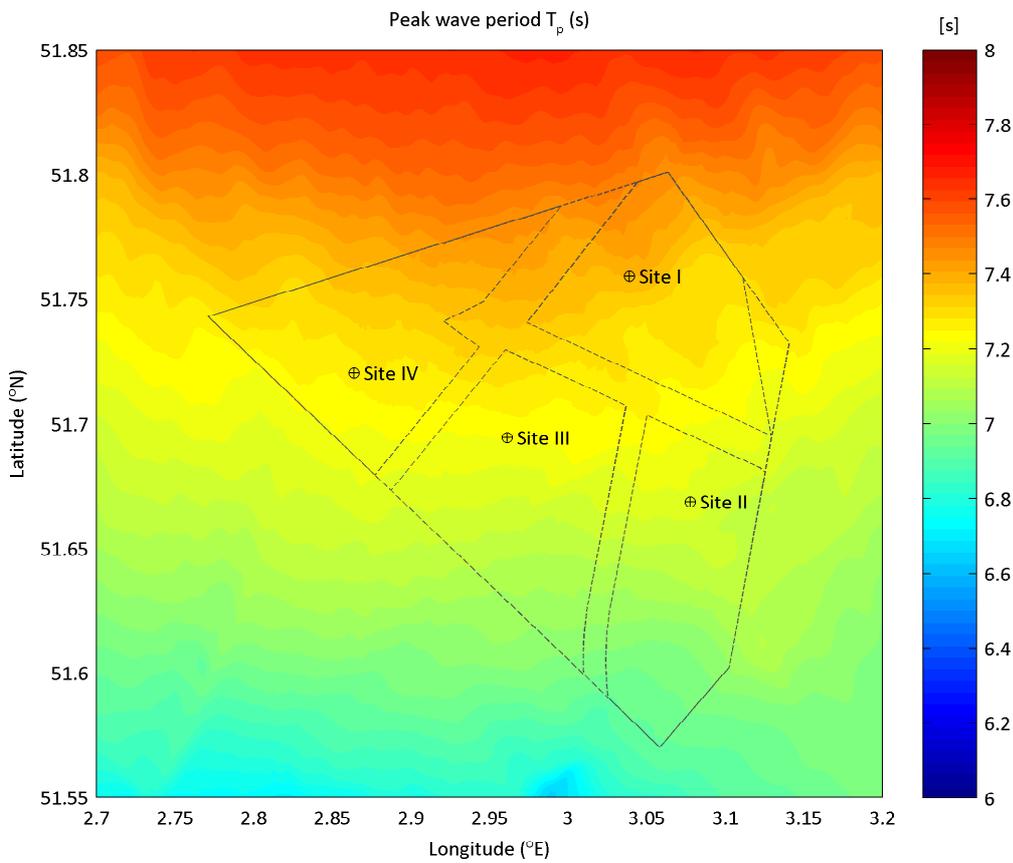
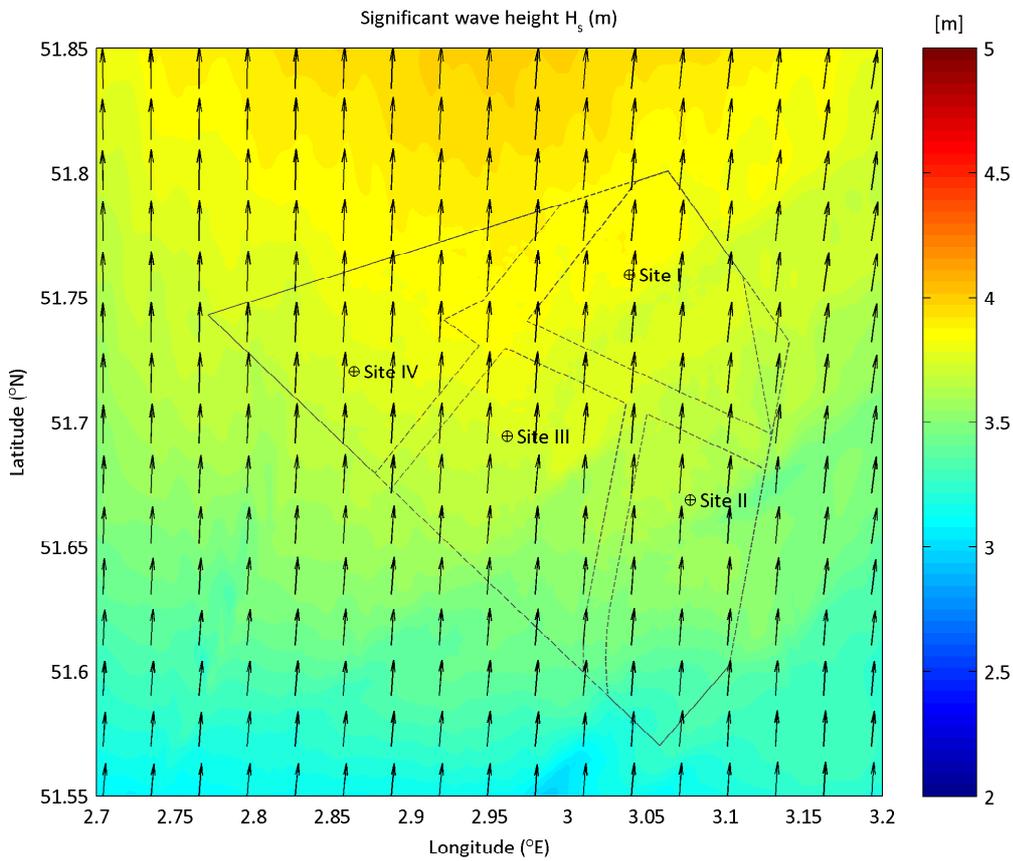
Extreme wave condition from Sector135 (°N) - 165 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.036



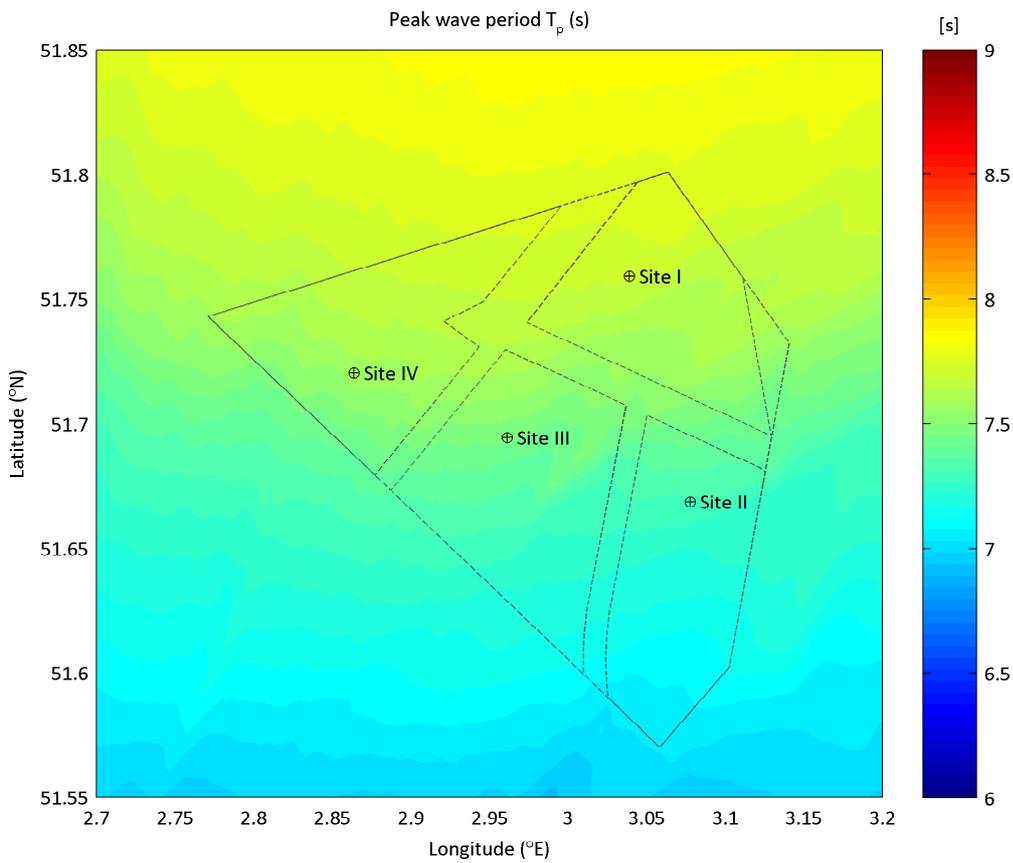
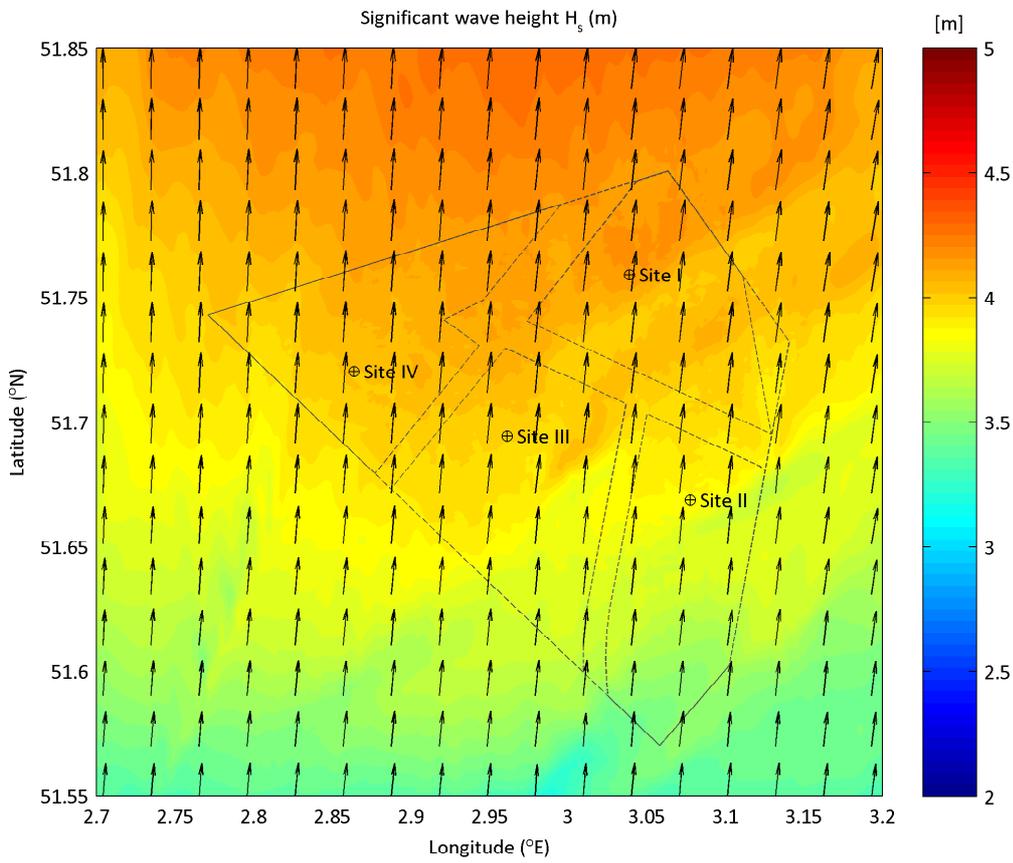
Extreme wave condition from Sector165 ( $^{\circ}$ N) - 195 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.037



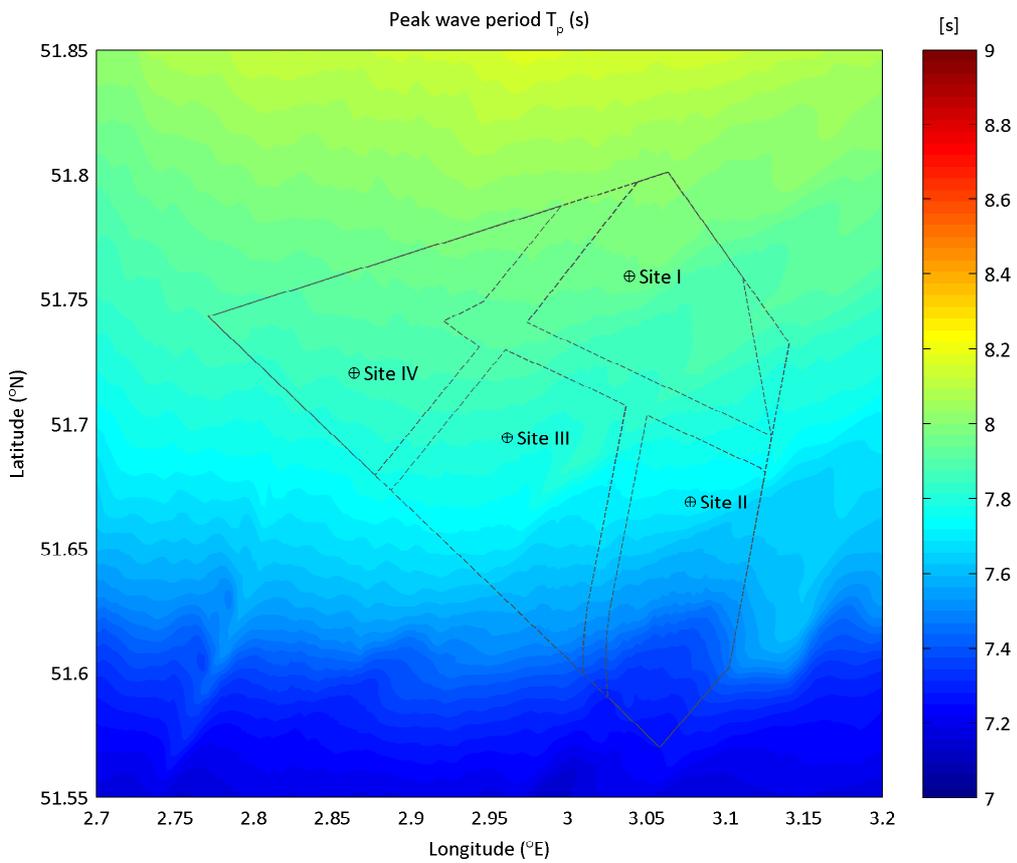
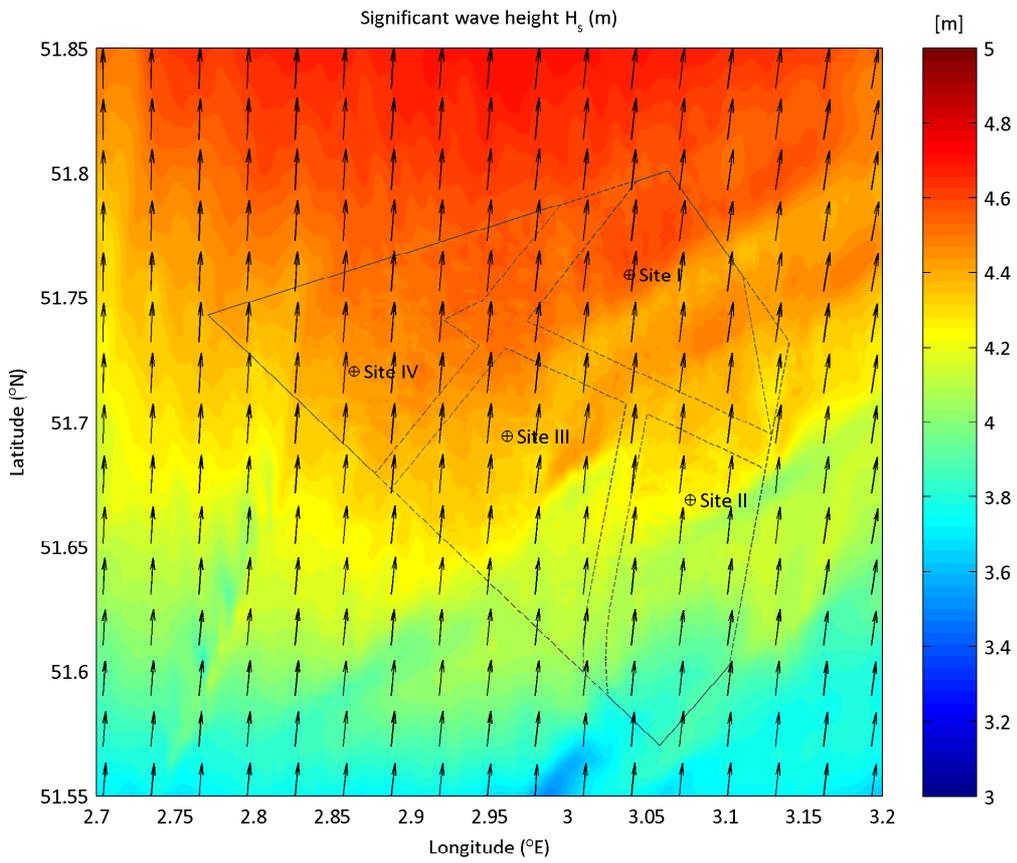
Extreme wave condition from Sector165 (°N) - 195 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.038



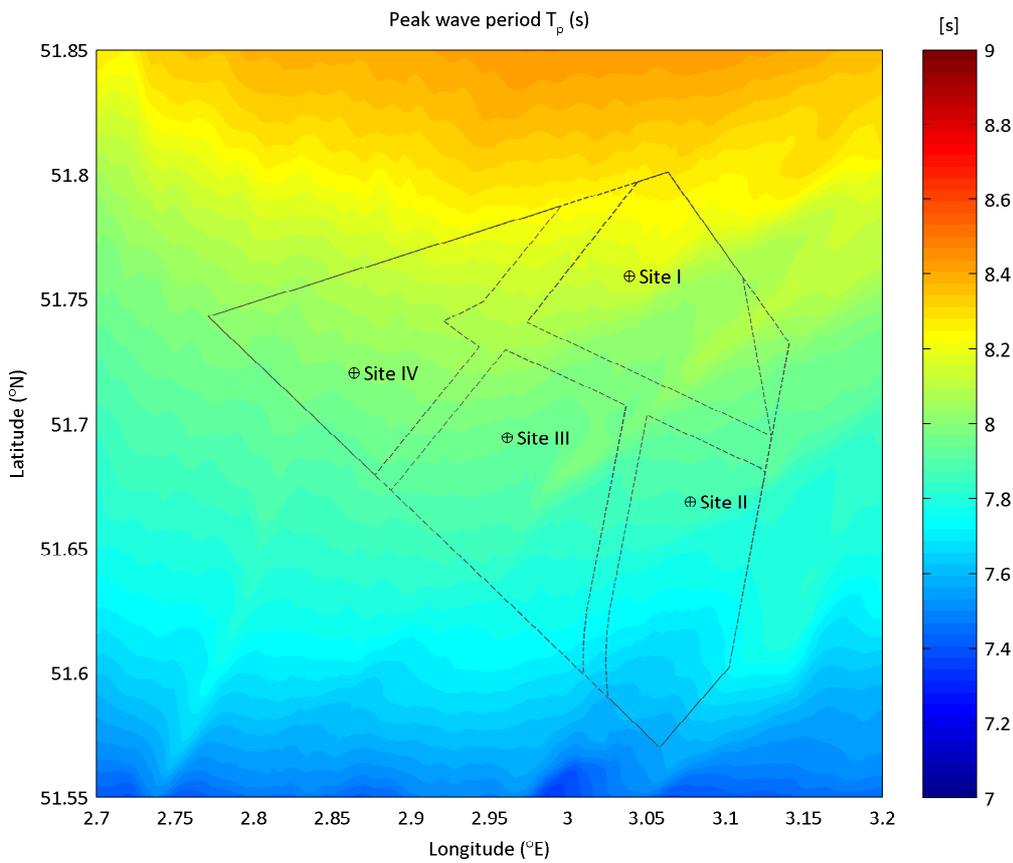
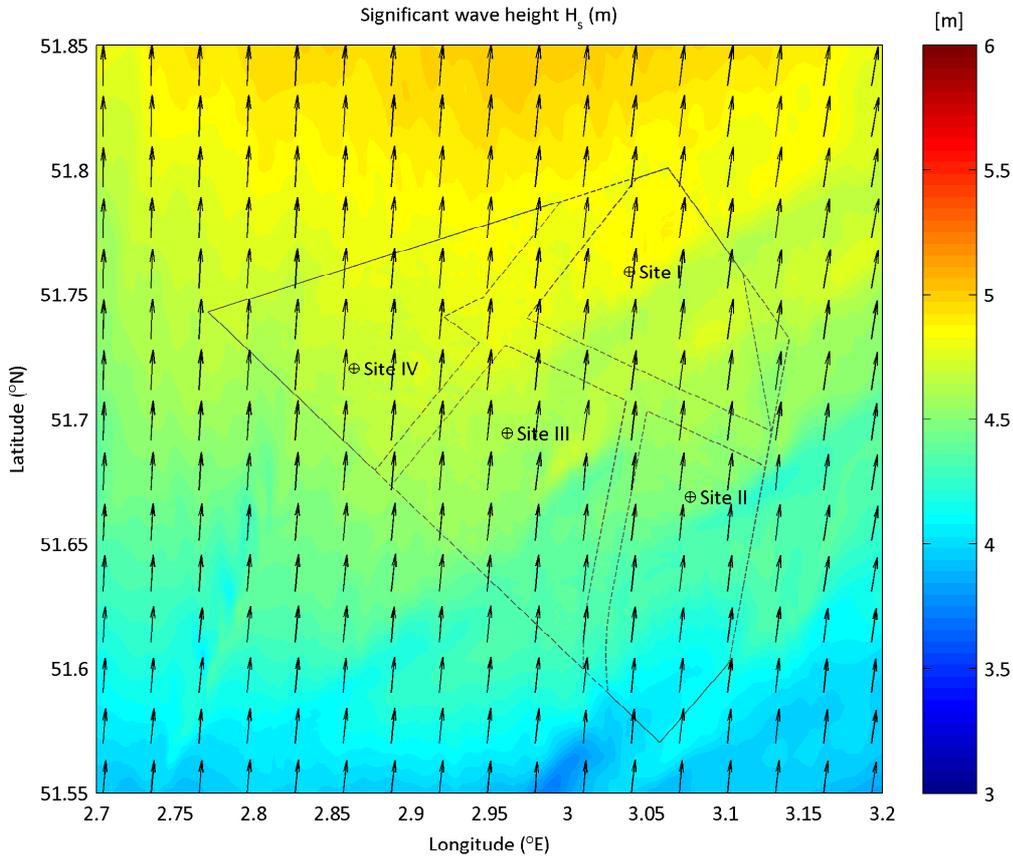
Extreme wave condition from Sector165 ( $^{\circ}$ N) - 195 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.039



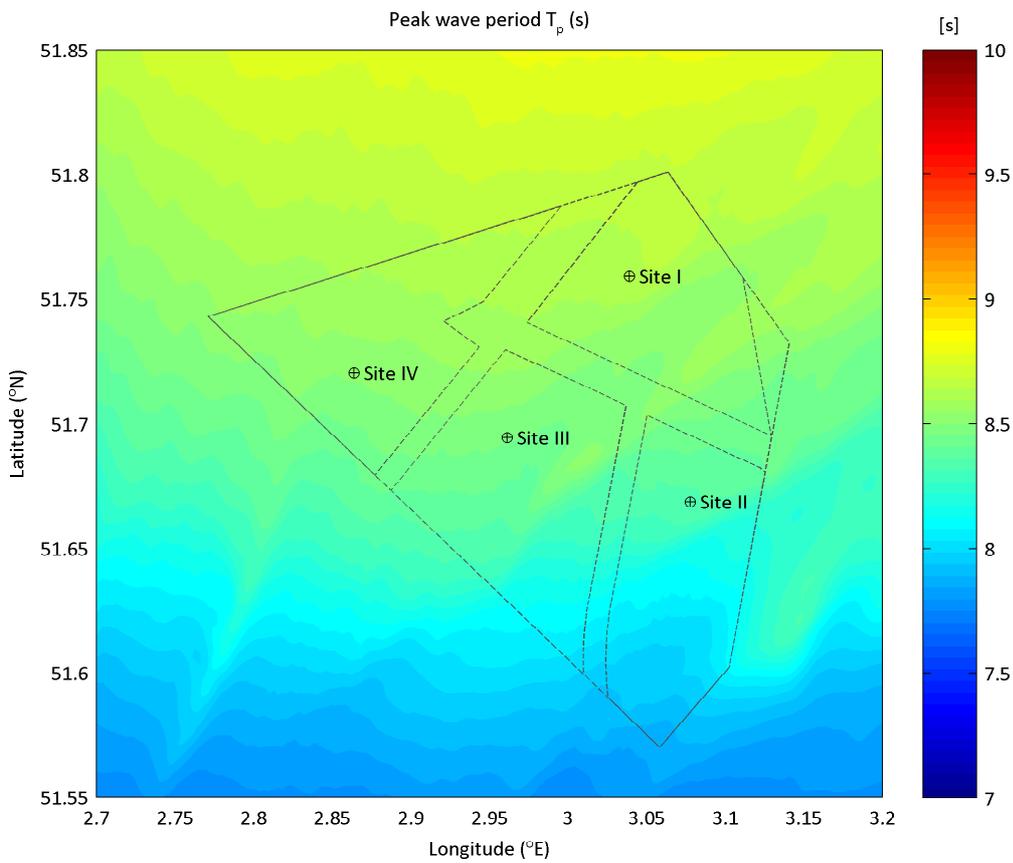
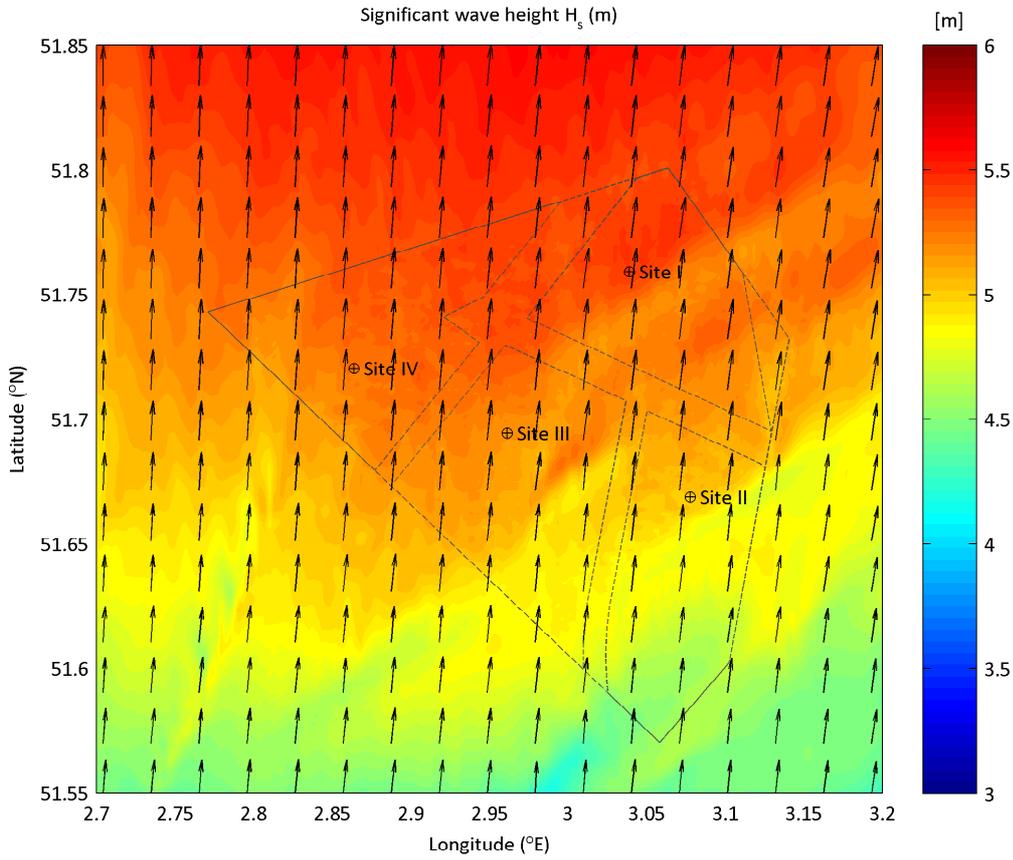
Extreme wave condition from Sector165 ( $^{\circ}$ N) - 195 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.040



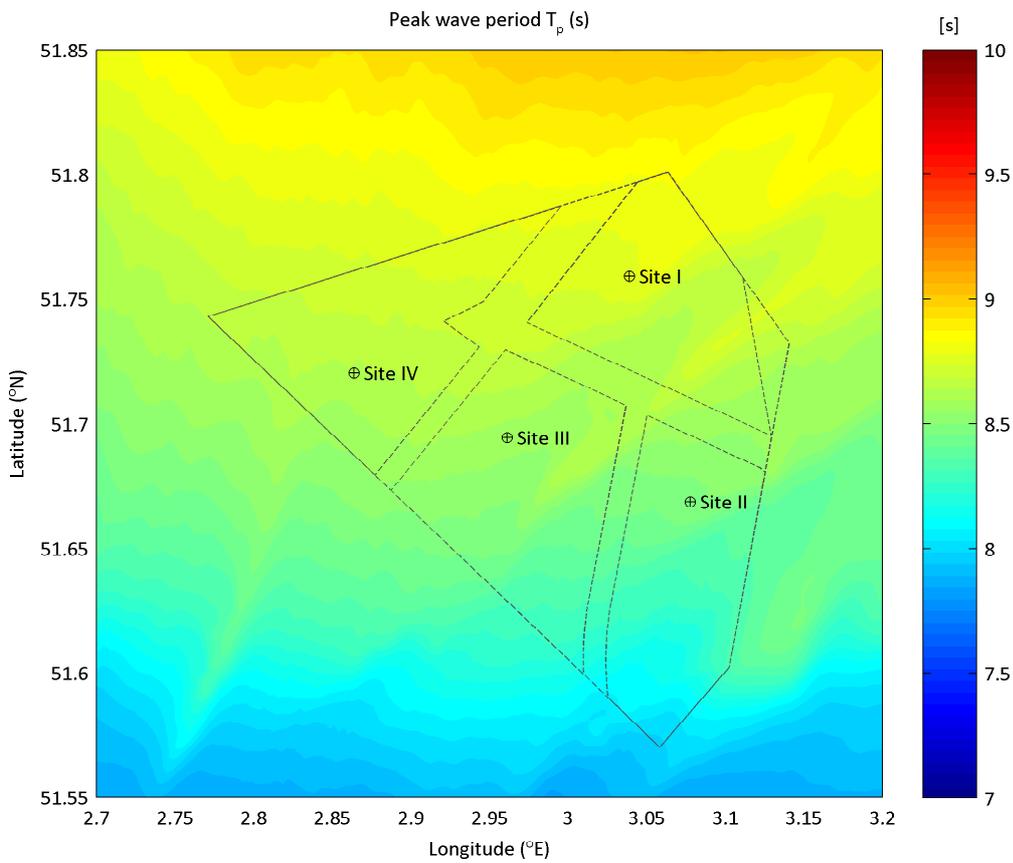
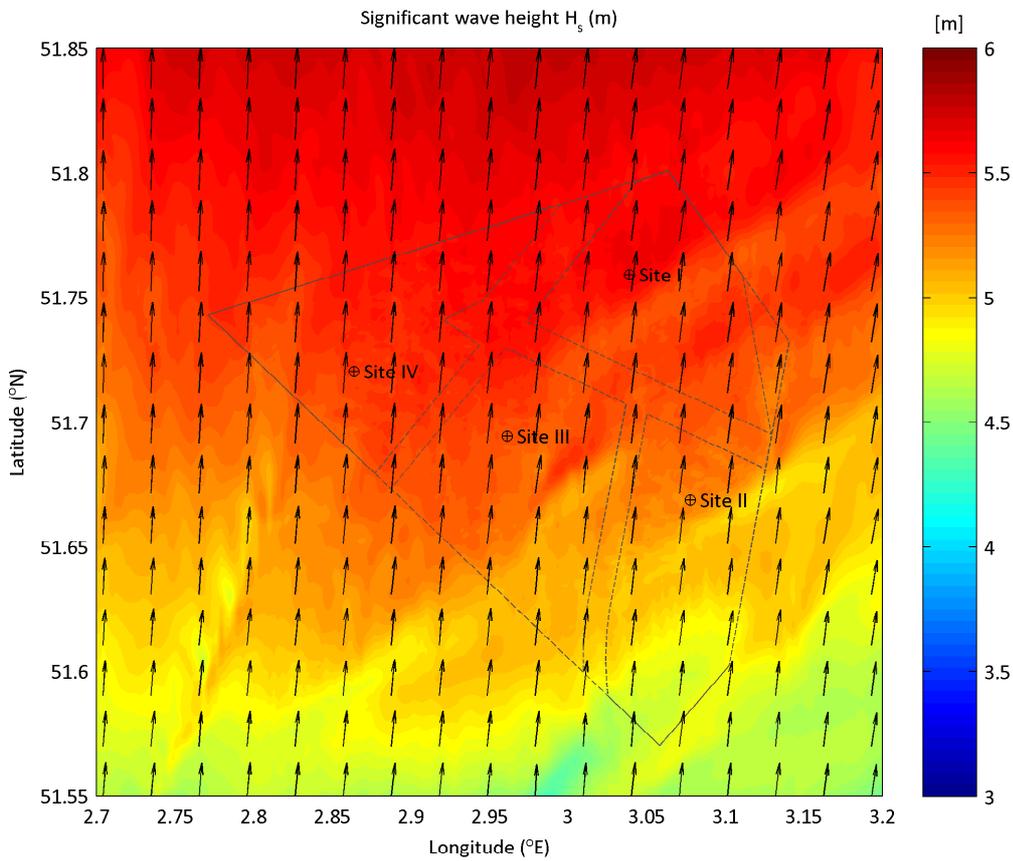
Extreme wave condition from Sector165 (°N) - 195 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.041



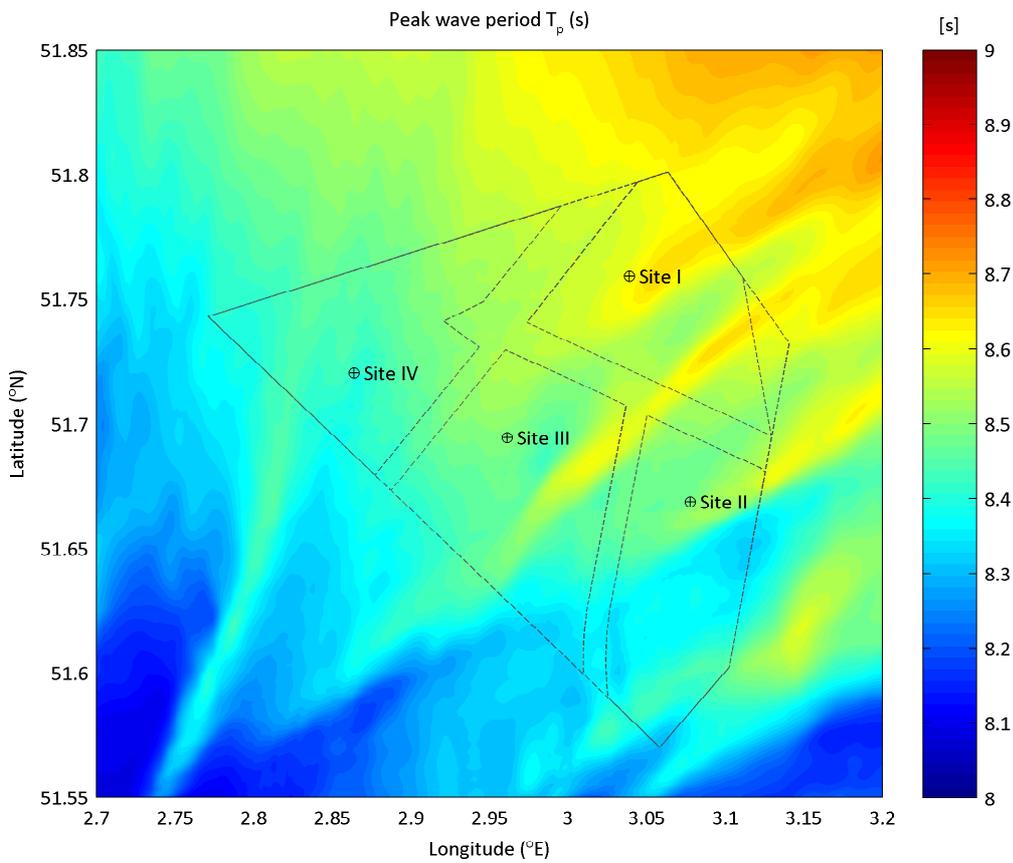
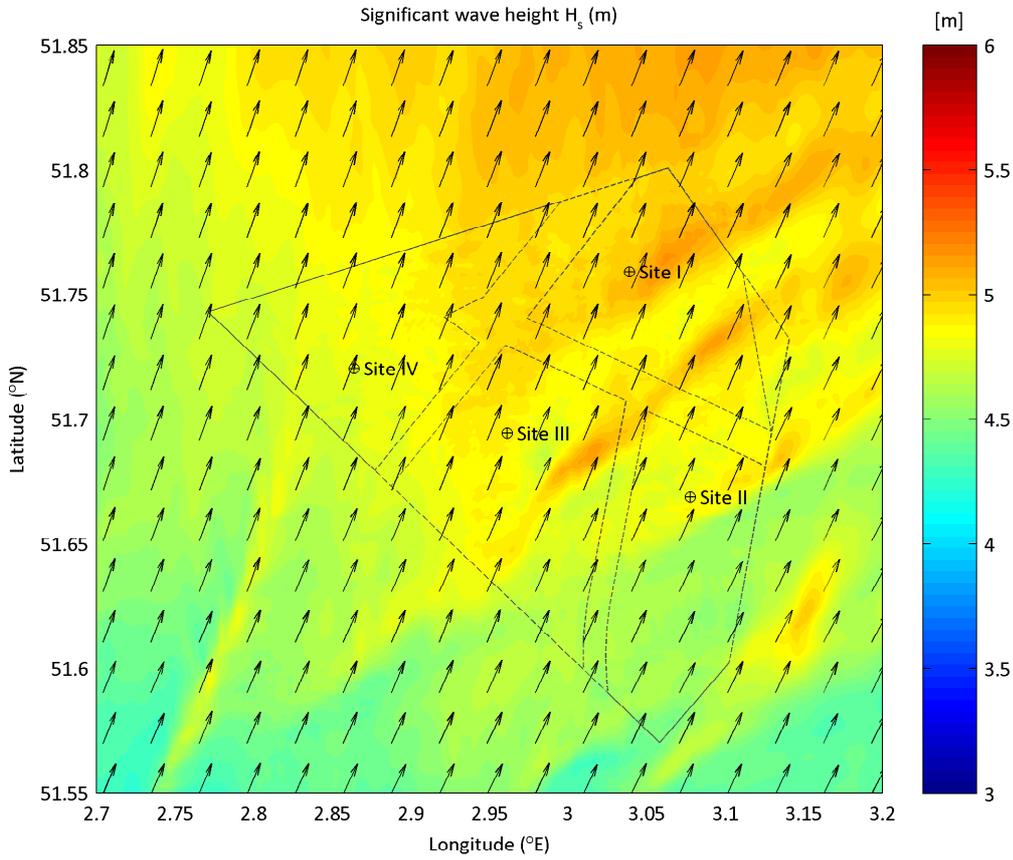
Extreme wave condition from Sector165 ( $^{\circ}$ N) - 195 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.042



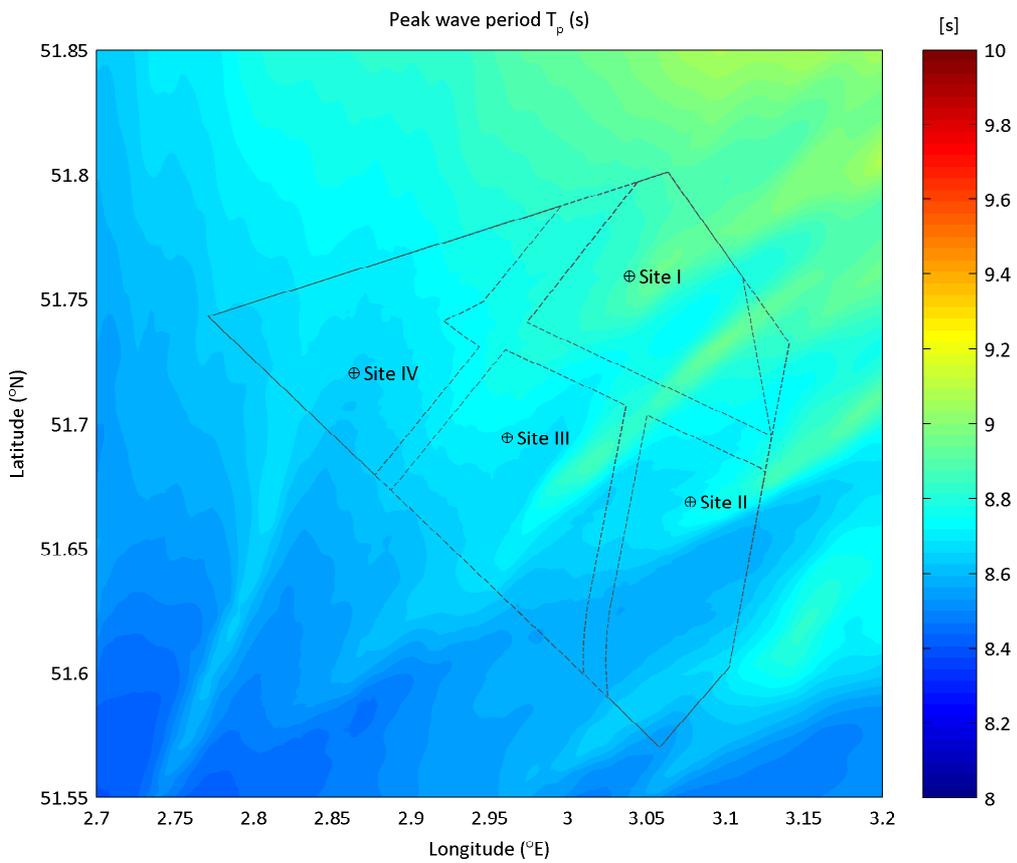
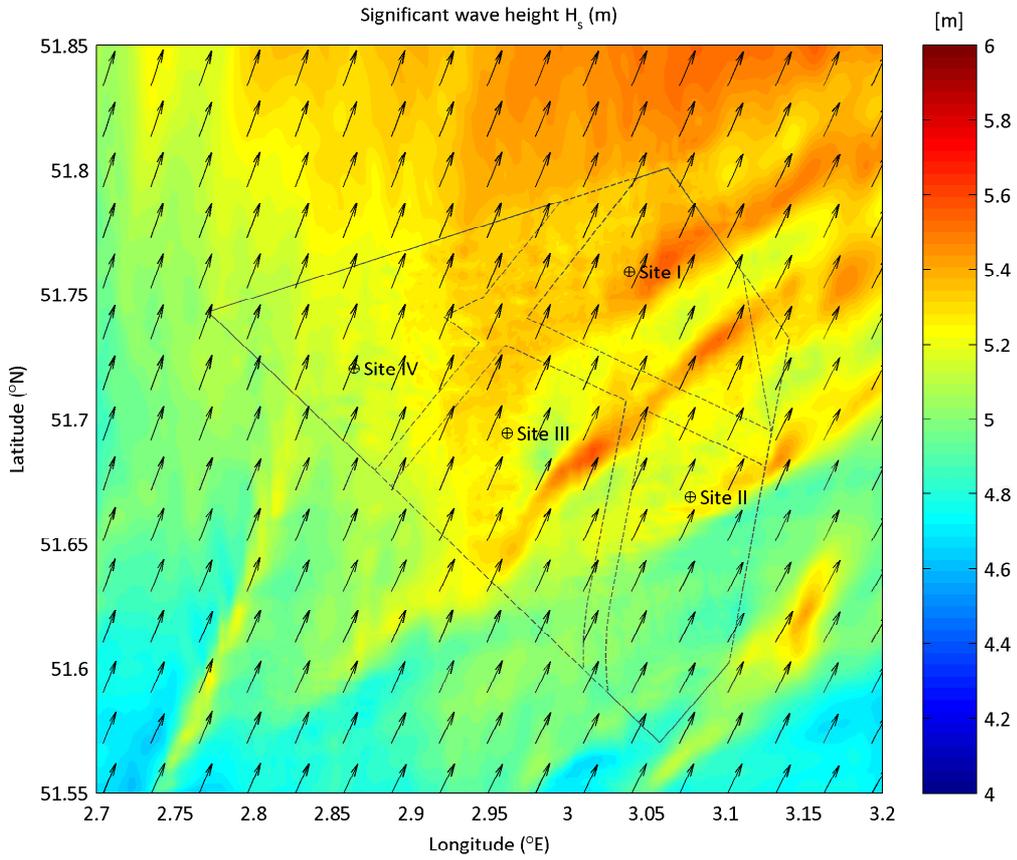
Extreme wave condition from Sector195 ( $^{\circ}$ N) - 225 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.043



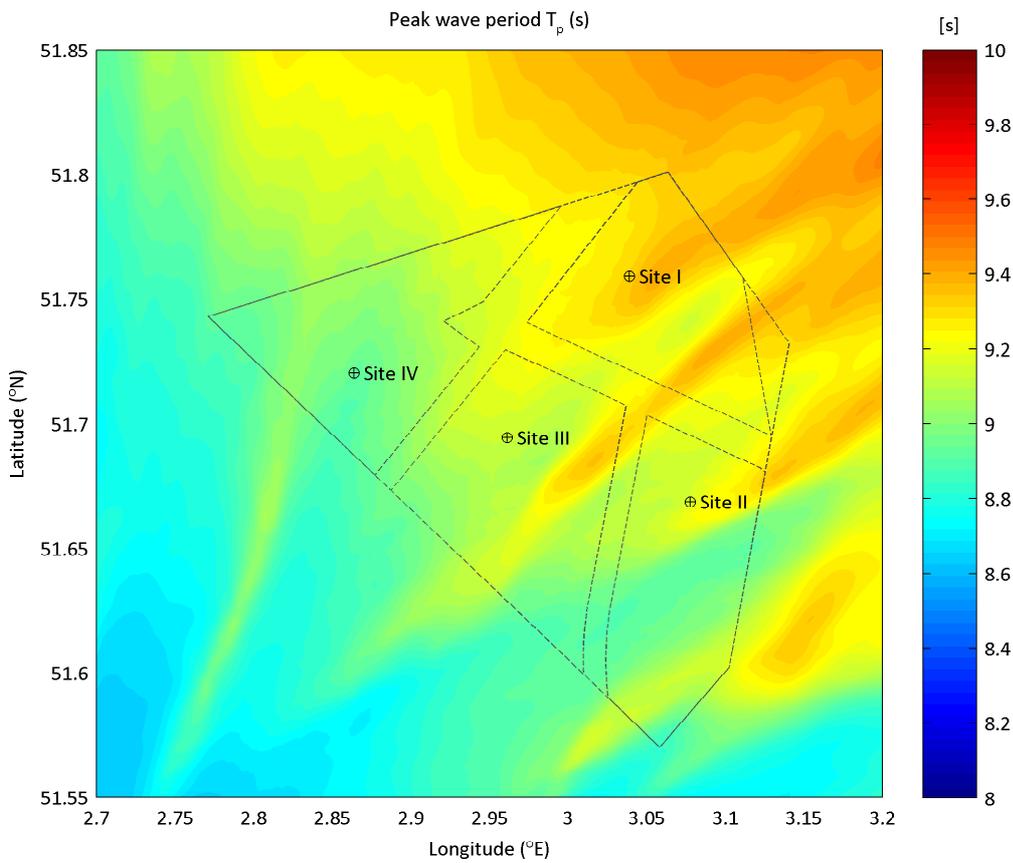
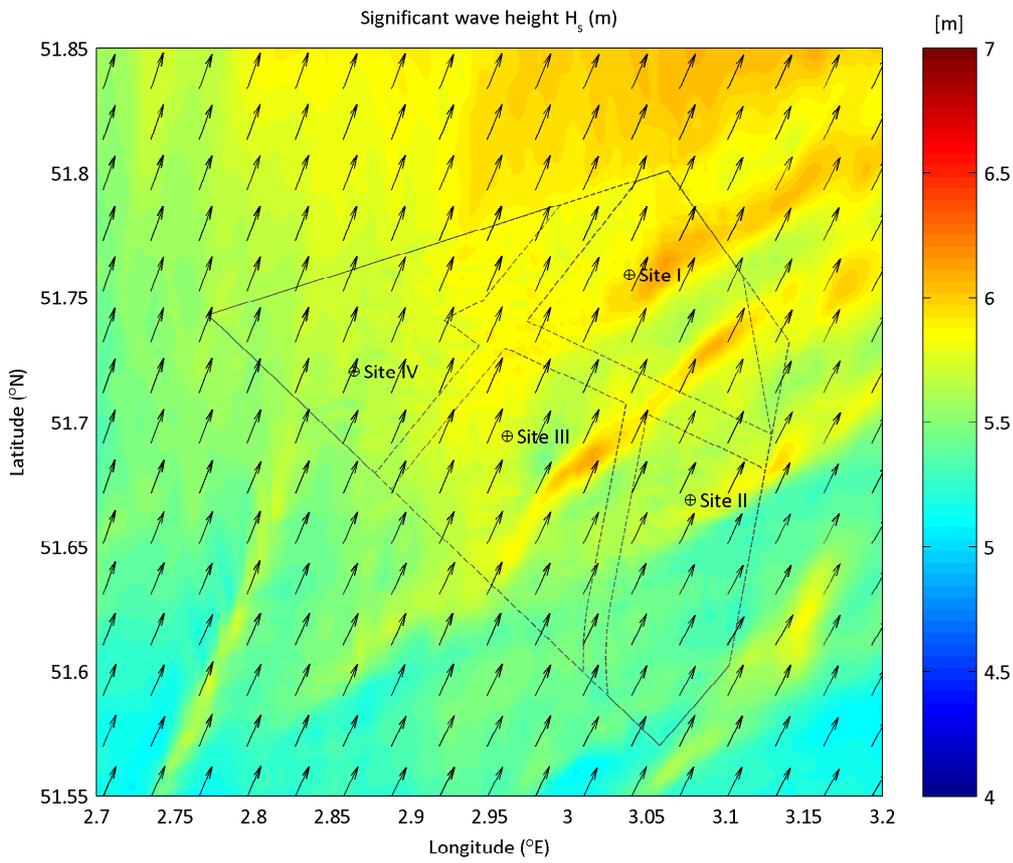
Extreme wave condition from Sector195 ( $^{\circ}$ N) - 225 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.044



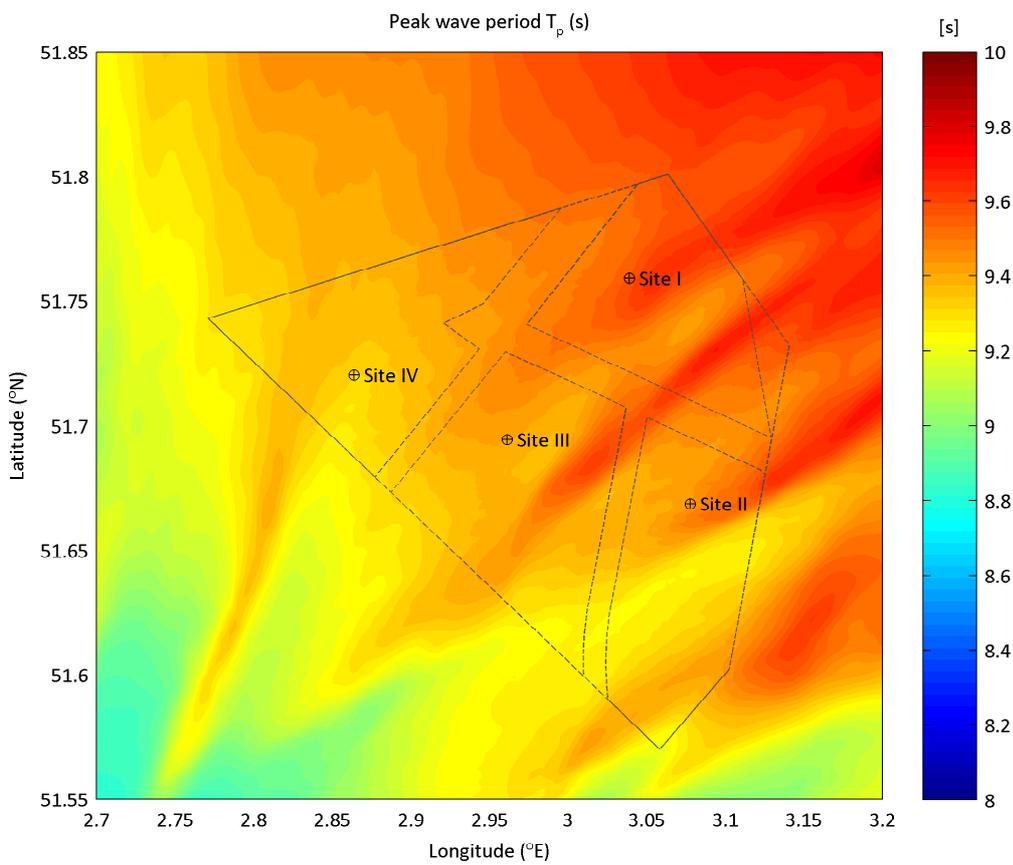
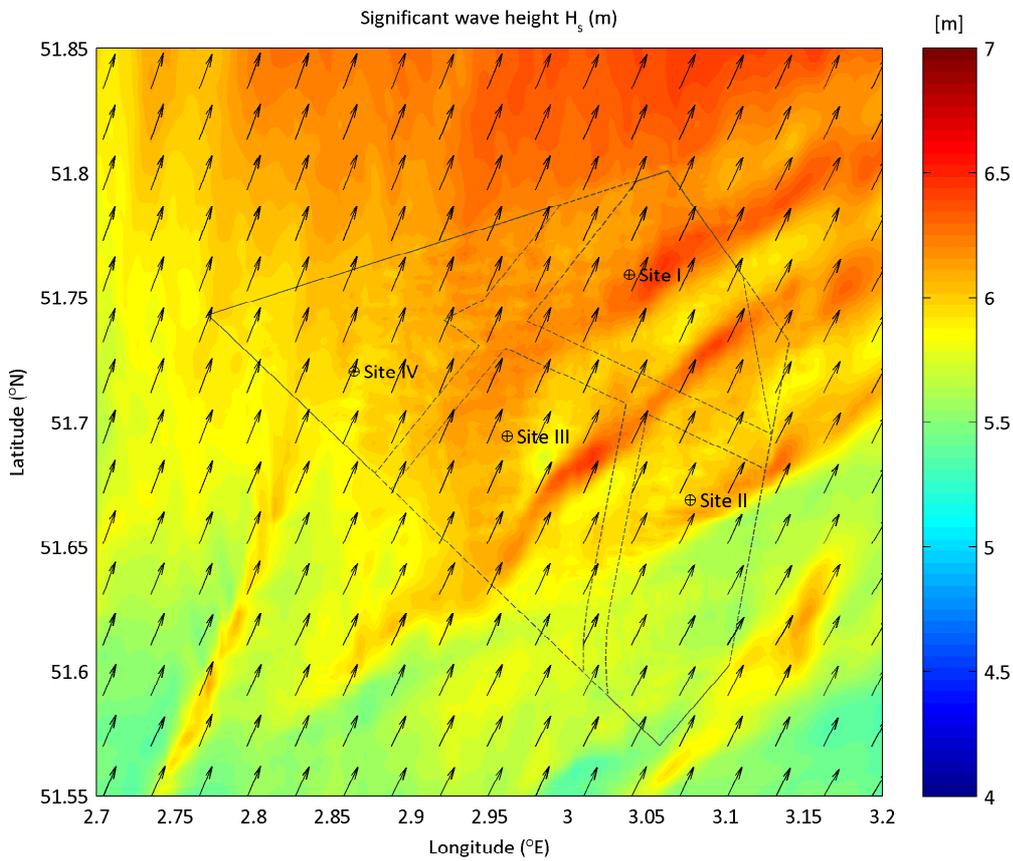
Extreme wave condition from Sector195 ( $^{\circ}$ N) - 225 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.045



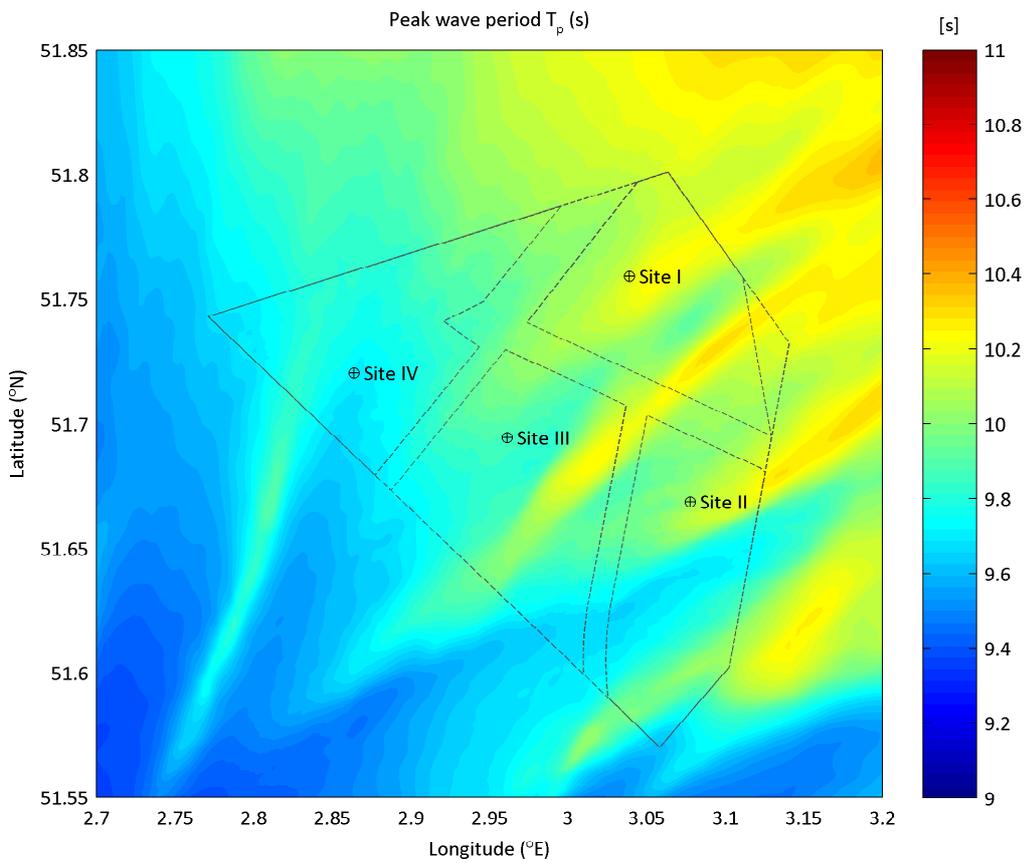
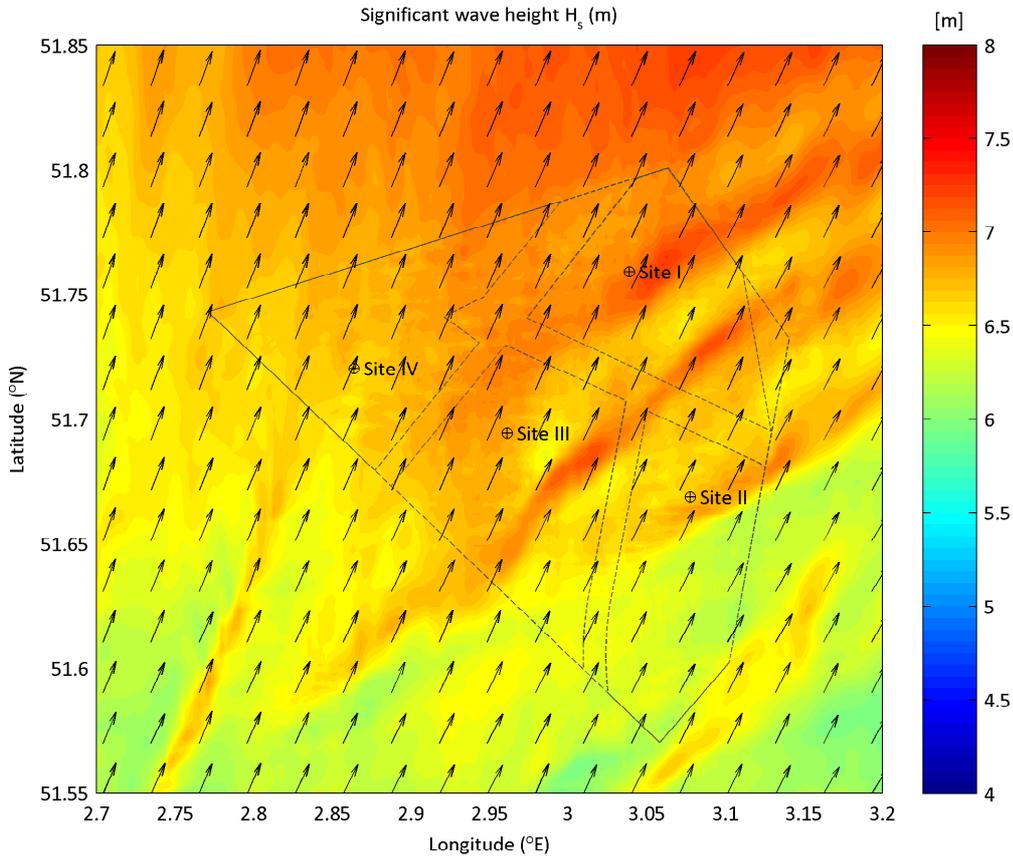
Extreme wave condition from Sector195 ( $^{\circ}$ N) - 225 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.046



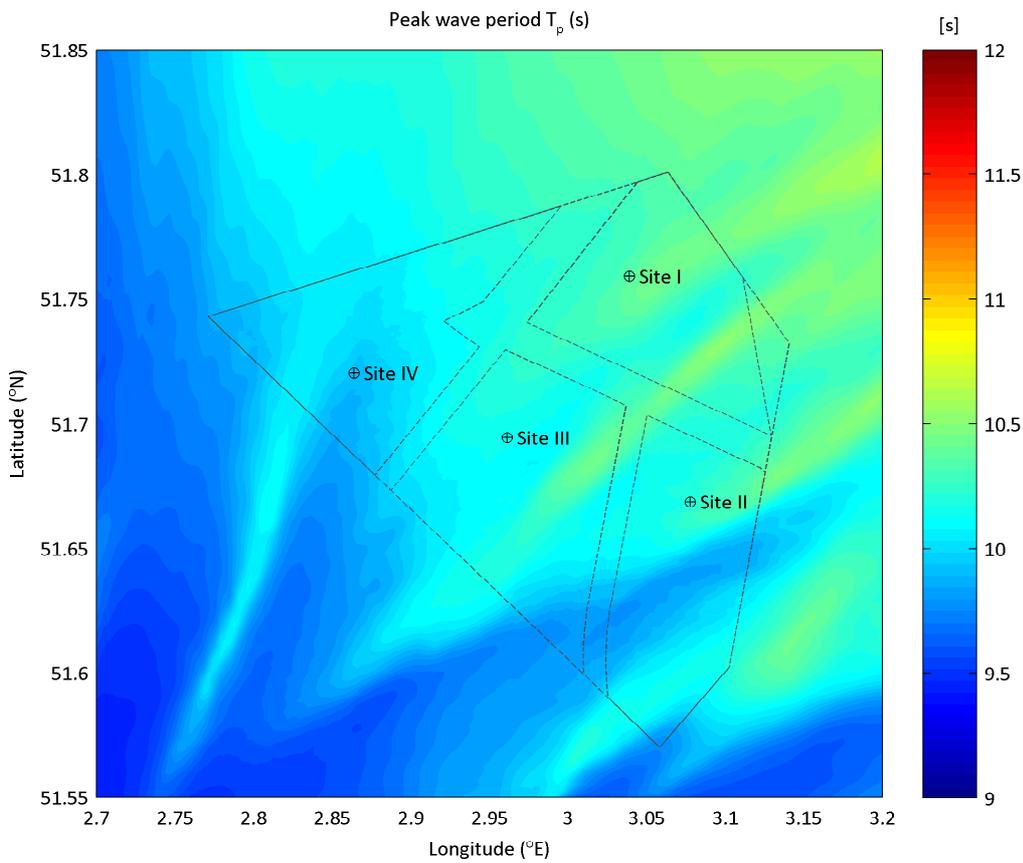
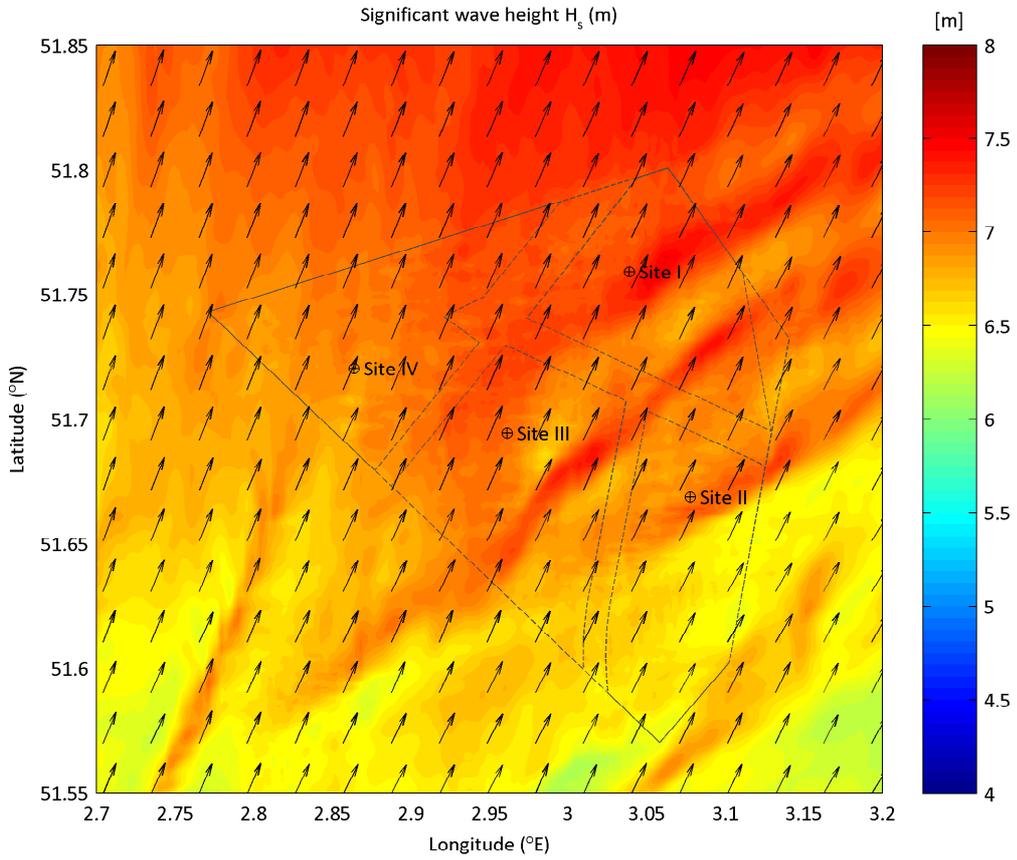
Extreme wave condition from Sector195 (°N) - 225 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.047



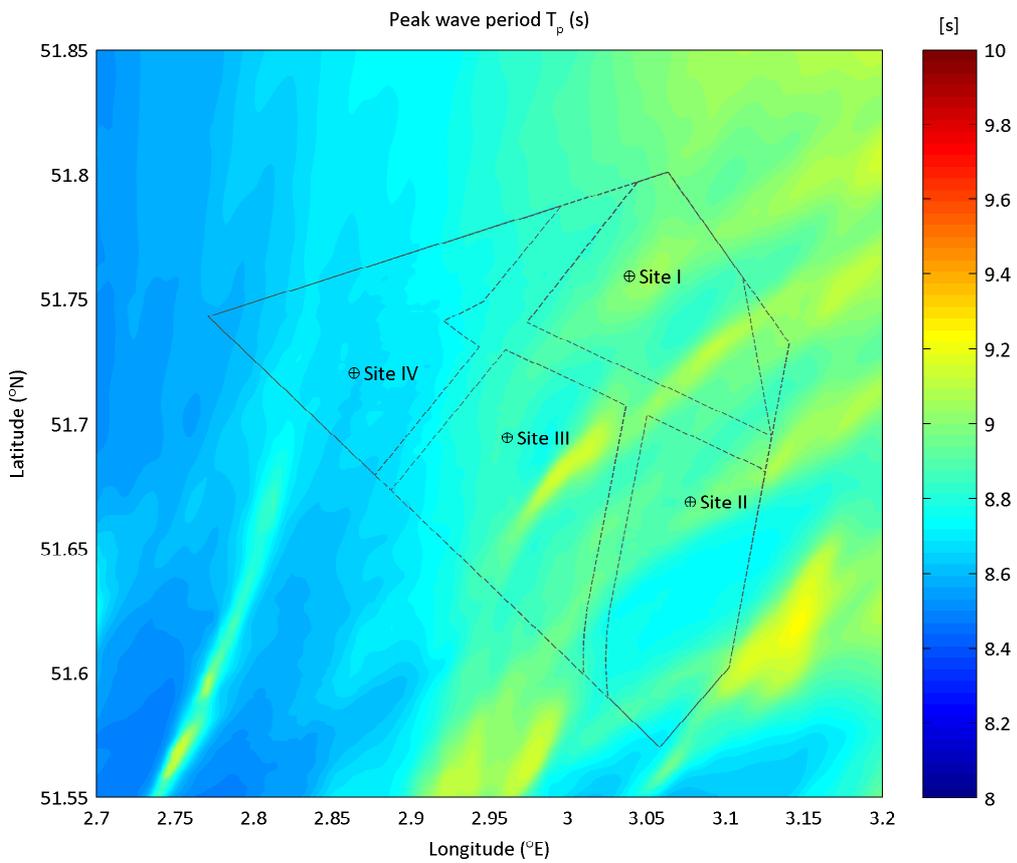
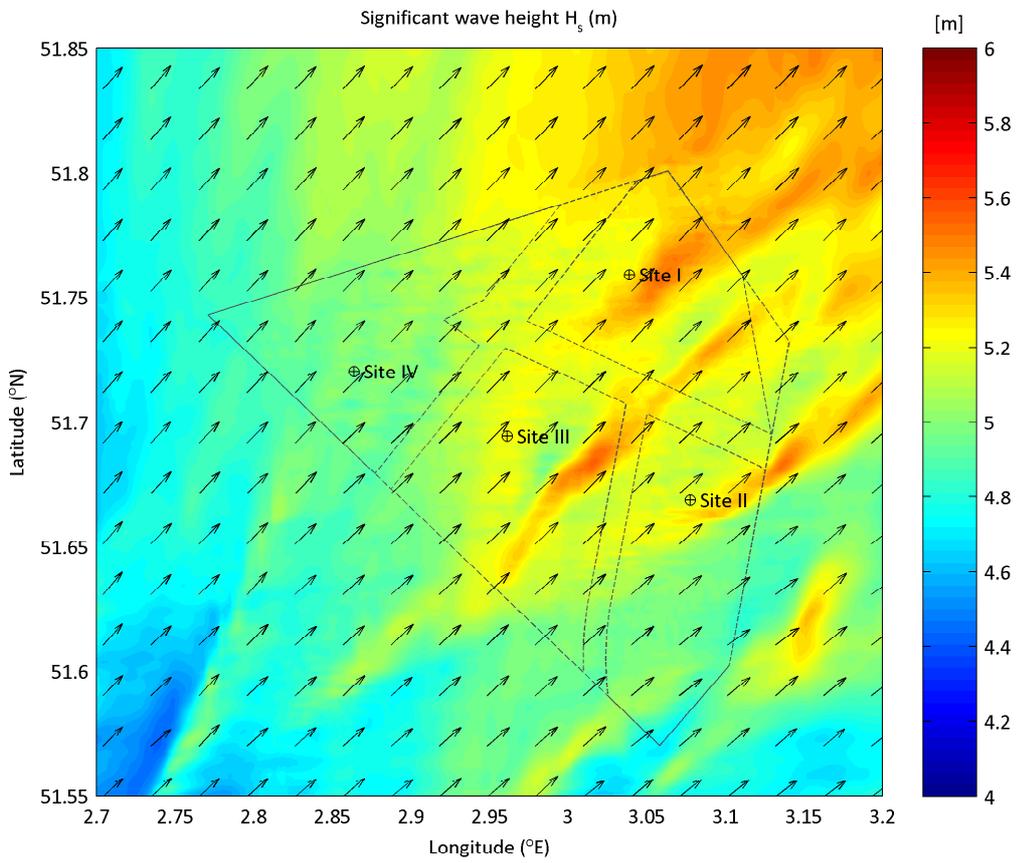
Extreme wave condition from Sector195 ( $^{\circ}$ N) - 225 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.048



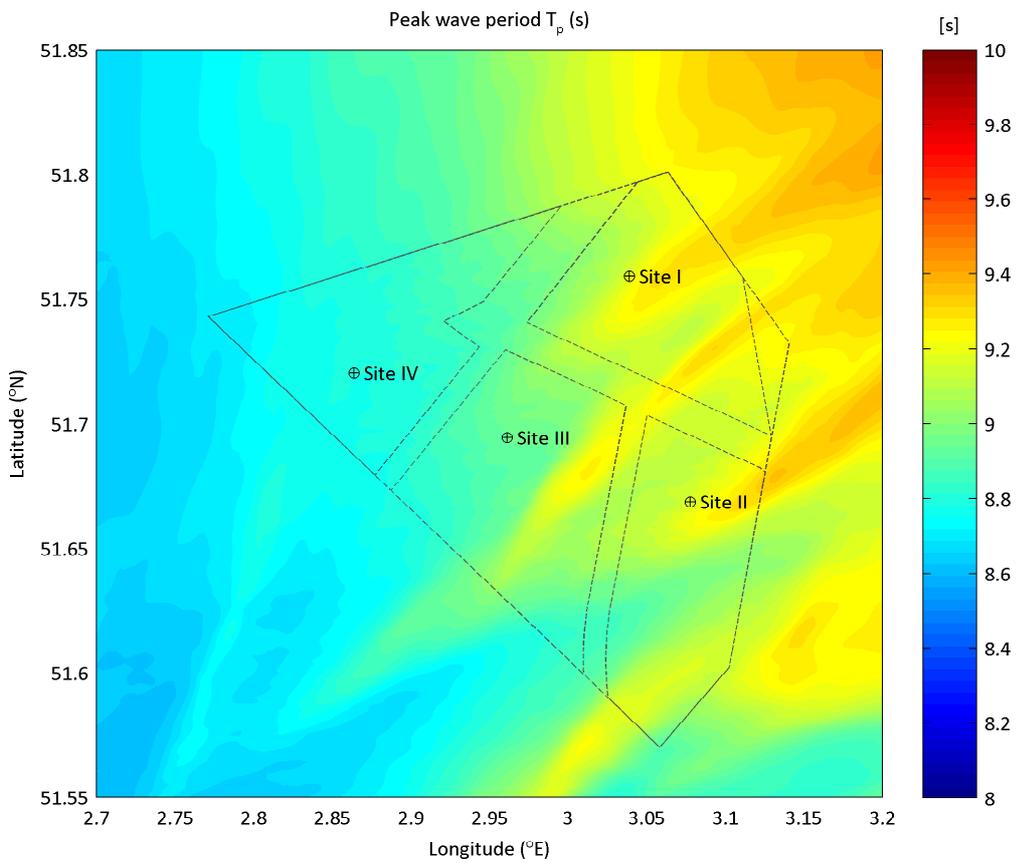
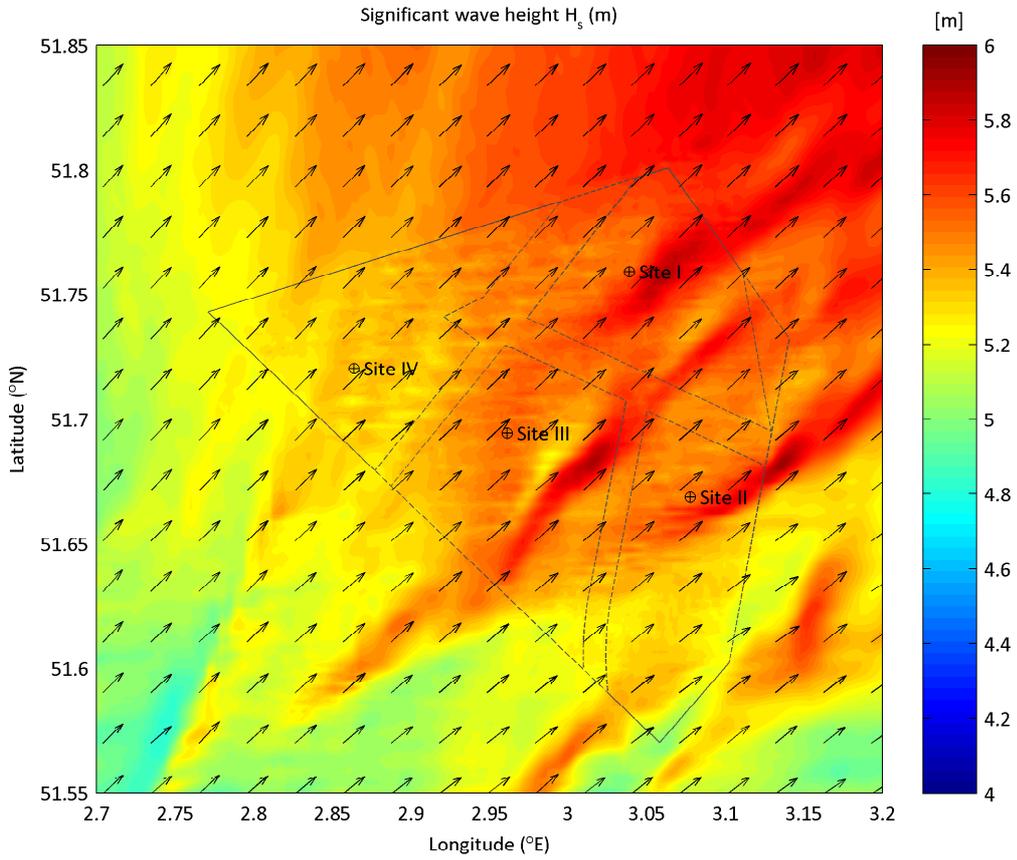
Extreme wave condition from Sector225 ( $^{\circ}$ N) - 255 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.049



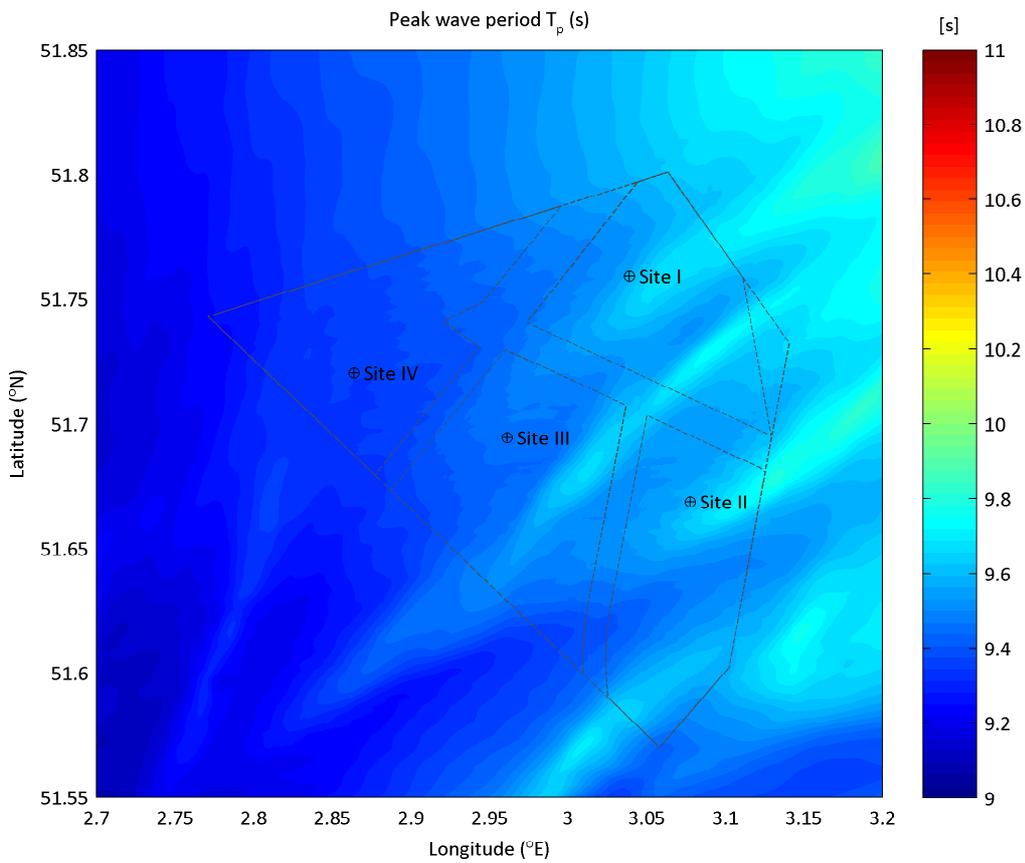
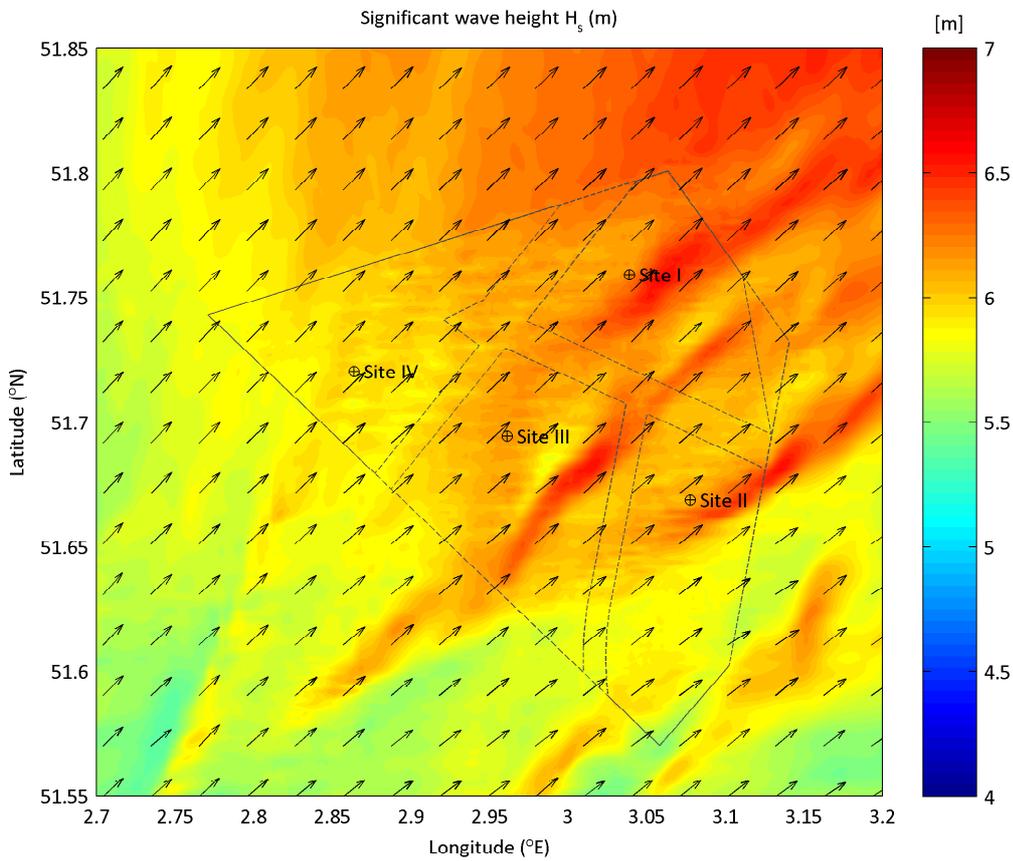
Extreme wave condition from Sector225 ( $^{\circ}$ N) - 255 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.050



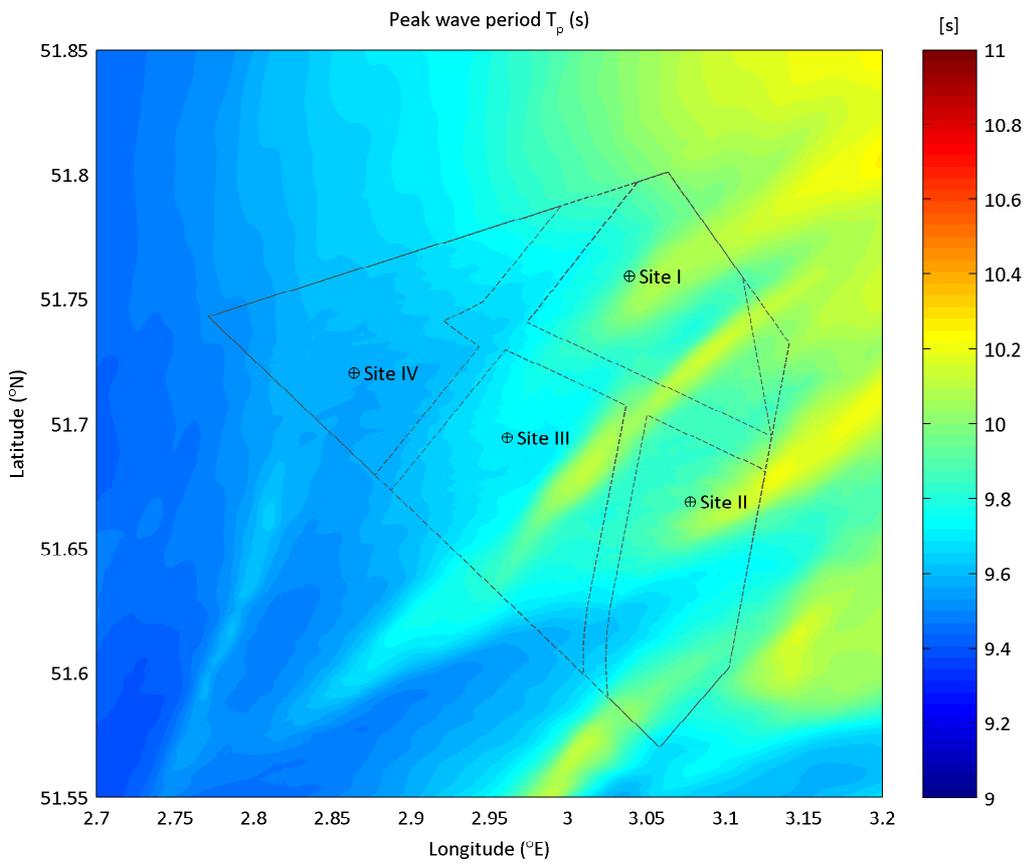
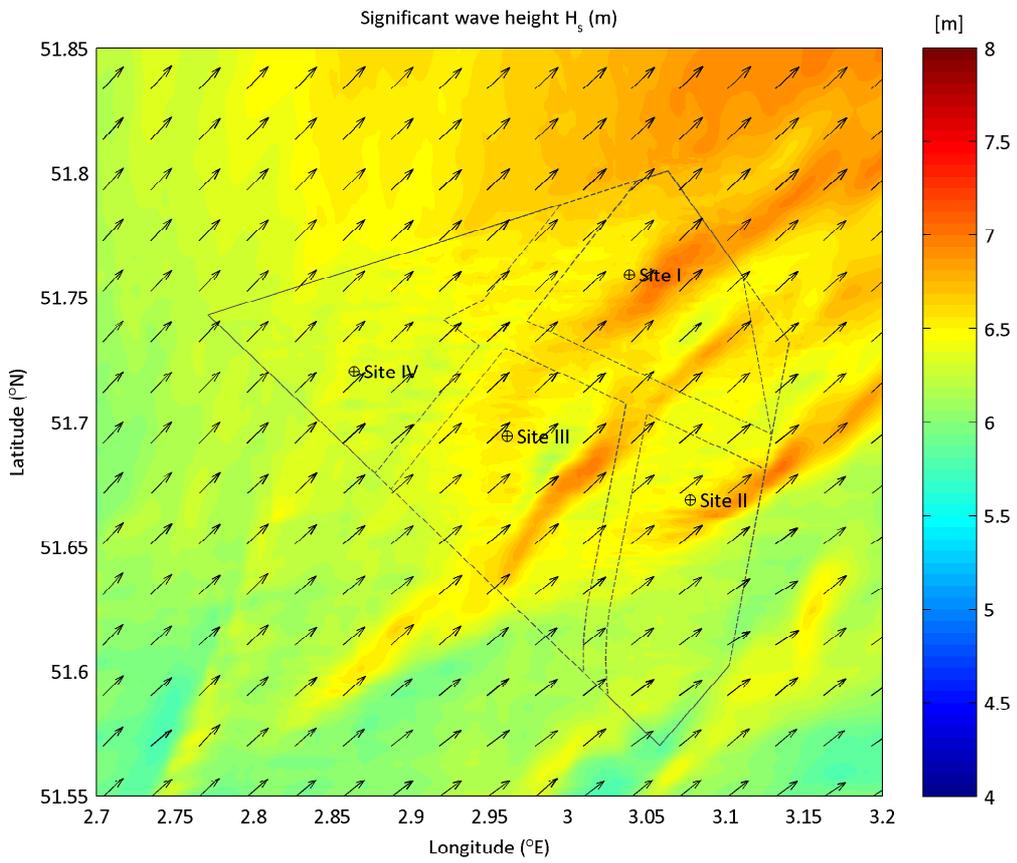
Extreme wave condition from Sector225 ( $^{\circ}$ N) - 255 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.051



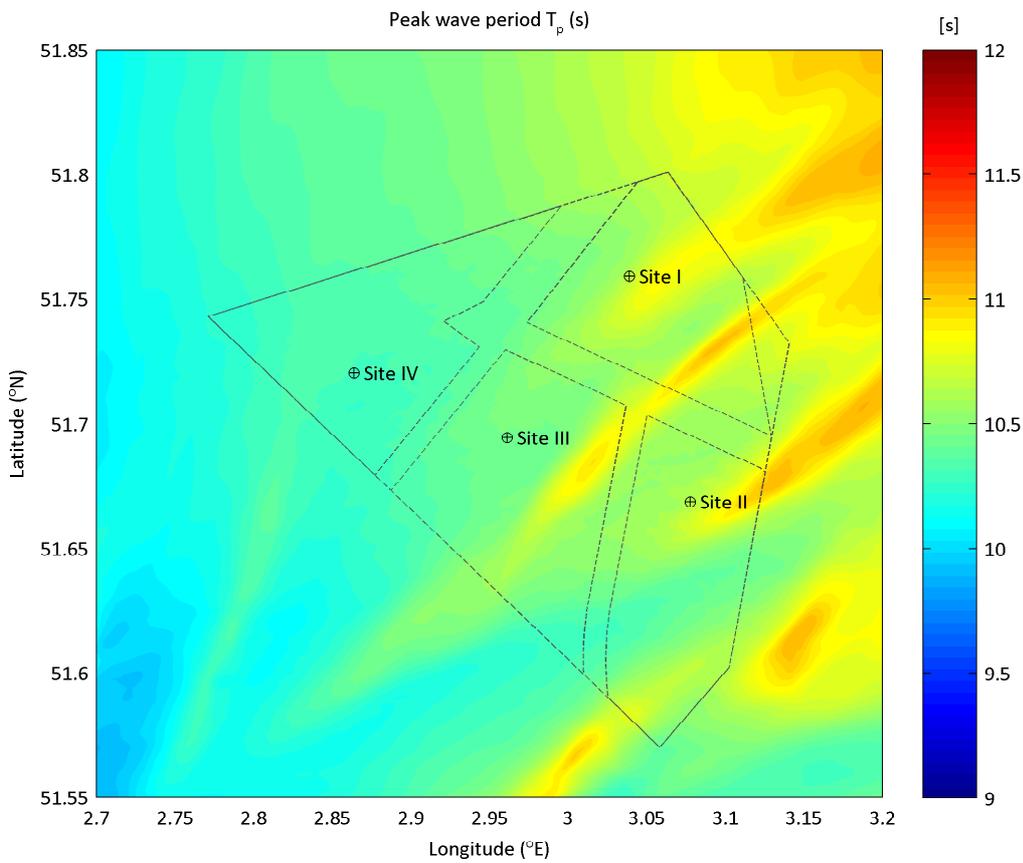
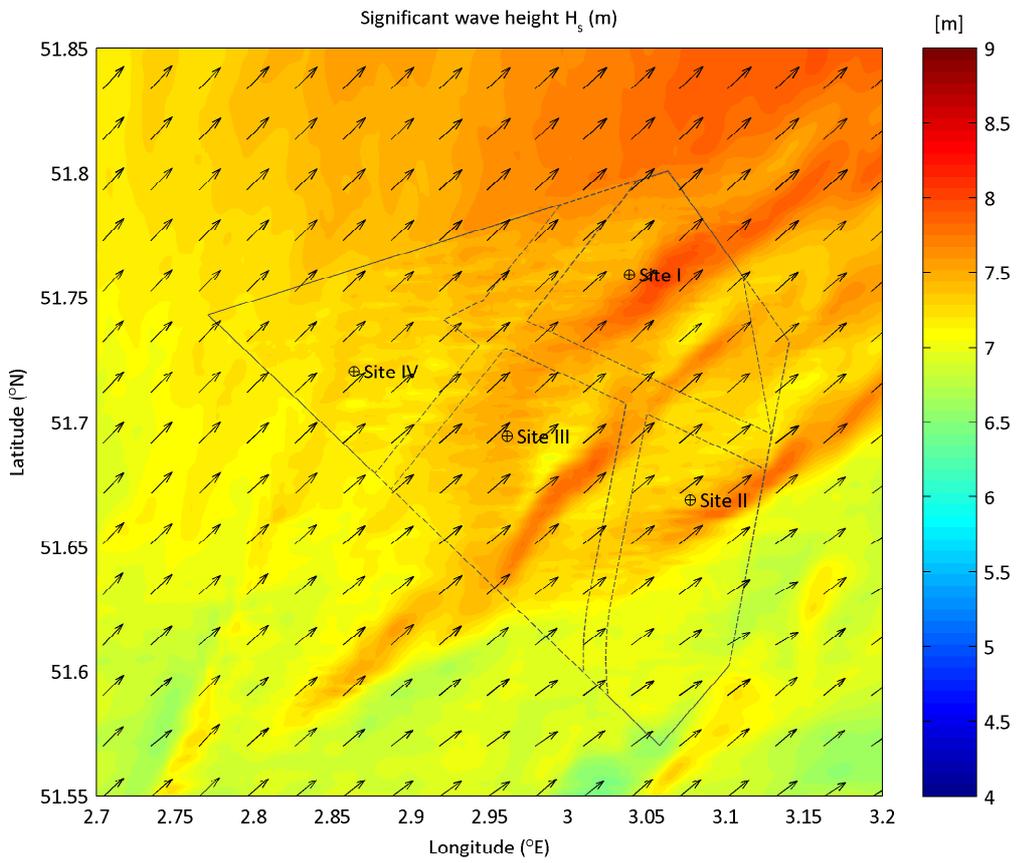
Extreme wave condition from Sector225 ( $^{\circ}$ N) - 255 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.052



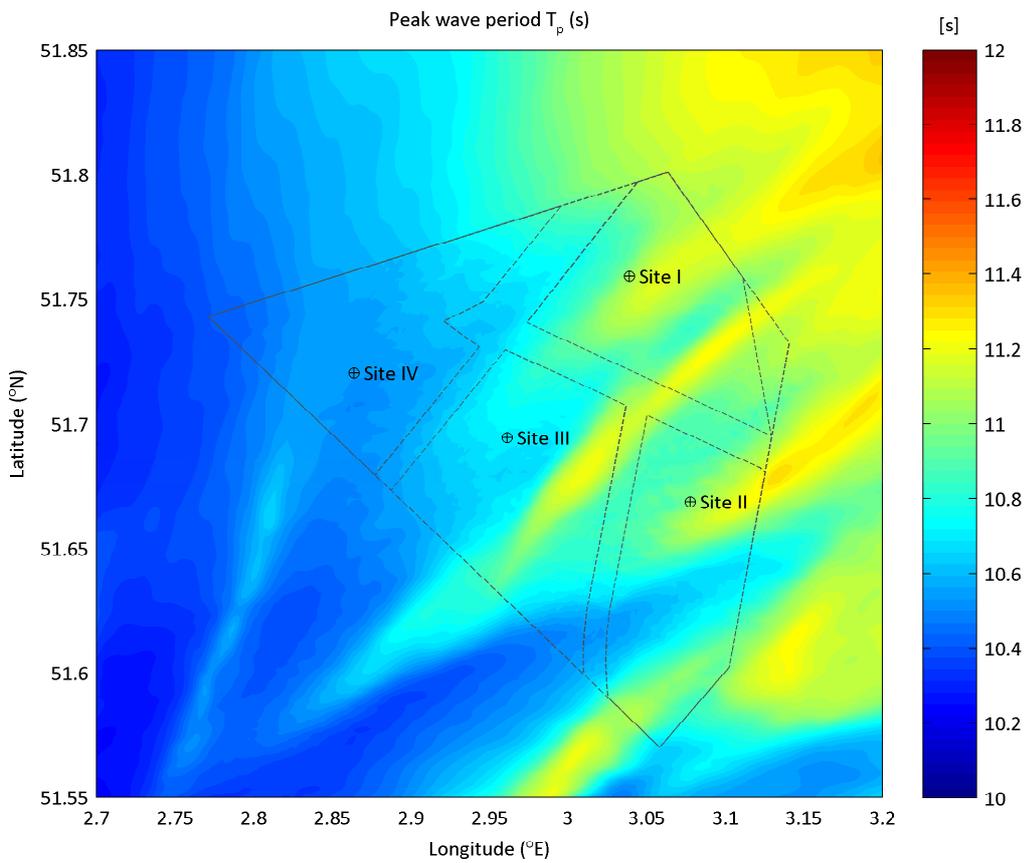
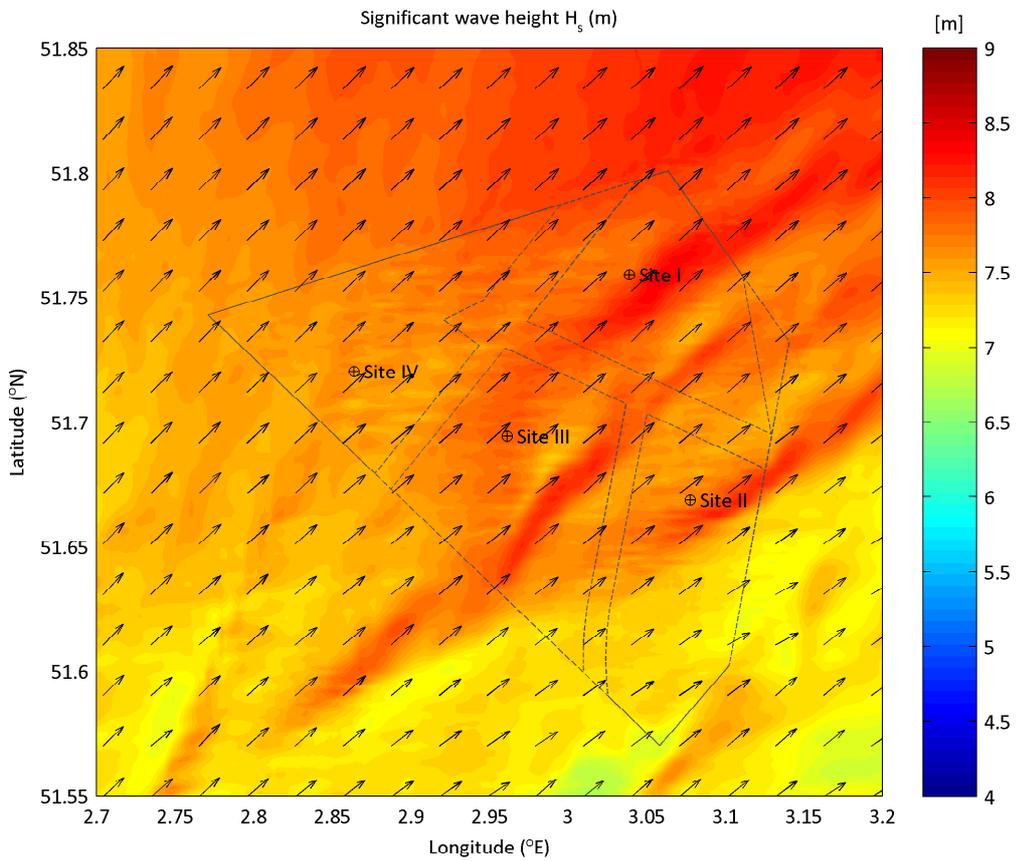
Extreme wave condition from Sector225 ( $^{\circ}$ N) - 255 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.053



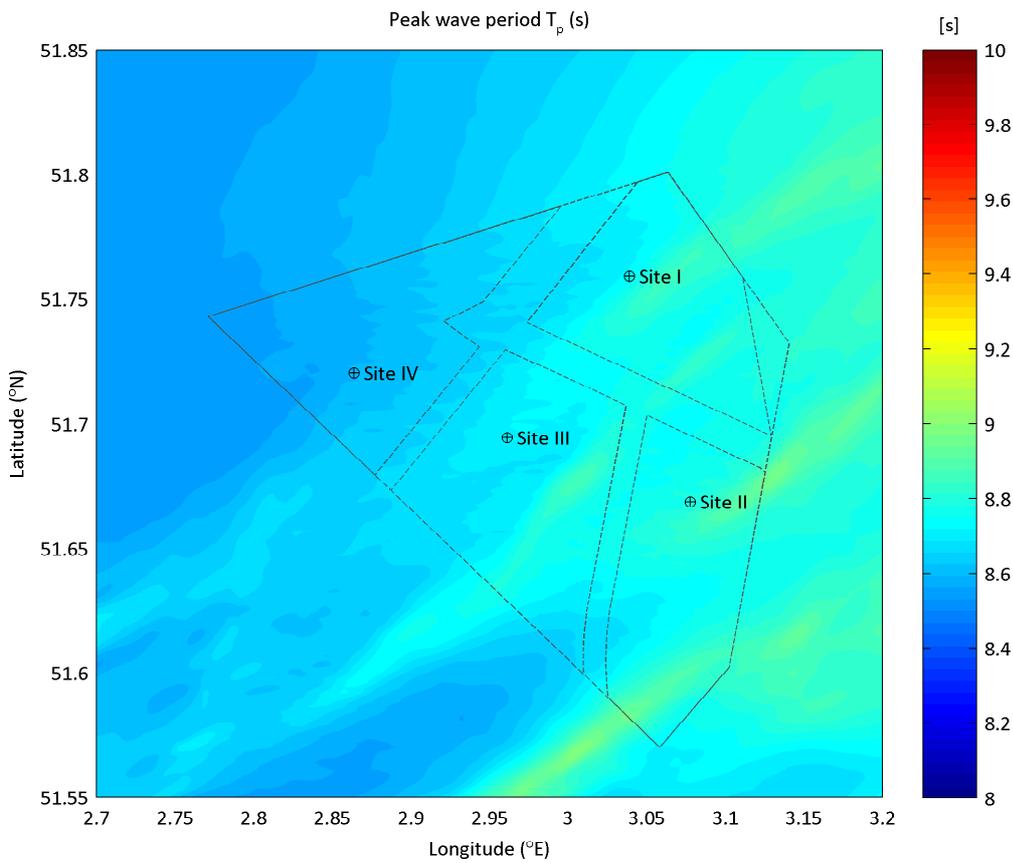
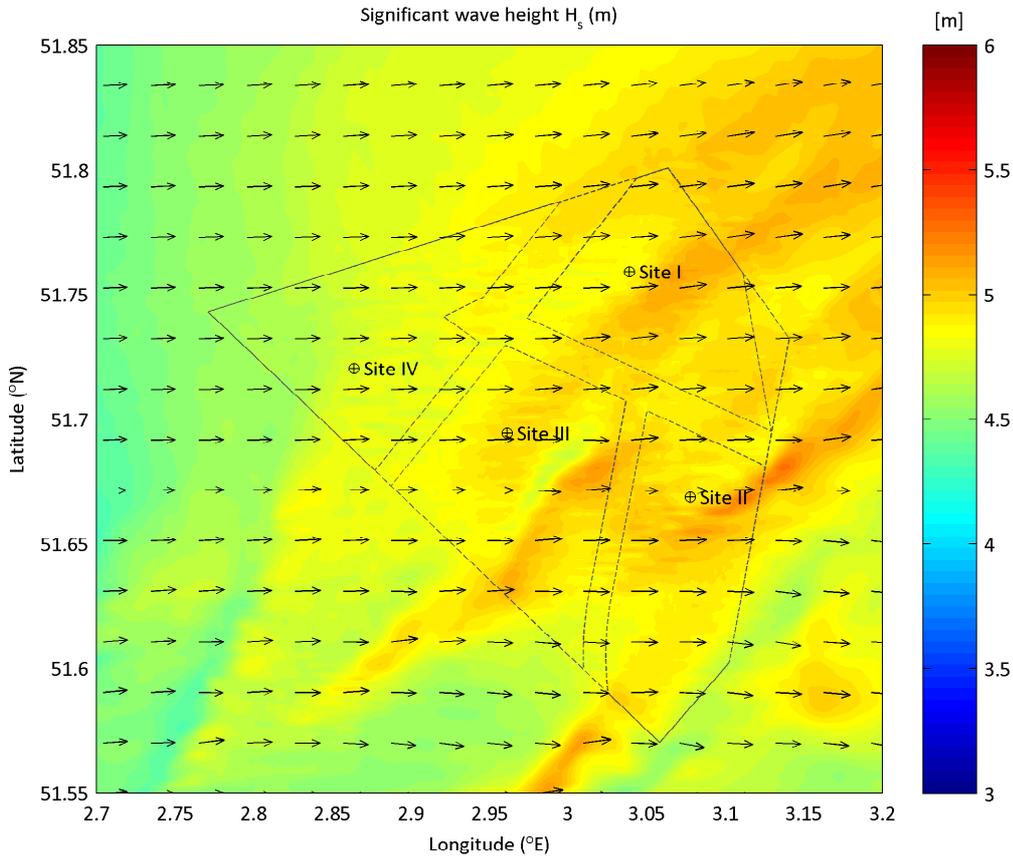
Extreme wave condition from Sector225 ( $^{\circ}$ N) - 255 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.054



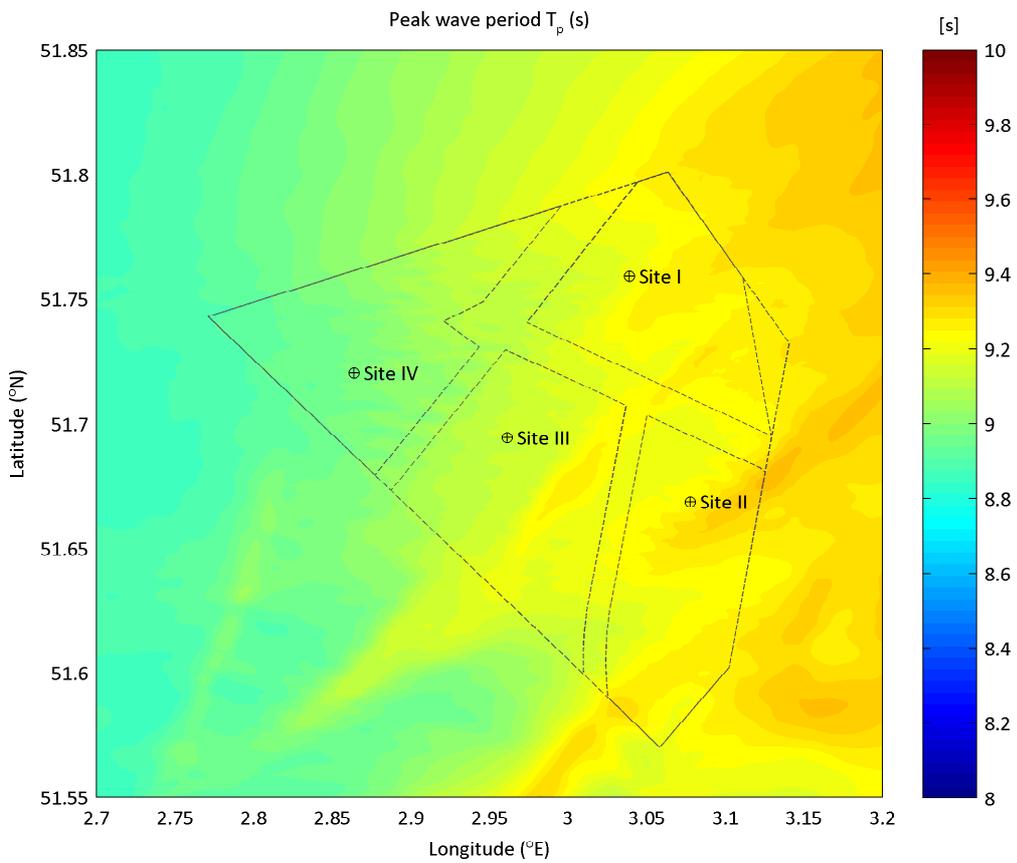
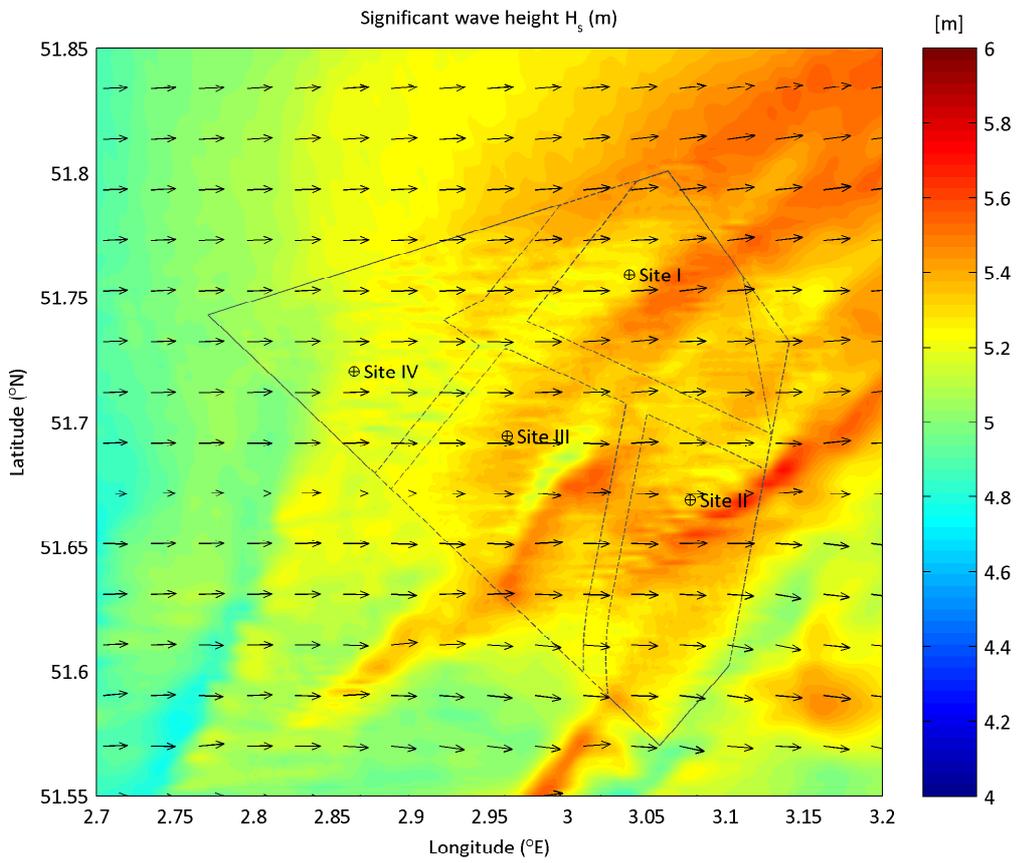
Extreme wave condition from Sector255 ( $^{\circ}$ N) - 285 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.055



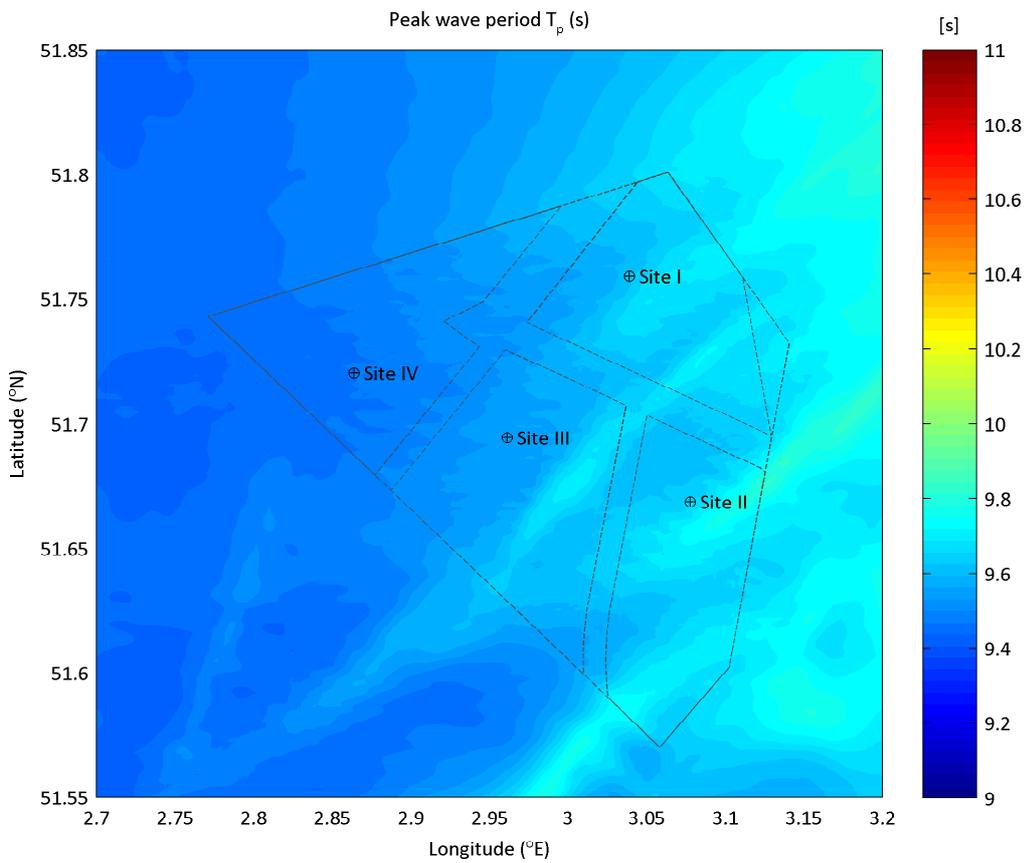
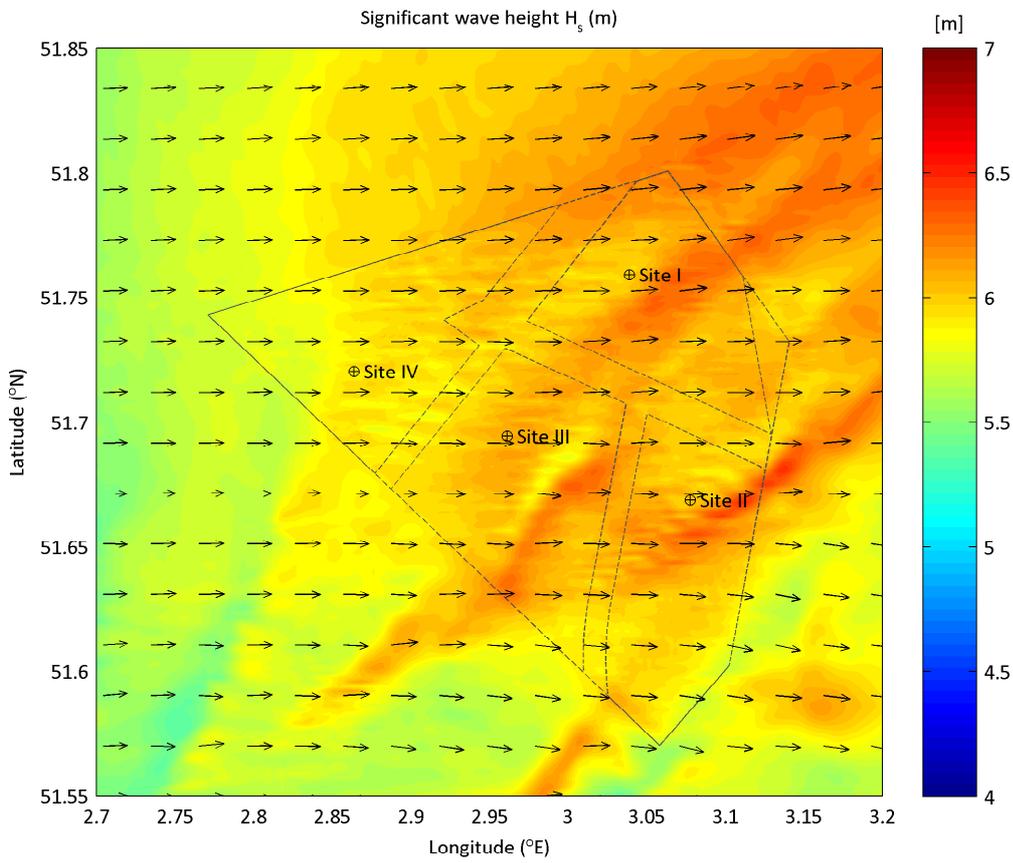
Extreme wave condition from Sector255 ( $^{\circ}$ N) - 285 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.056



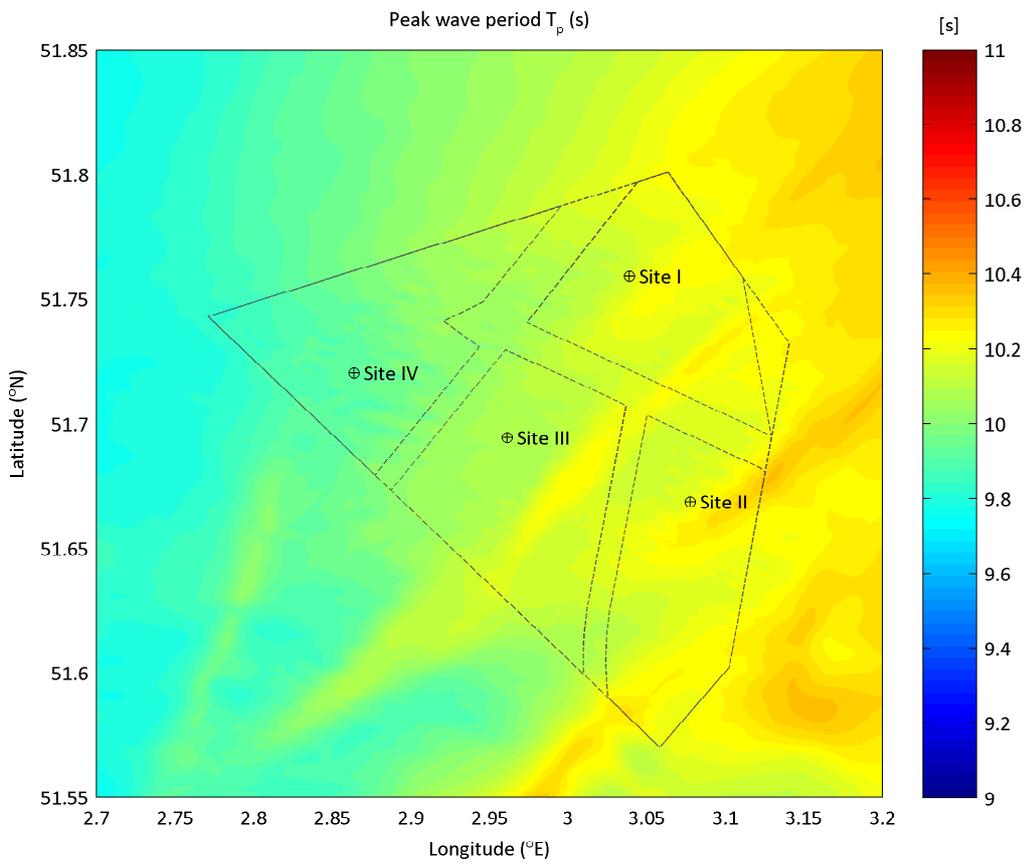
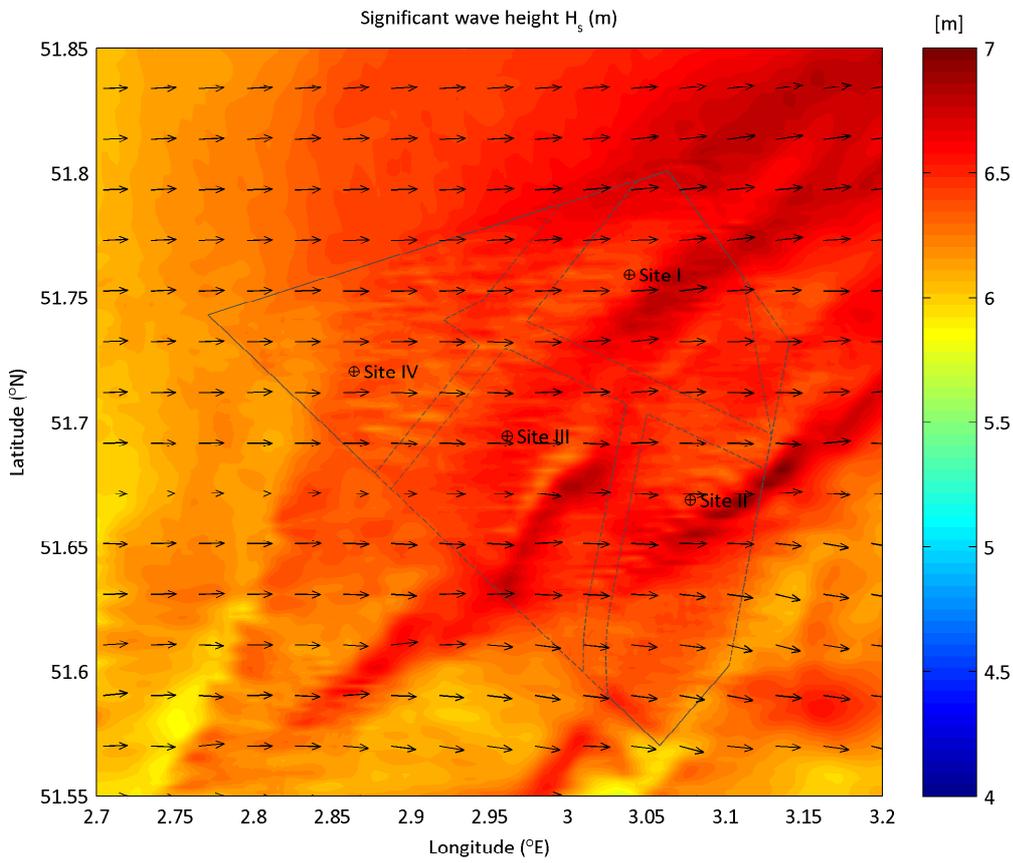
Extreme wave condition from Sector255 ( $^{\circ}$ N) - 285 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.057



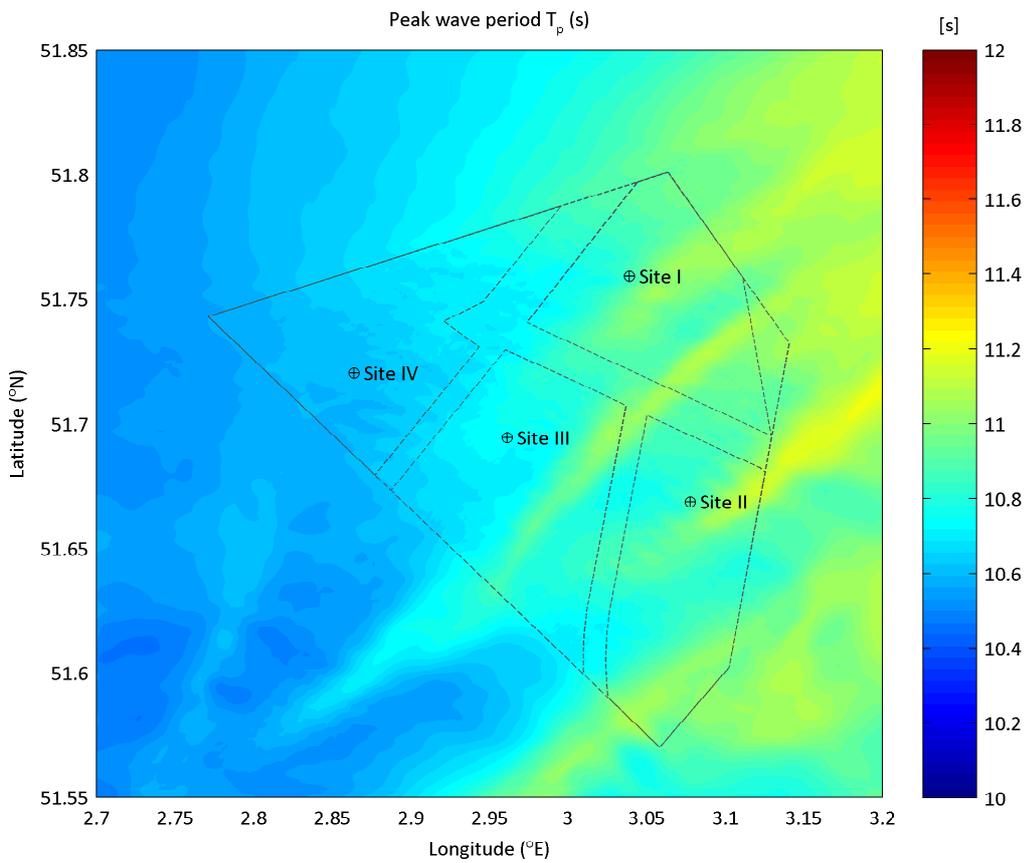
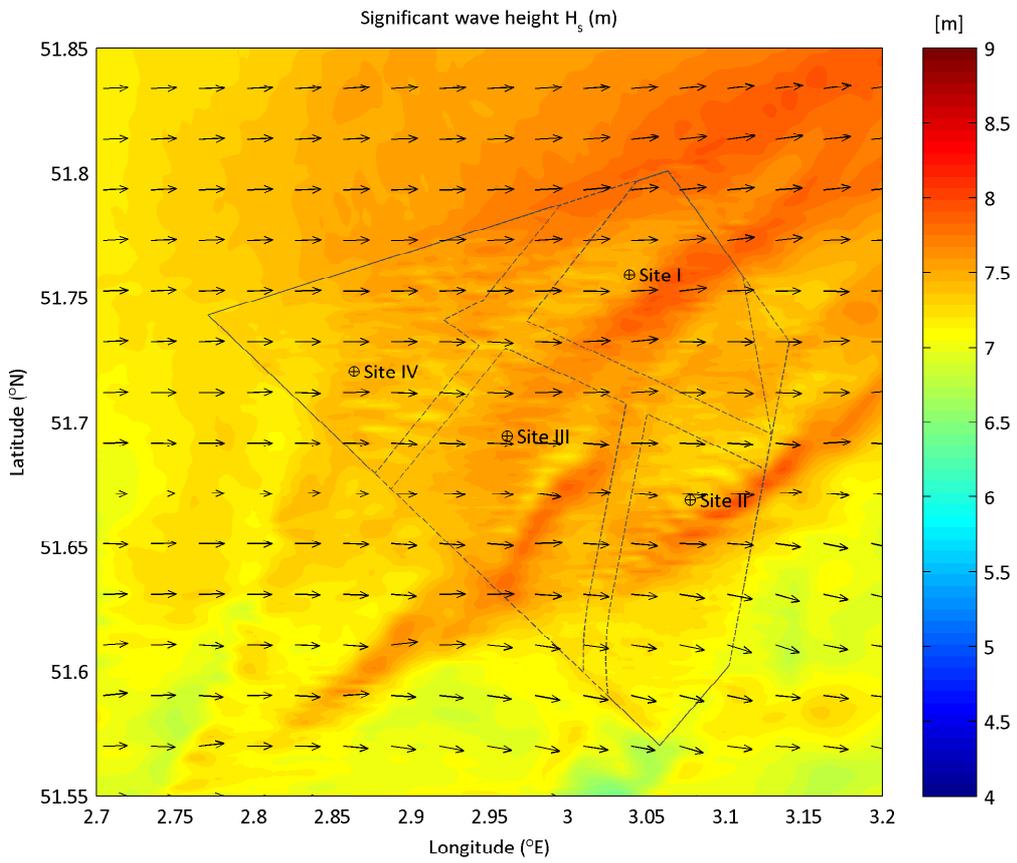
Extreme wave condition from Sector255 ( $^{\circ}$ N) - 285 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.058



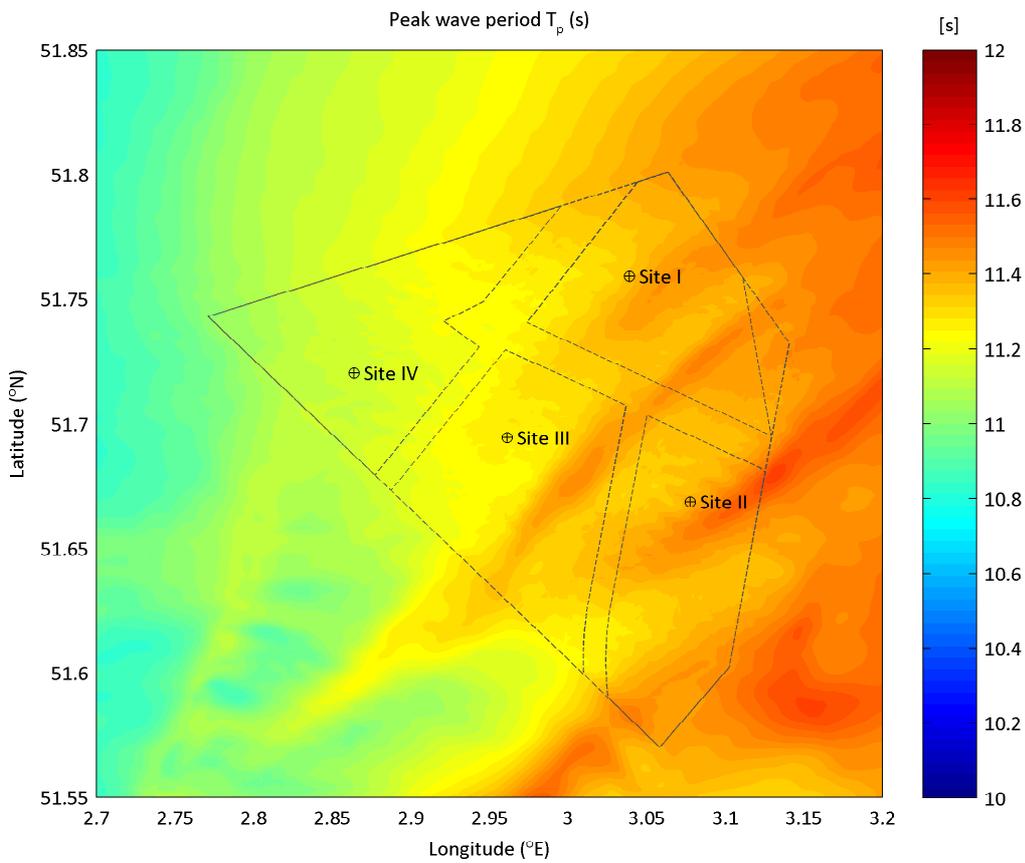
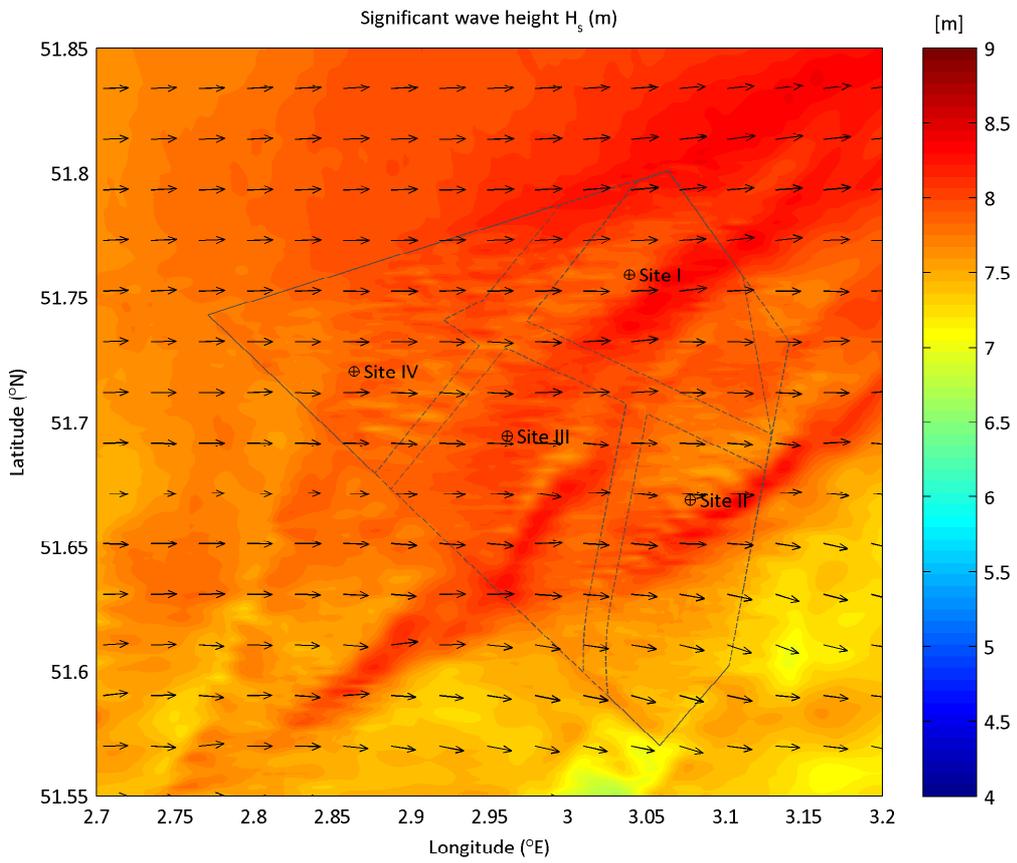
Extreme wave condition from Sector255 ( $^{\circ}$ N) - 285 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.059



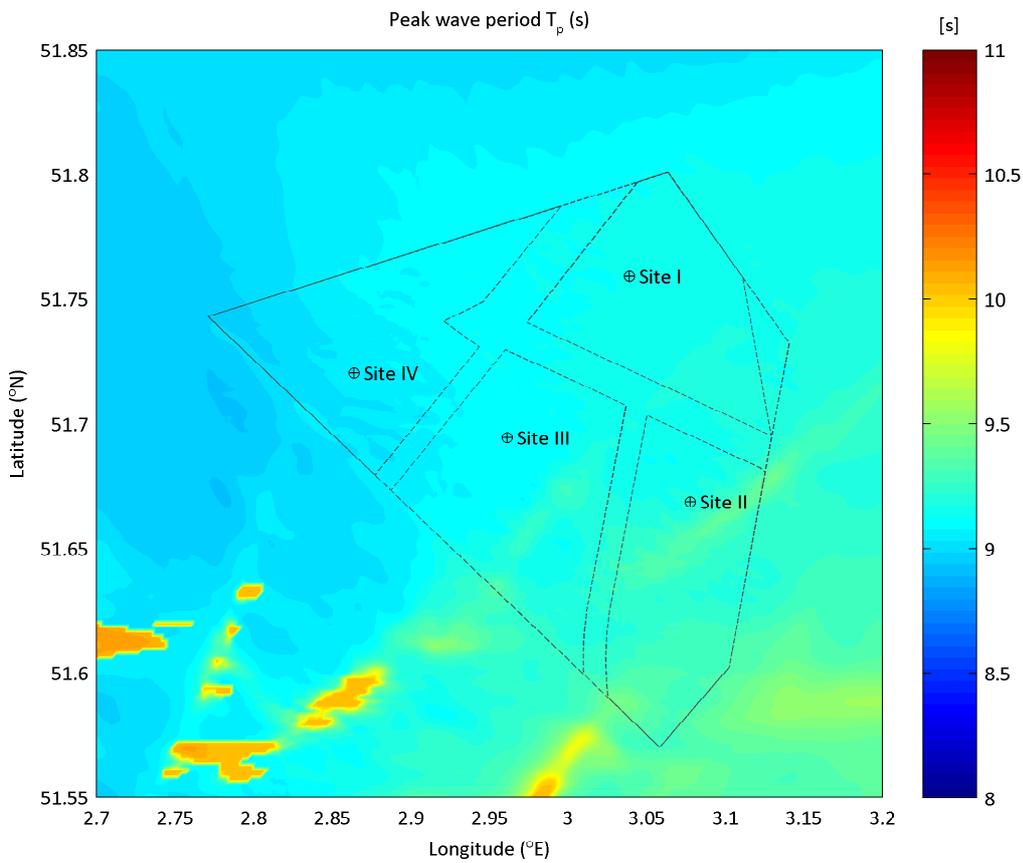
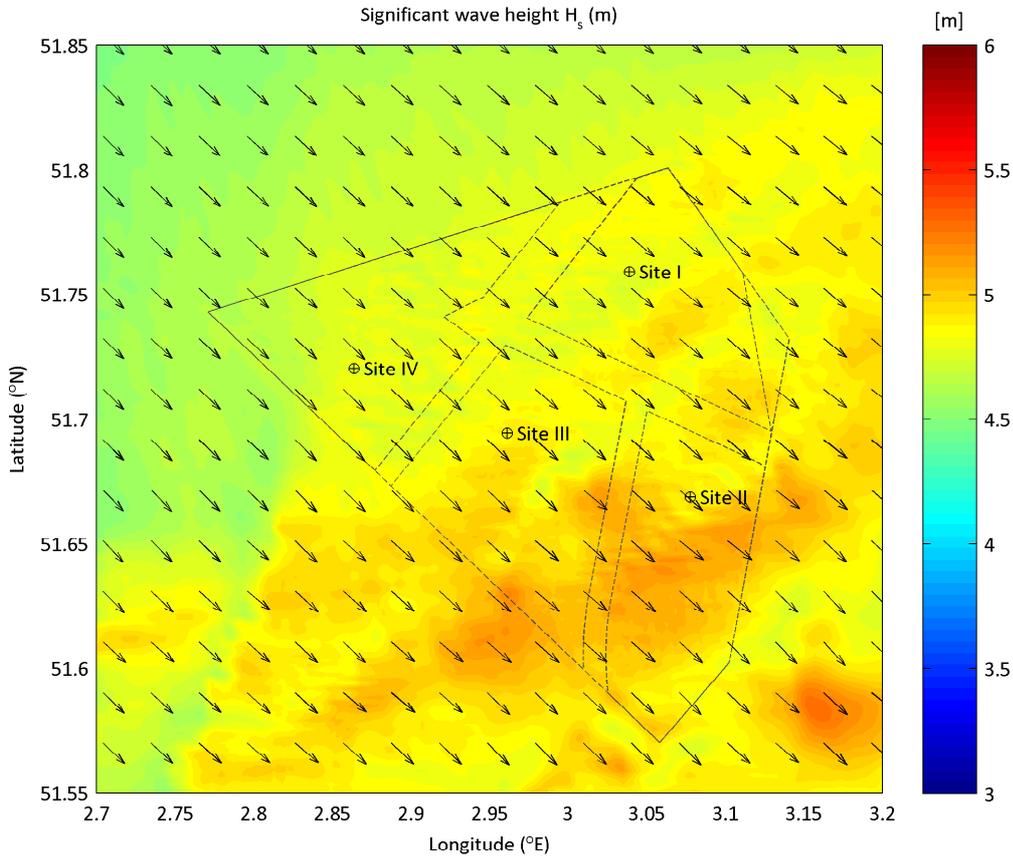
Extreme wave condition from Sector255 ( $^{\circ}$ N) - 285 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.060



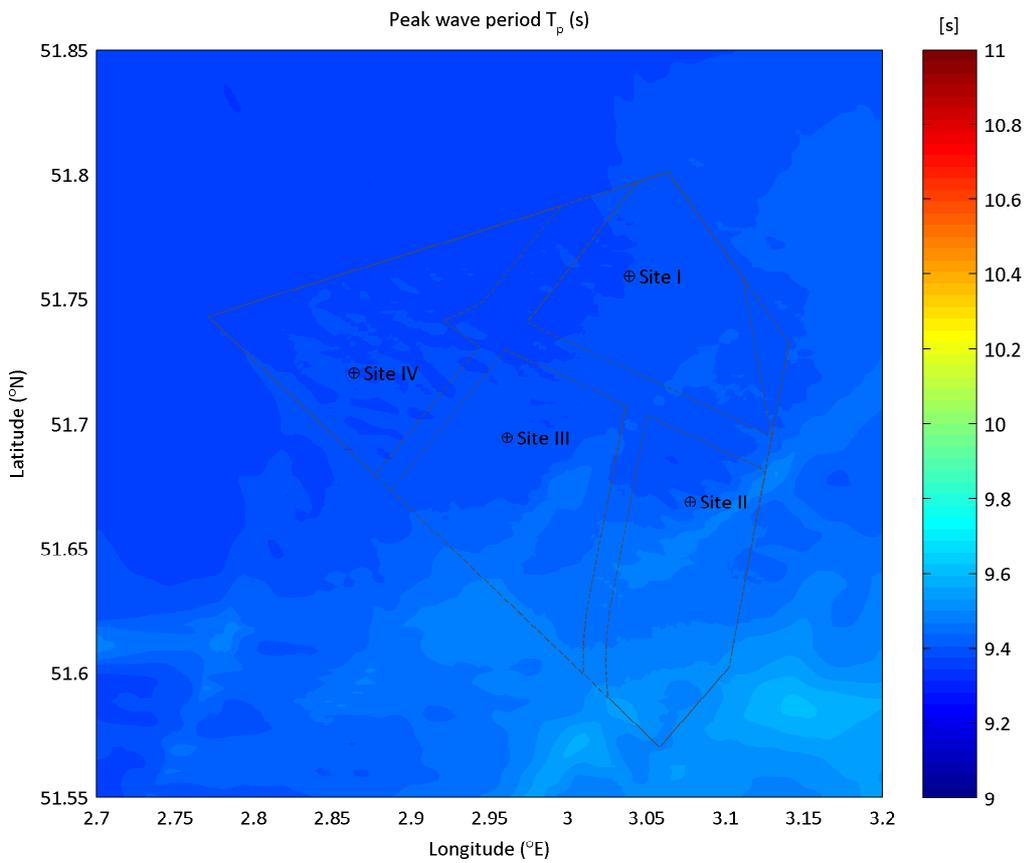
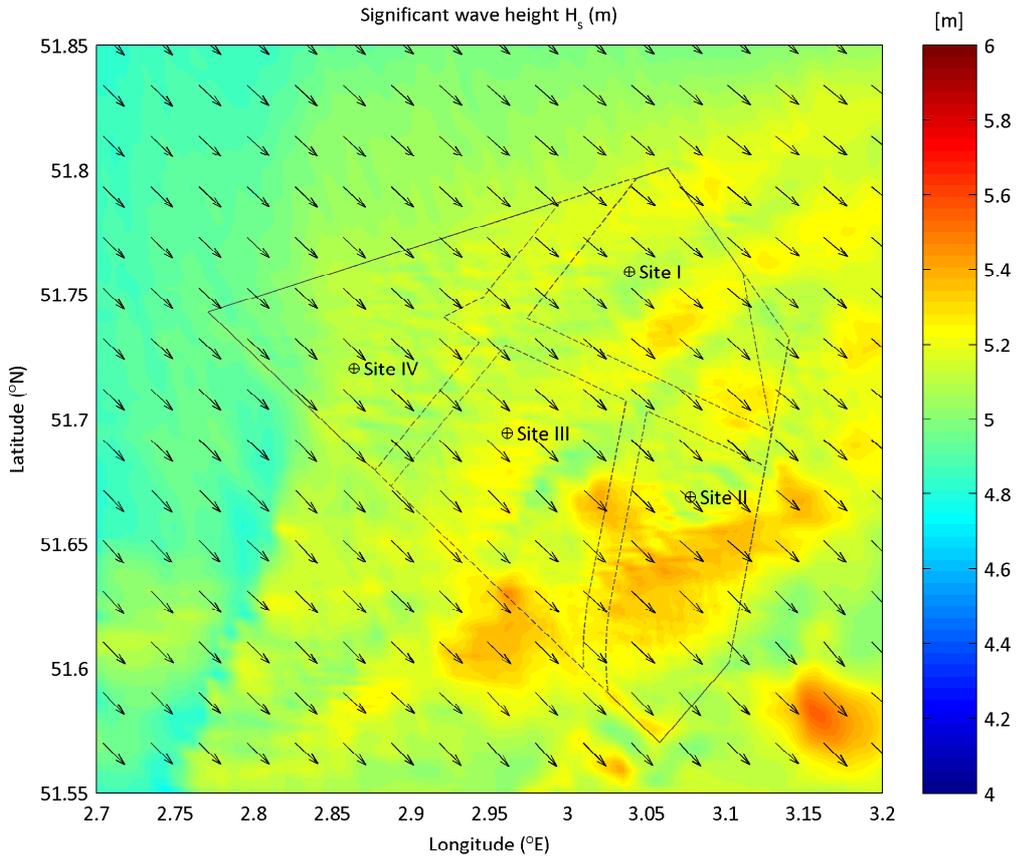
Extreme wave condition from Sector285 (°N) - 315 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.061



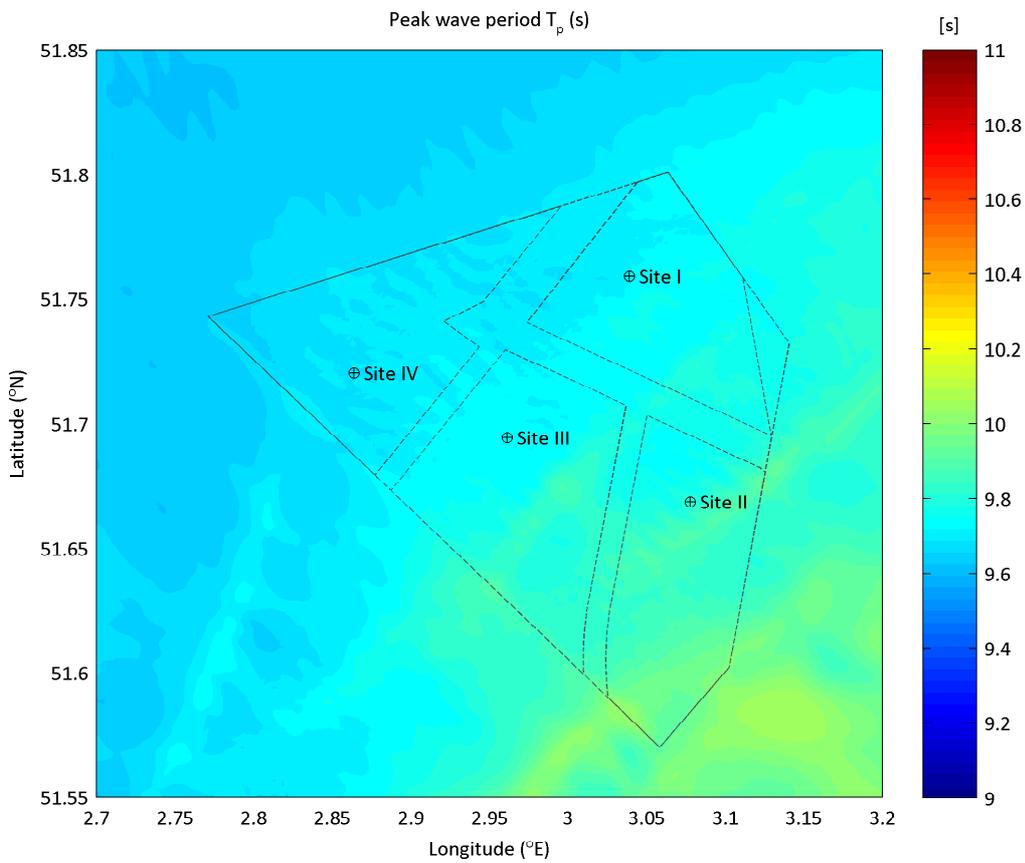
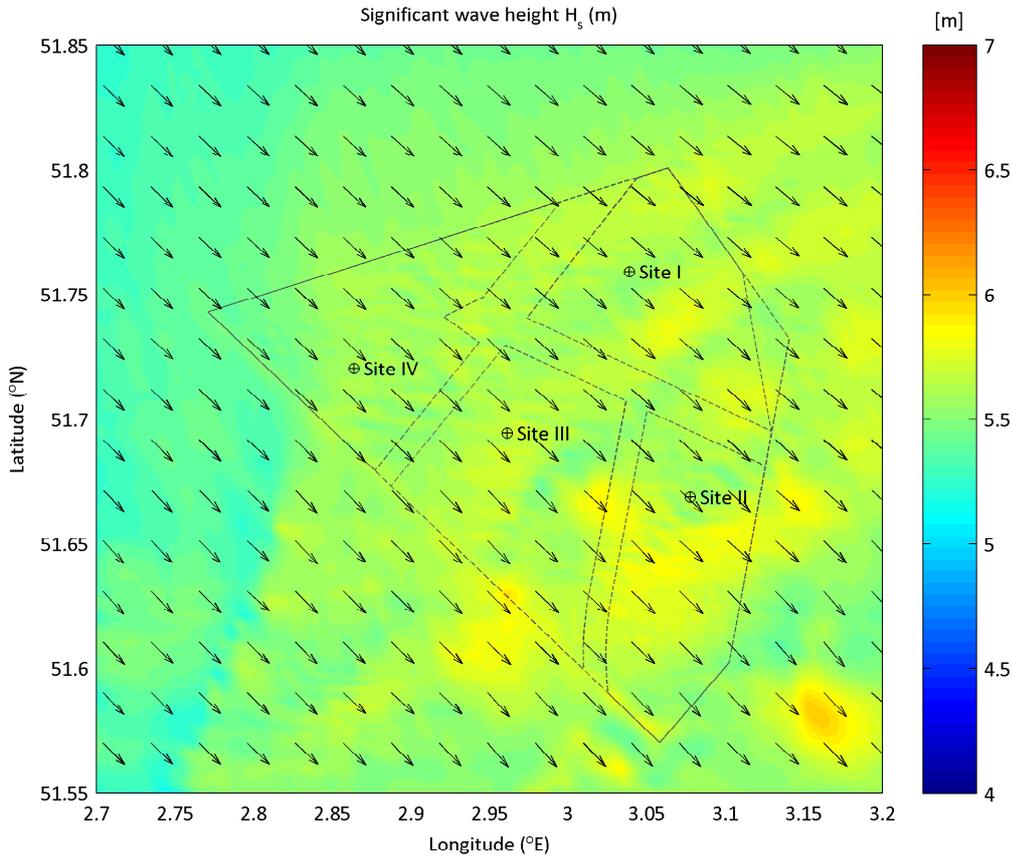
Extreme wave condition from Sector285 (°N) - 315 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.062



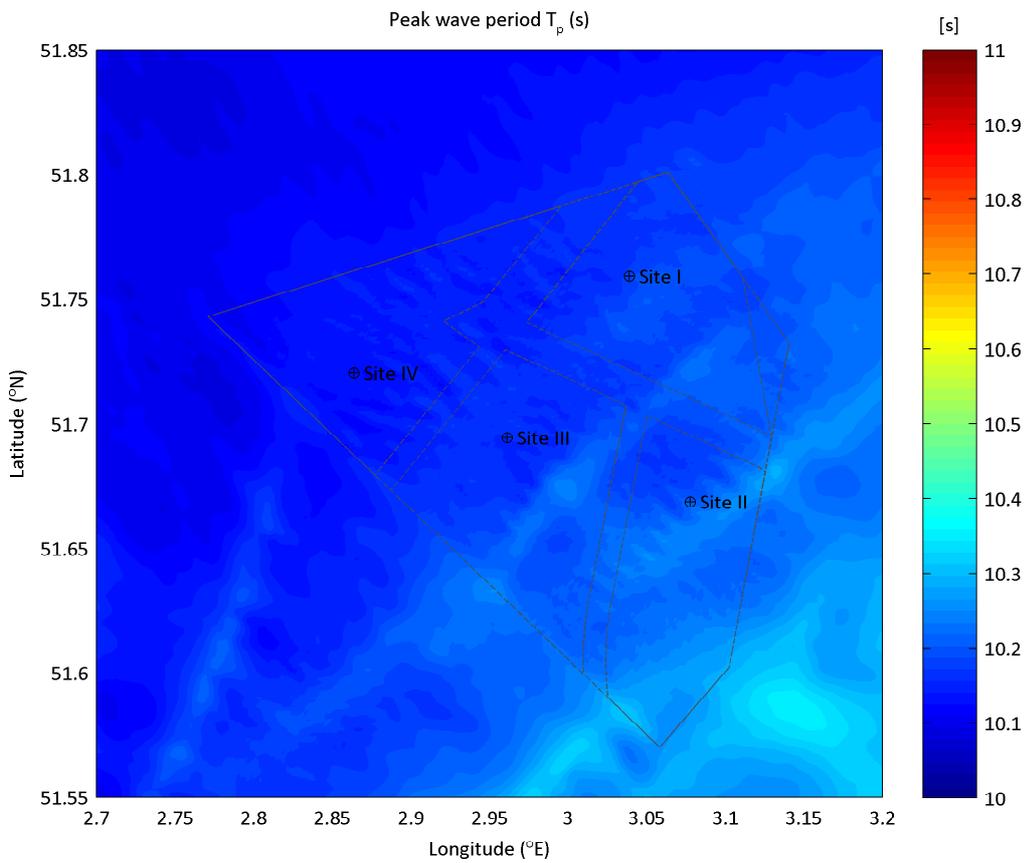
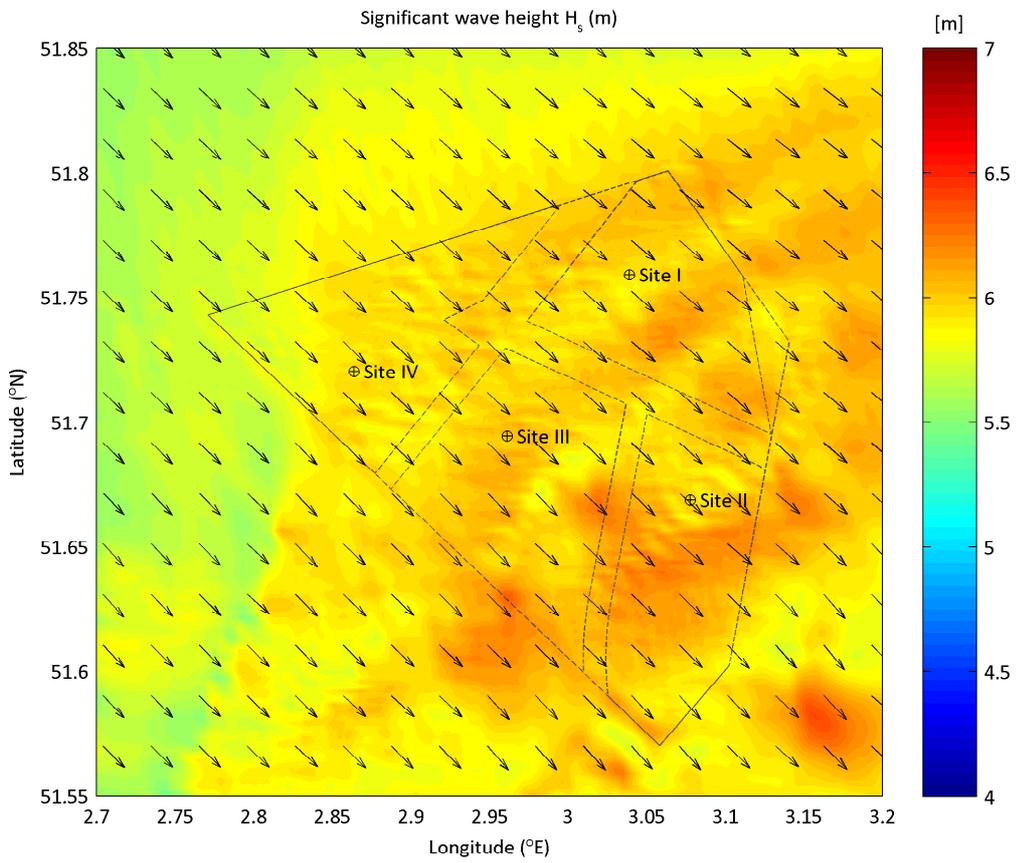
Extreme wave condition from Sector285 ( $^{\circ}$ N) - 315 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.063



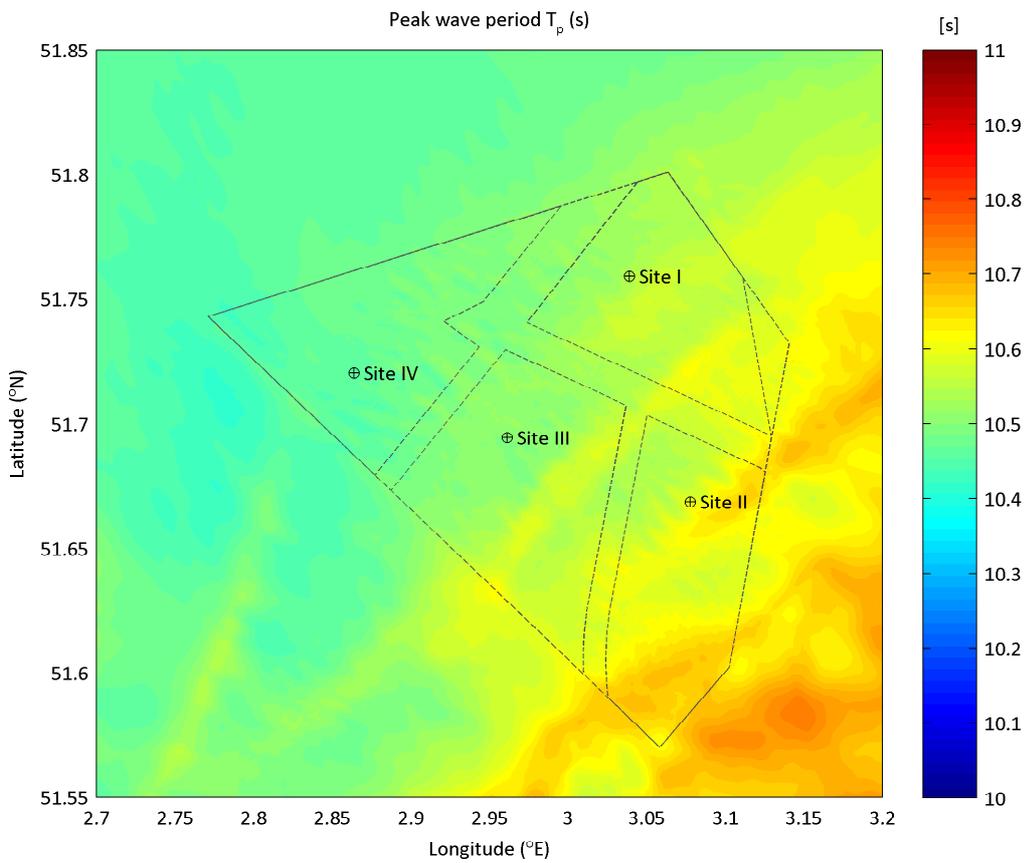
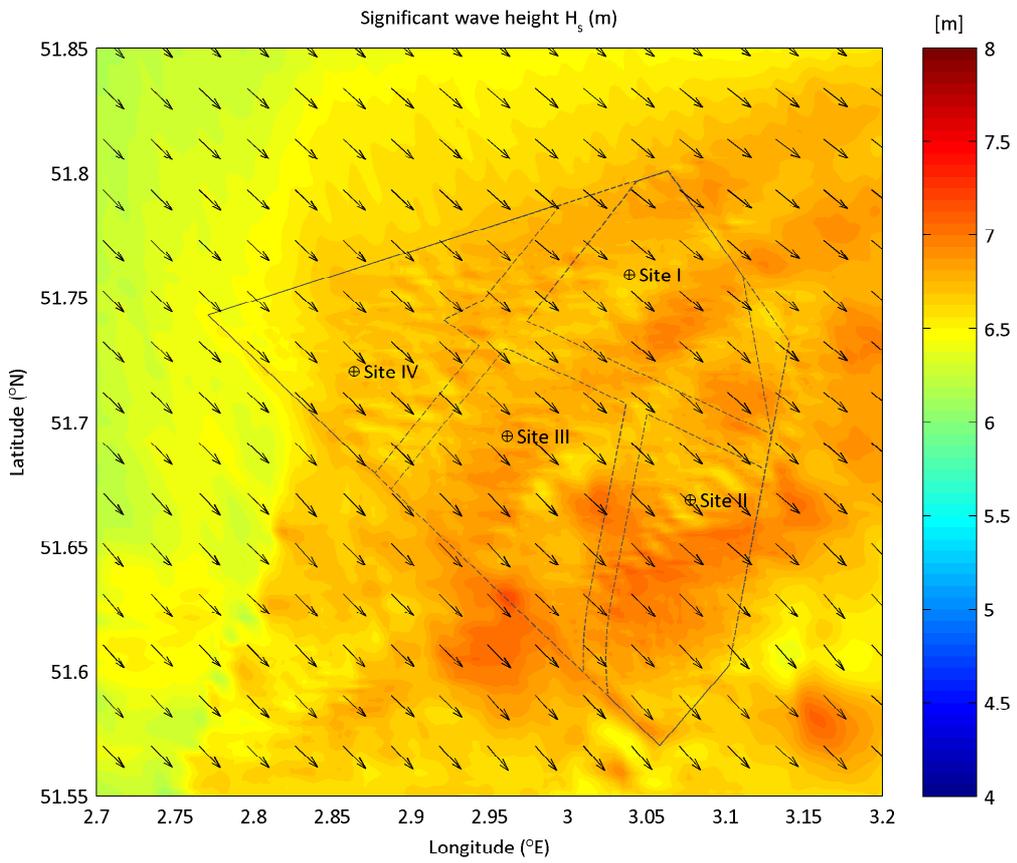
Extreme wave condition from Sector285 (°N) - 315 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.064



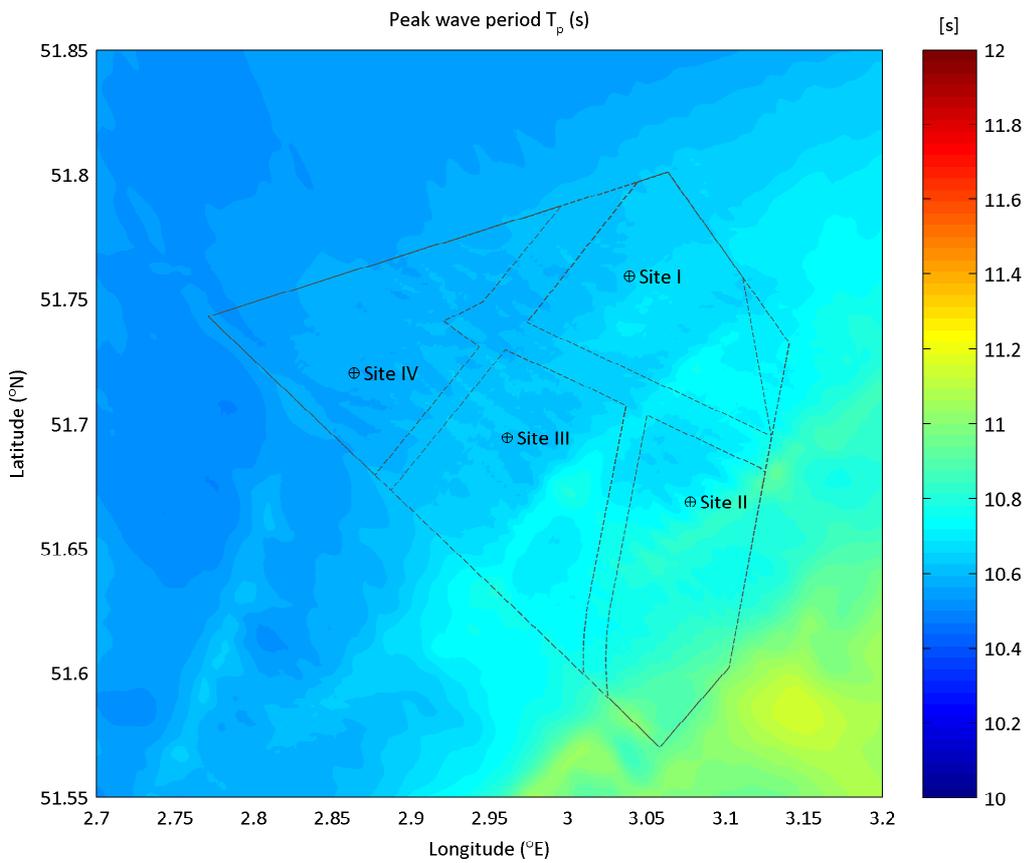
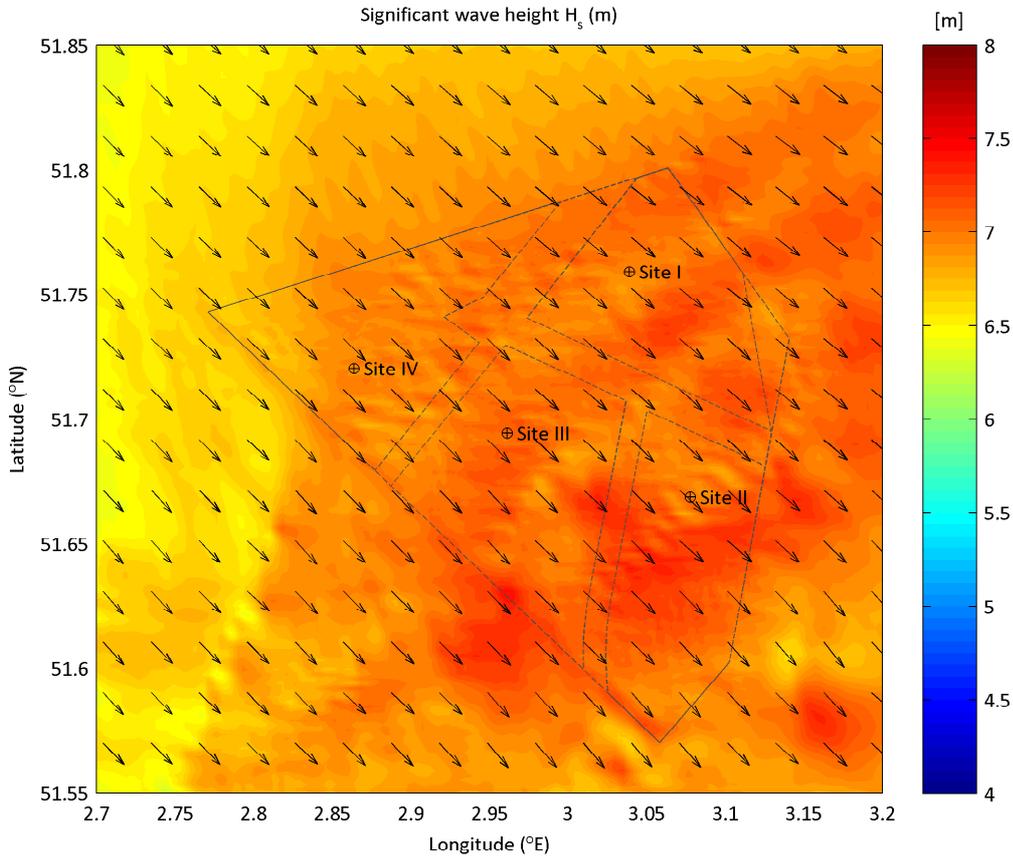
Extreme wave condition from Sector285 (°N) - 315 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.065



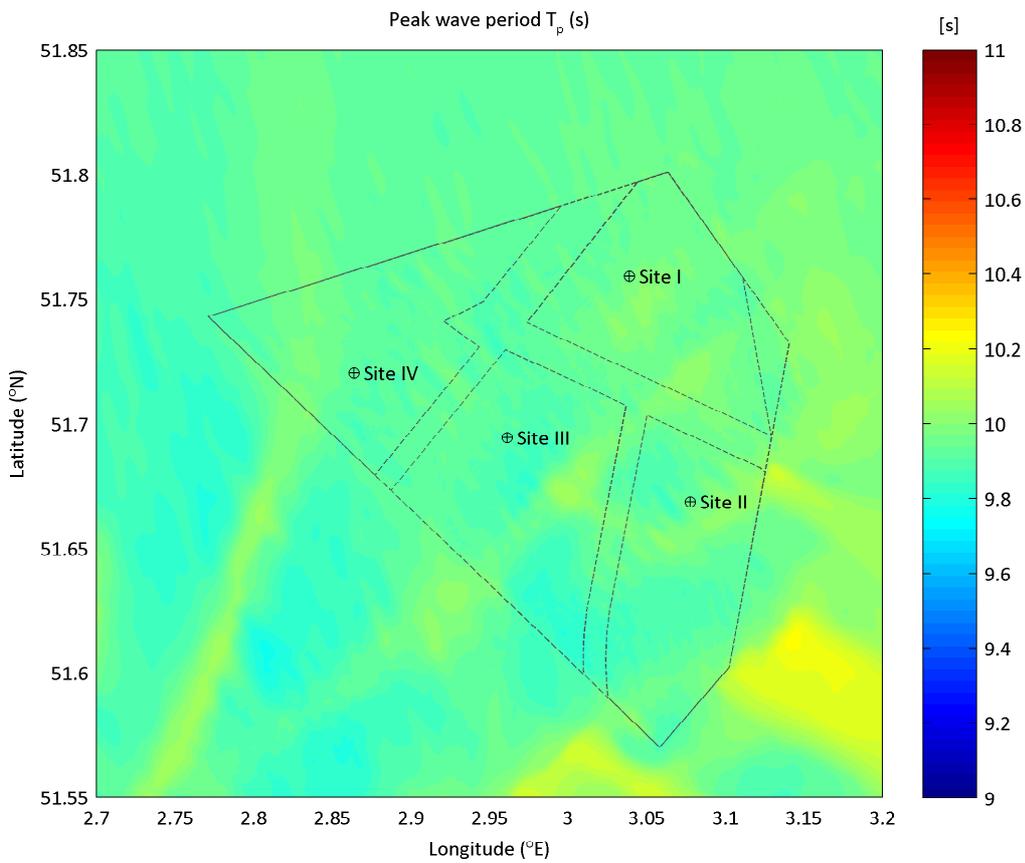
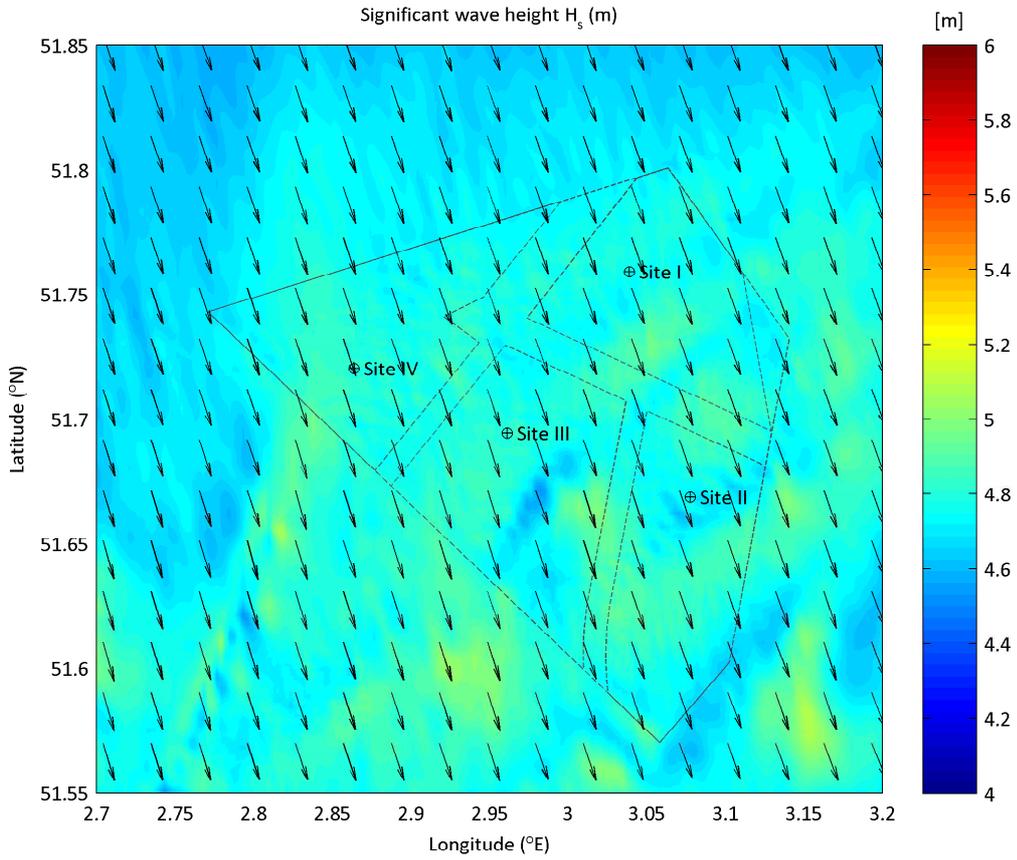
Extreme wave condition from Sector285 (°N) - 315 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.066



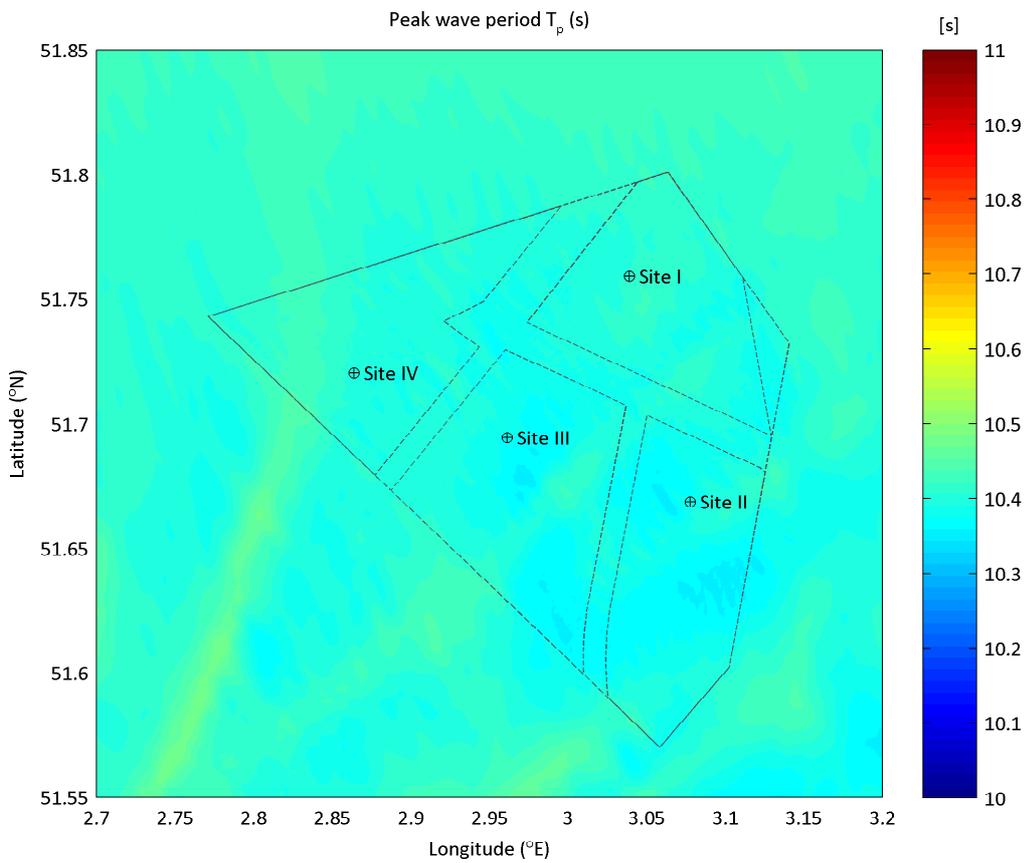
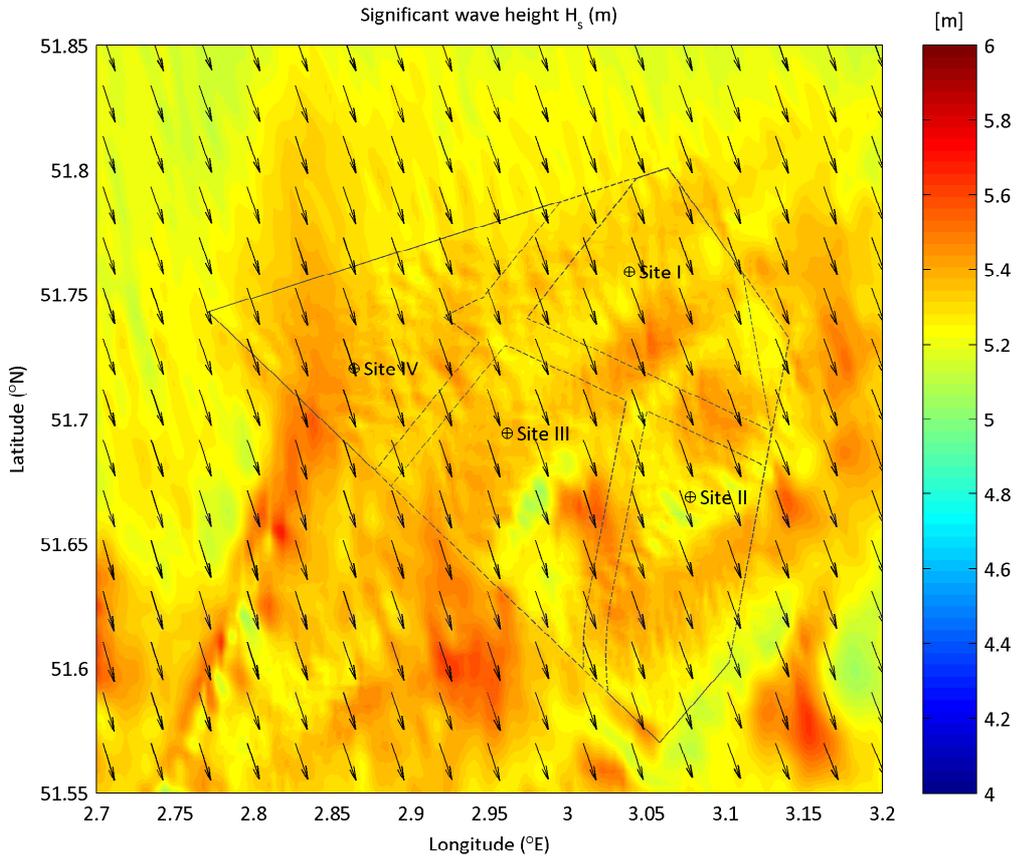
Extreme wave condition from Sector315 ( $^{\circ}$ N) - 345 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.067



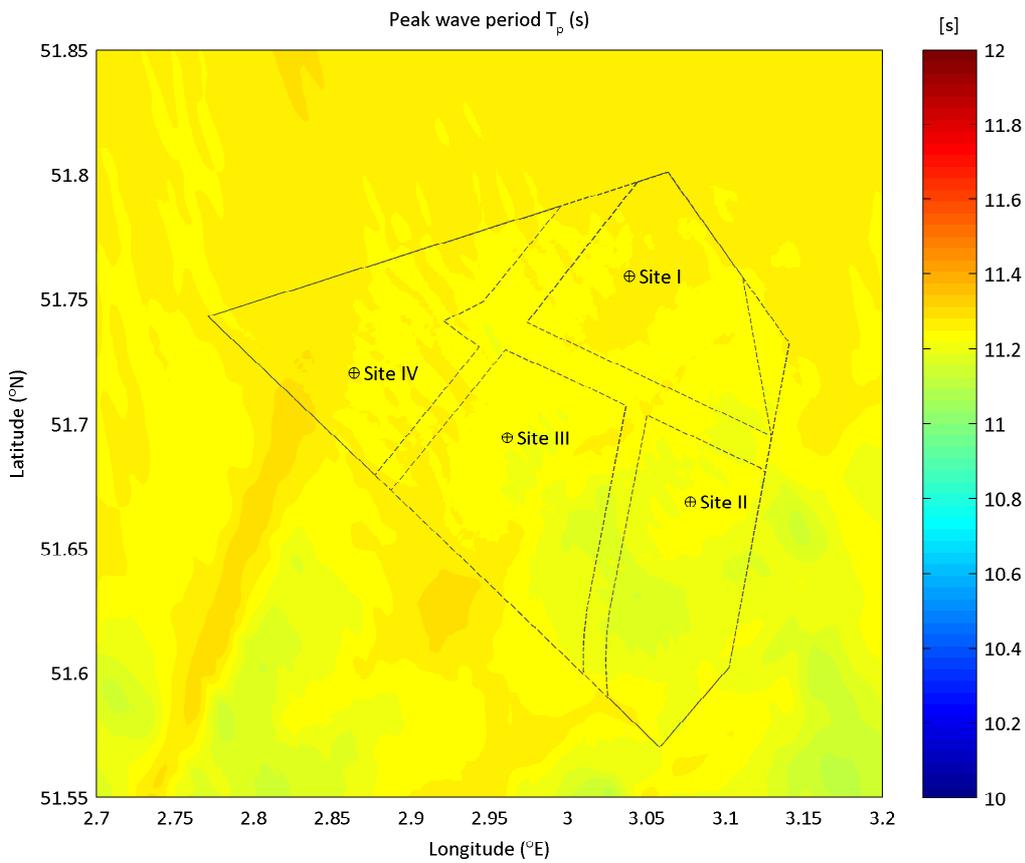
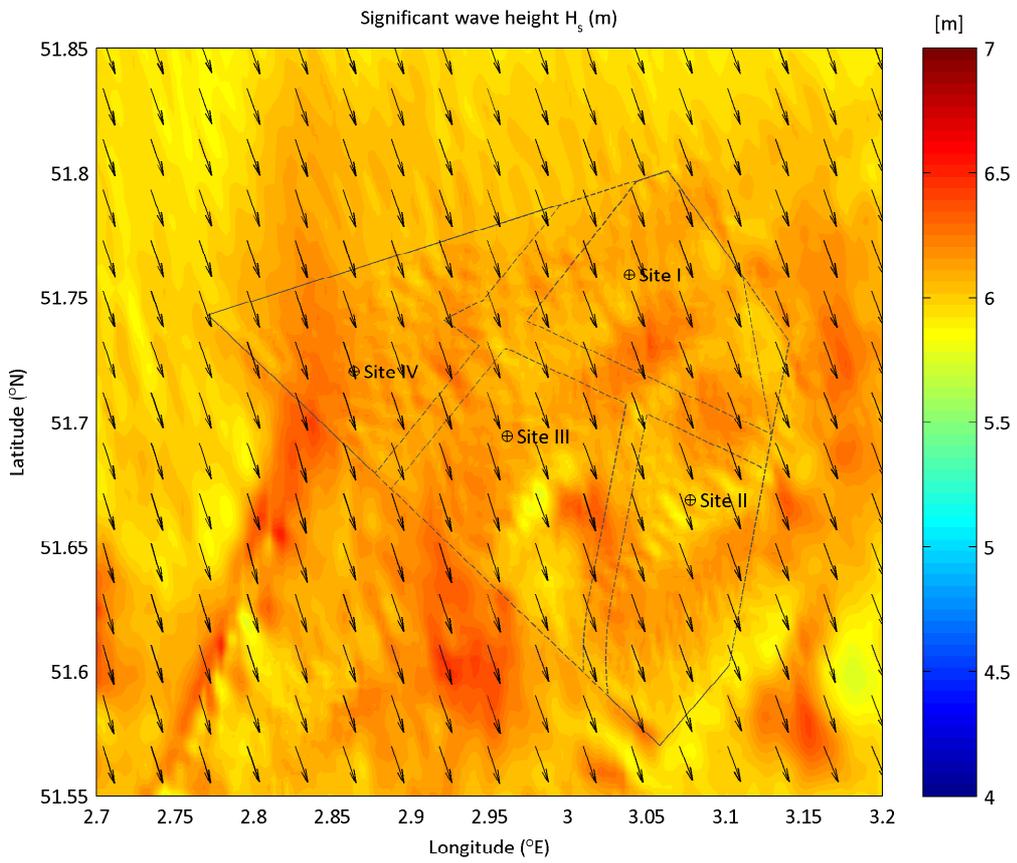
Extreme wave condition from Sector315 (°N) - 345 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.068



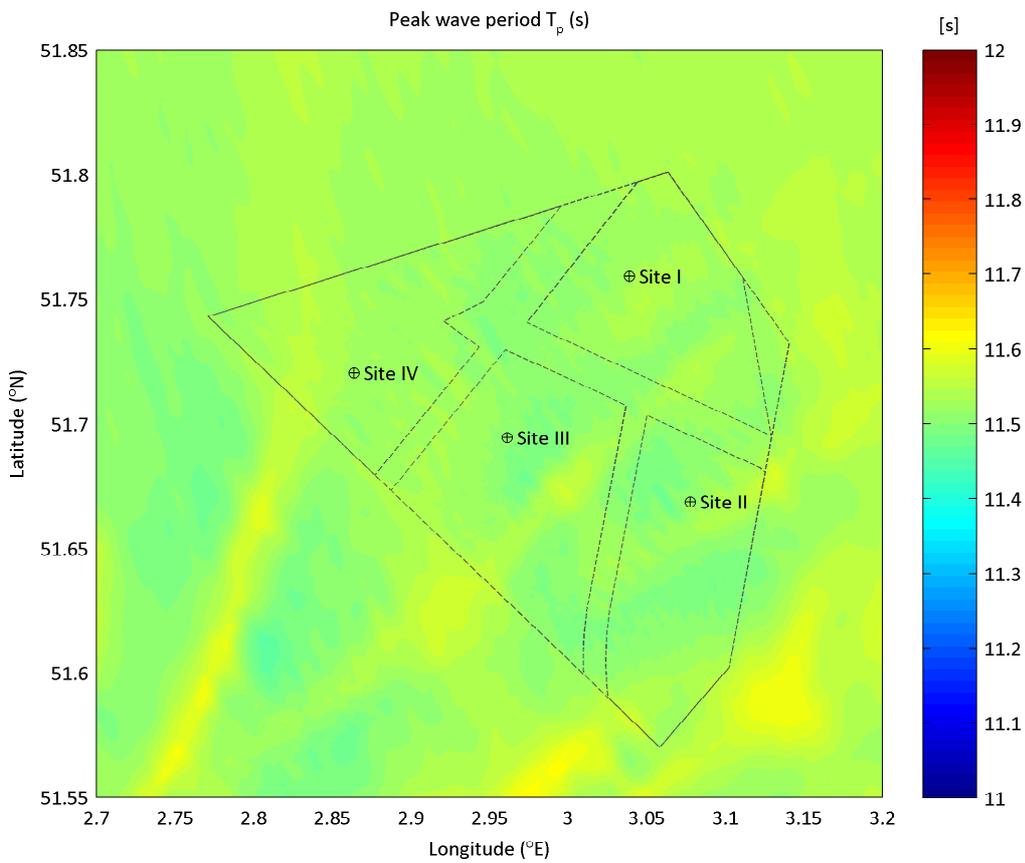
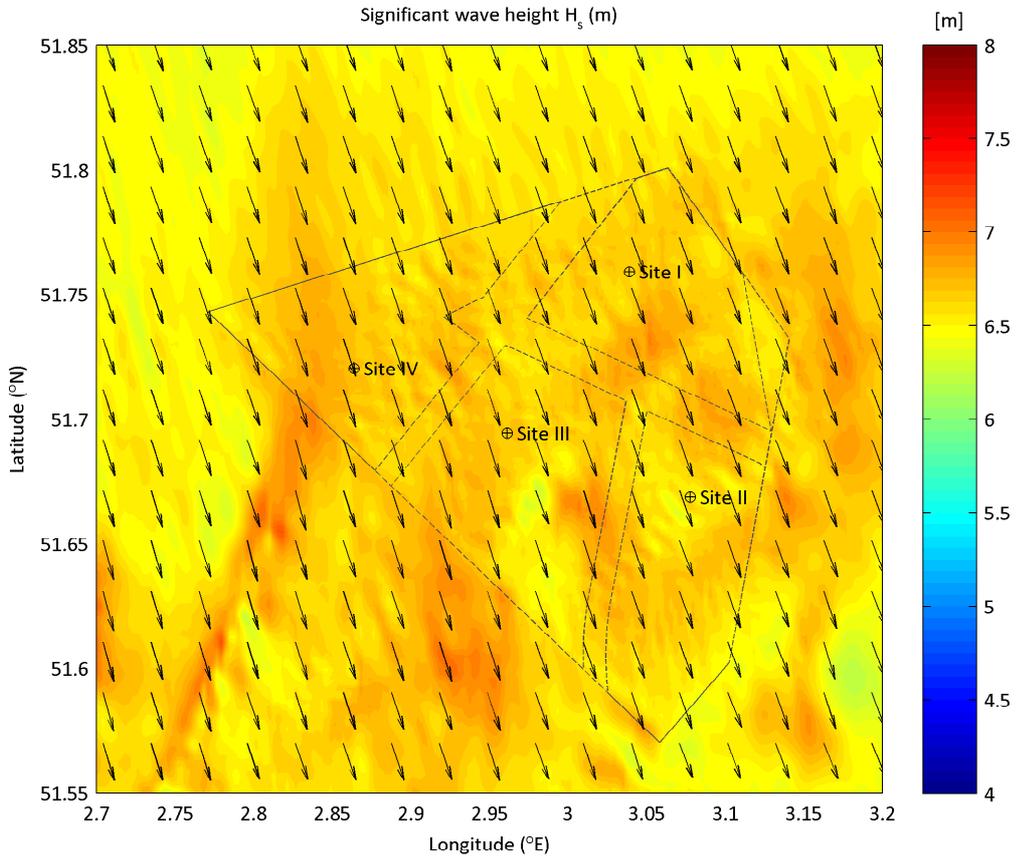
Extreme wave condition from Sector315 ( $^{\circ}$ N) - 345 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.069



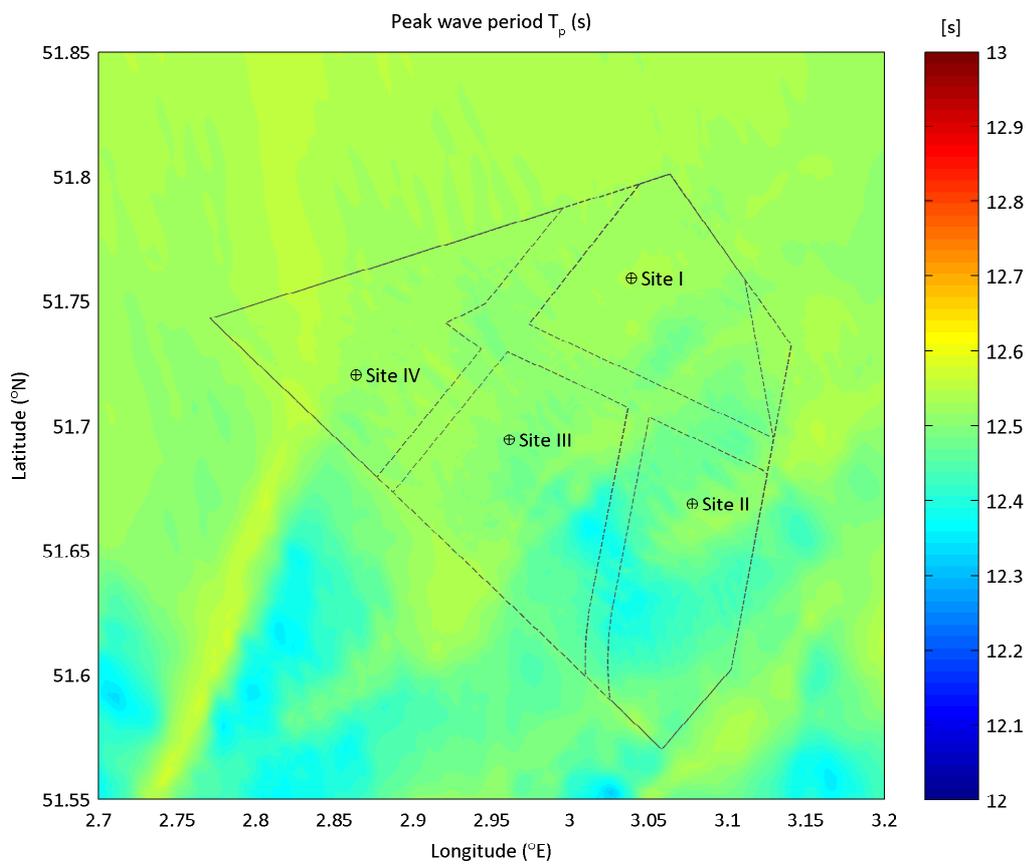
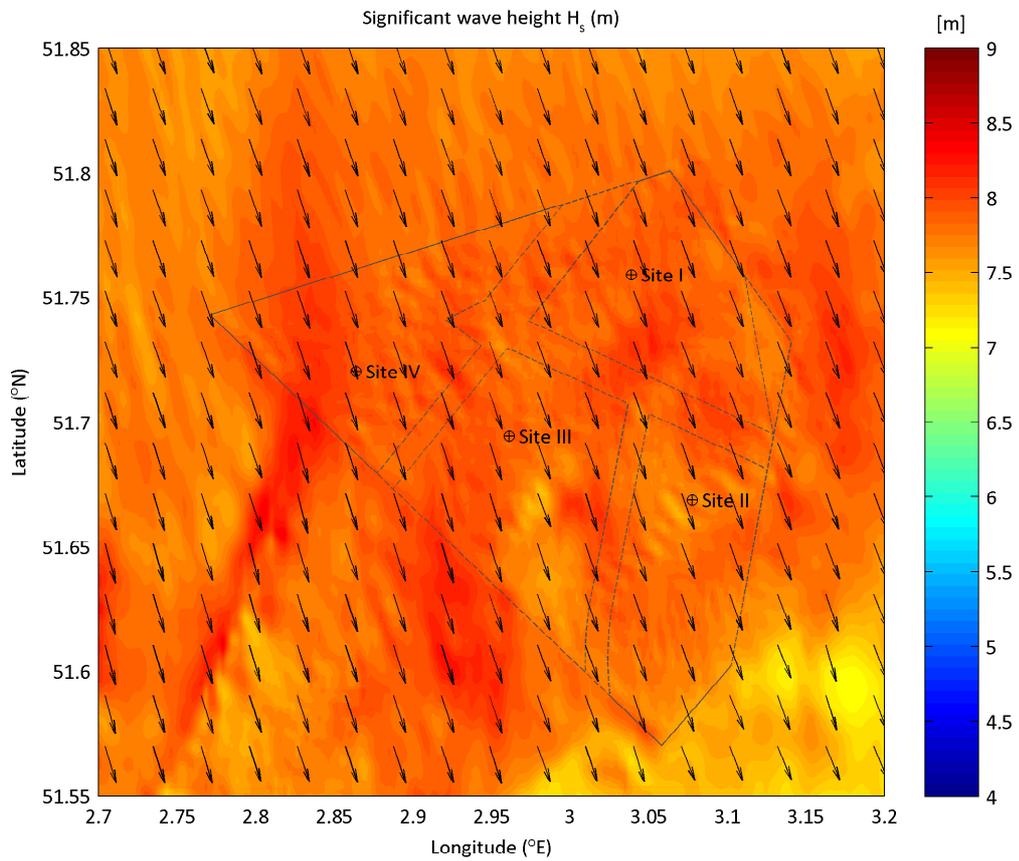
Extreme wave condition from Sector315 ( $^{\circ}$ N) - 345 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.070



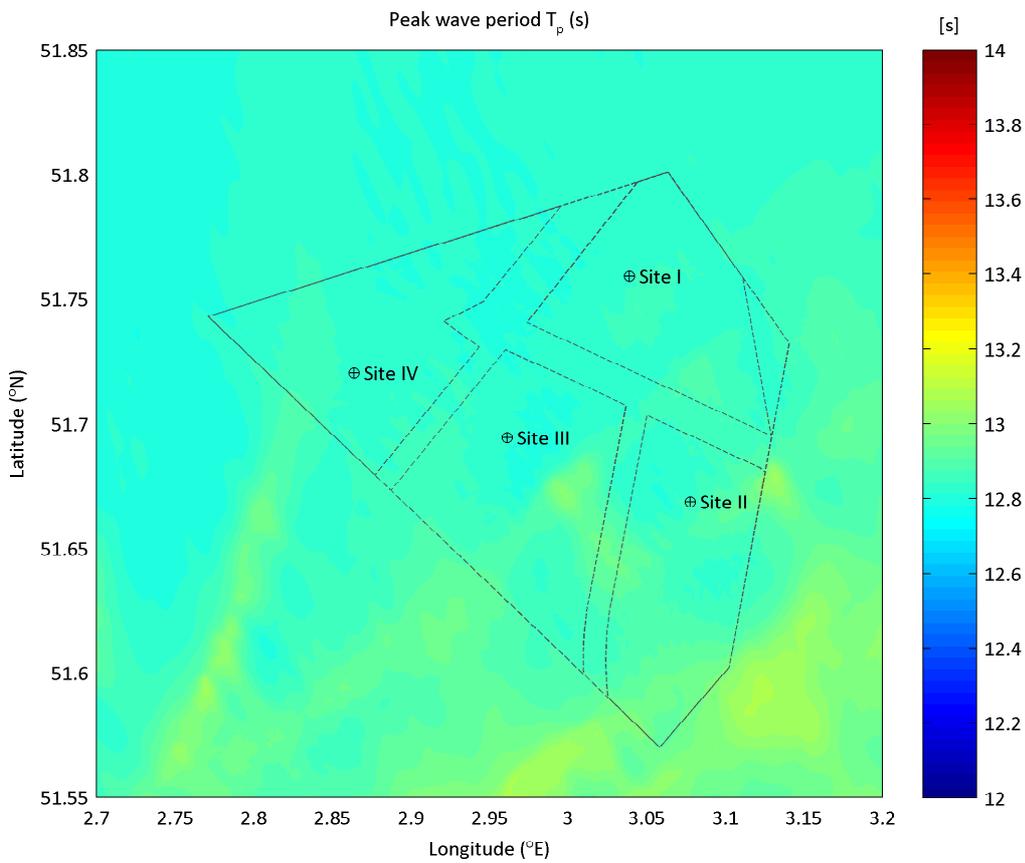
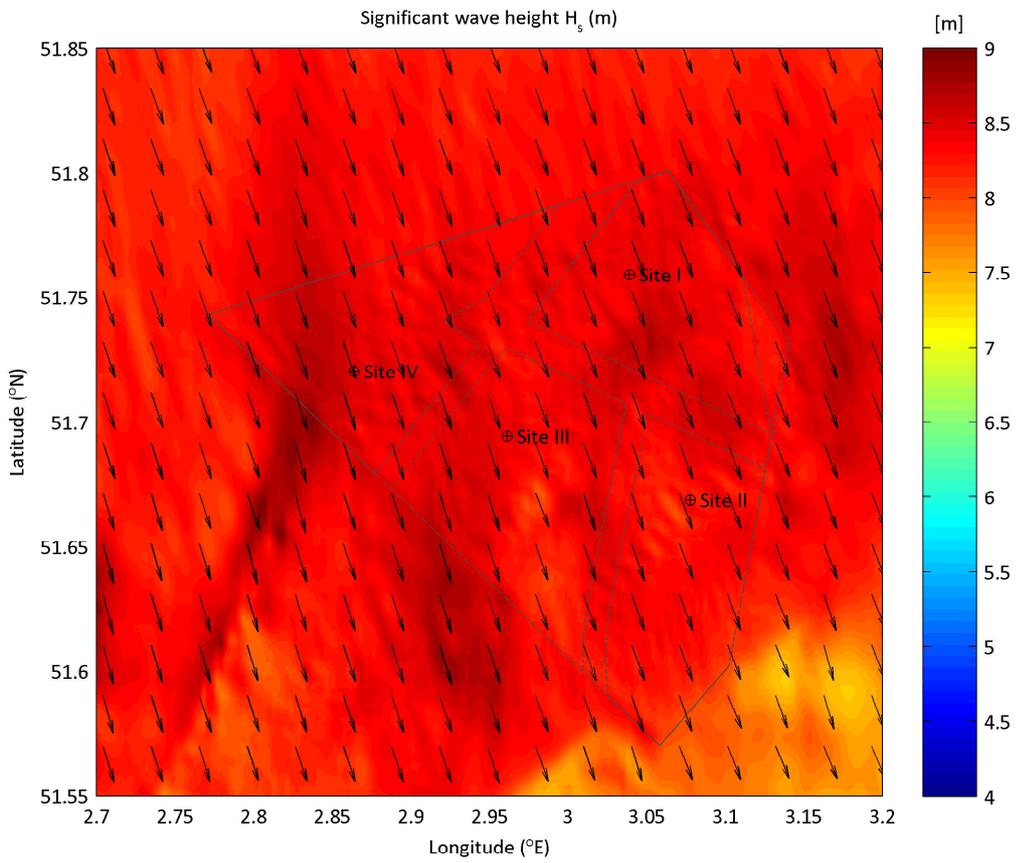
Extreme wave condition from Sector315 ( $^{\circ}$ N) - 345 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.071



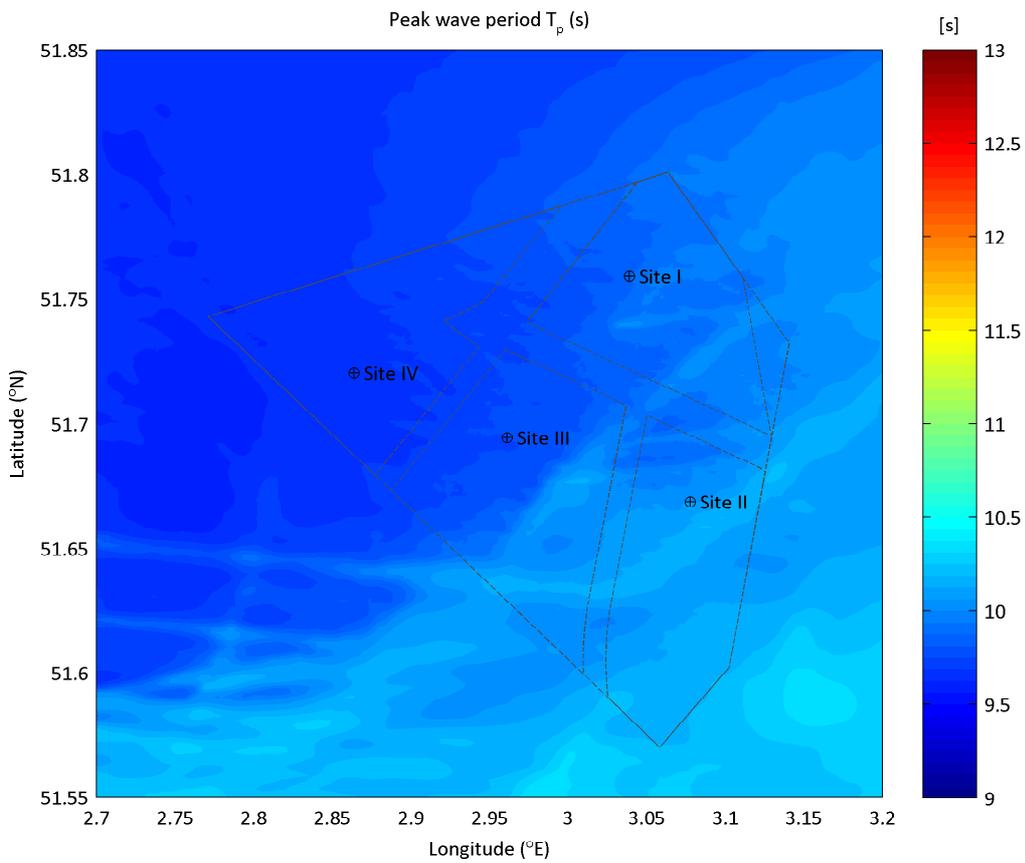
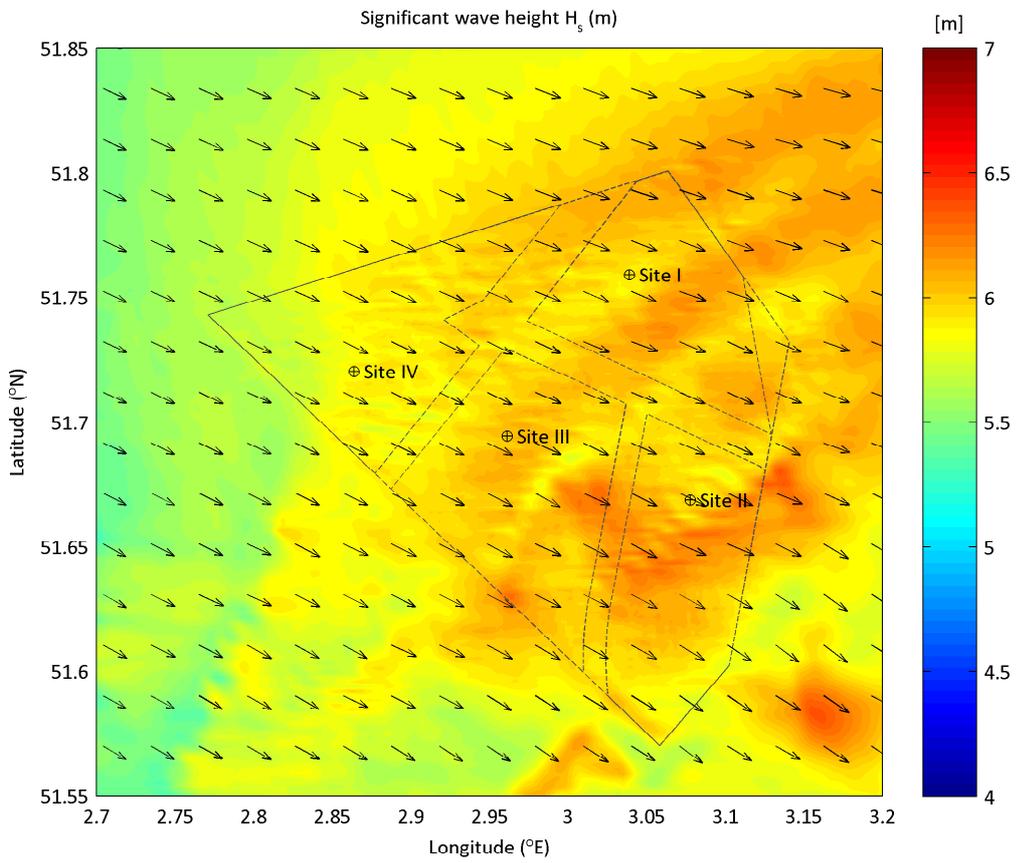
Extreme wave condition from Sector315 (°N) - 345 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.072



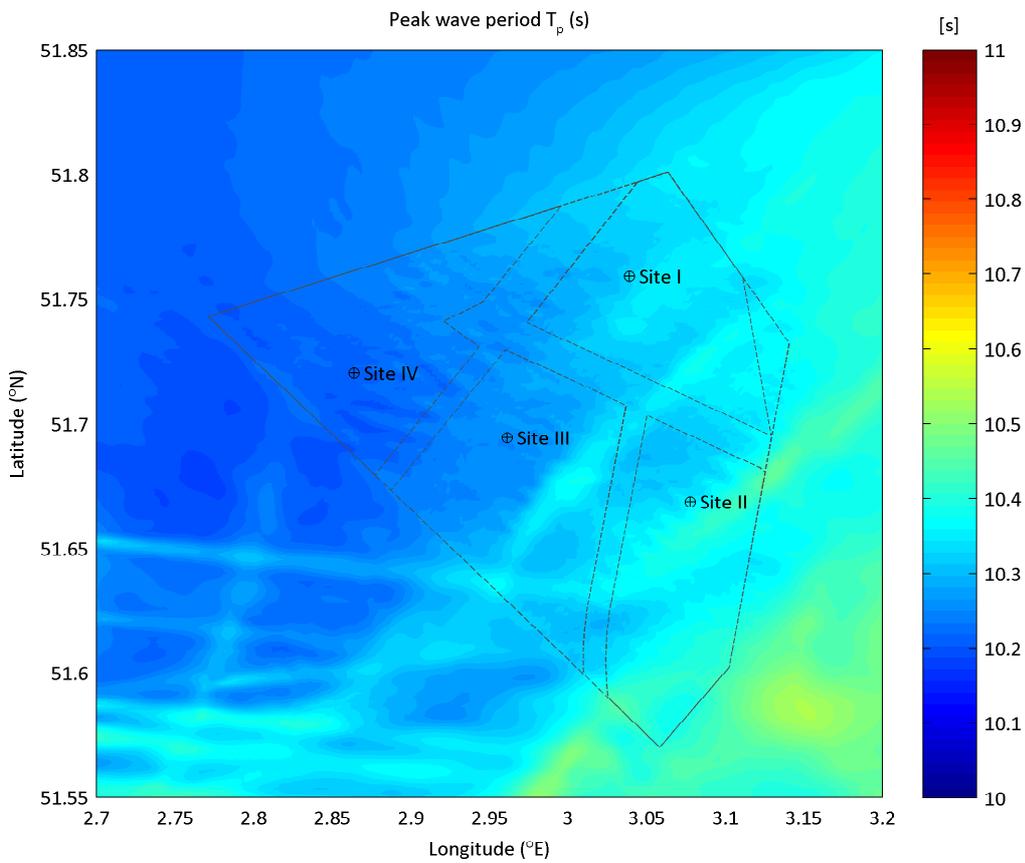
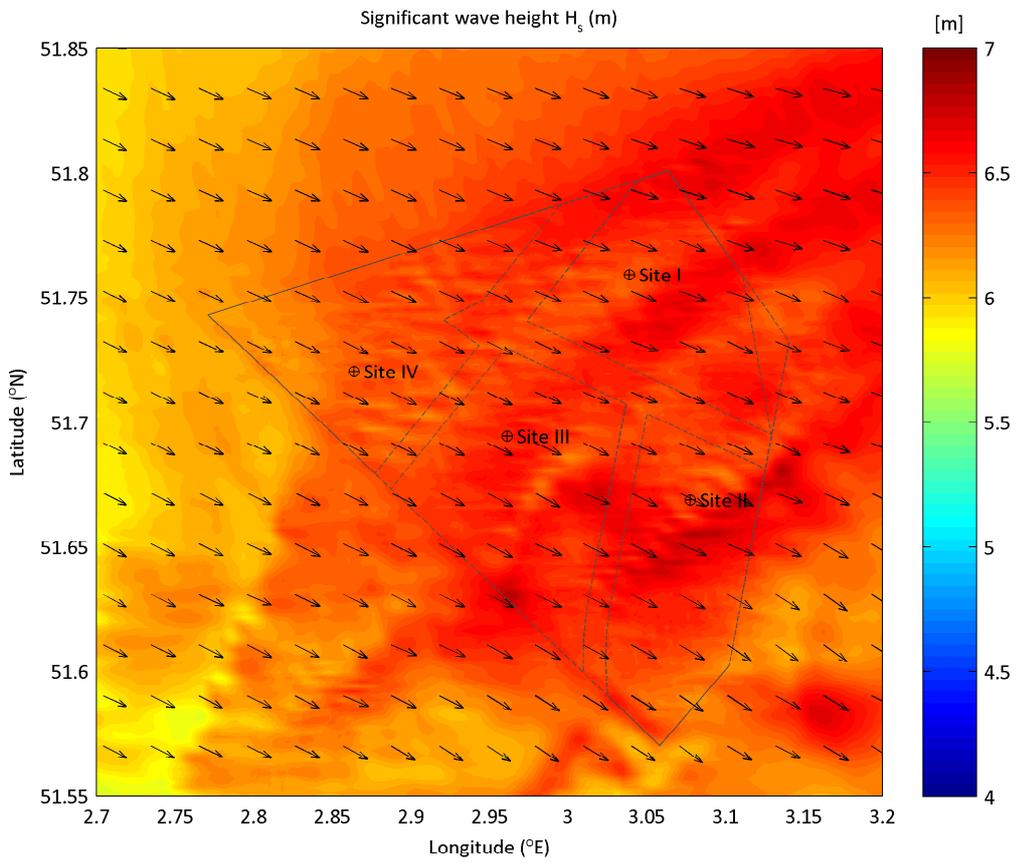
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

maximum still water level

**Deltares**

App. B.3.073



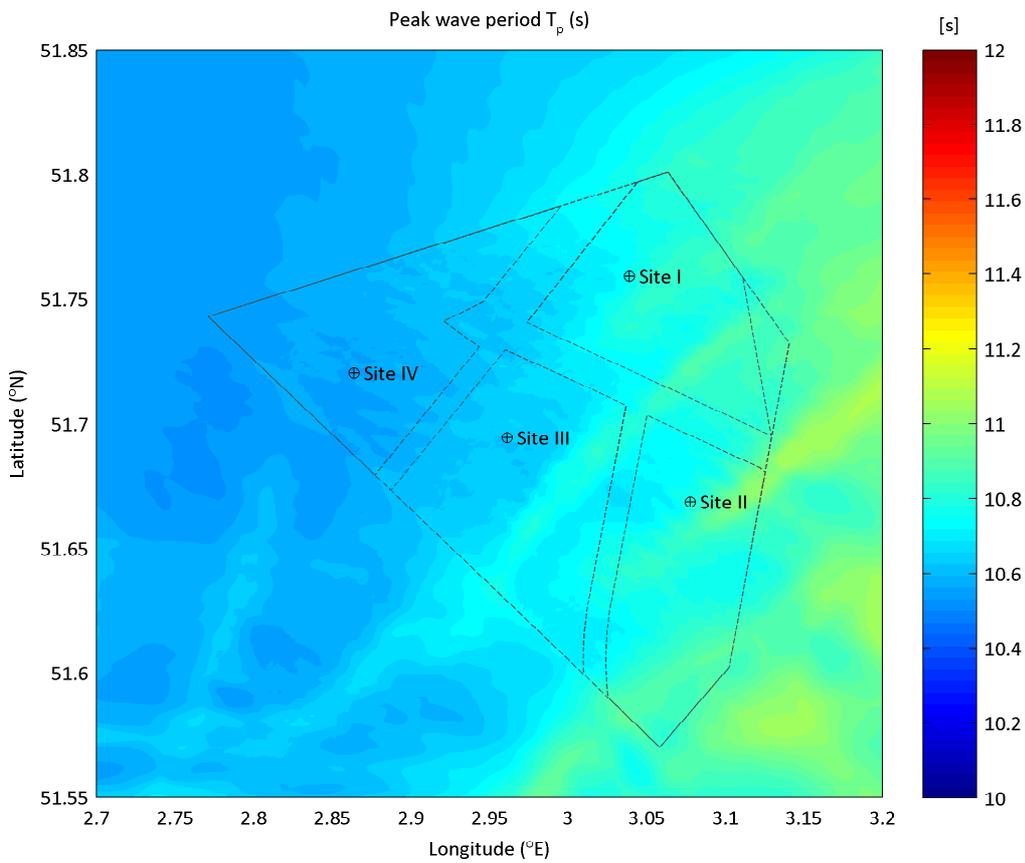
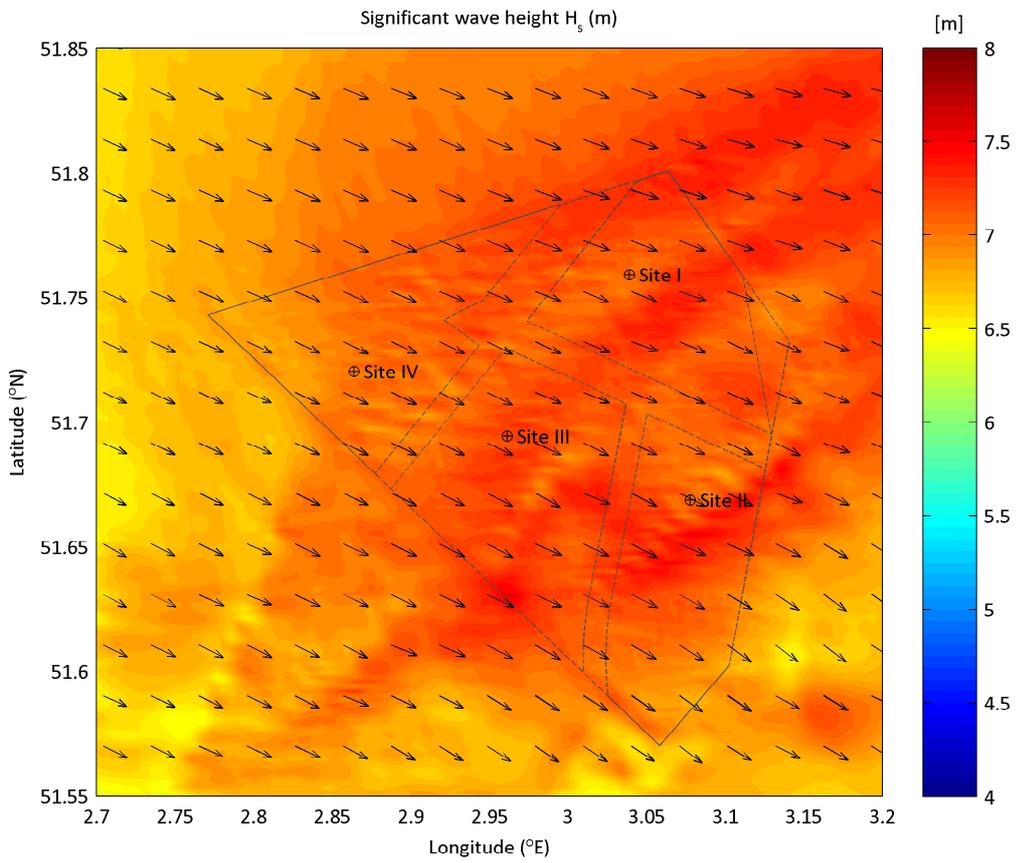
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

maximum still water level

**Deltares**

App. B.3.074



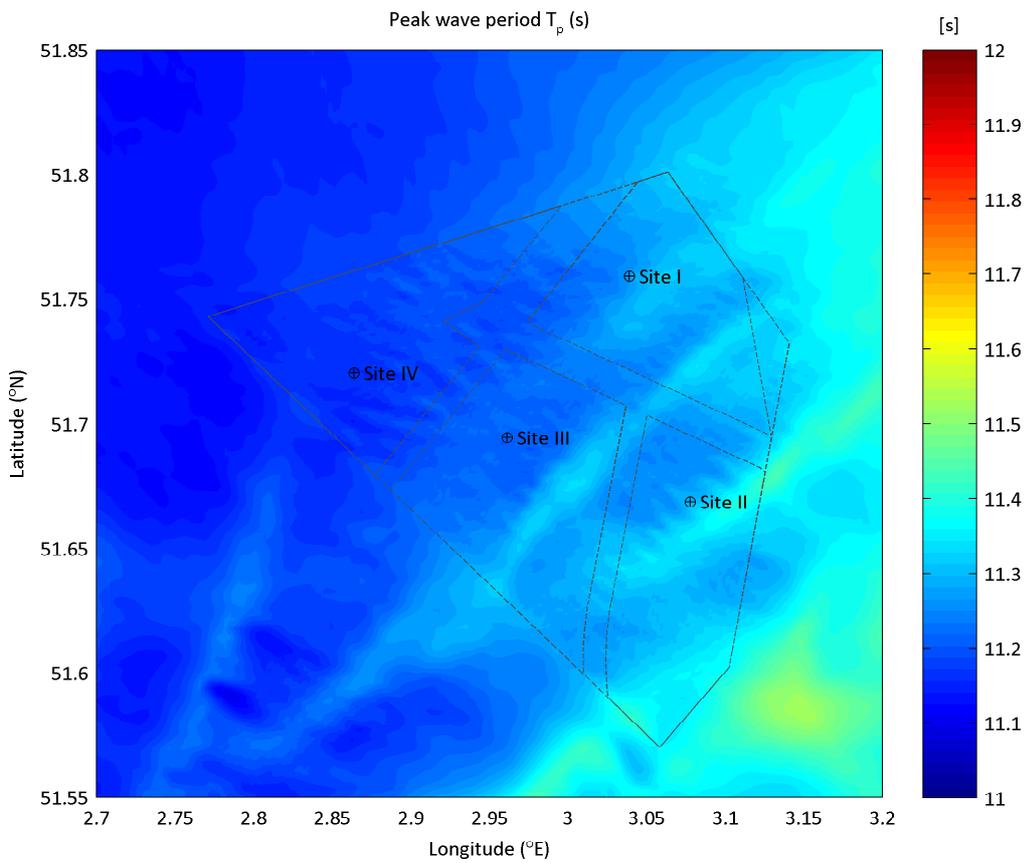
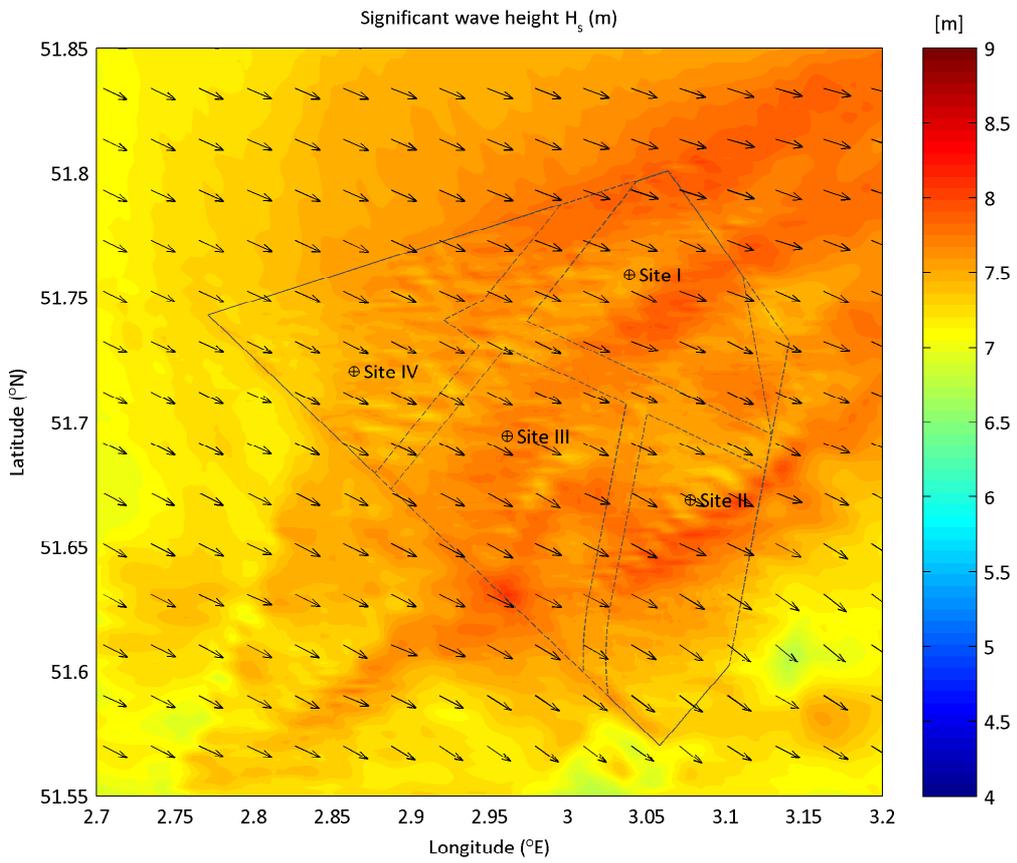
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

maximum still water level

**Deltares**

App. B.3.075



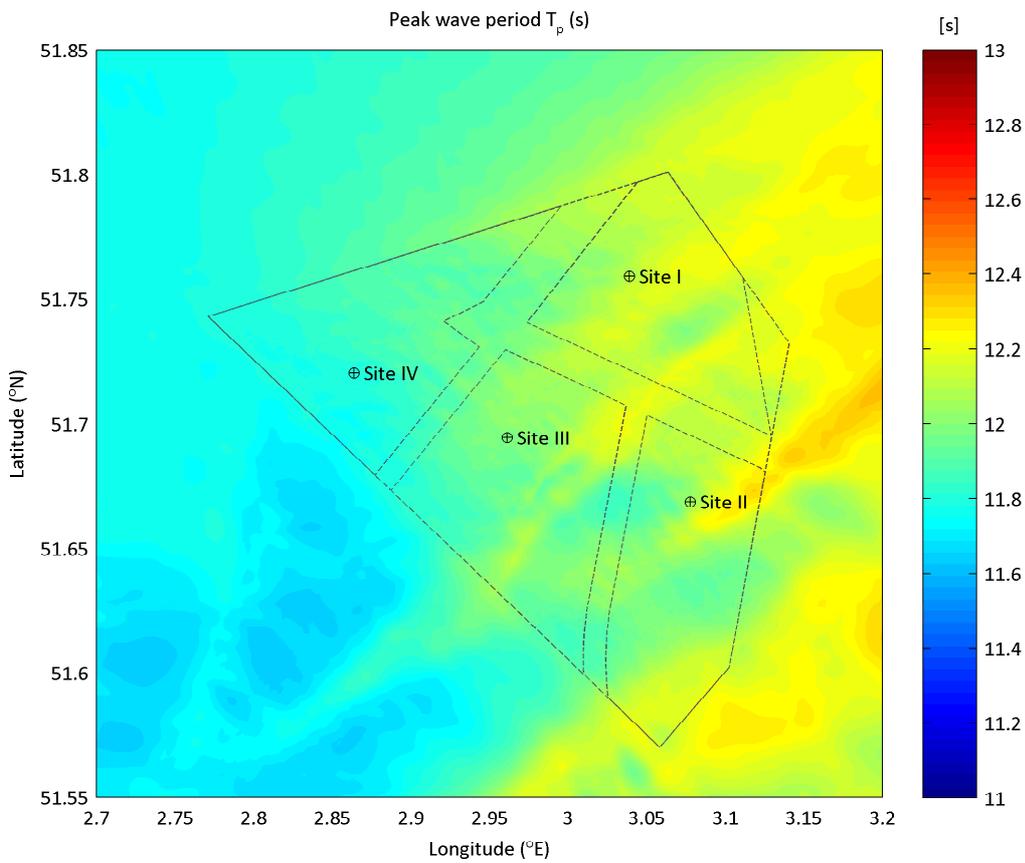
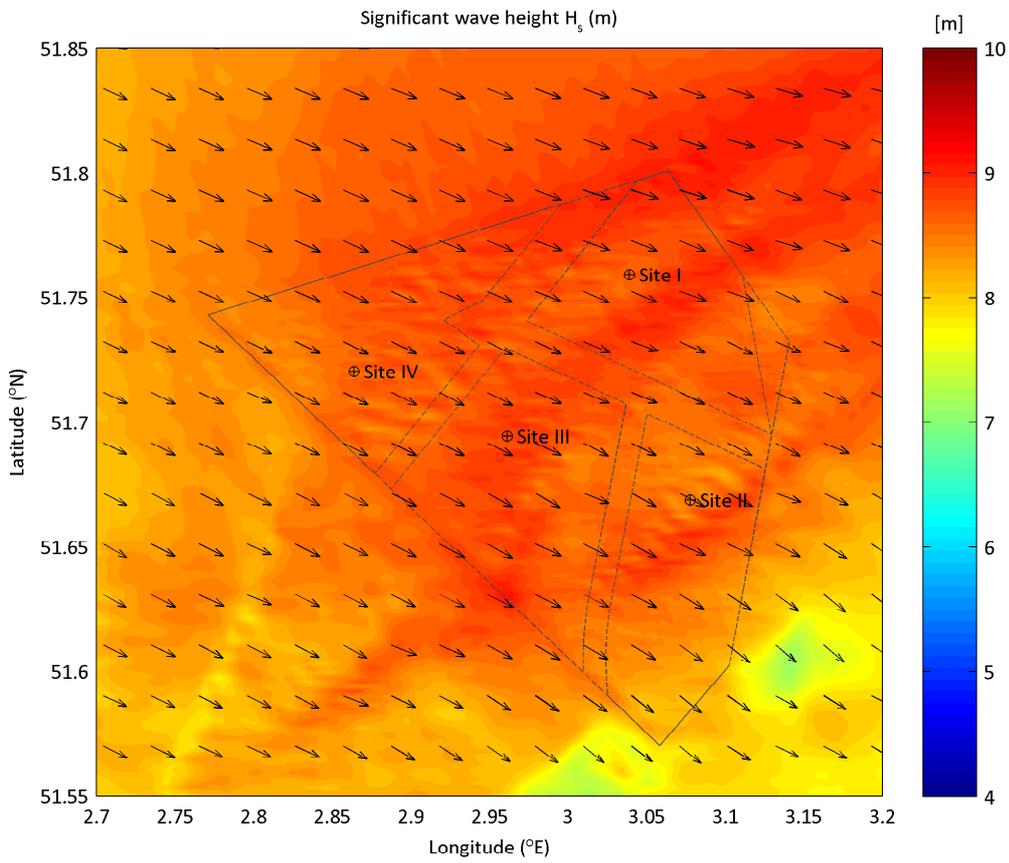
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

maximum still water level

**Deltares**

App. B.3.076



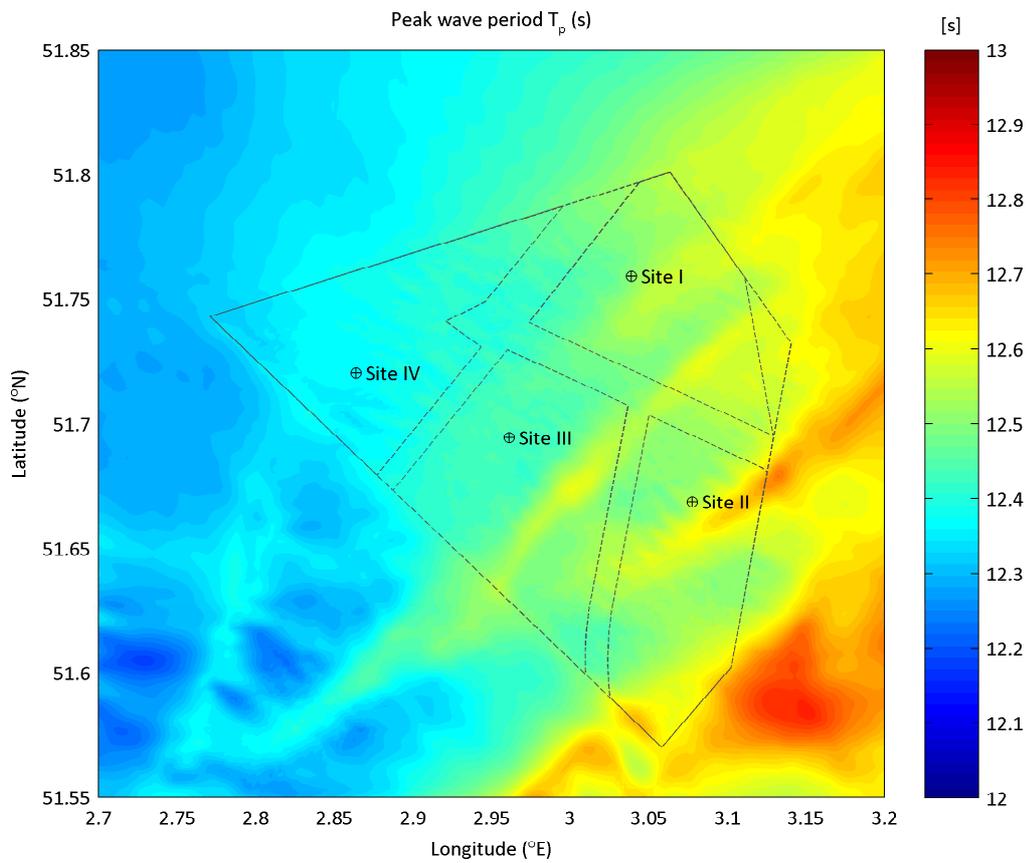
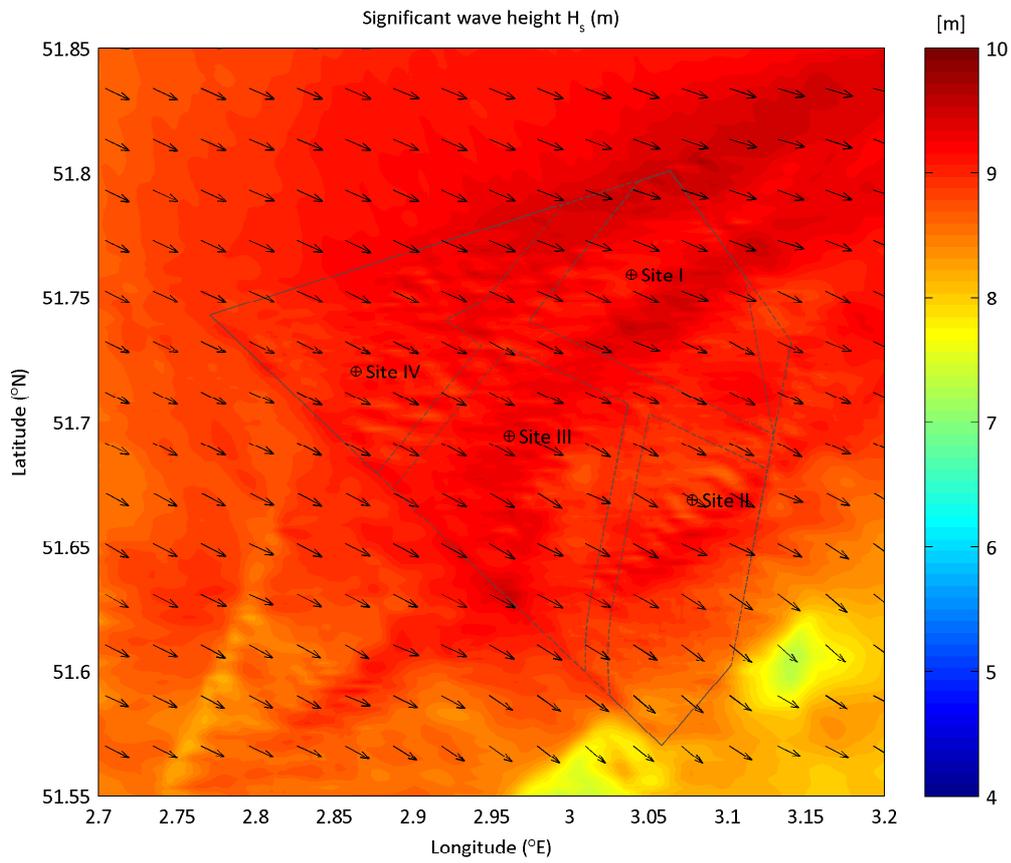
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

maximum still water level

**Deltares**

App. B.3.077



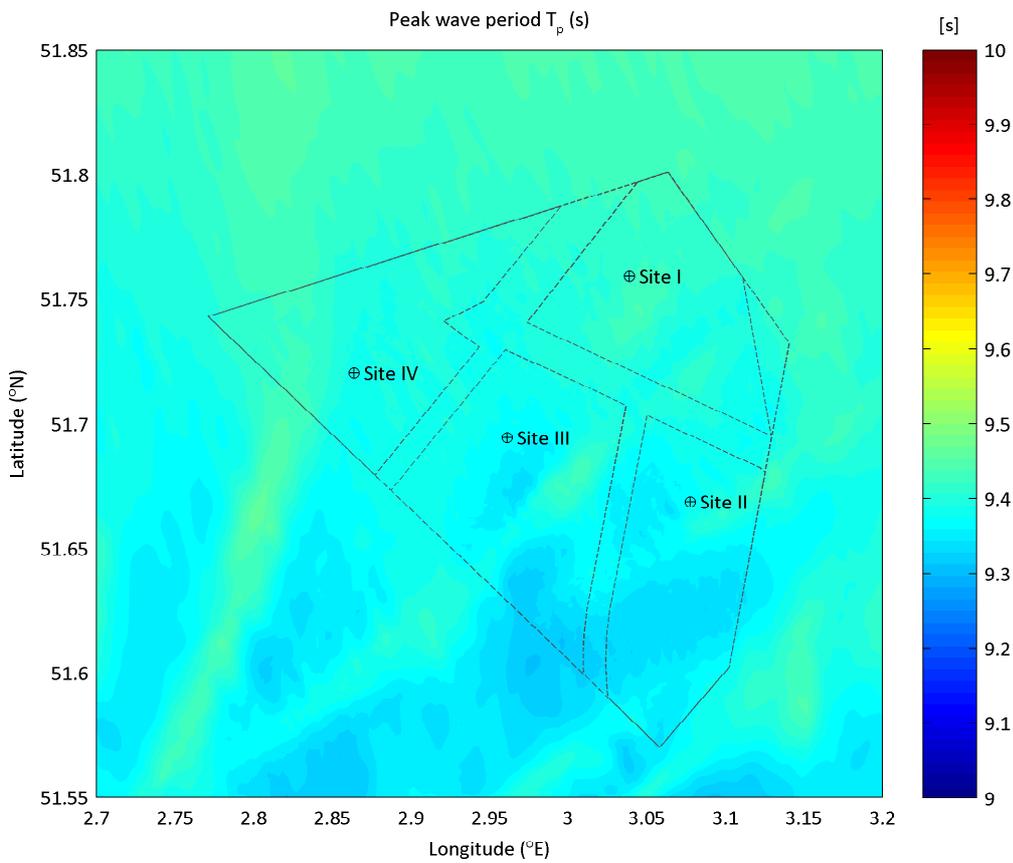
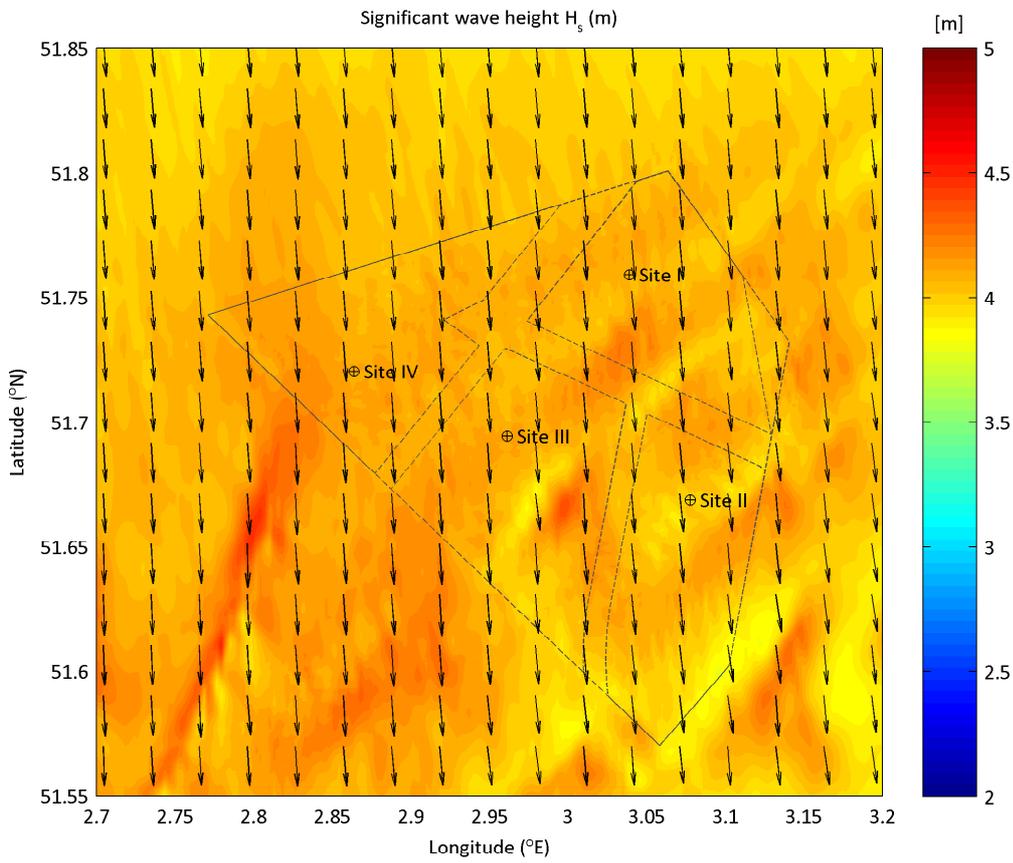
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

maximum still water level

**Deltares**

App. B.3.078



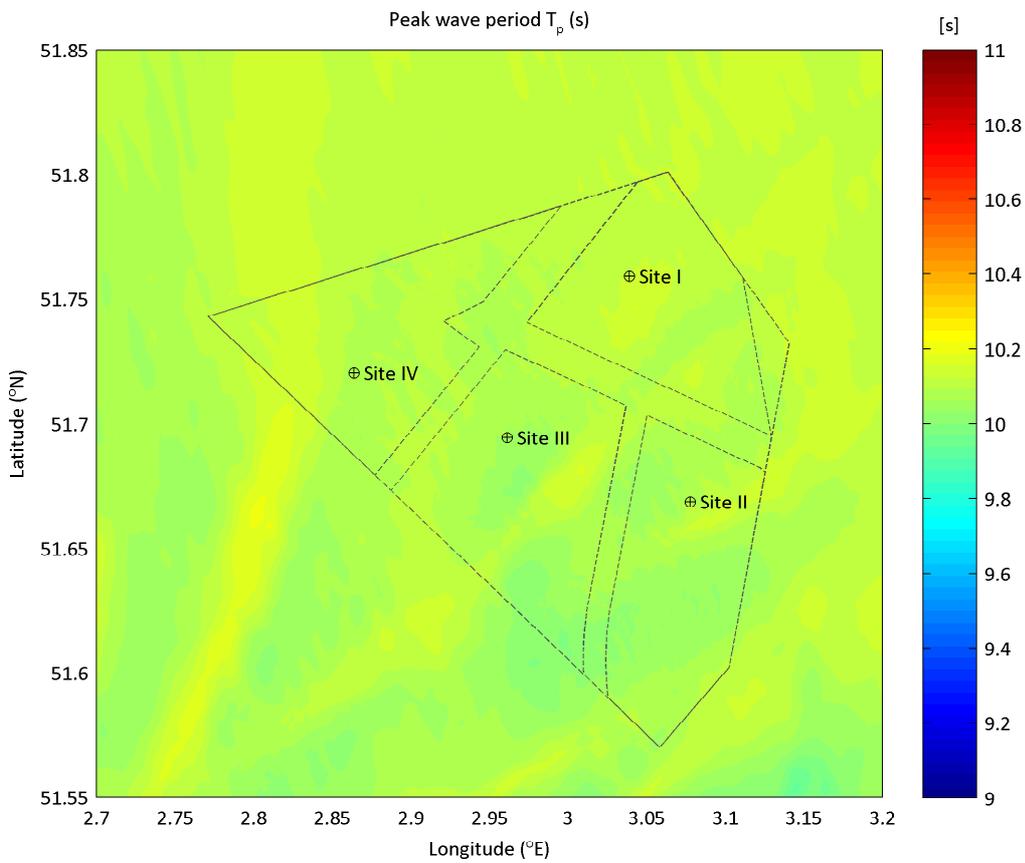
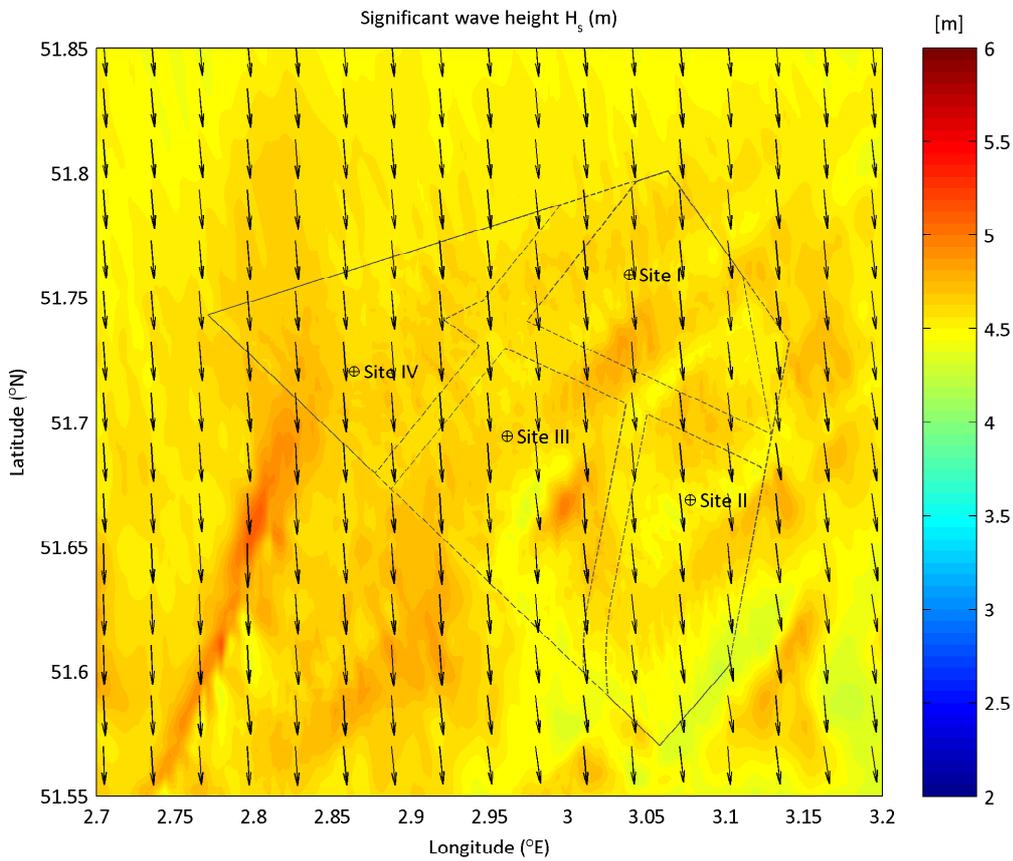
Extreme wave condition from Sector345 ( $^{\circ}$ N) - 15 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.001



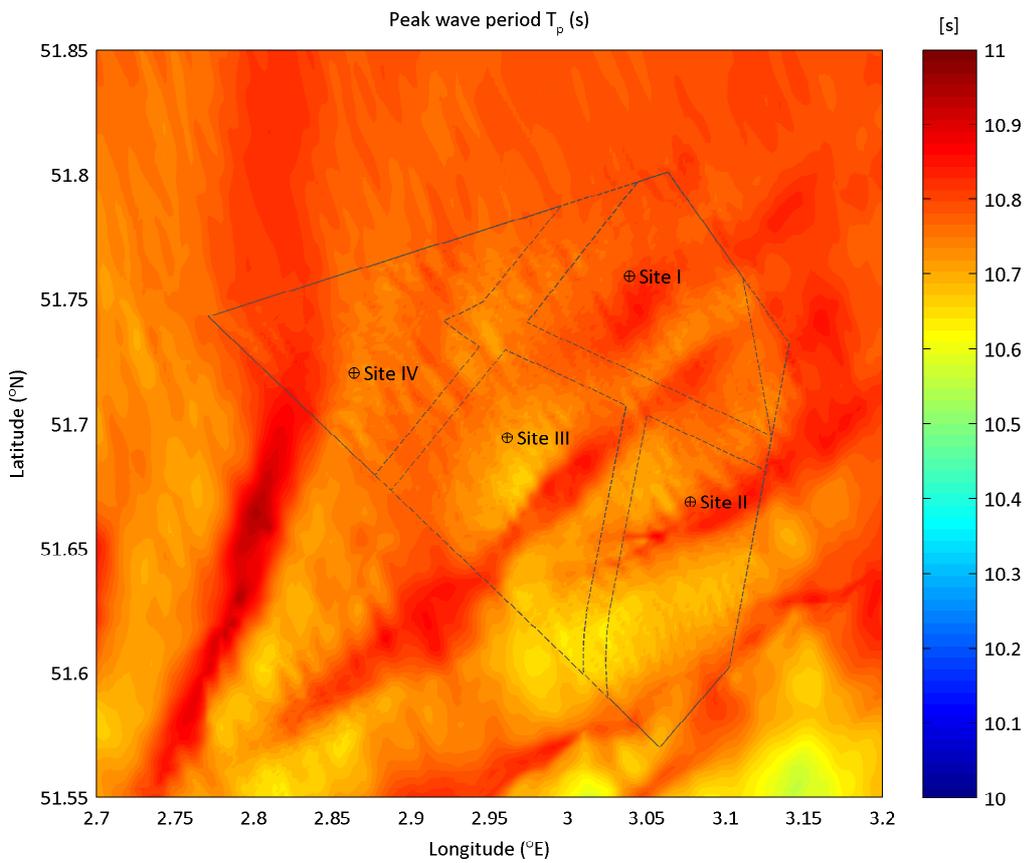
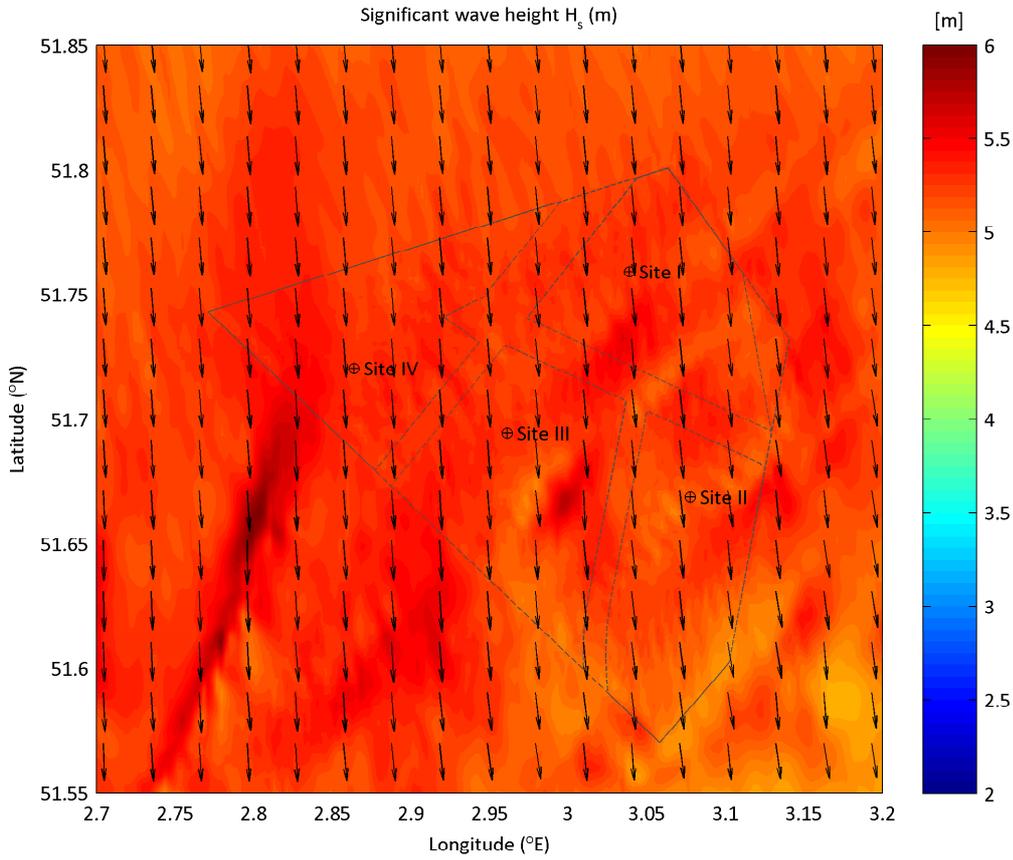
Extreme wave condition from Sector345 ( $^{\circ}$ N) - 15 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.002



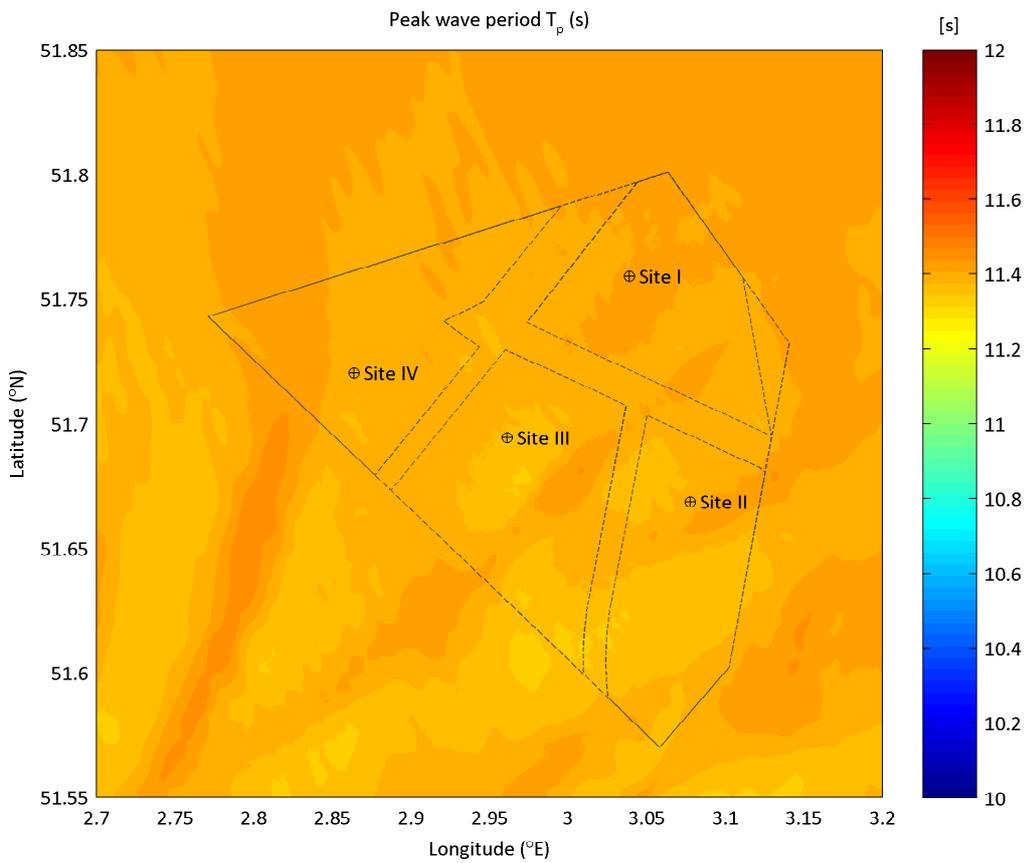
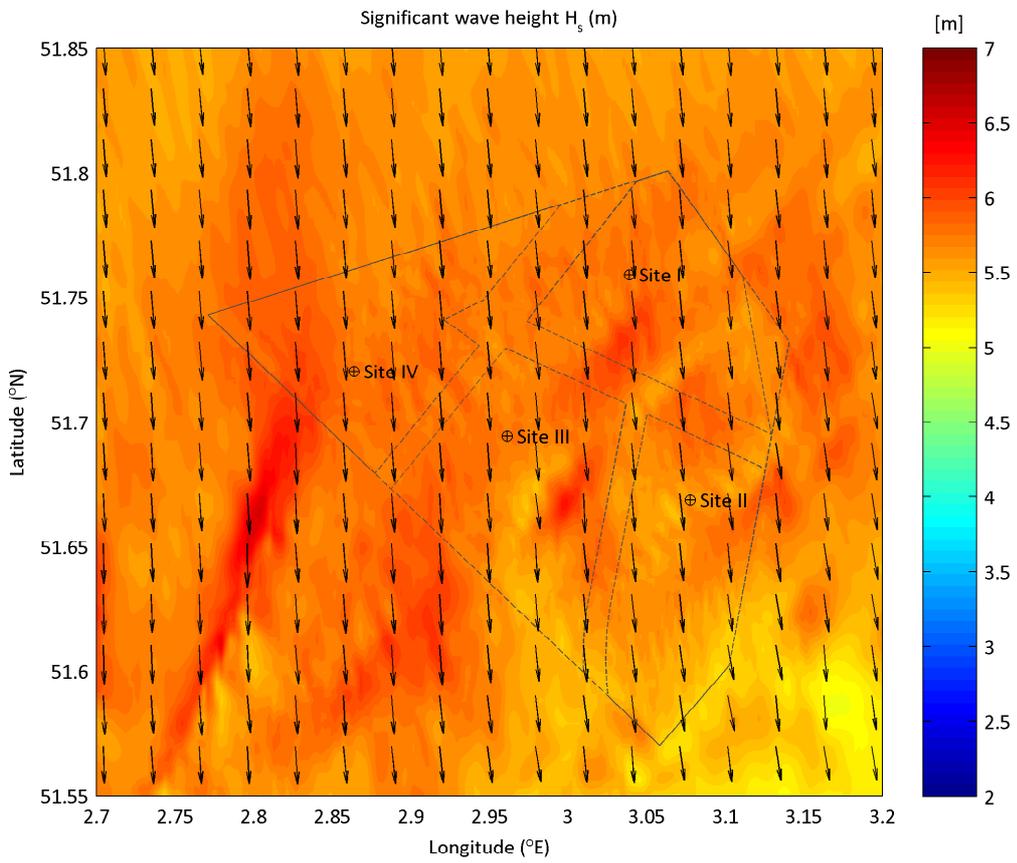
Extreme wave condition from Sector345 ( $^{\circ}$ N) - 15 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.003



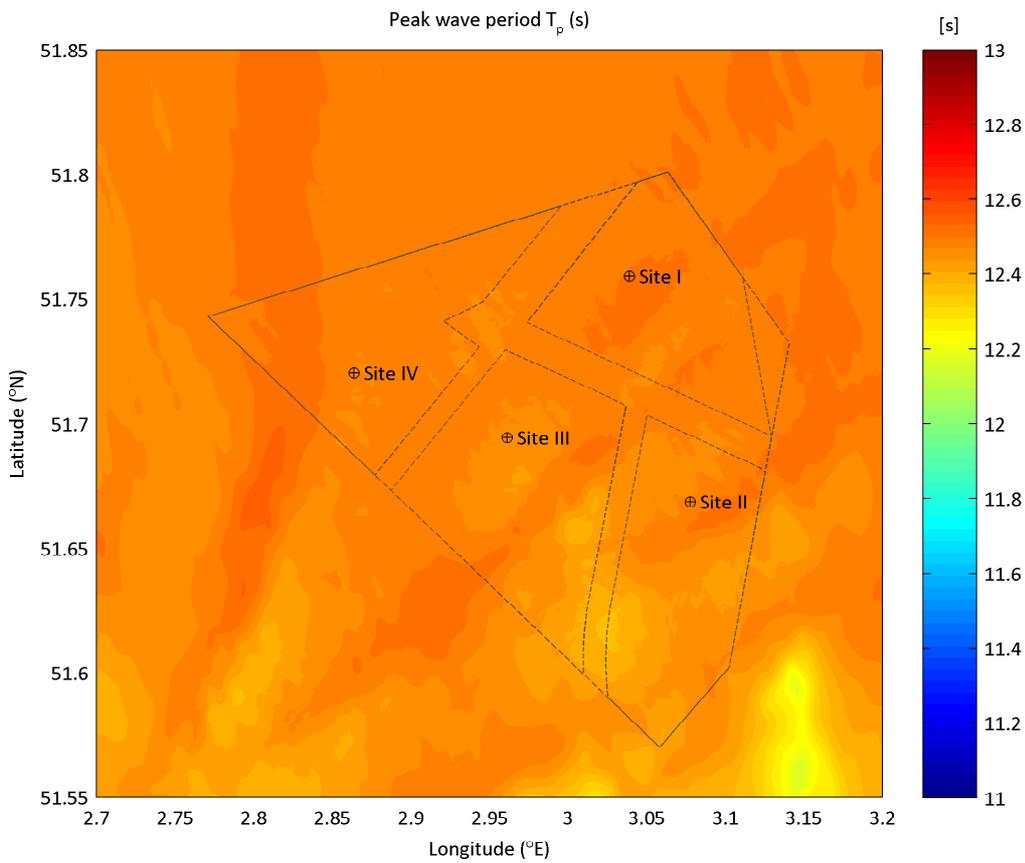
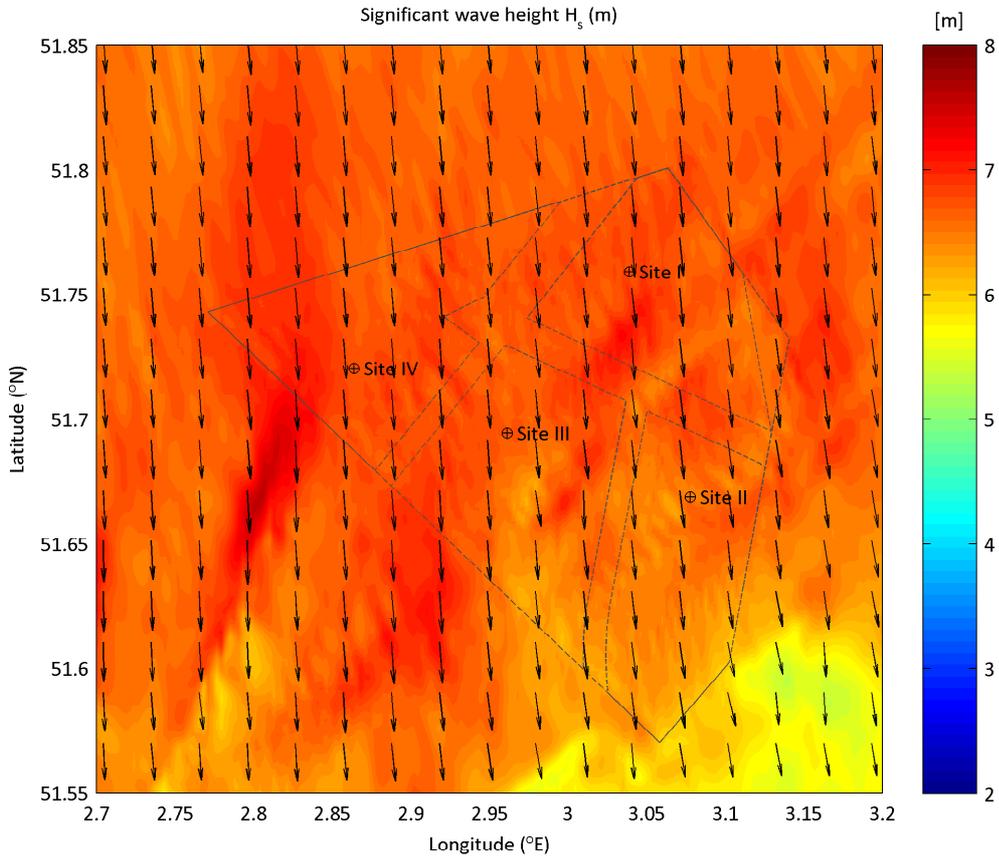
Extreme wave condition from Sector345 ( $^{\circ}$ N) - 15 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.004



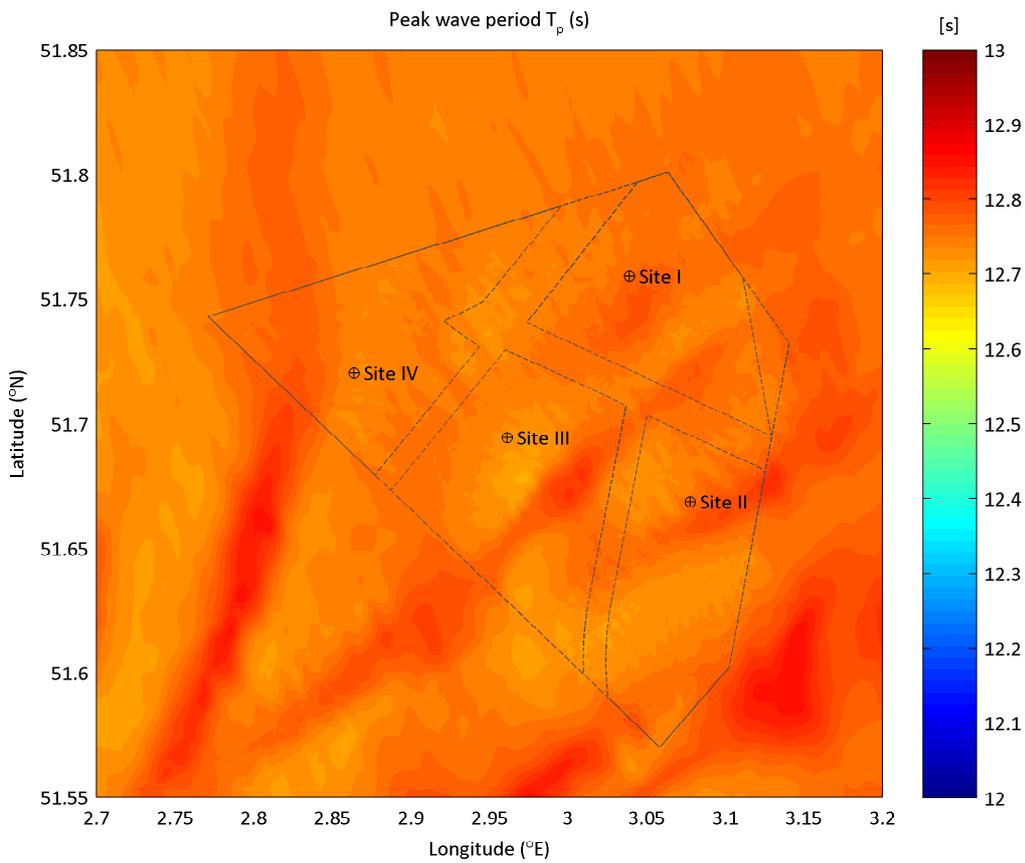
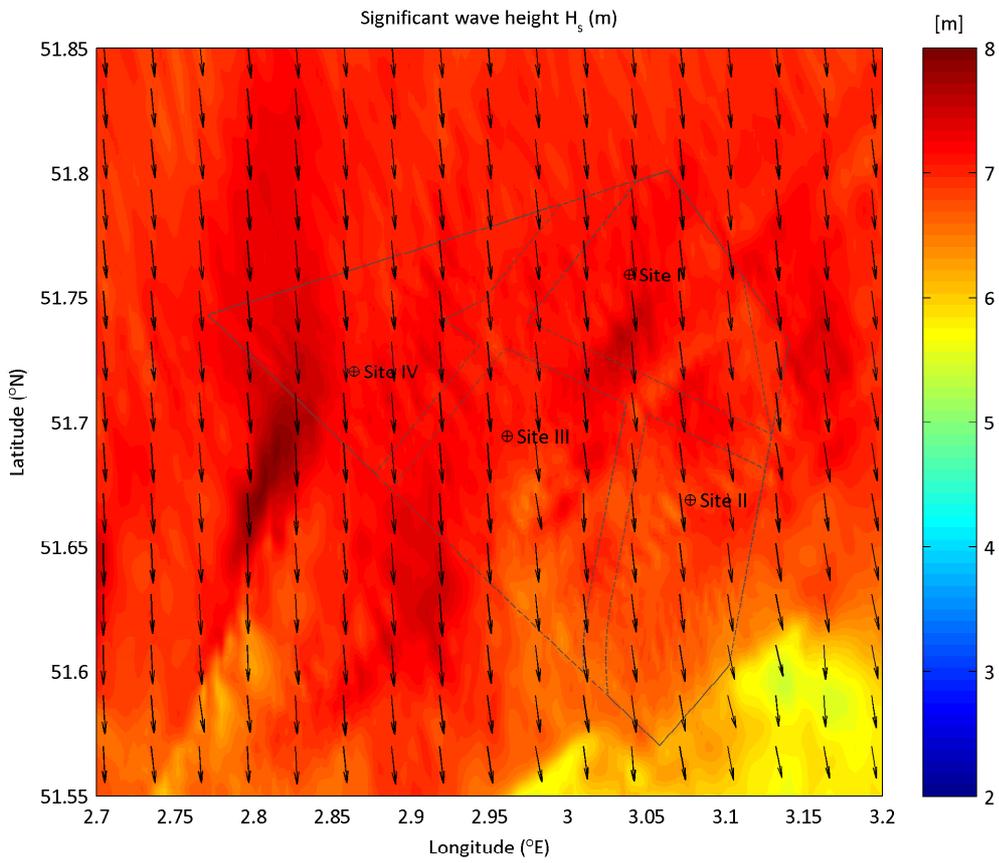
Extreme wave condition from Sector345 ( $^{\circ}$ N) - 15 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.005



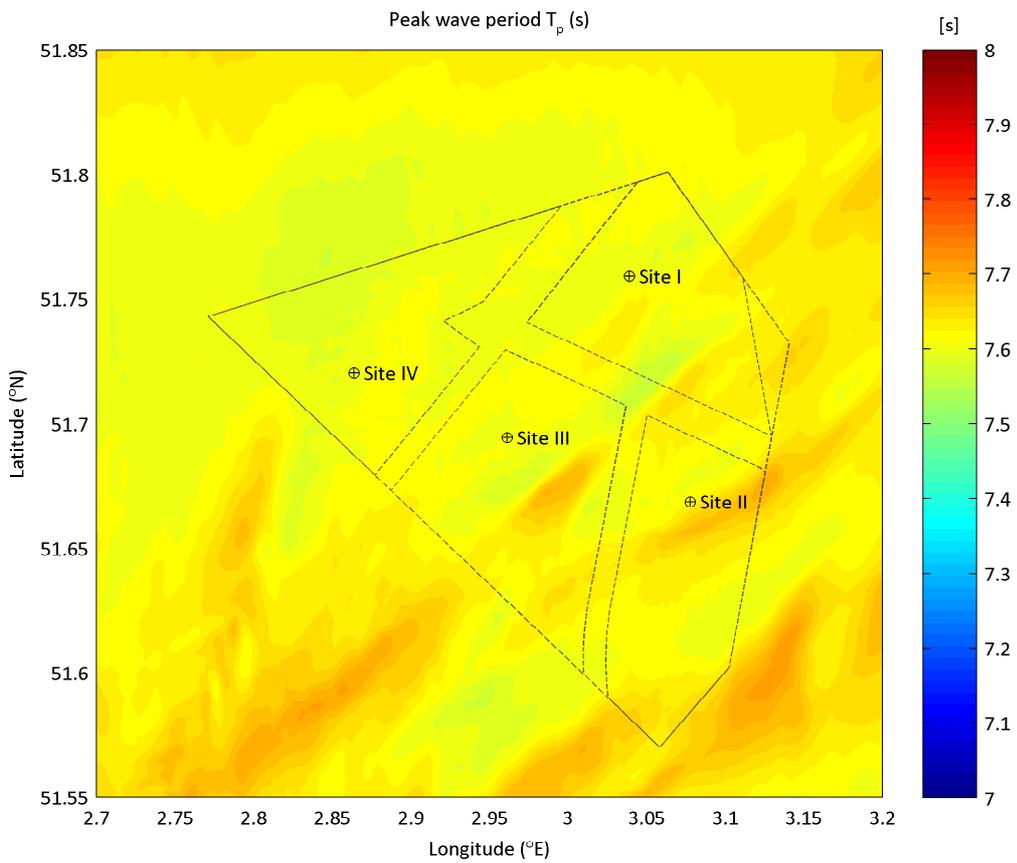
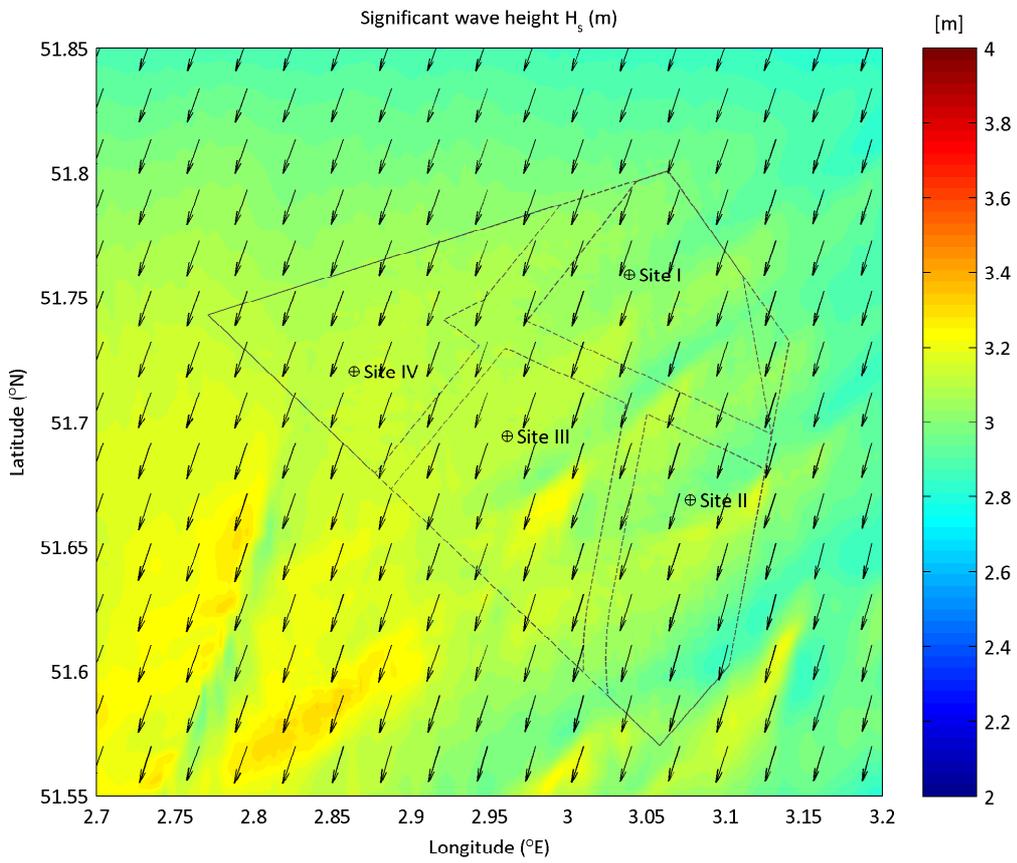
Extreme wave condition from Sector345 ( $^{\circ}$ N) - 15 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.006



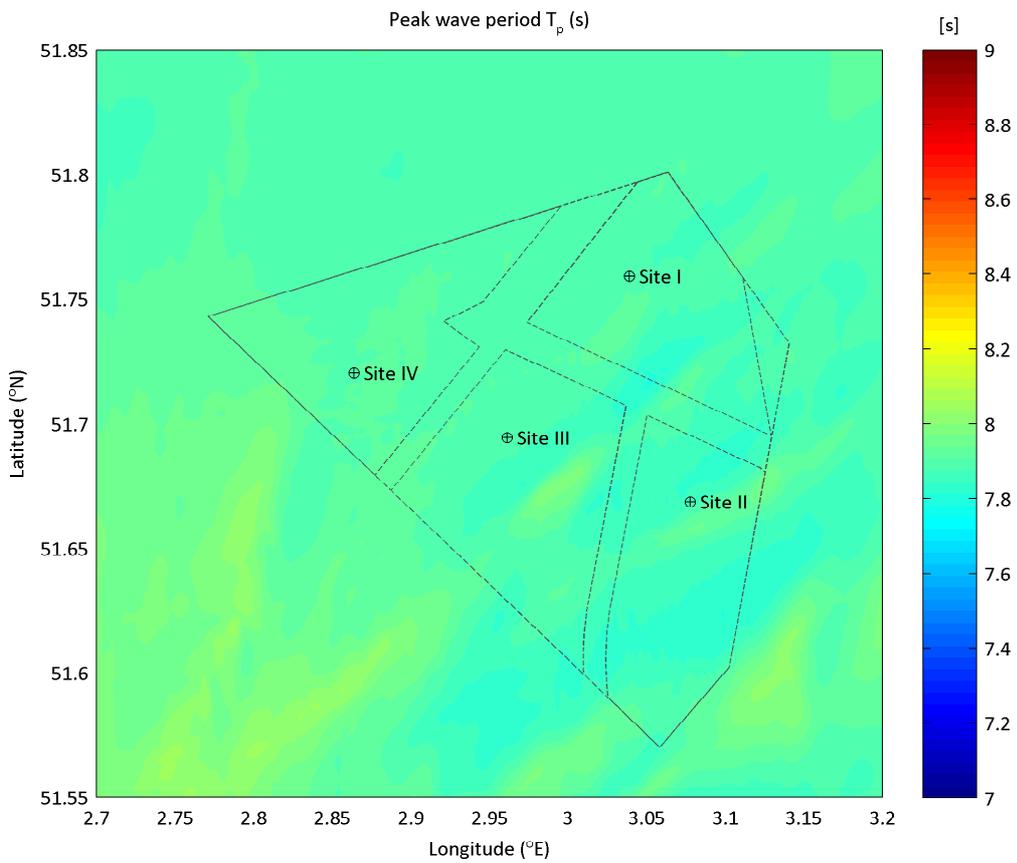
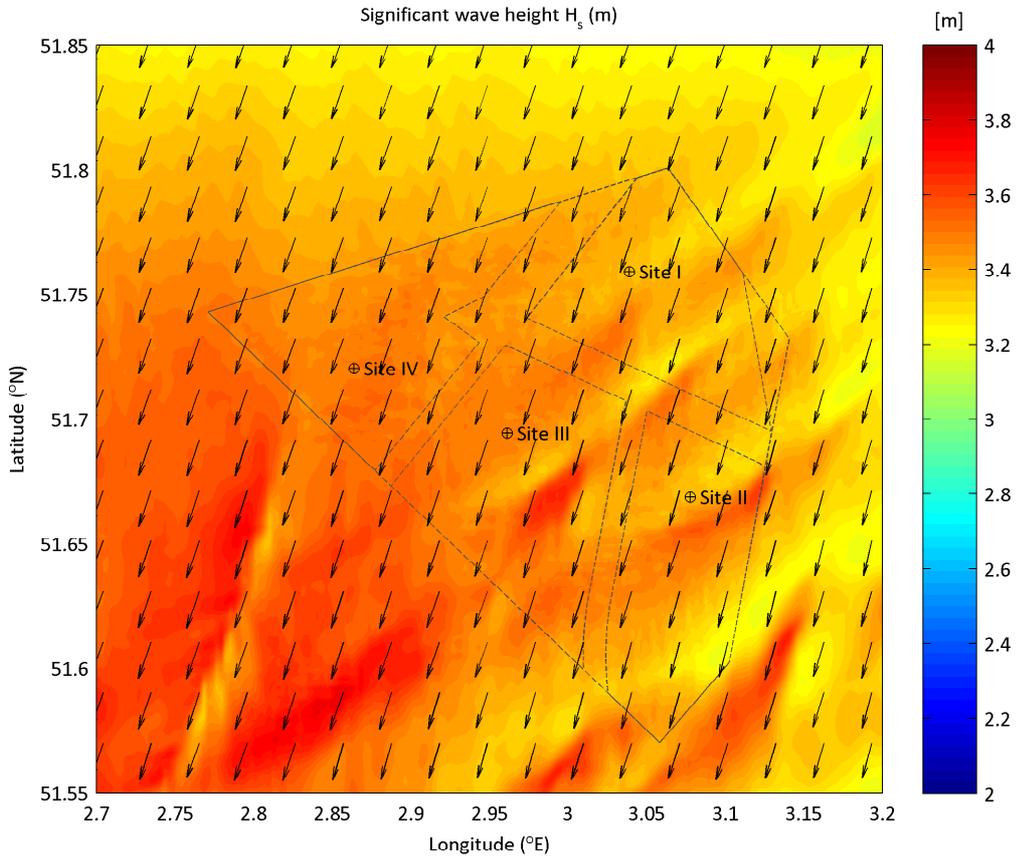
Extreme wave condition from Sector15 (°N) - 45 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.007



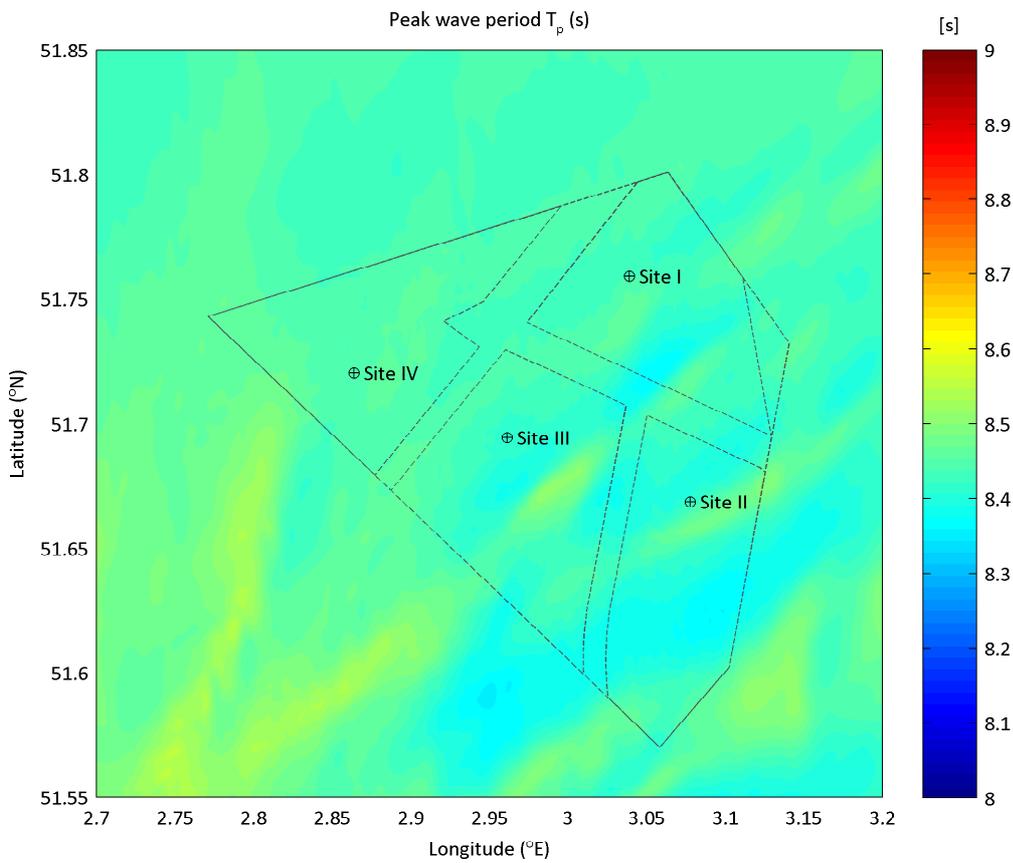
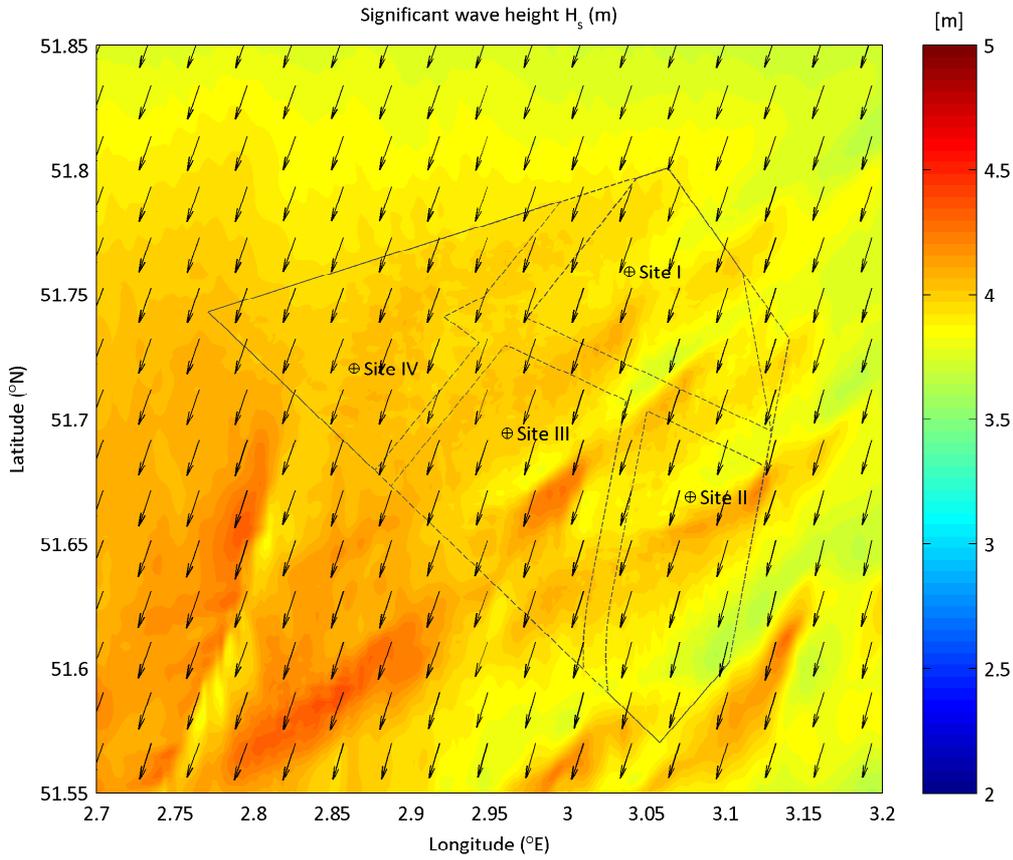
Extreme wave condition from Sector15 ( $^{\circ}$ N) - 45 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.008



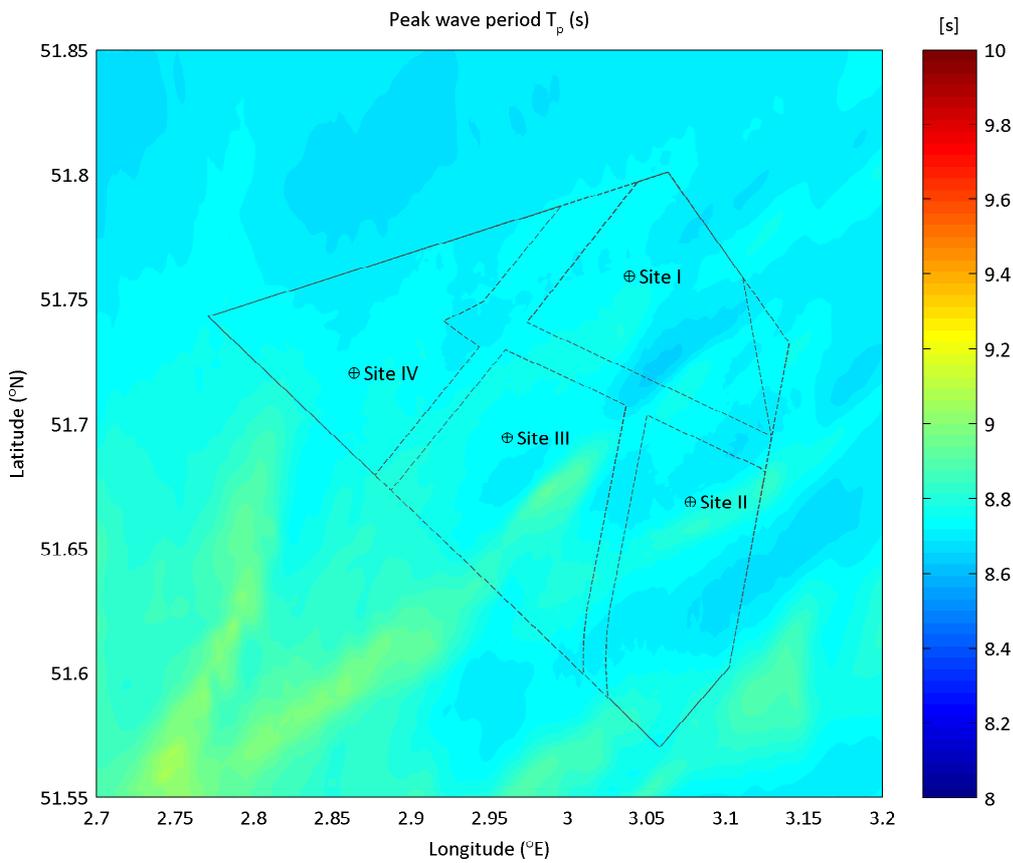
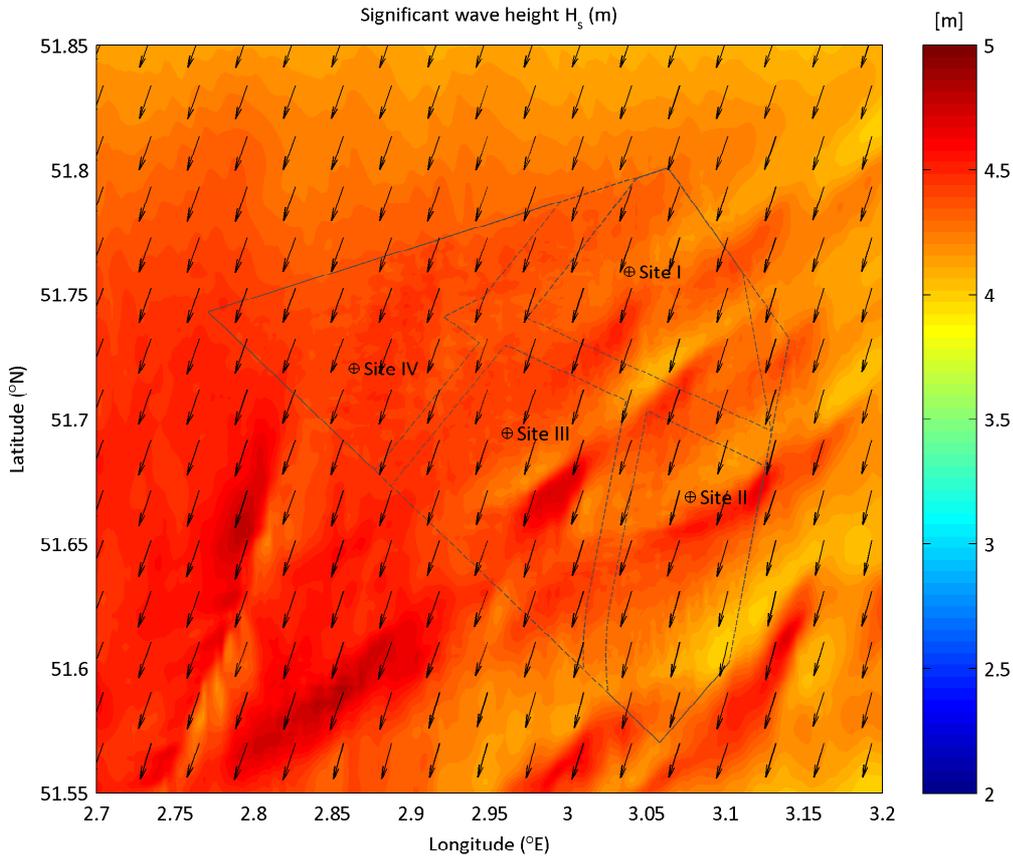
Extreme wave condition from Sector15 ( $^{\circ}$ N) - 45 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.009



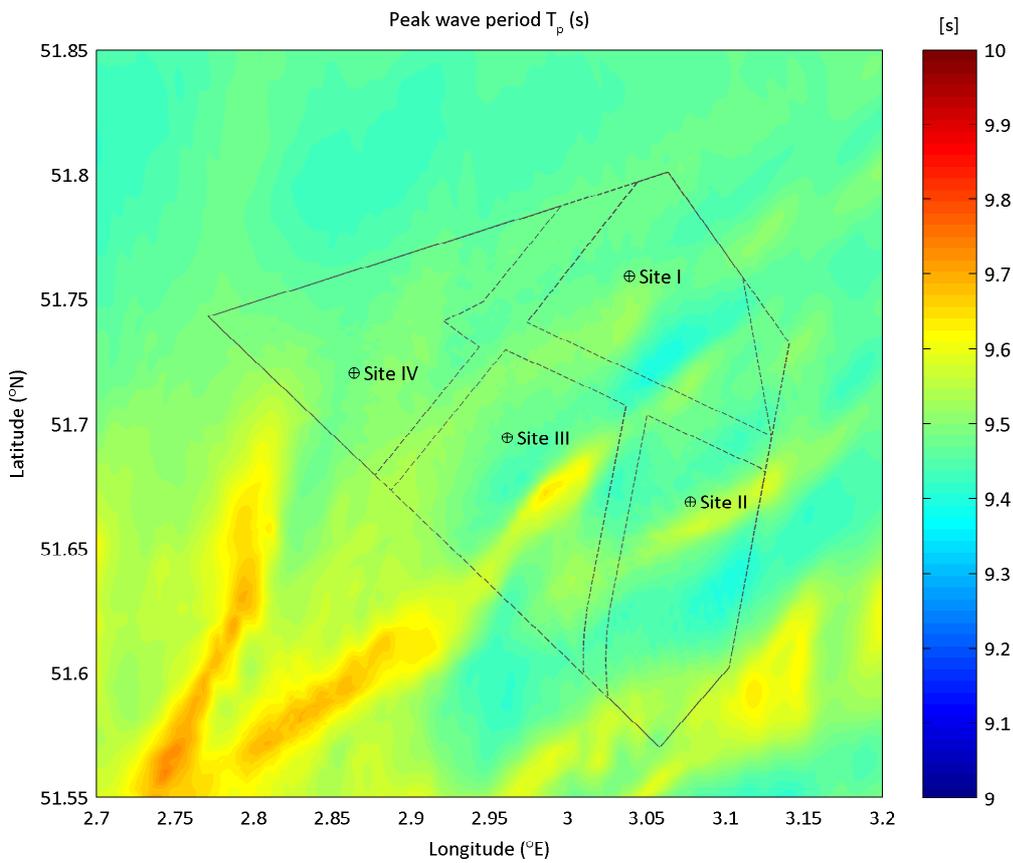
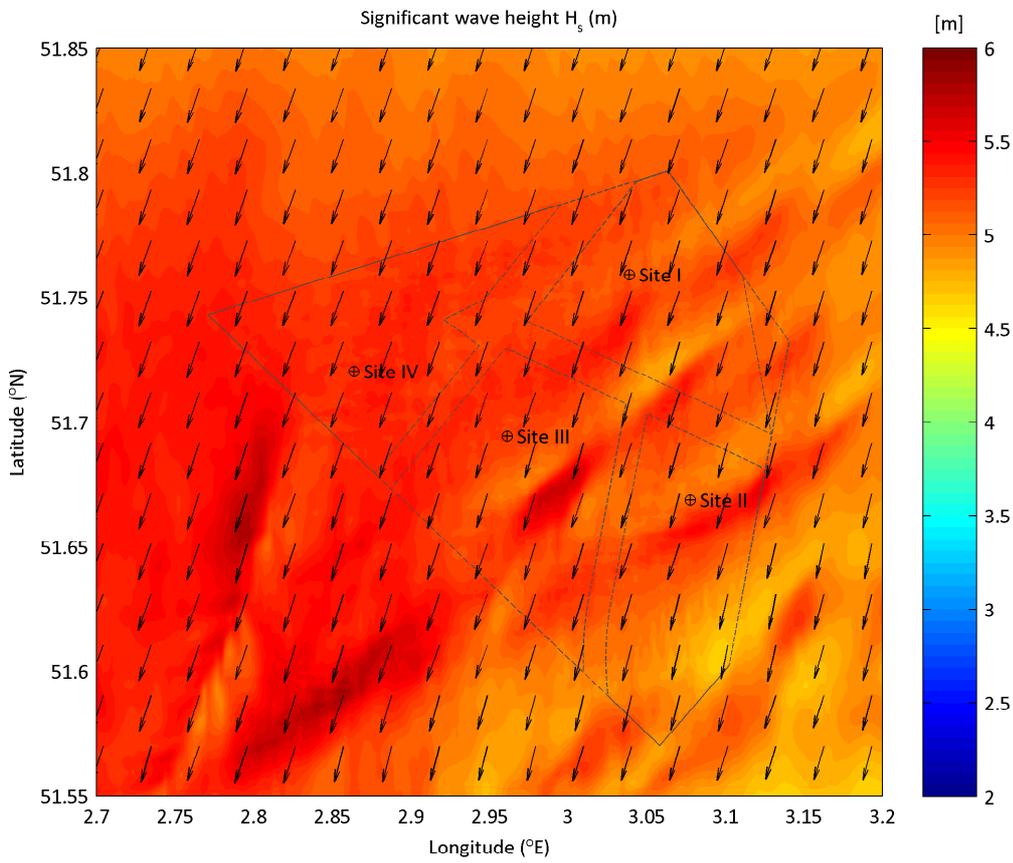
Extreme wave condition from Sector15 ( $^{\circ}$ N) - 45 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.010



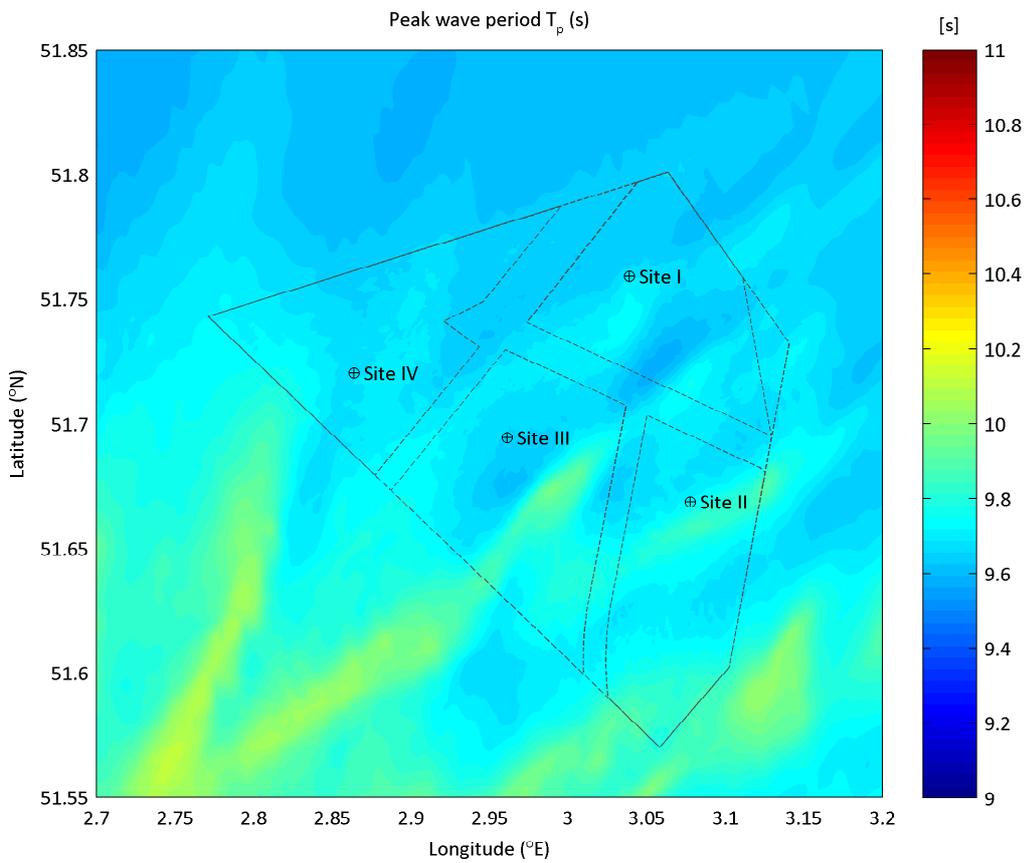
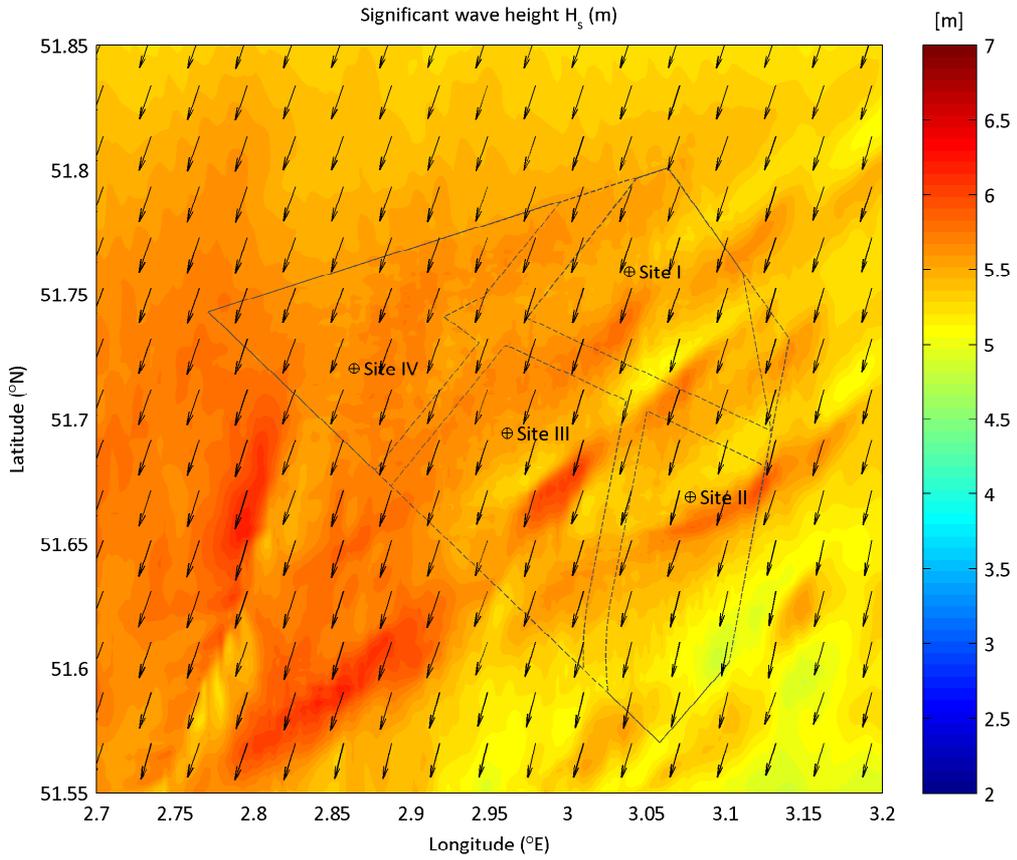
Extreme wave condition from Sector15 ( $^{\circ}$ N) - 45 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.011



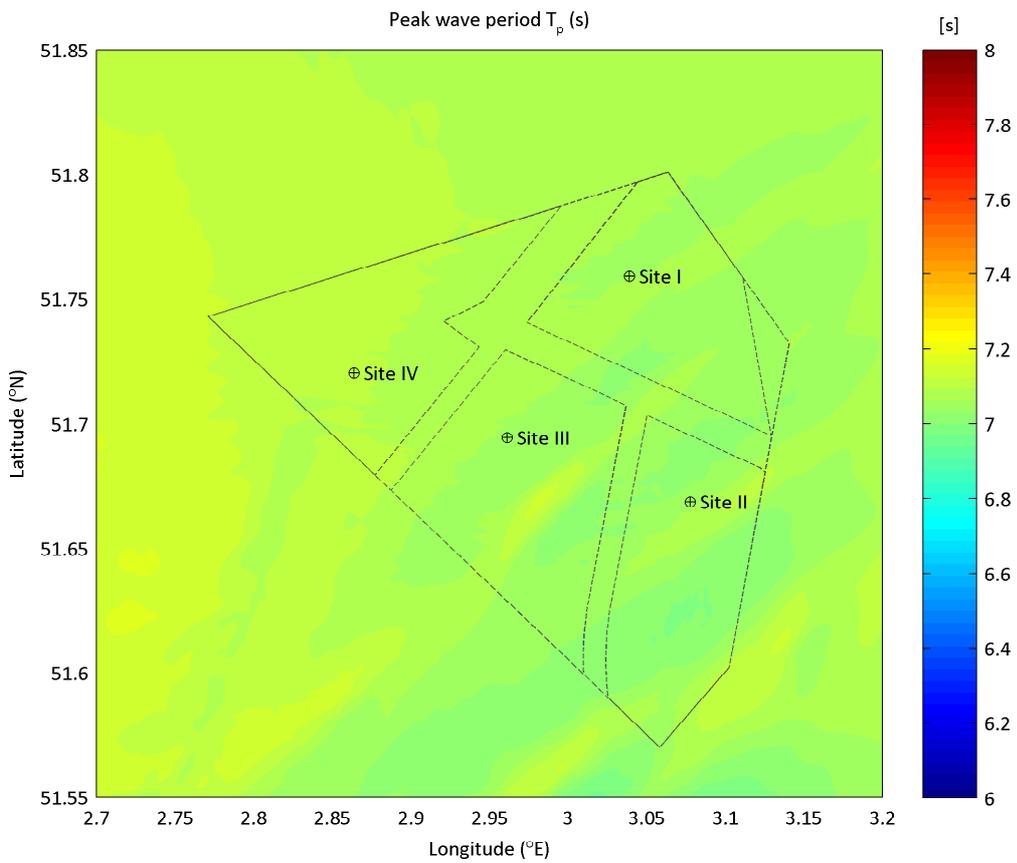
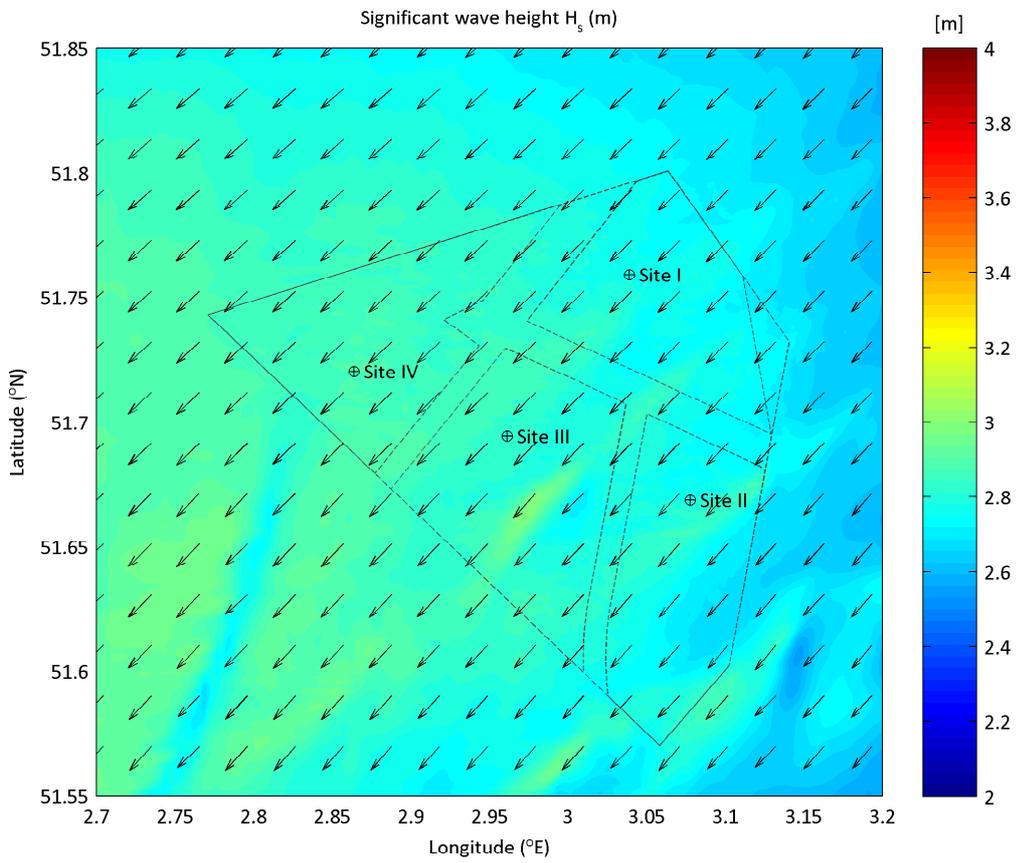
Extreme wave condition from Sector15 ( $^{\circ}$ N) - 45 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.012



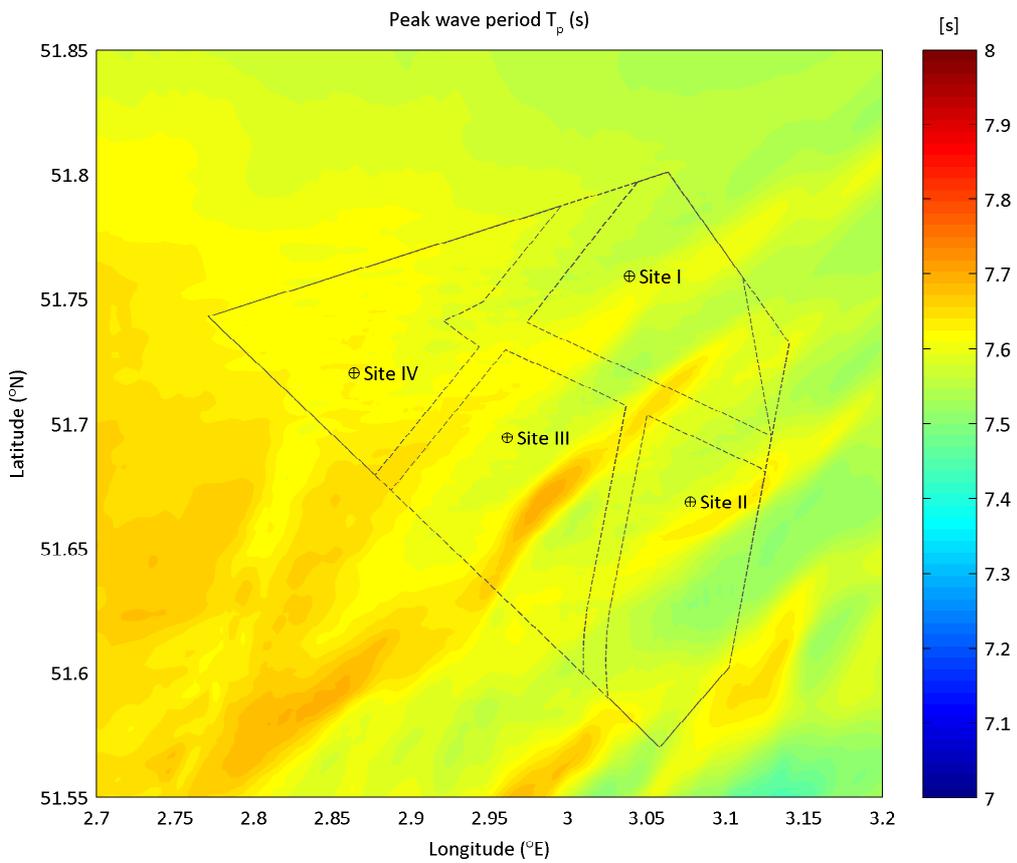
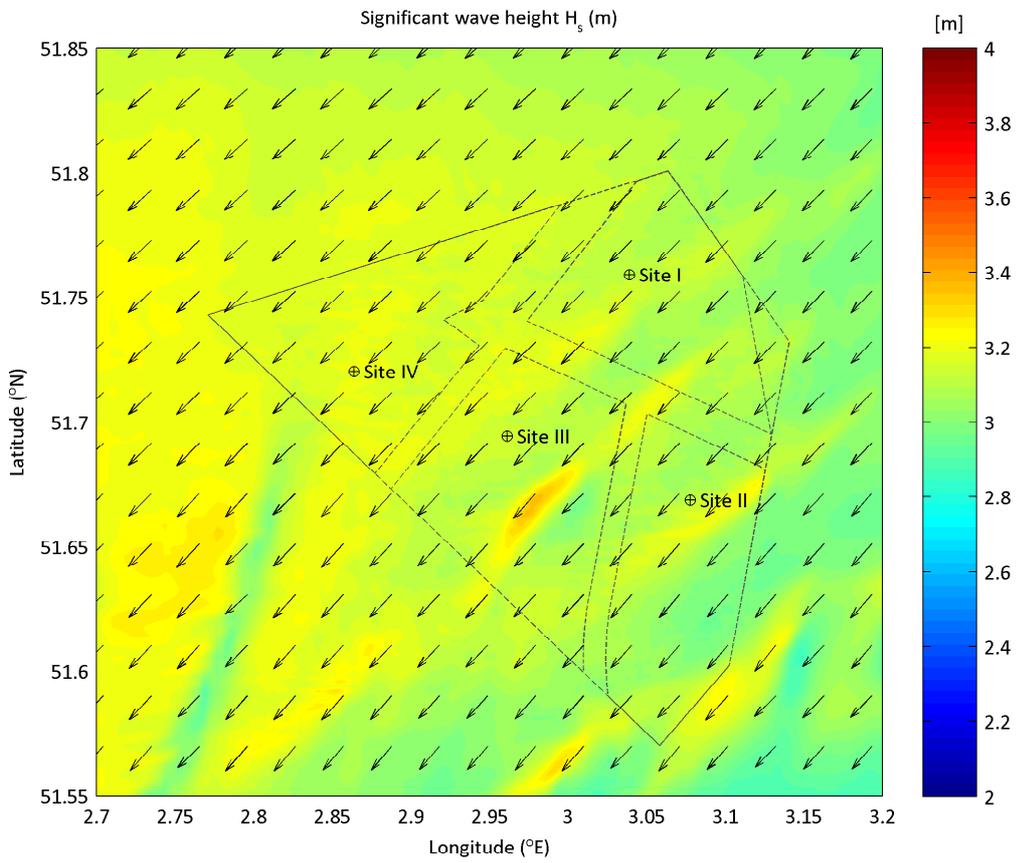
Extreme wave condition from Sector45 ( $^{\circ}$ N) - 75 ( $^{\circ}$ E)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.013



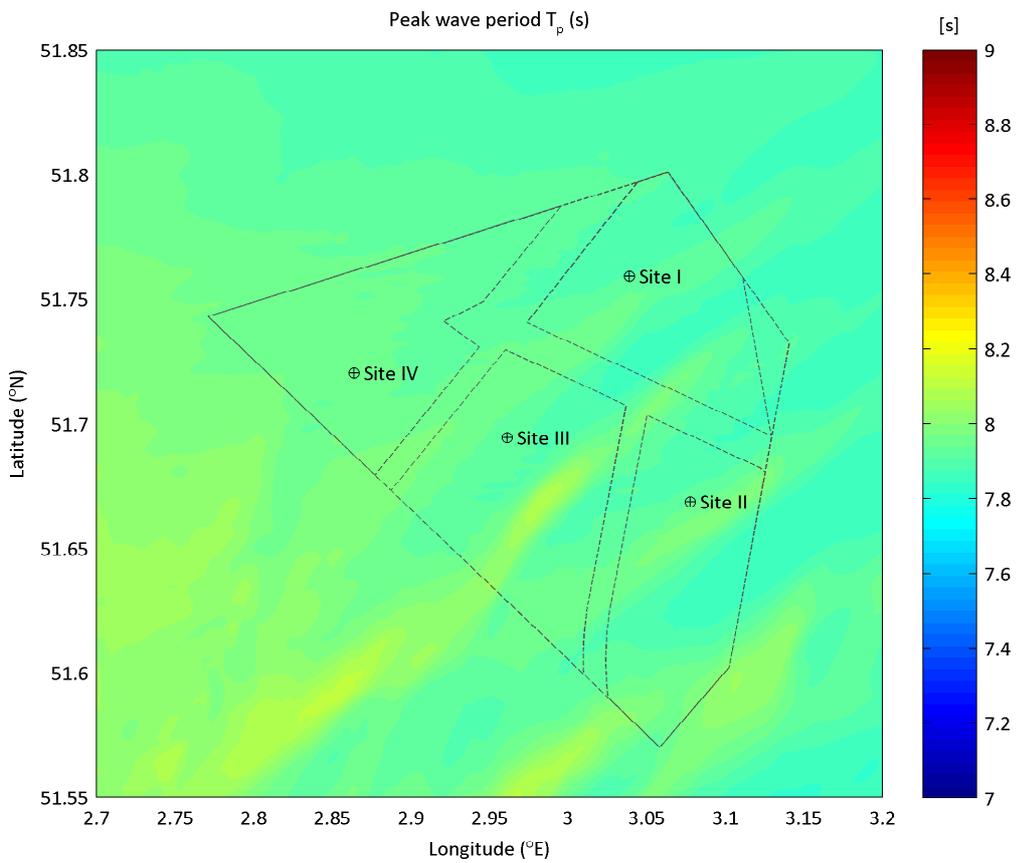
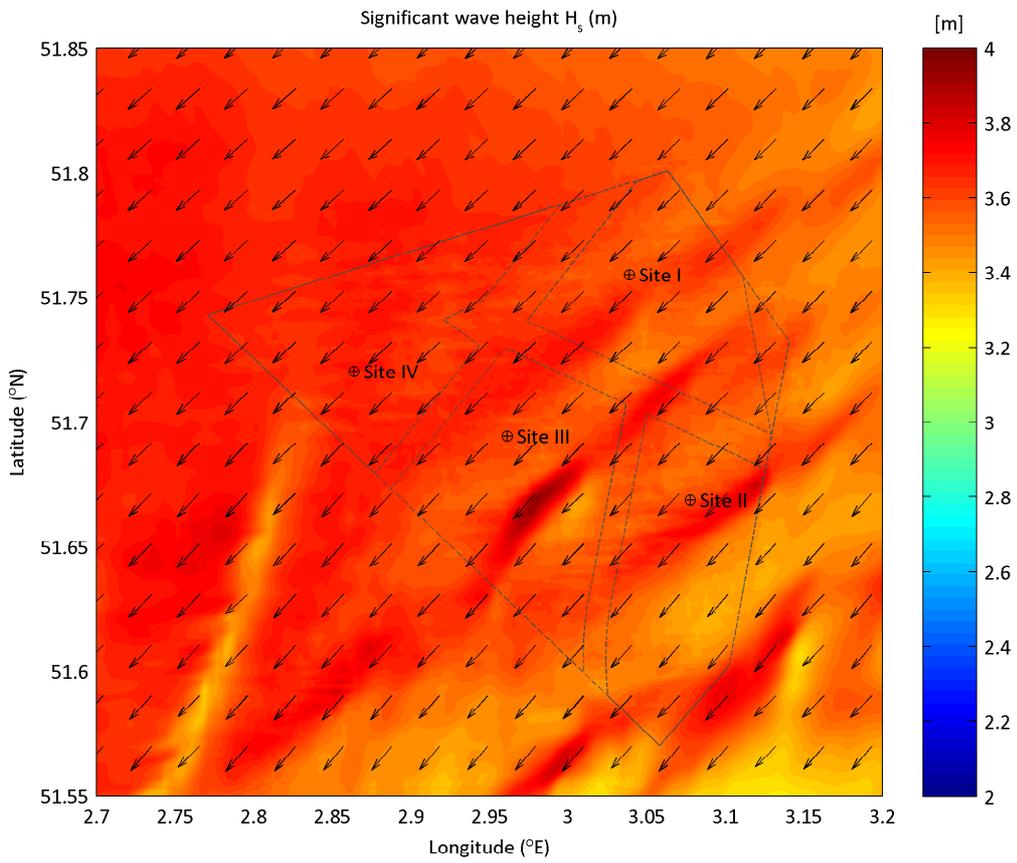
Extreme wave condition from Sector45 (°N) - 75 (°E)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.014



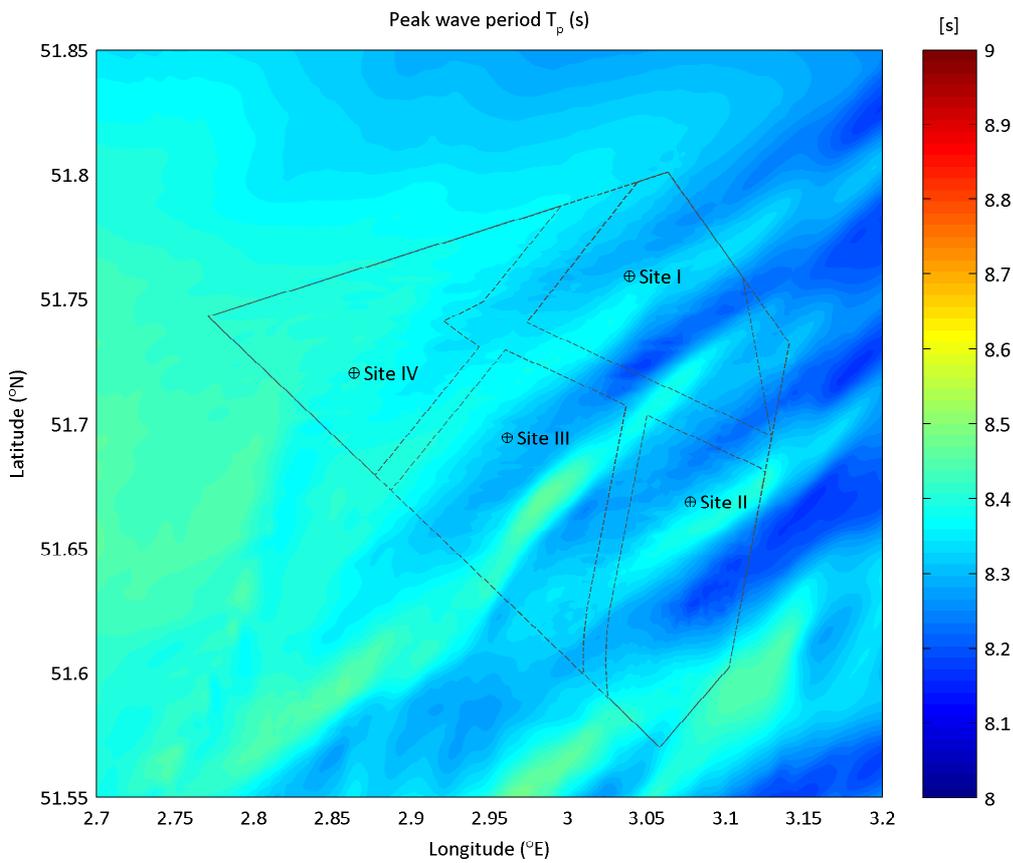
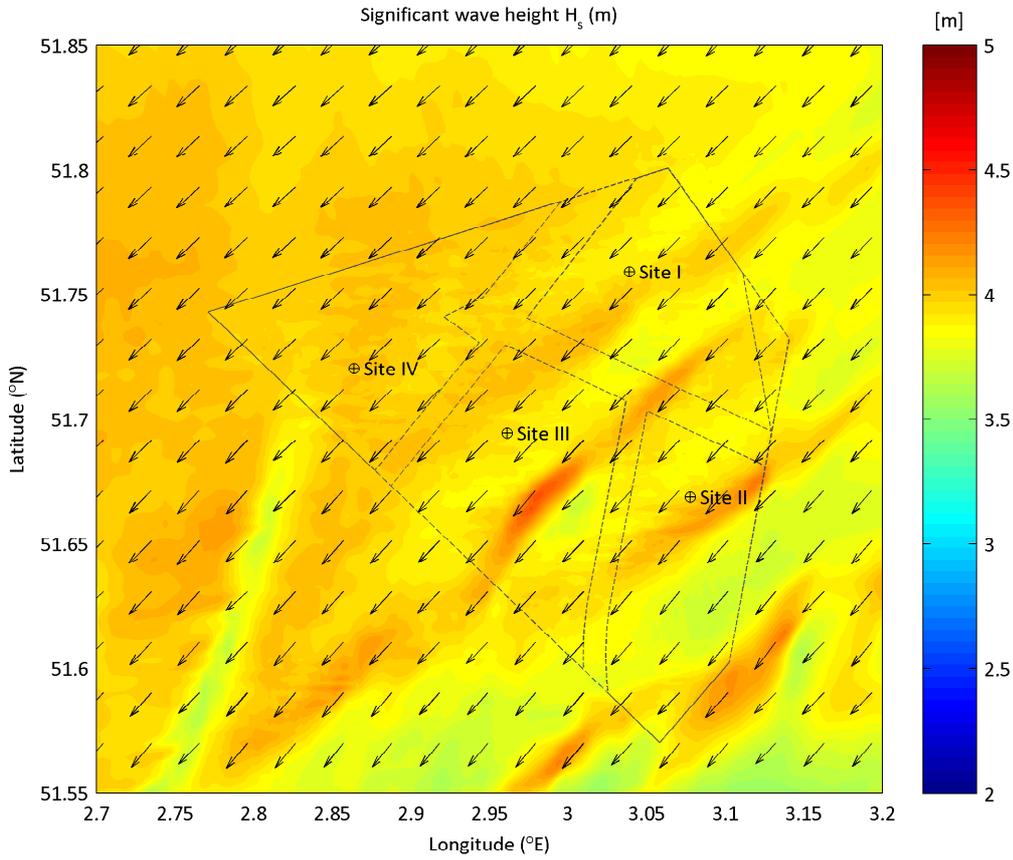
Extreme wave condition from Sector45 ( $^{\circ}$ N) - 75 ( $^{\circ}$ E)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.015



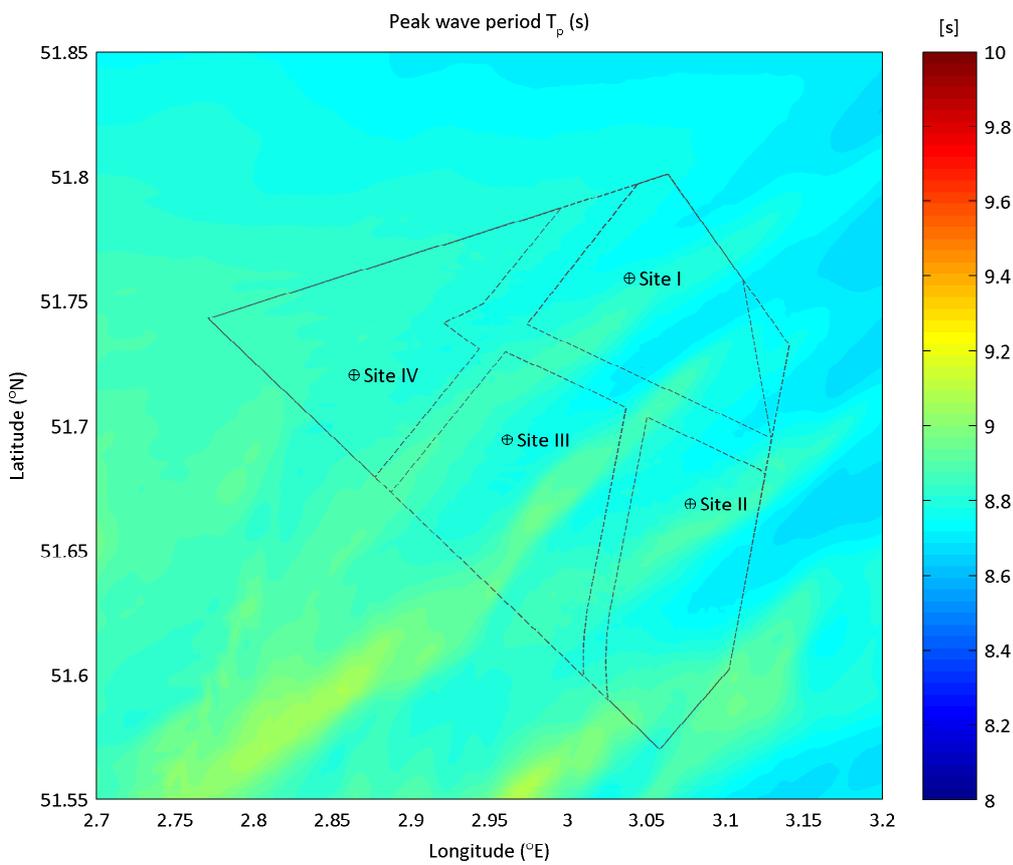
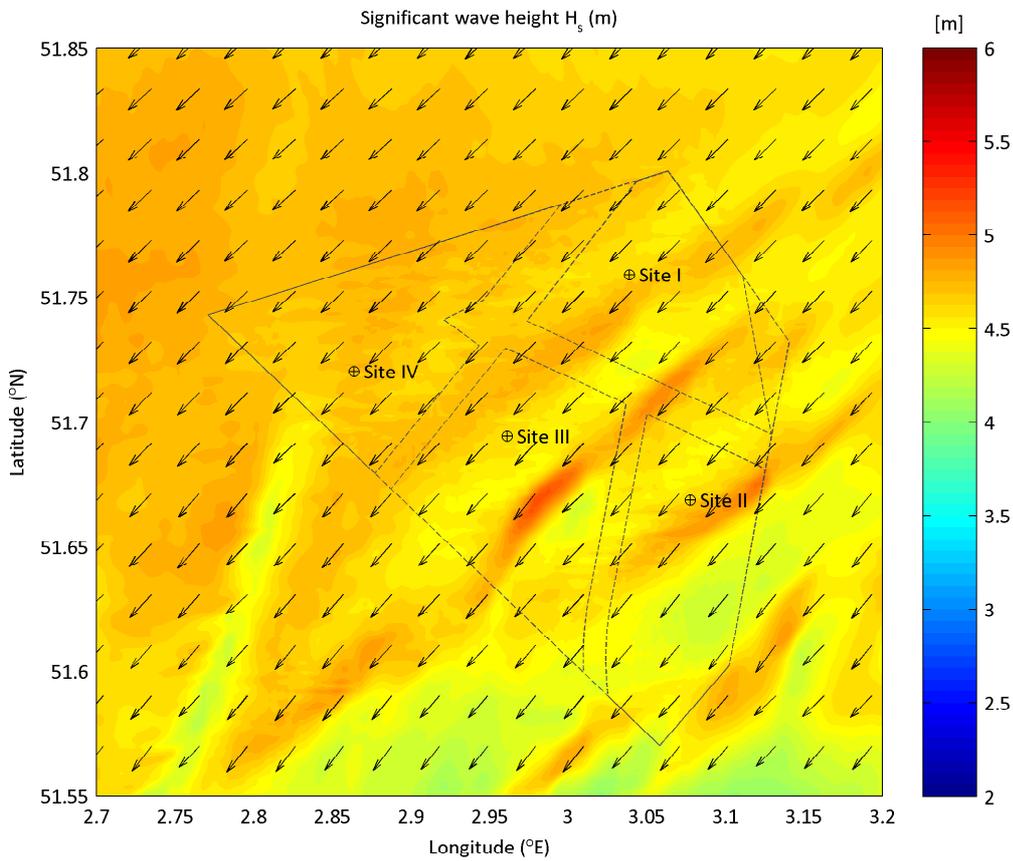
Extreme wave condition from Sector45 (°N) - 75 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.016



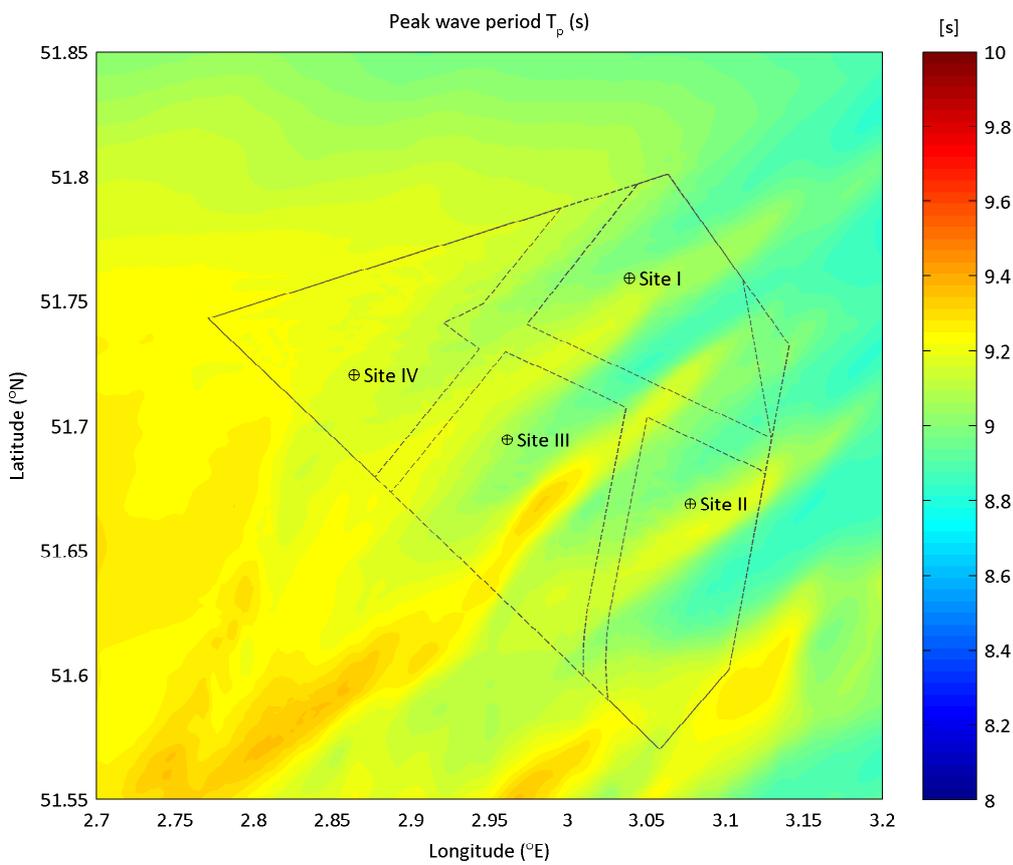
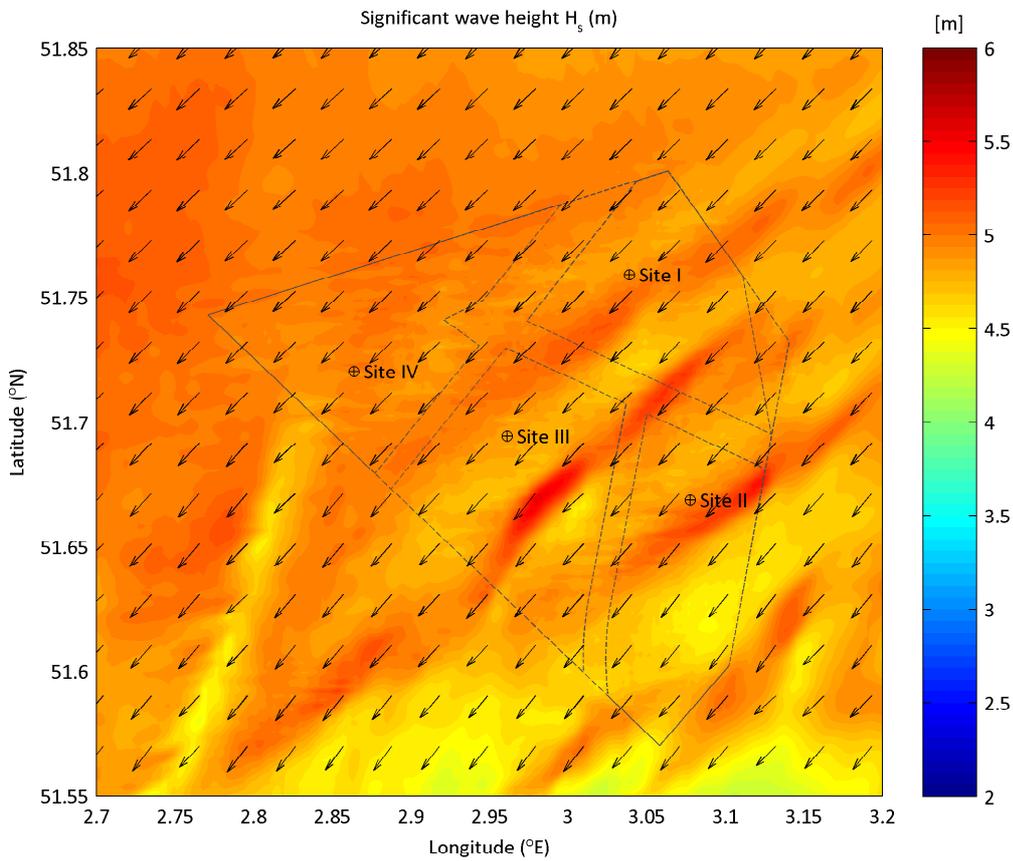
Extreme wave condition from Sector45 (°N) - 75 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.017



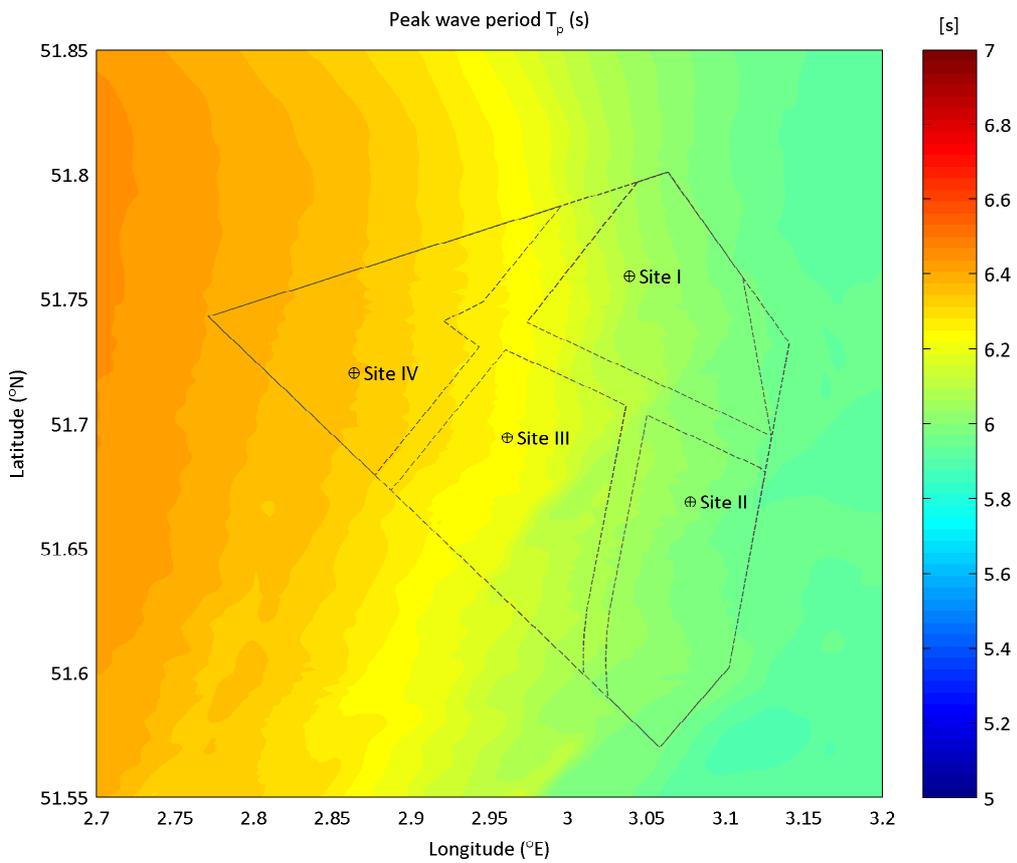
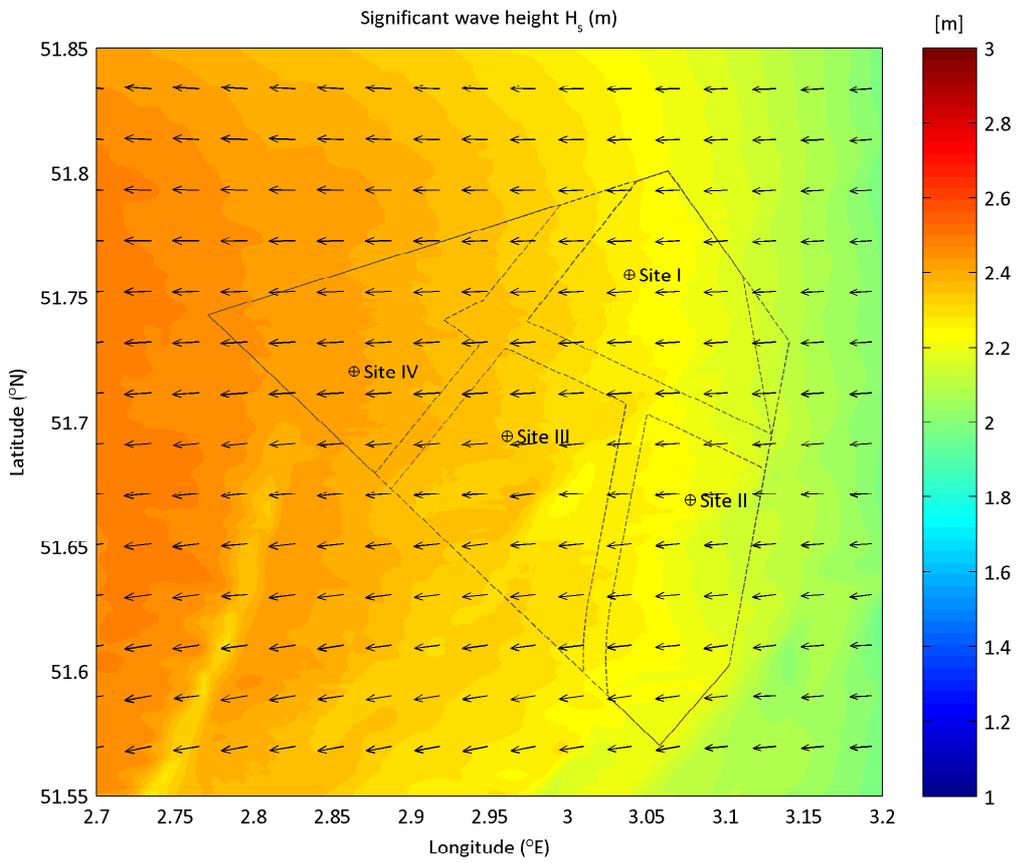
Extreme wave condition from Sector45 ( $^{\circ}$ N) - 75 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.018



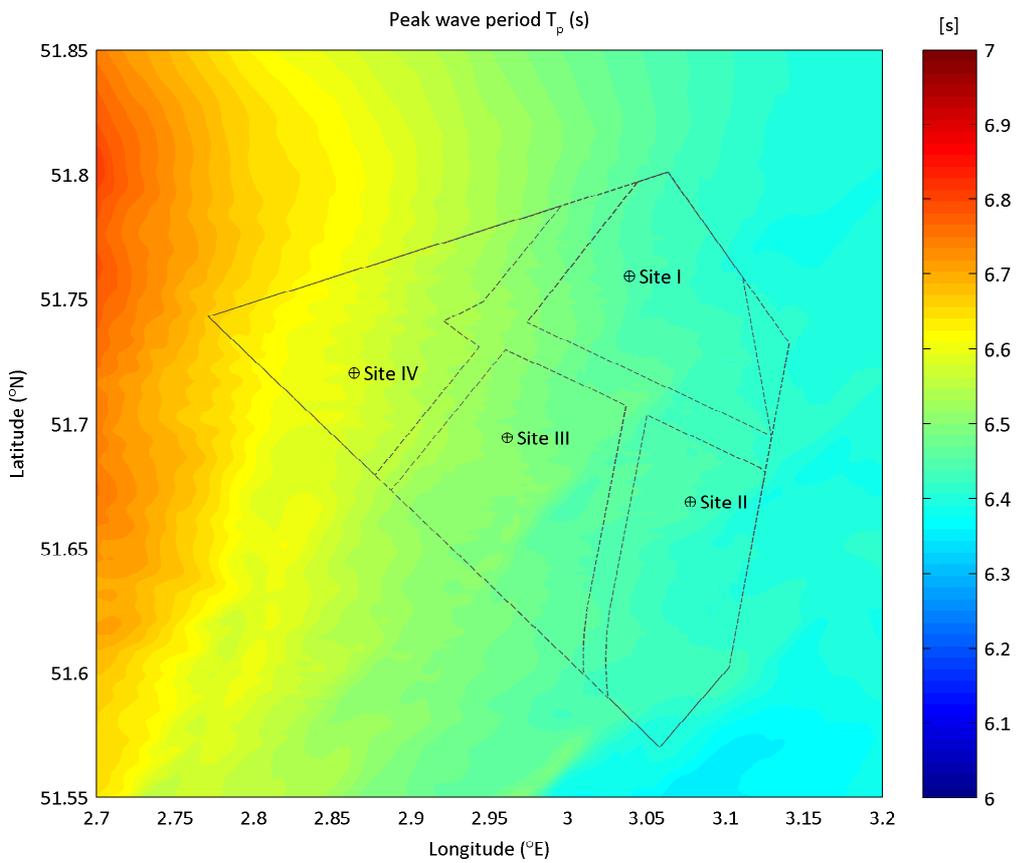
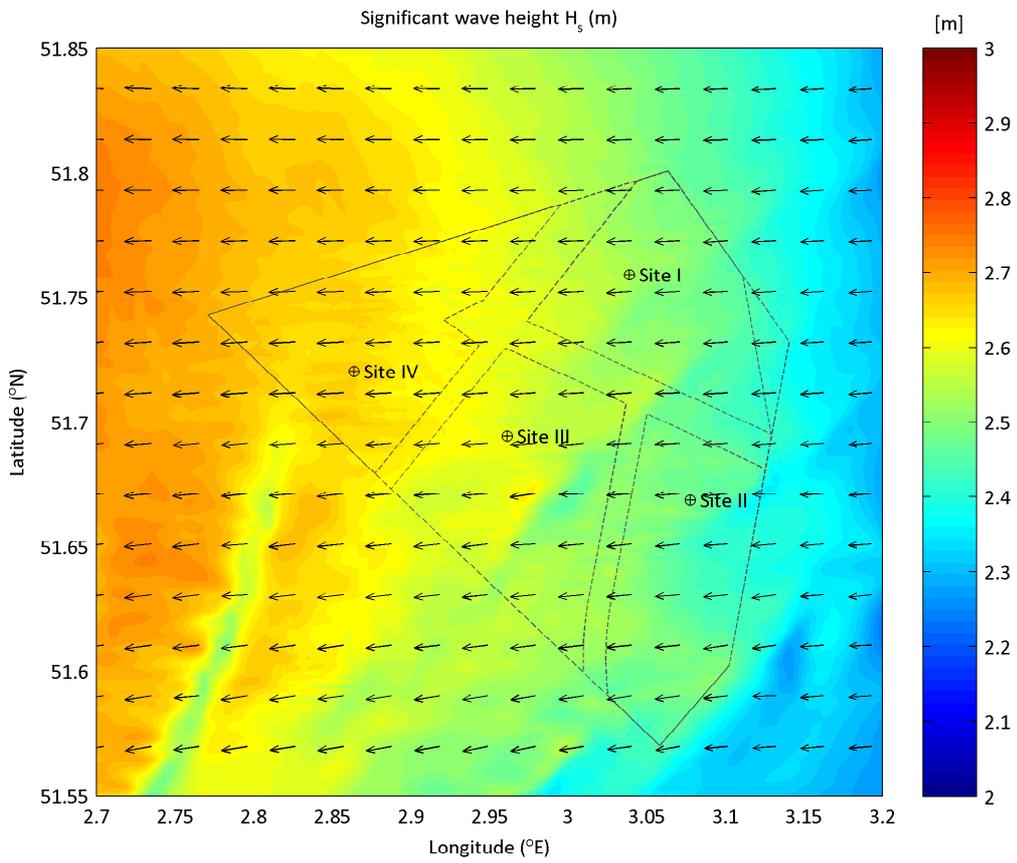
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.019



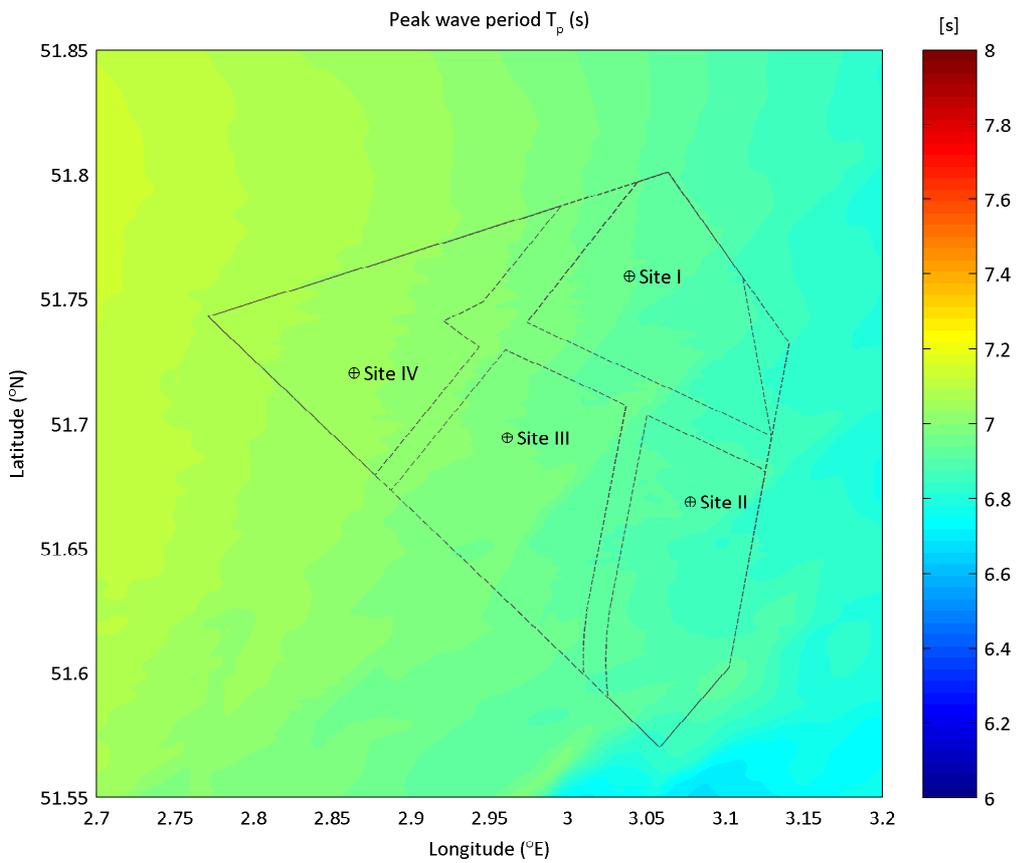
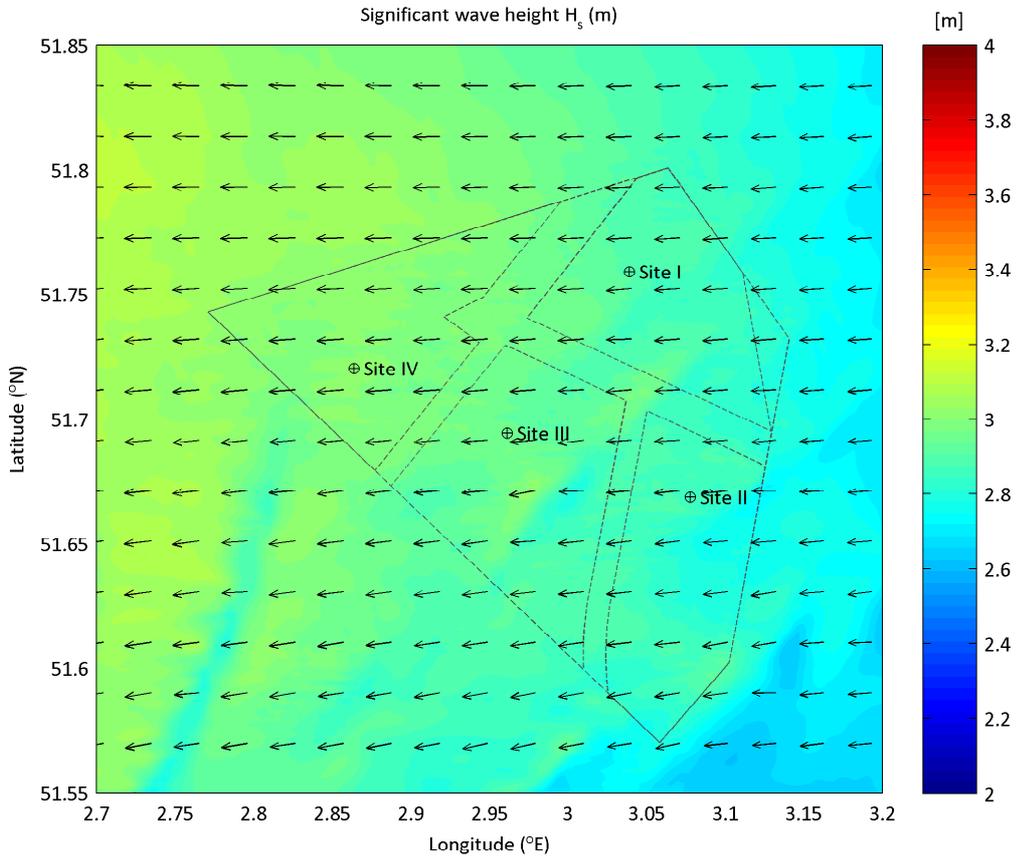
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.020



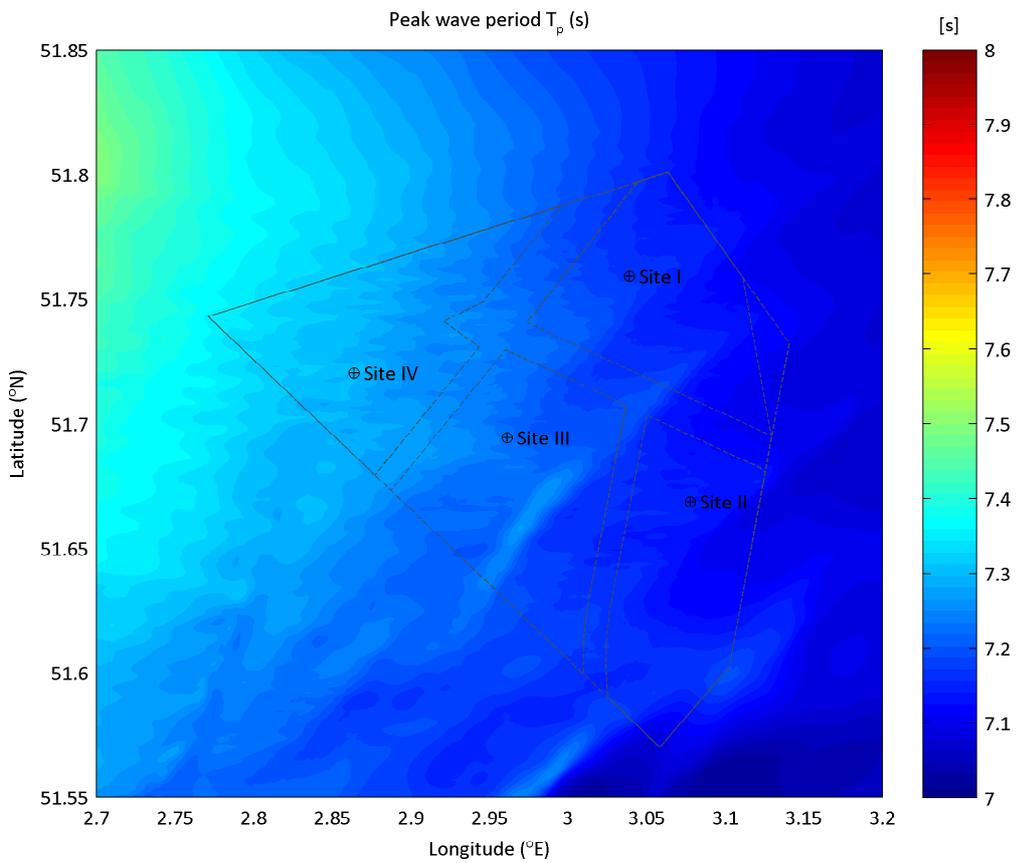
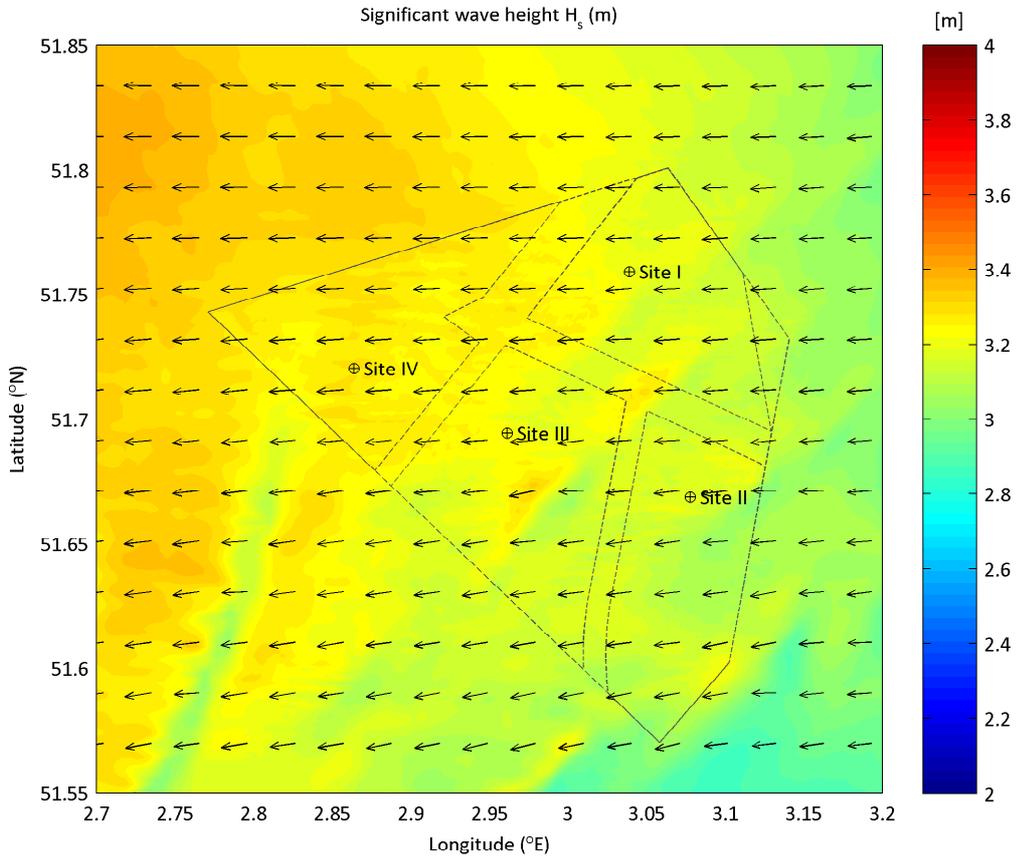
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.021



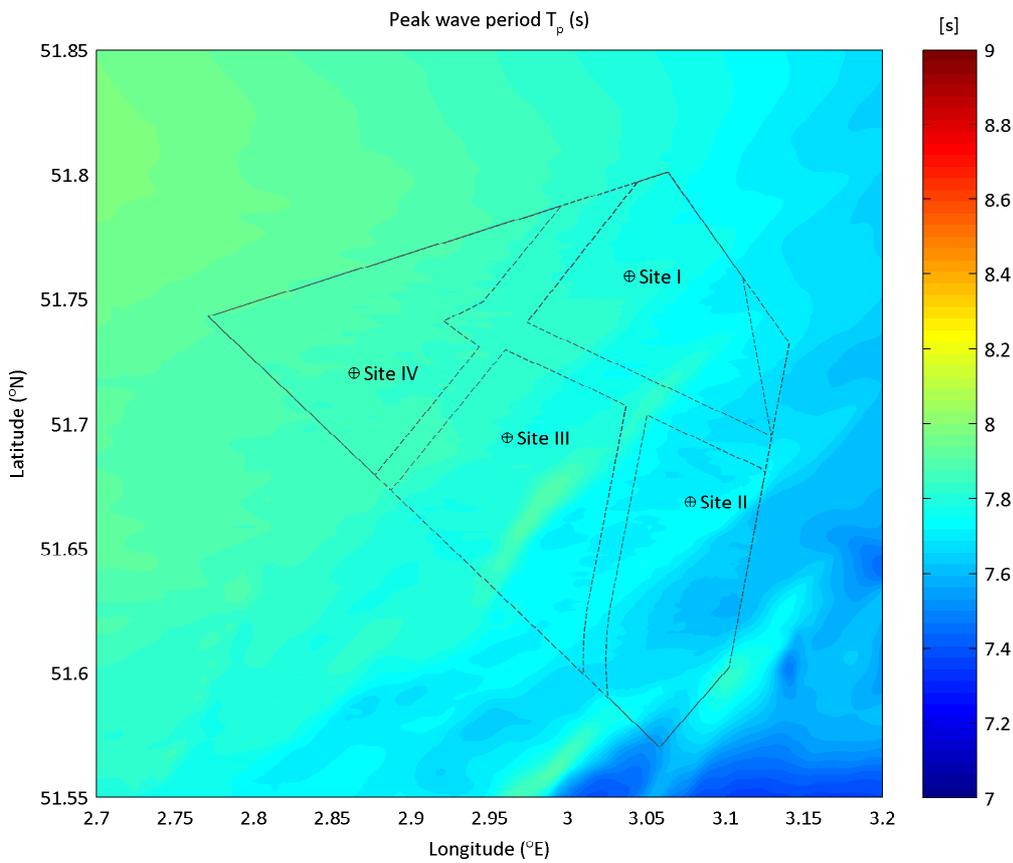
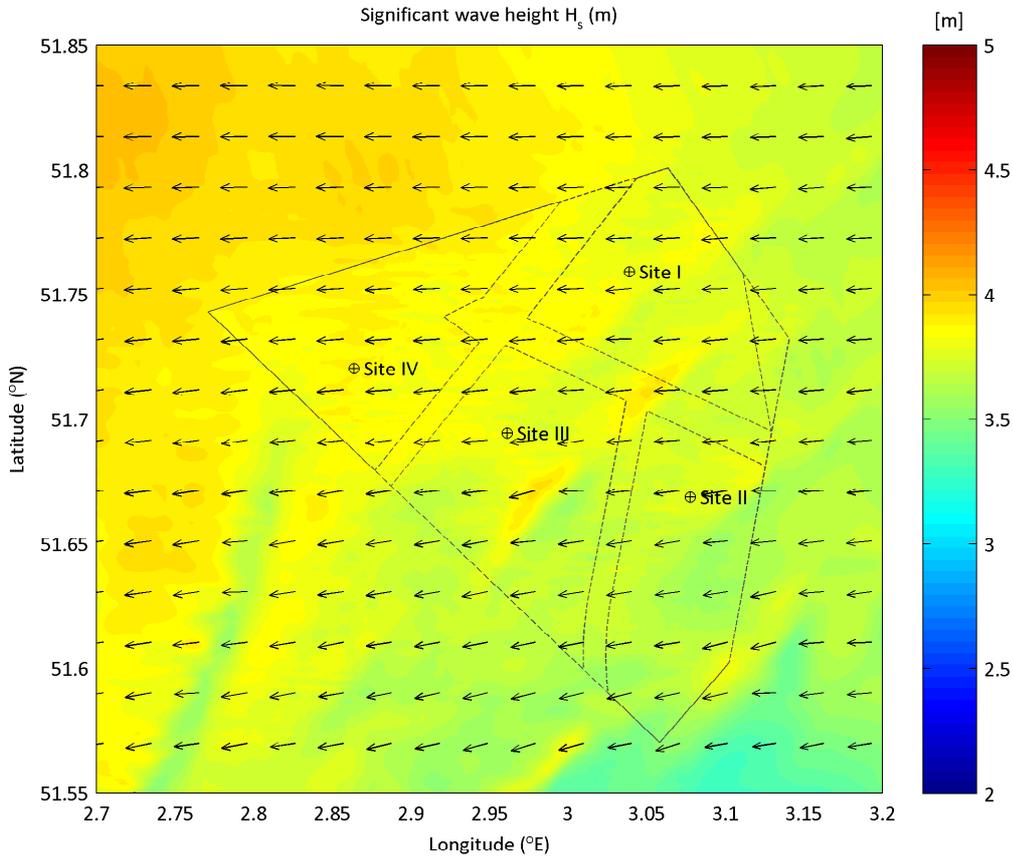
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.022



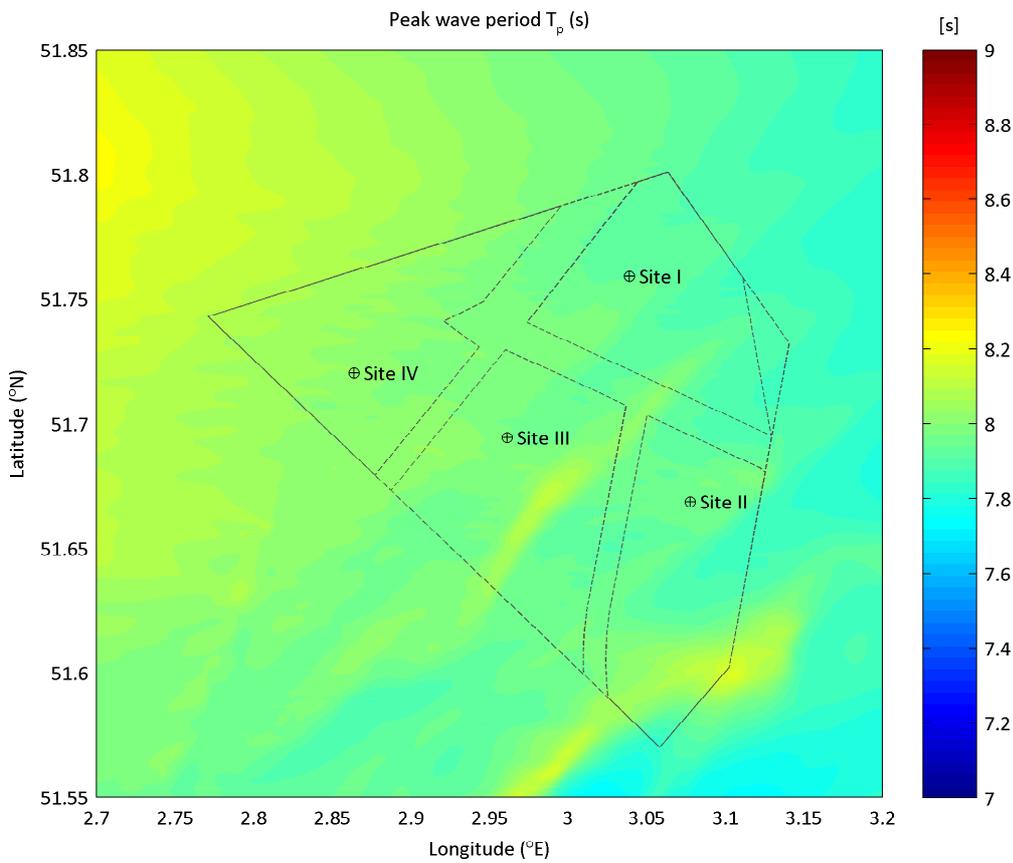
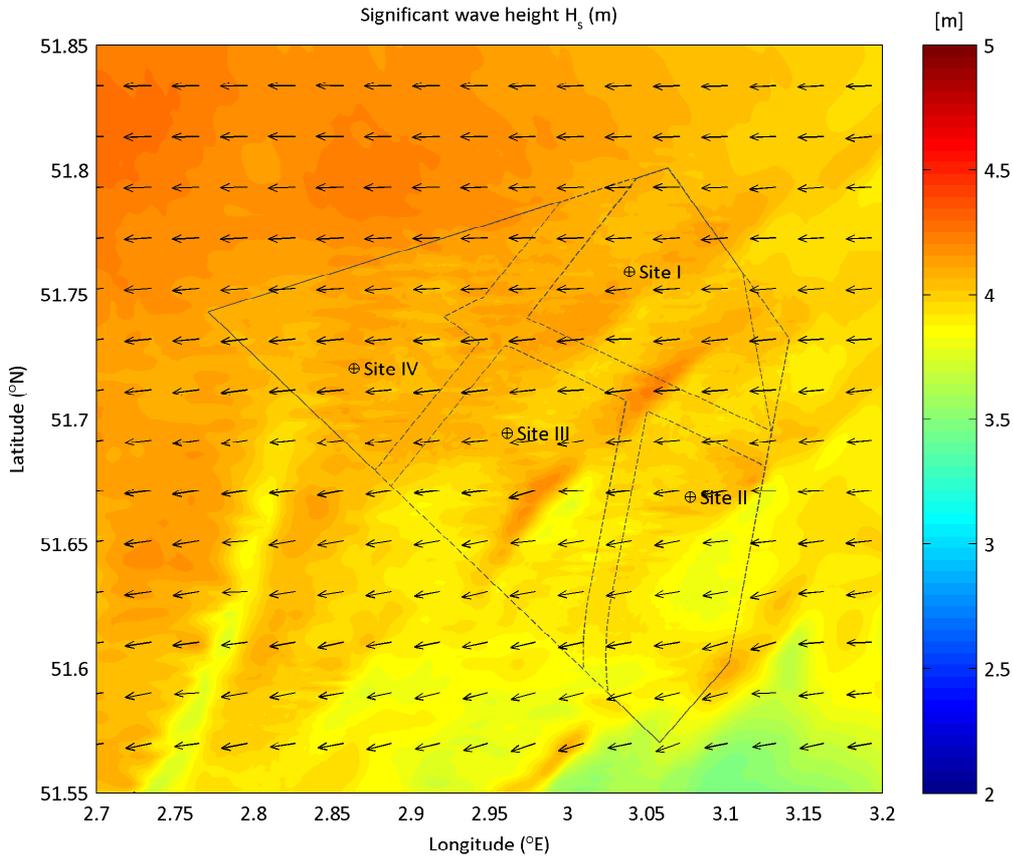
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.023



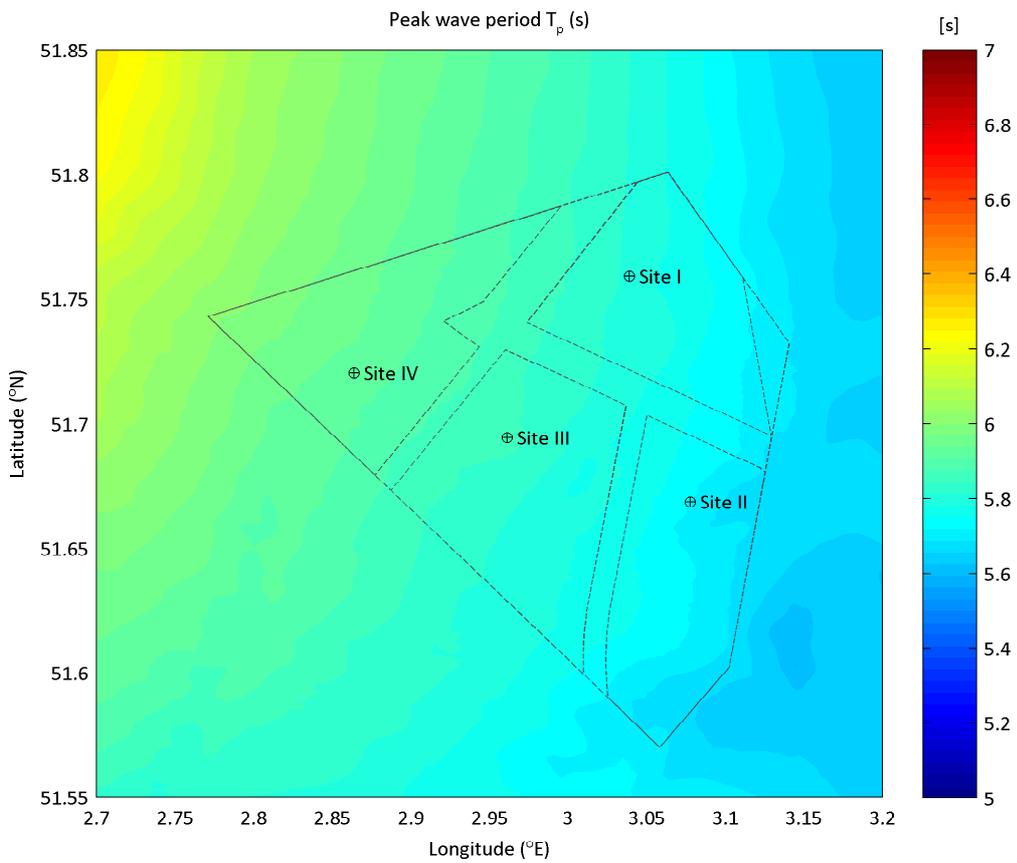
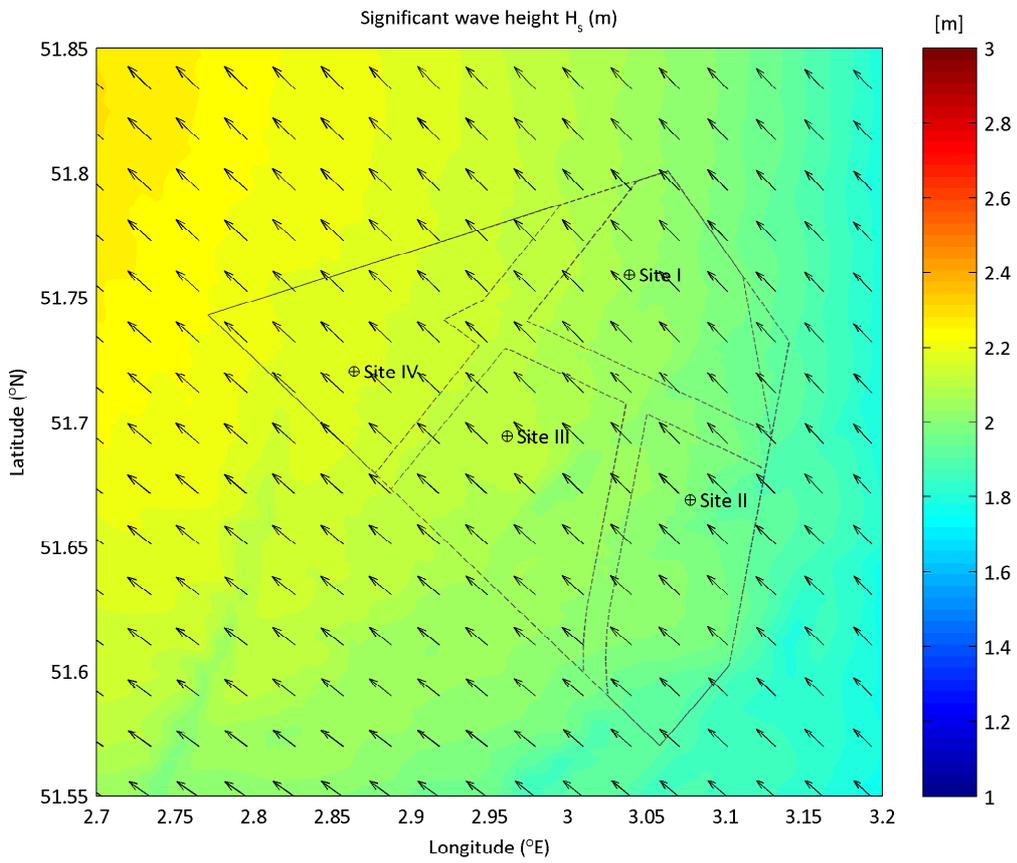
Extreme wave condition from Sector75 ( $^{\circ}$ N) - 105 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.024



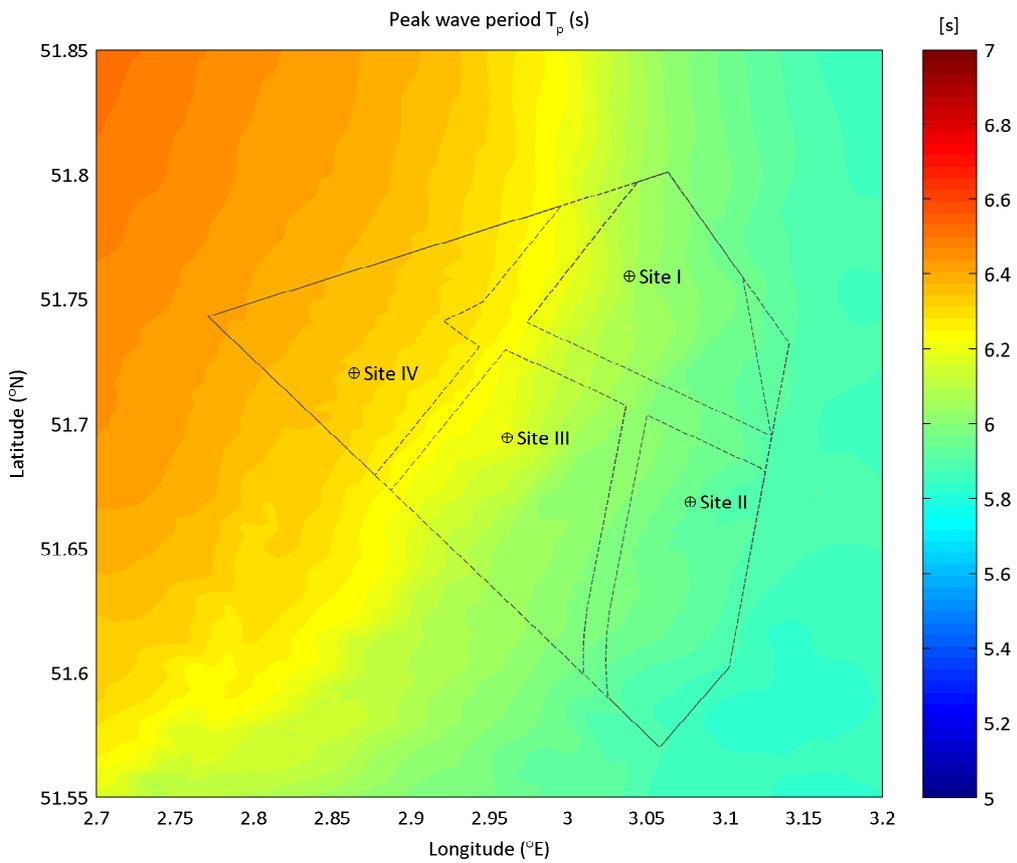
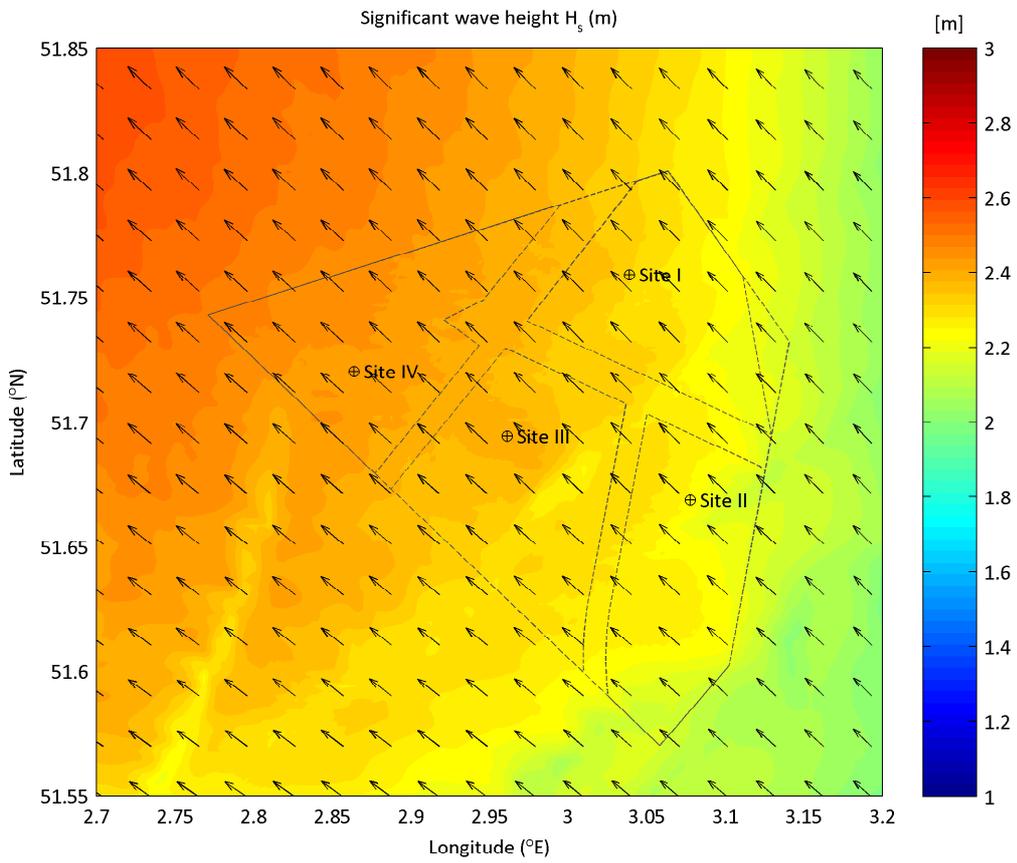
Extreme wave condition from Sector105 ( $^{\circ}$ N) - 135 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.025



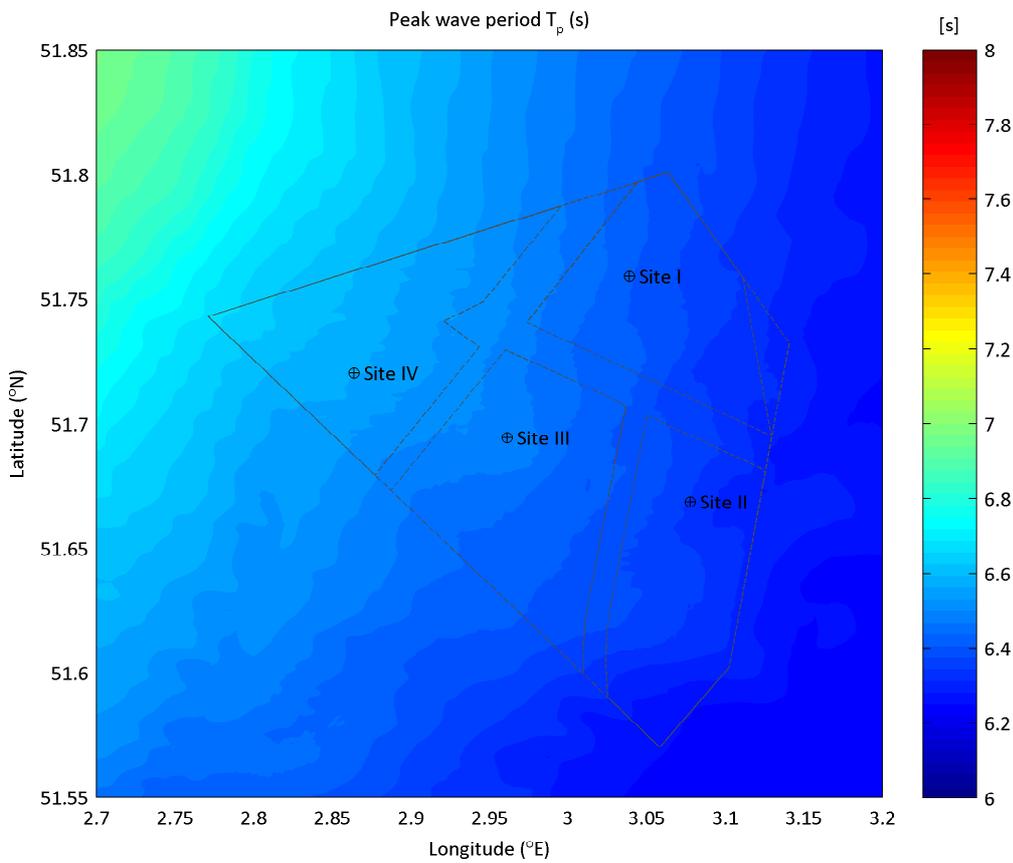
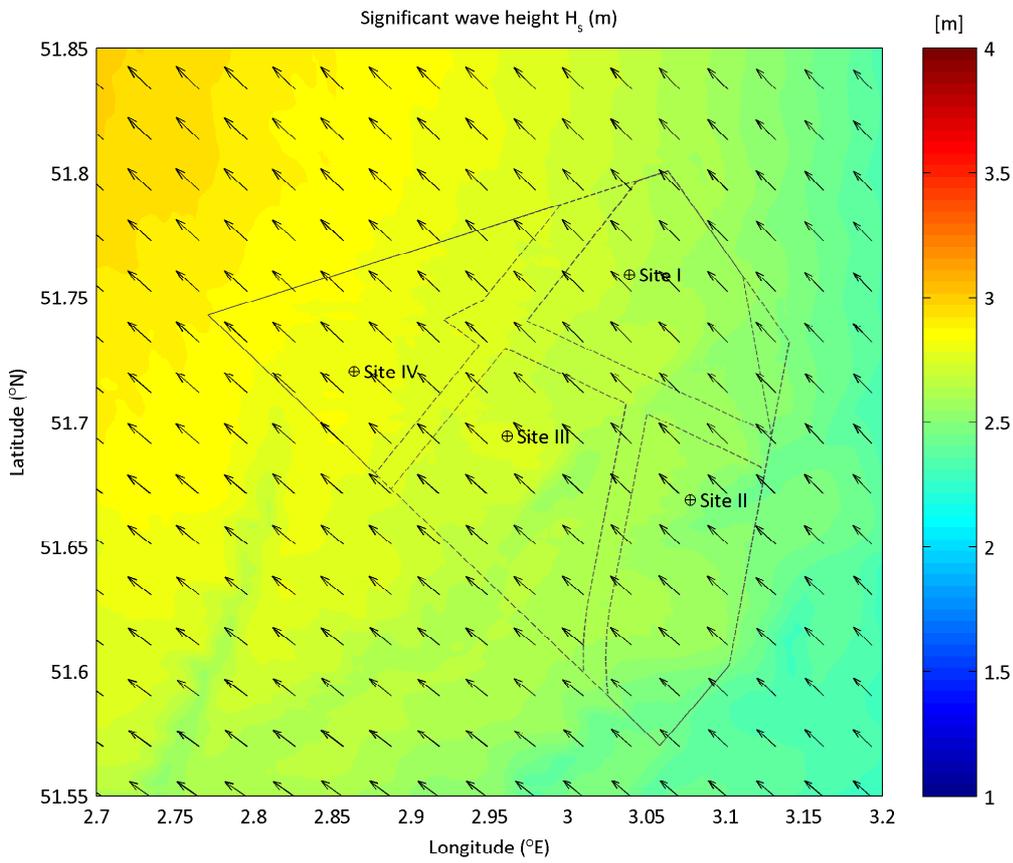
Extreme wave condition from Sector105 ( $^{\circ}$ N) - 135 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.026



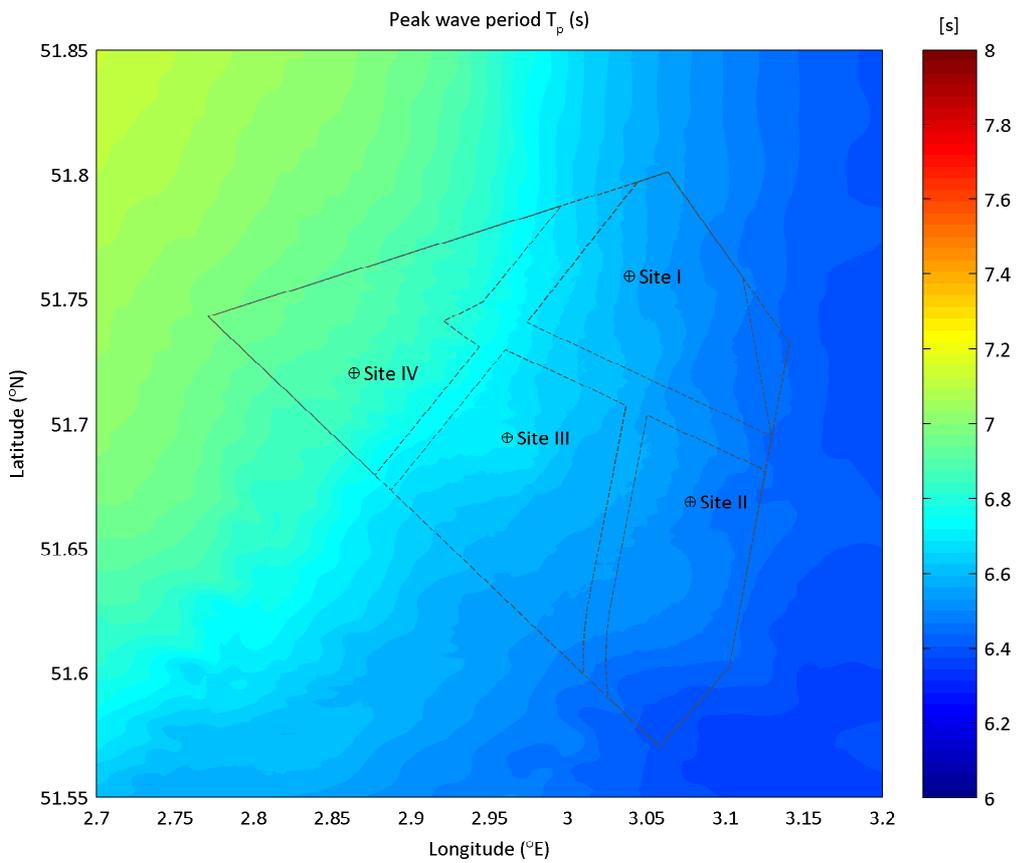
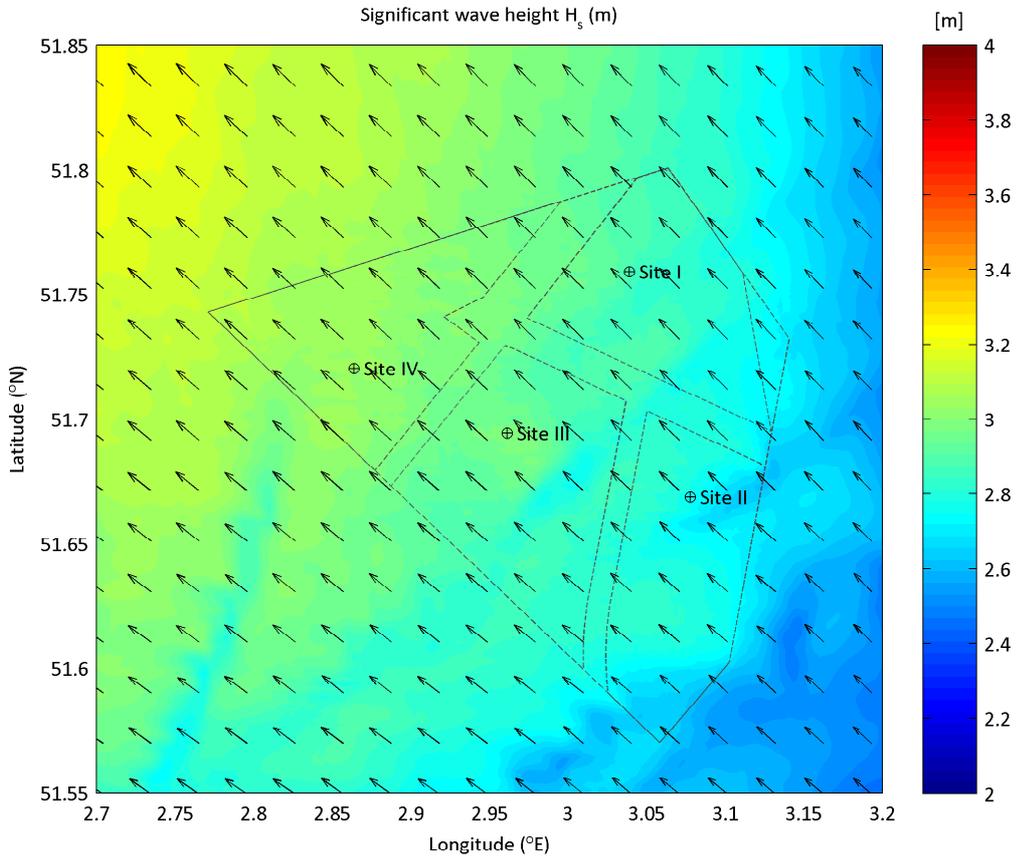
Extreme wave condition from Sector105 ( $^{\circ}$ N) - 135 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.027



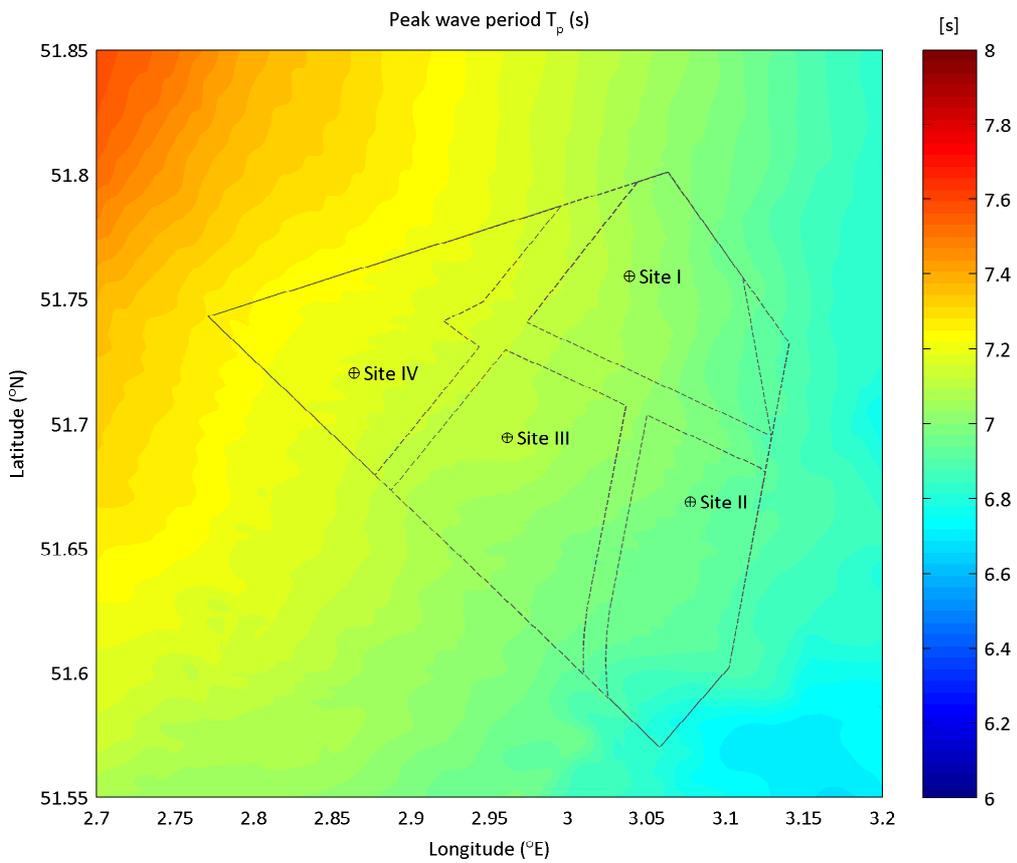
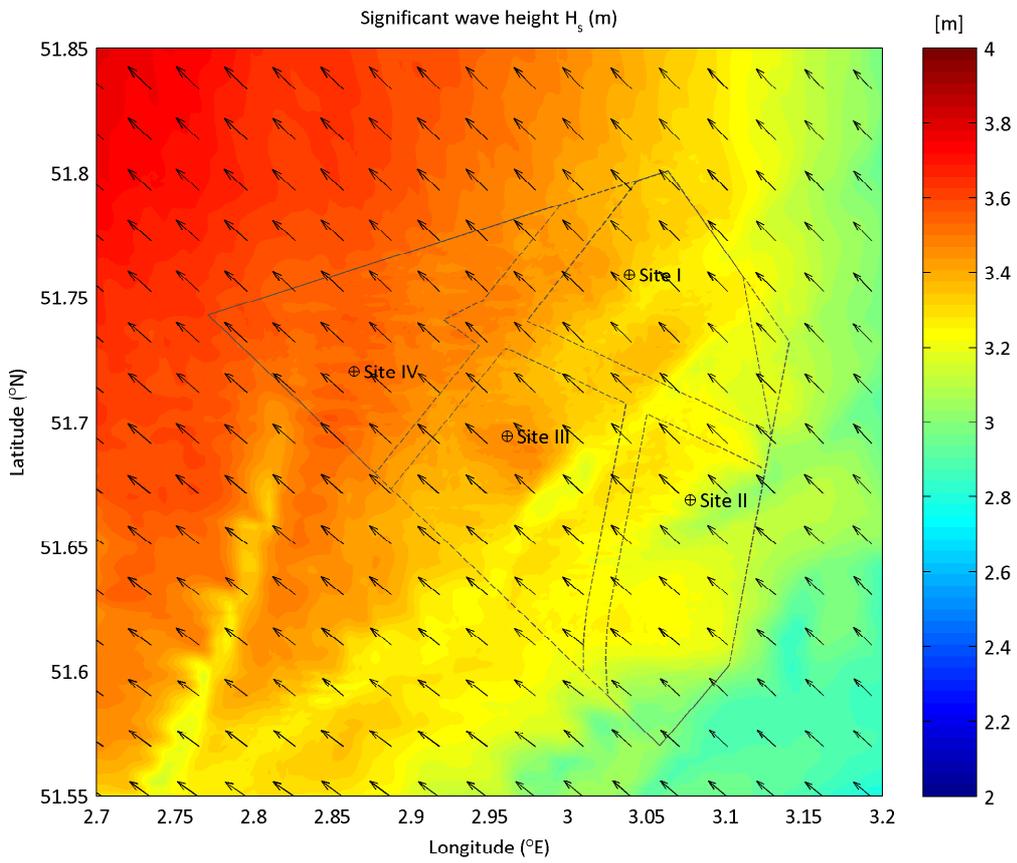
Extreme wave condition from Sector105 ( $^{\circ}$ N) - 135 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.028



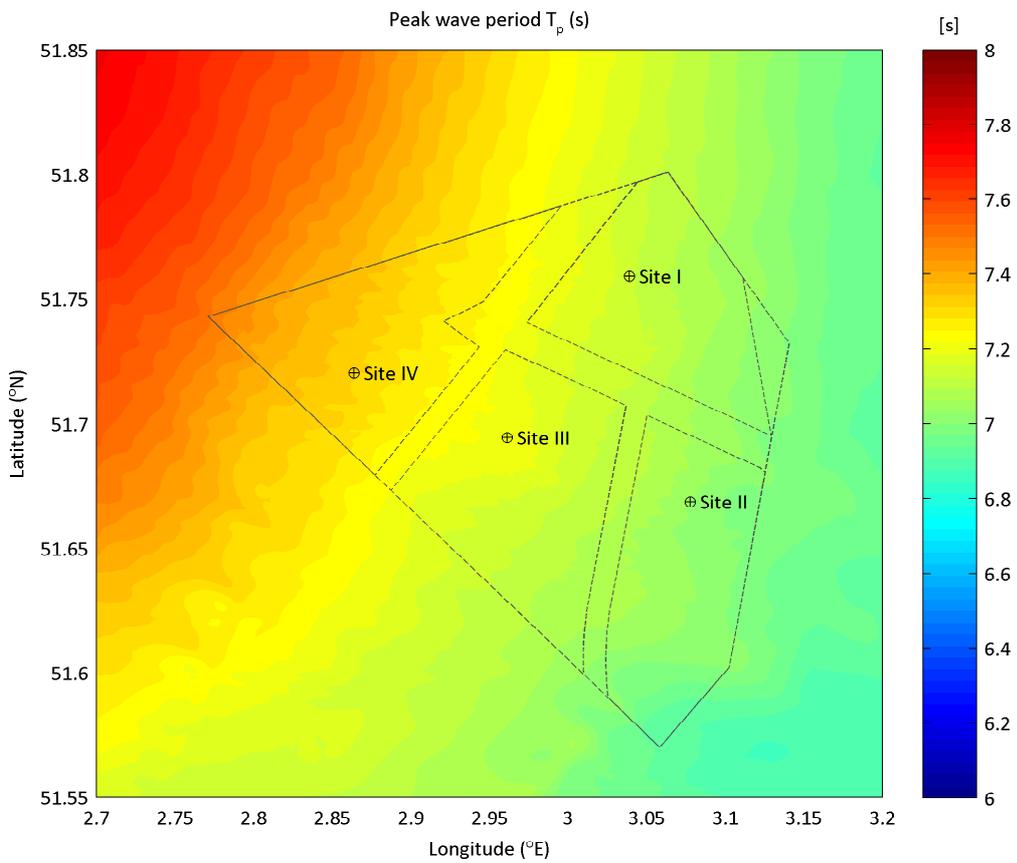
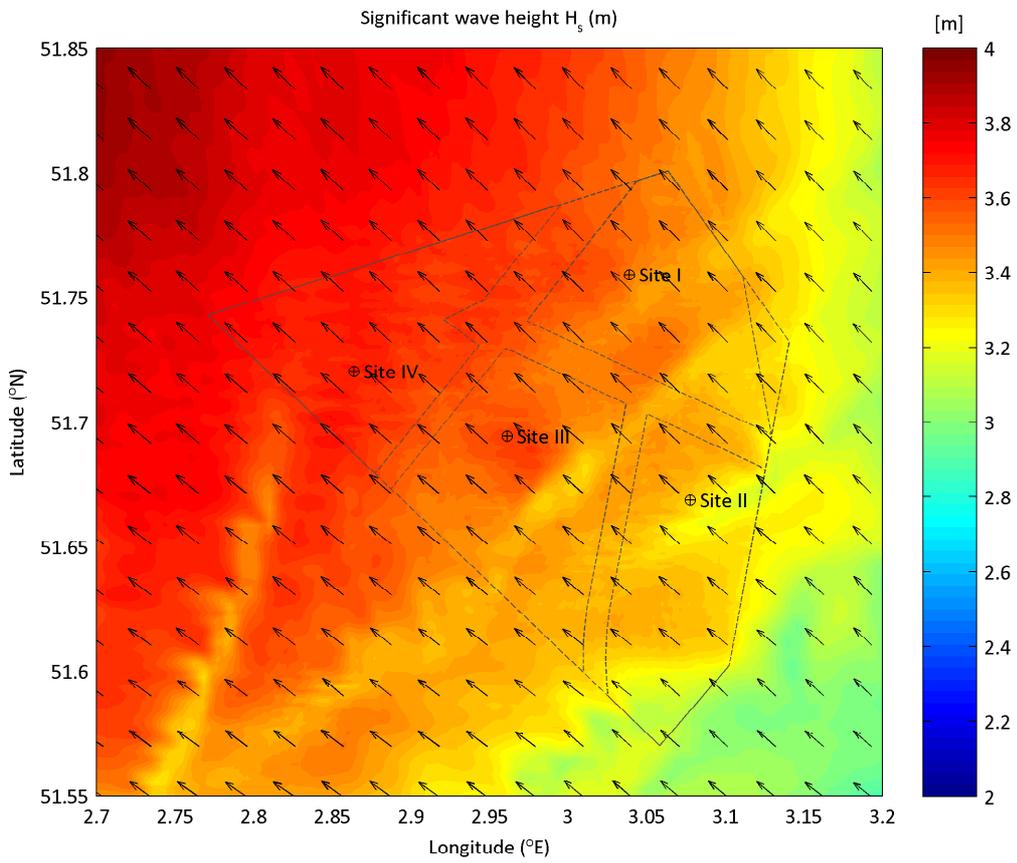
Extreme wave condition from Sector105 ( $^{\circ}$ N) - 135 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.029



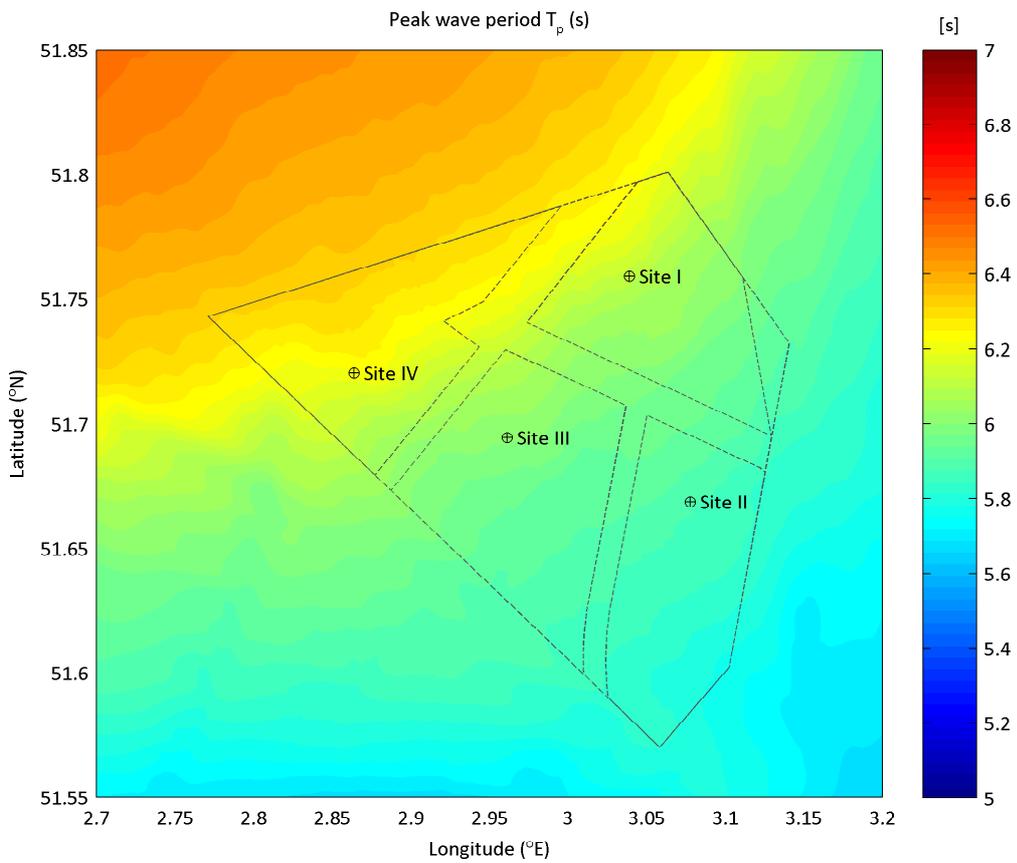
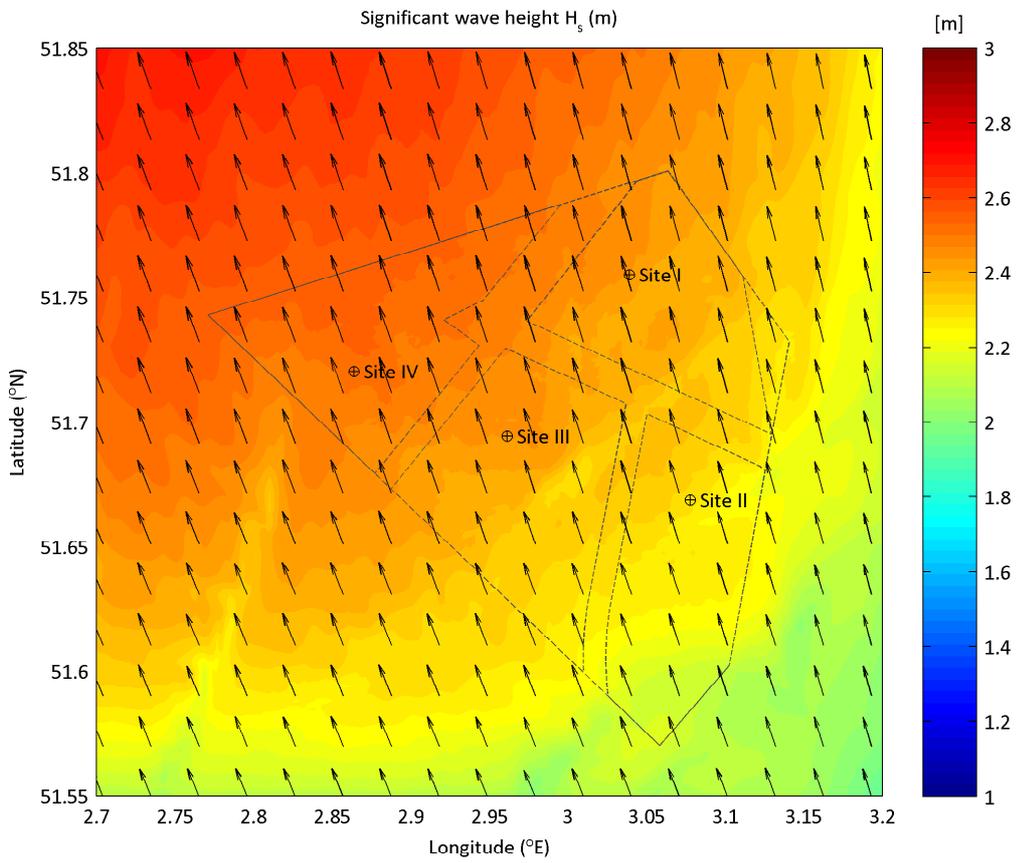
Extreme wave condition from Sector105 (°N) - 135 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.030



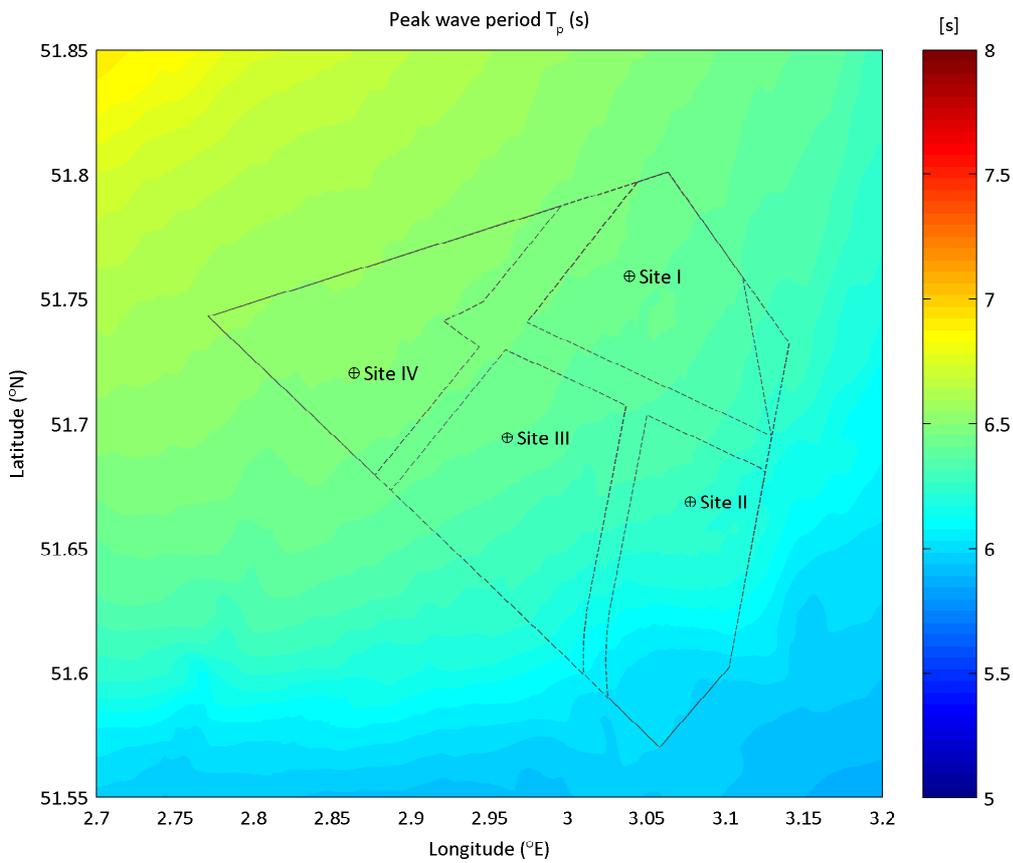
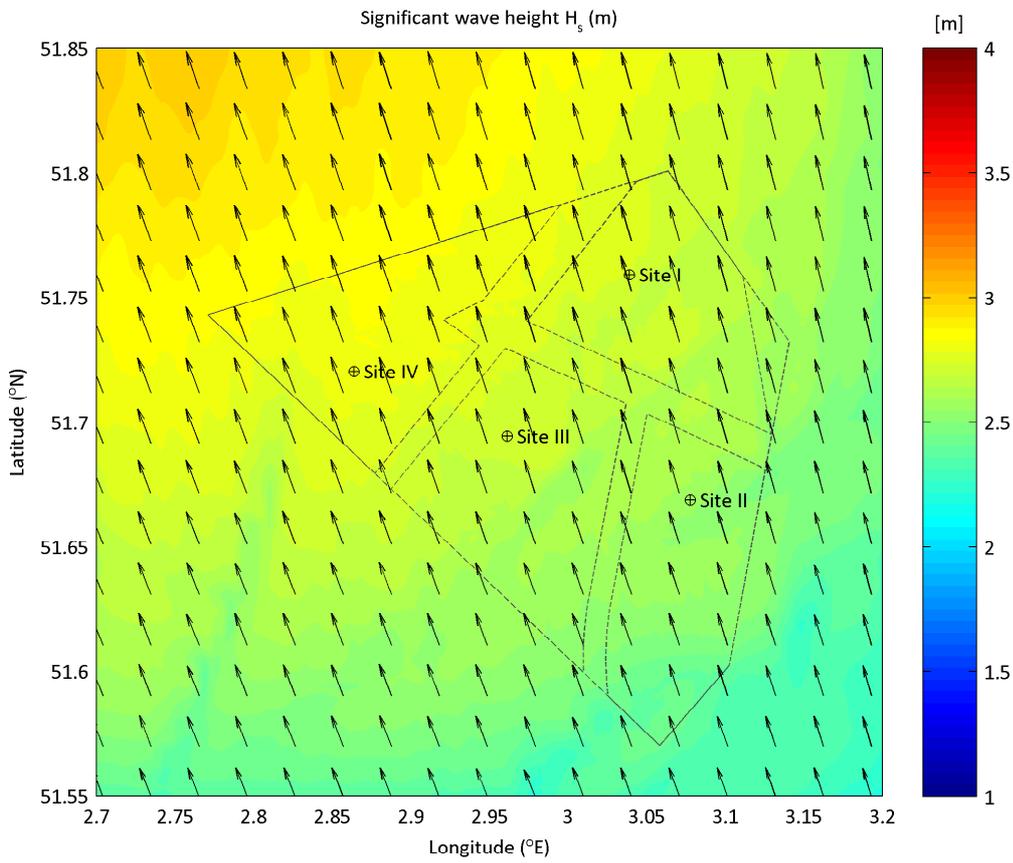
Extreme wave condition from Sector135 ( $^{\circ}$ N) - 165 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.031



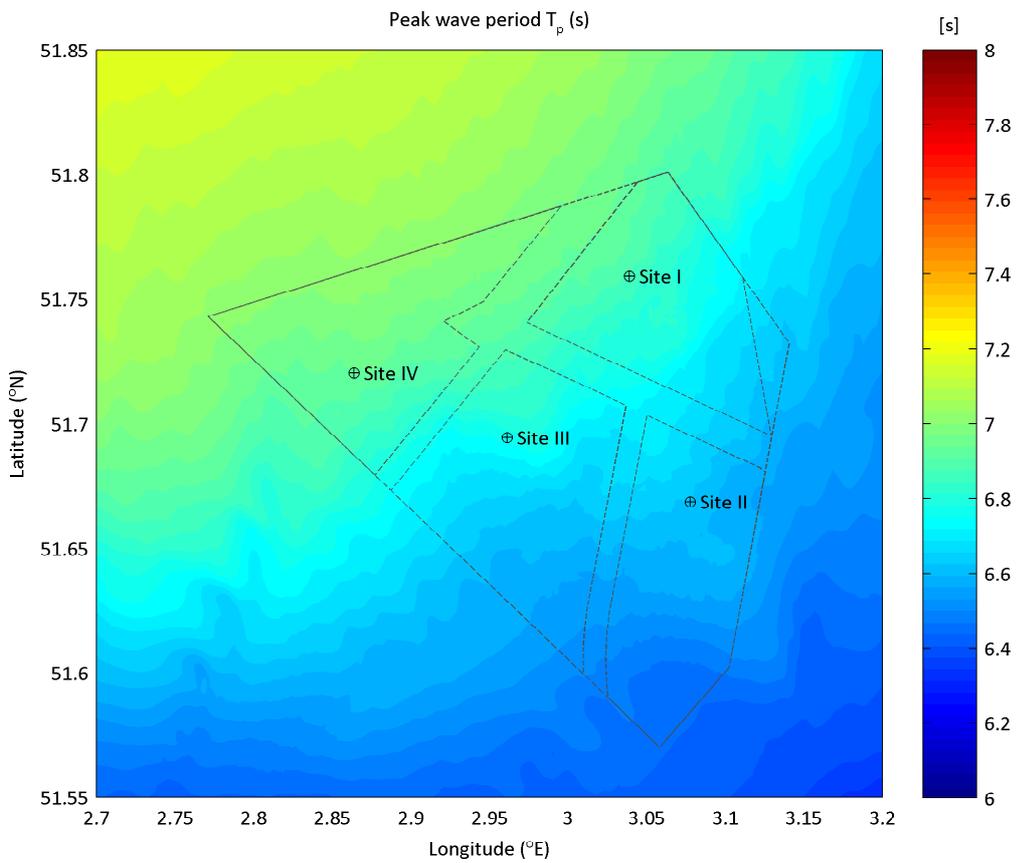
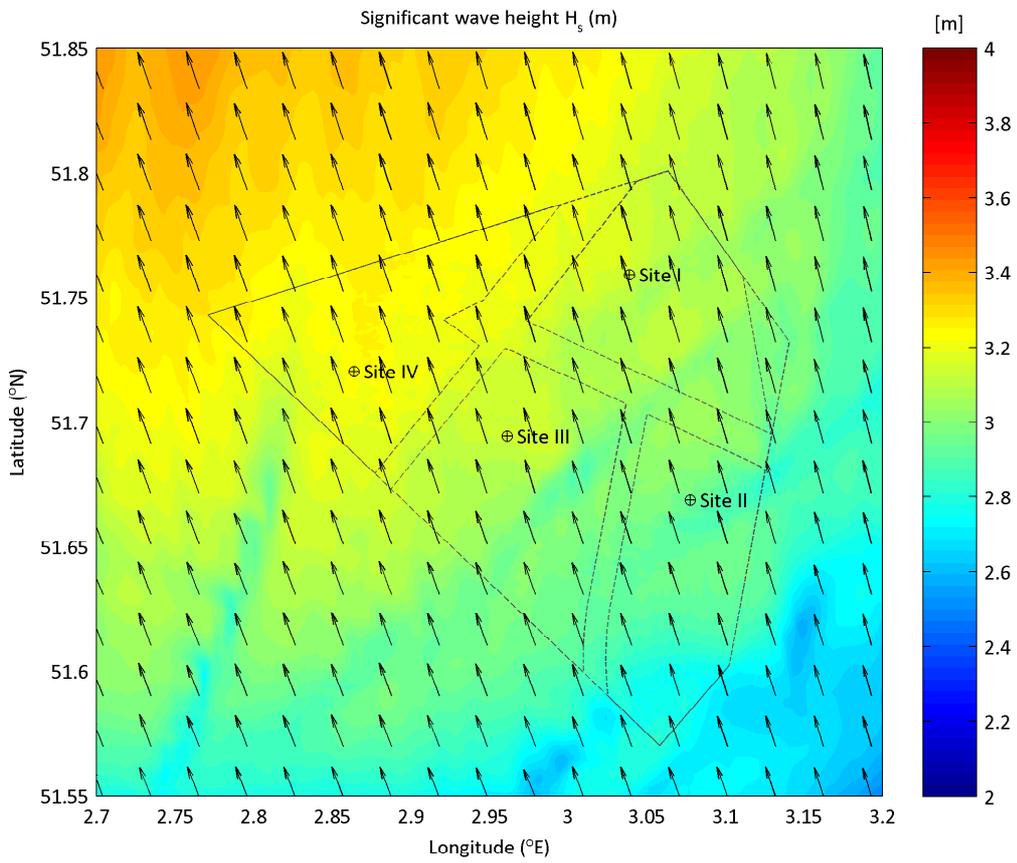
Extreme wave condition from Sector135 ( $^{\circ}$ N) - 165 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.032



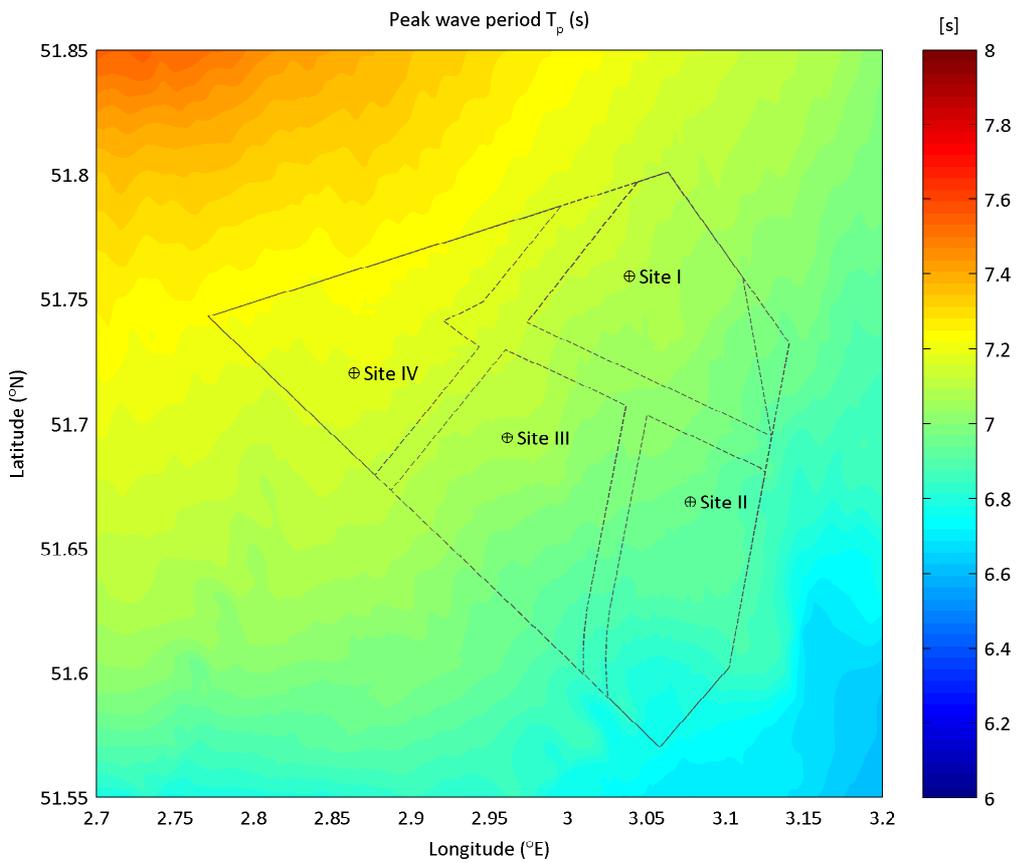
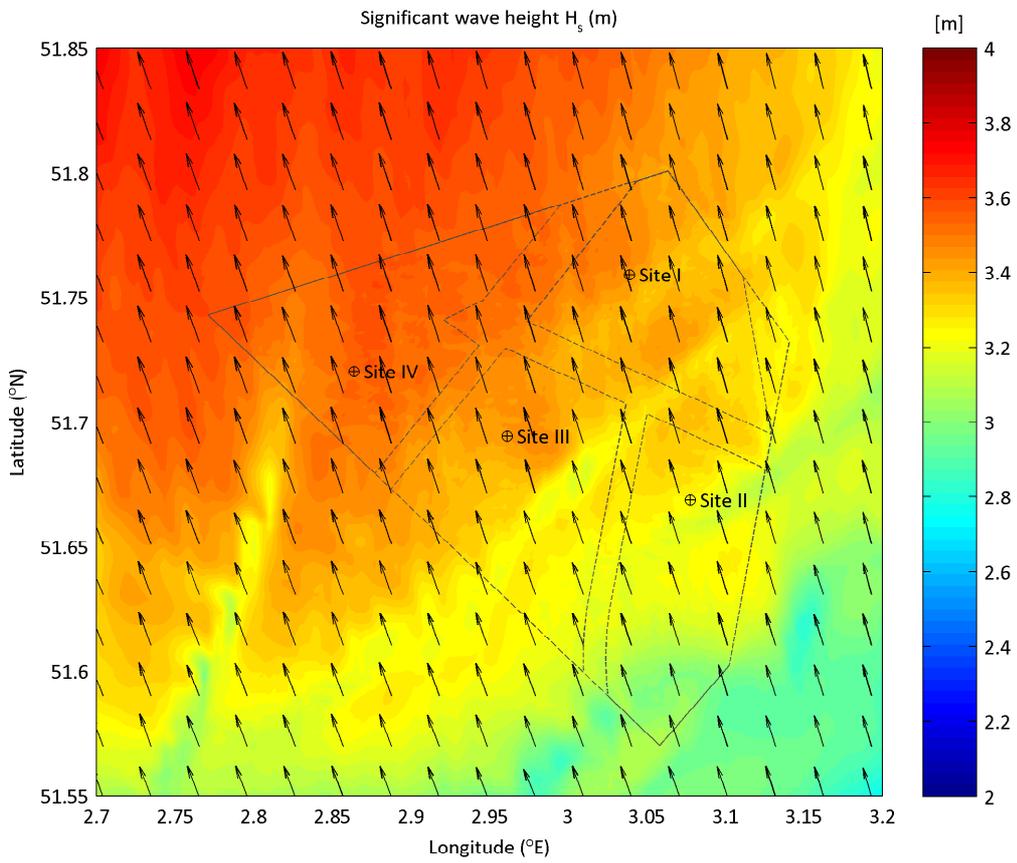
Extreme wave condition from Sector135 ( $^{\circ}$ N) - 165 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.033



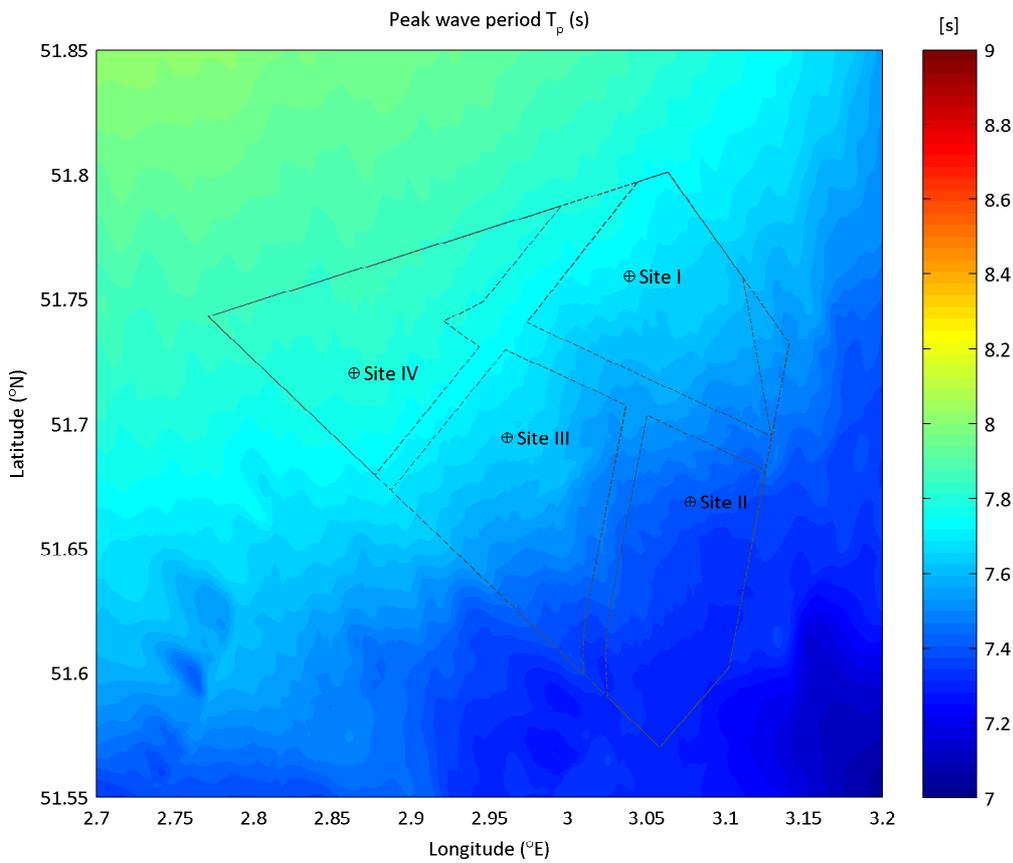
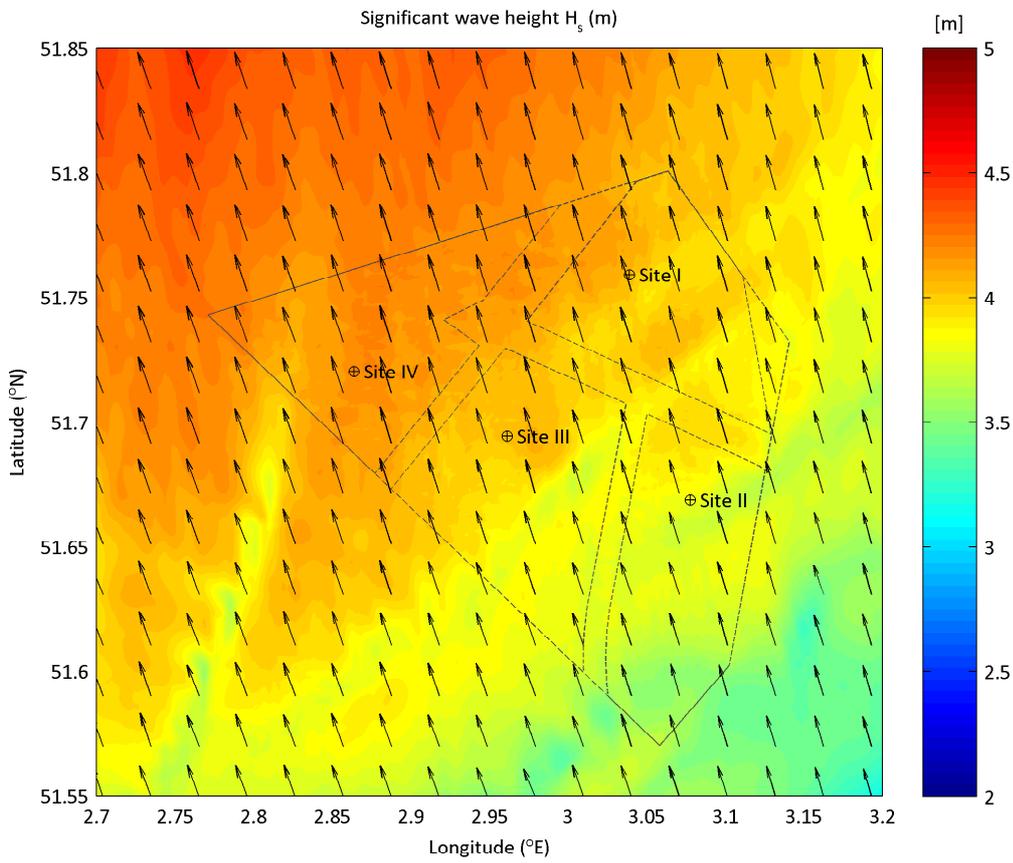
Extreme wave condition from Sector135 (°N) - 165 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.034



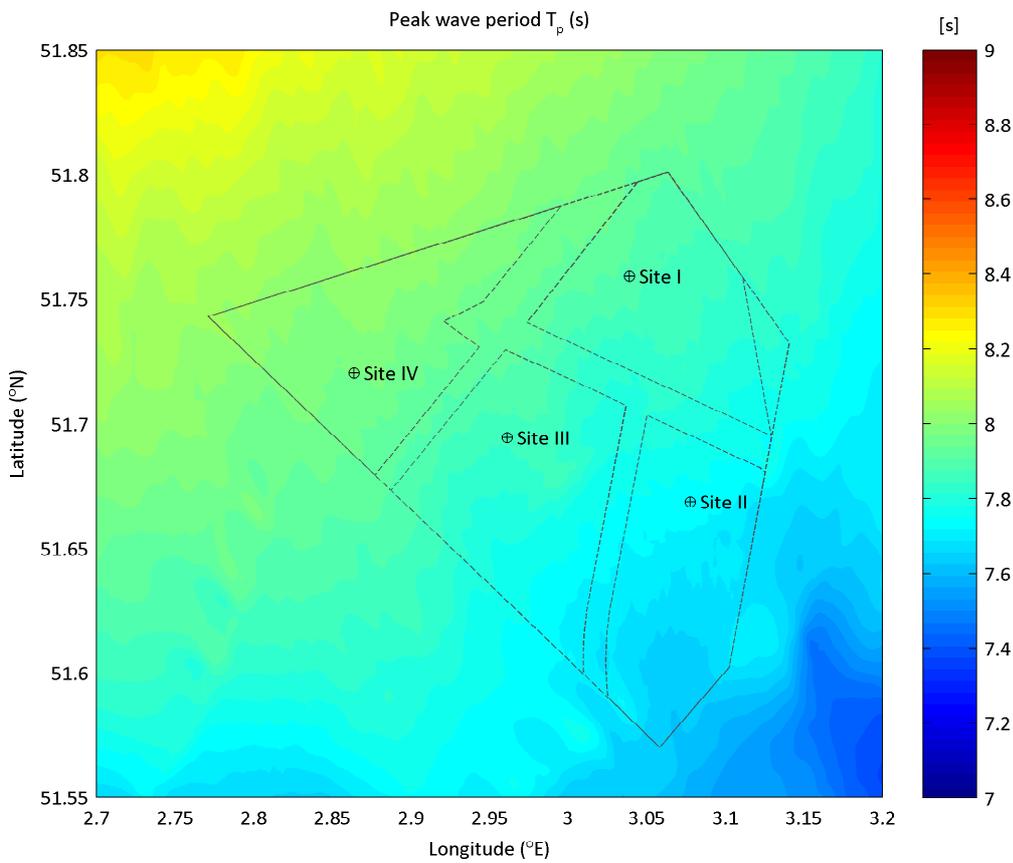
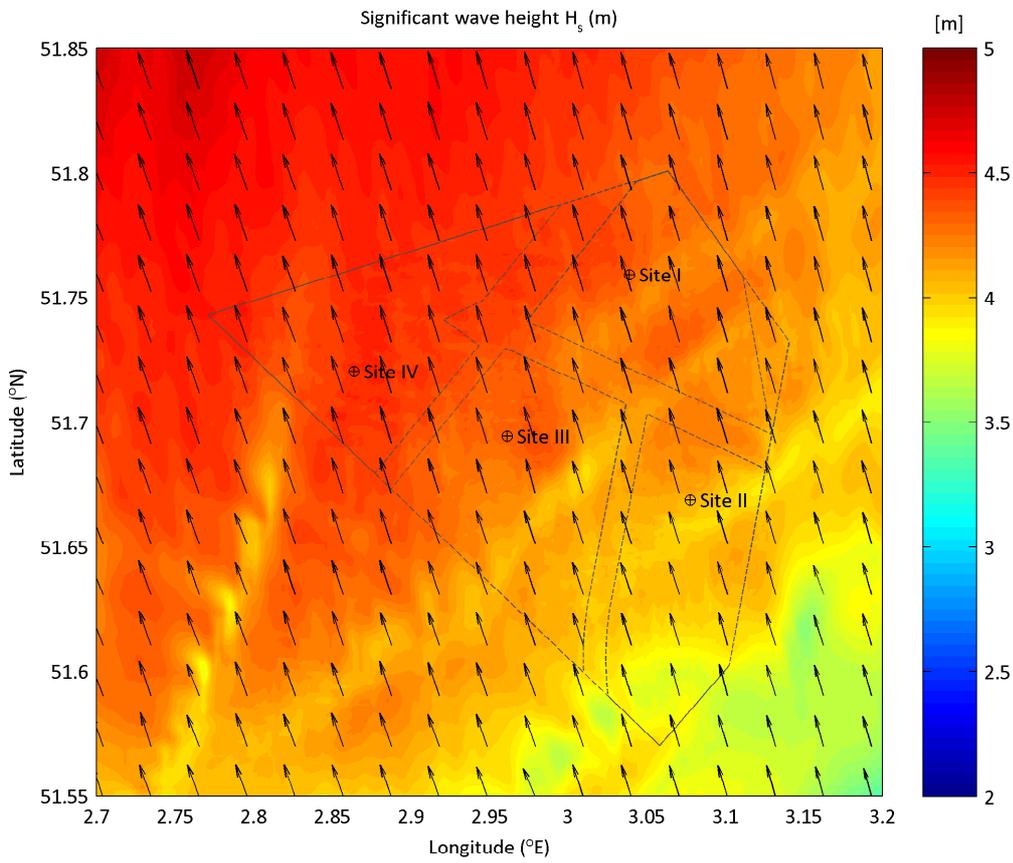
Extreme wave condition from Sector135 (°N) - 165 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.035



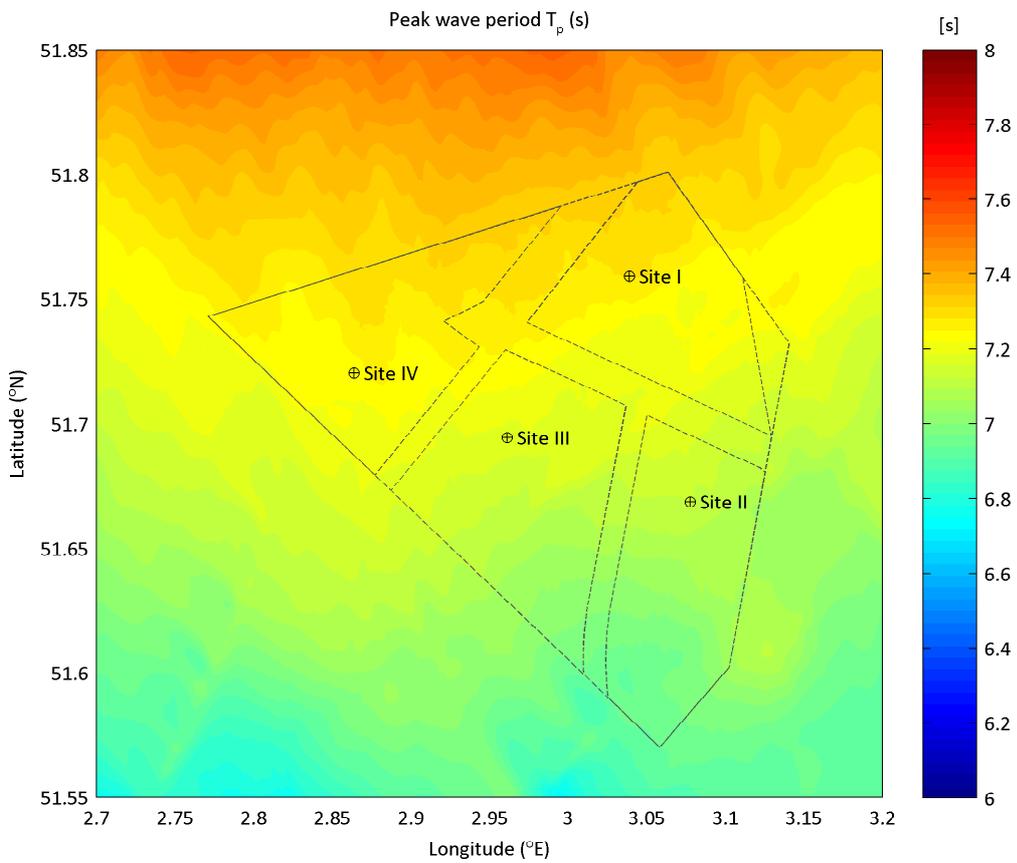
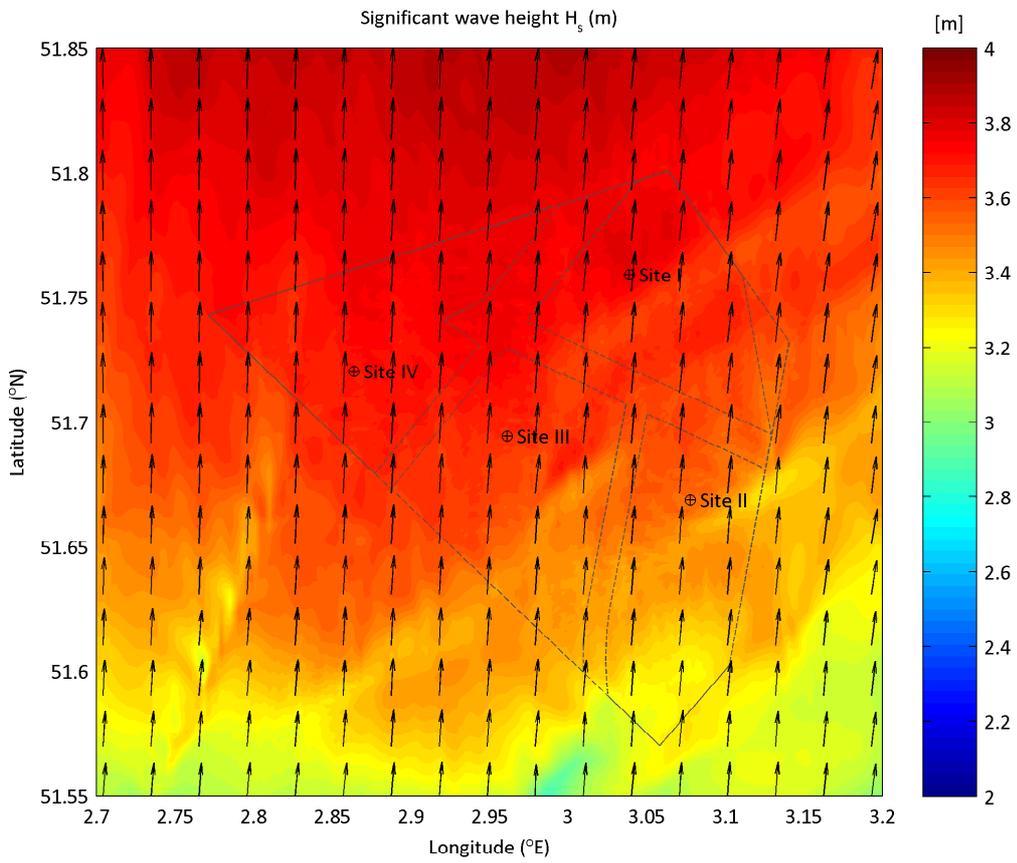
Extreme wave condition from Sector135 ( $^{\circ}$ N) - 165 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.036



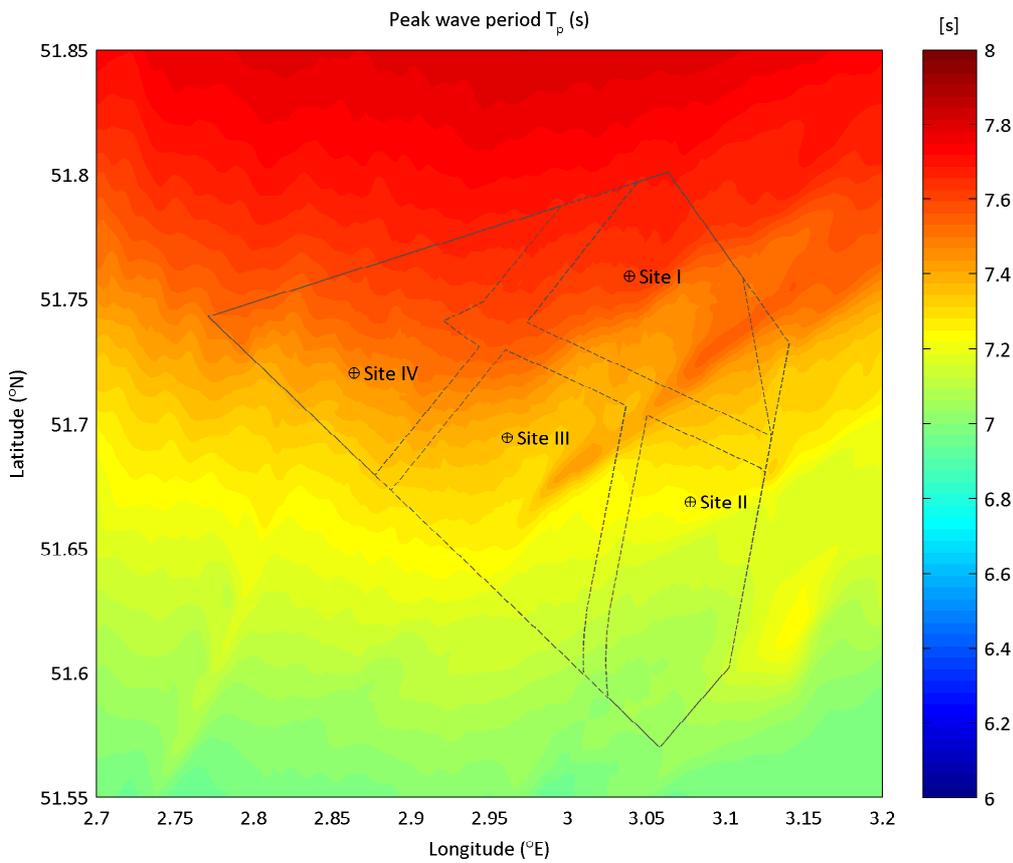
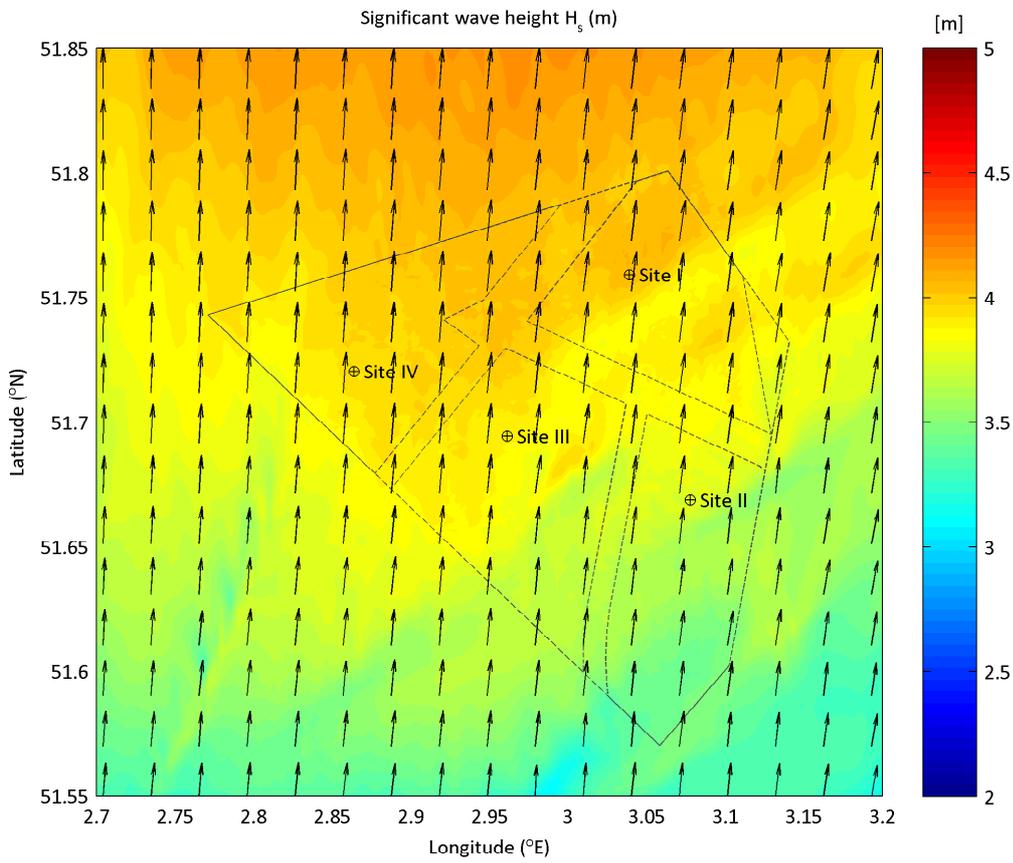
Extreme wave condition from Sector165 ( $^{\circ}$ N) - 195 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.037



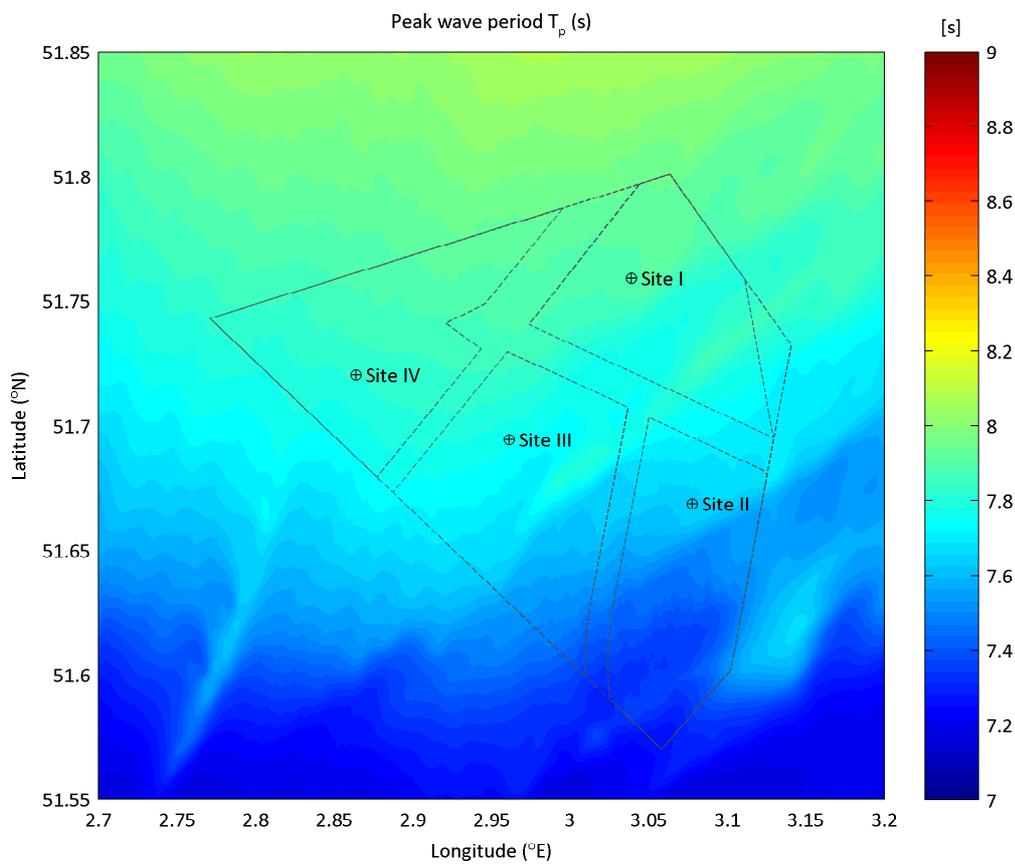
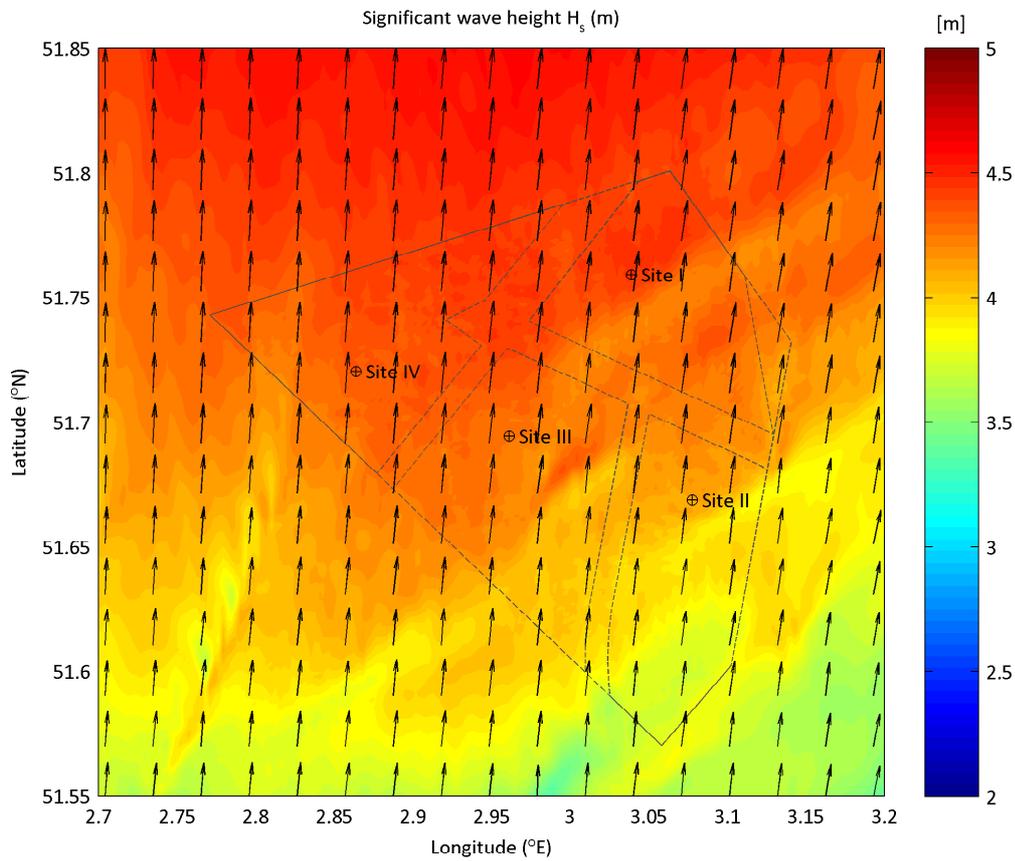
Extreme wave condition from Sector165 ( $^{\circ}$ N) - 195 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.038



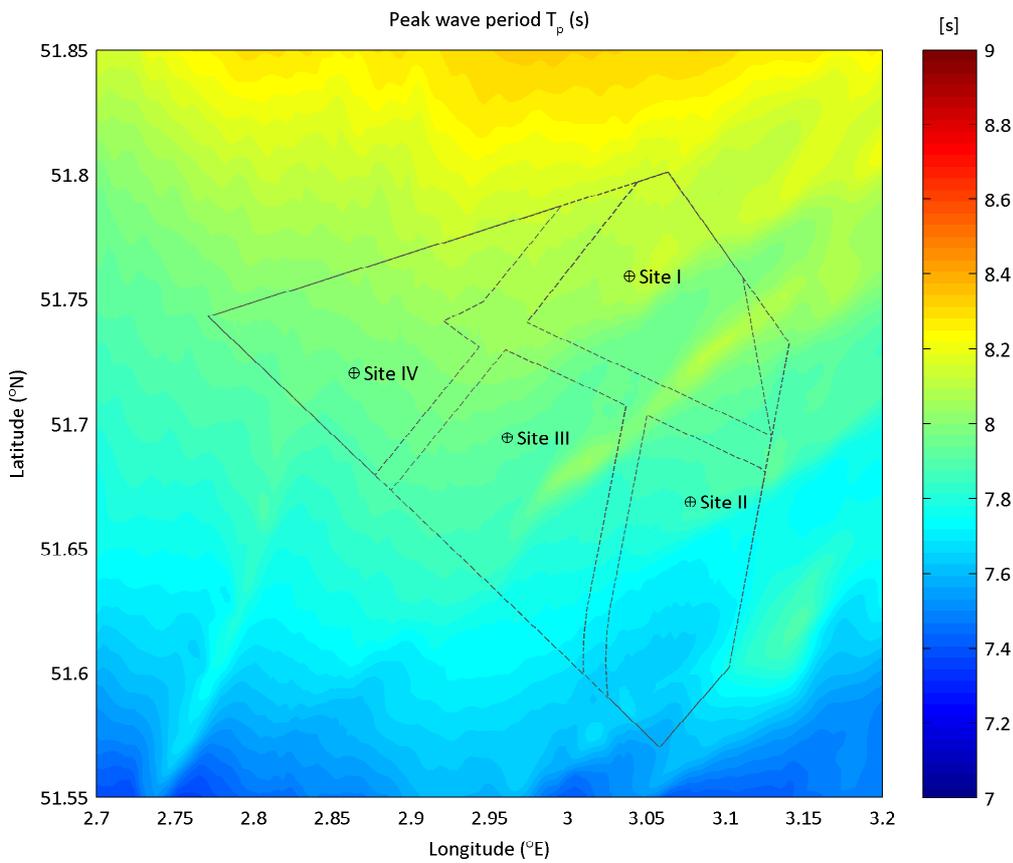
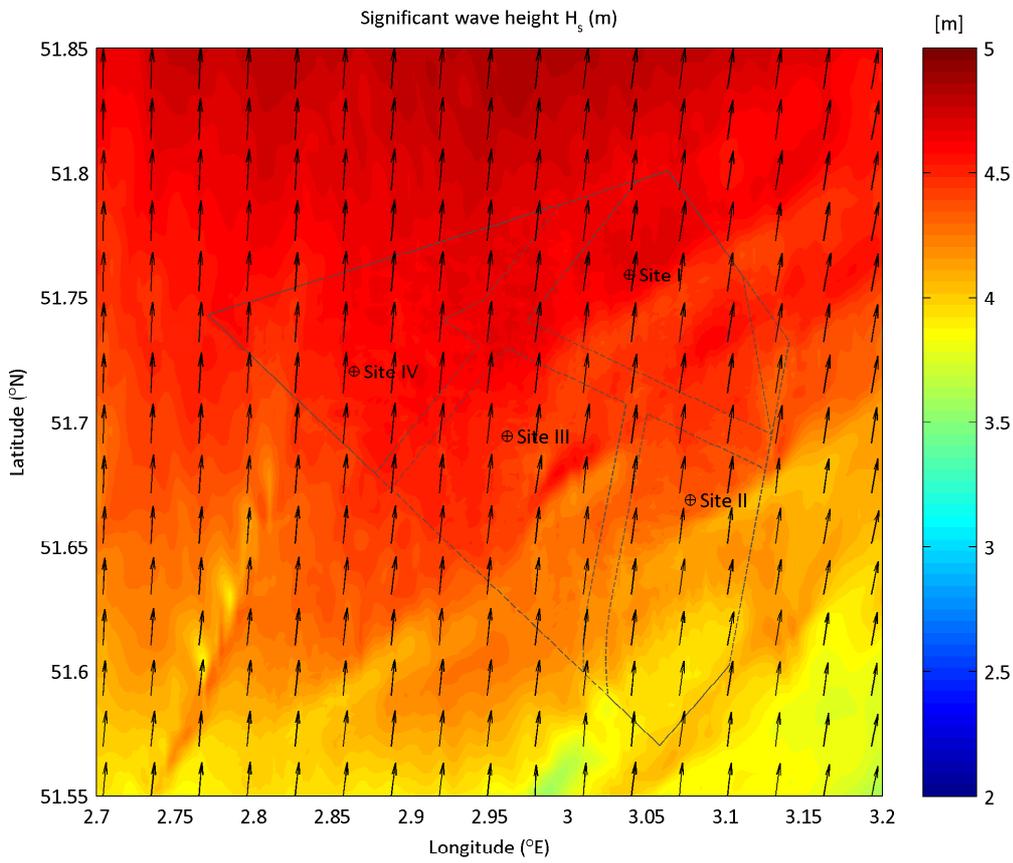
Extreme wave condition from Sector165 ( $^{\circ}$ N) - 195 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.039



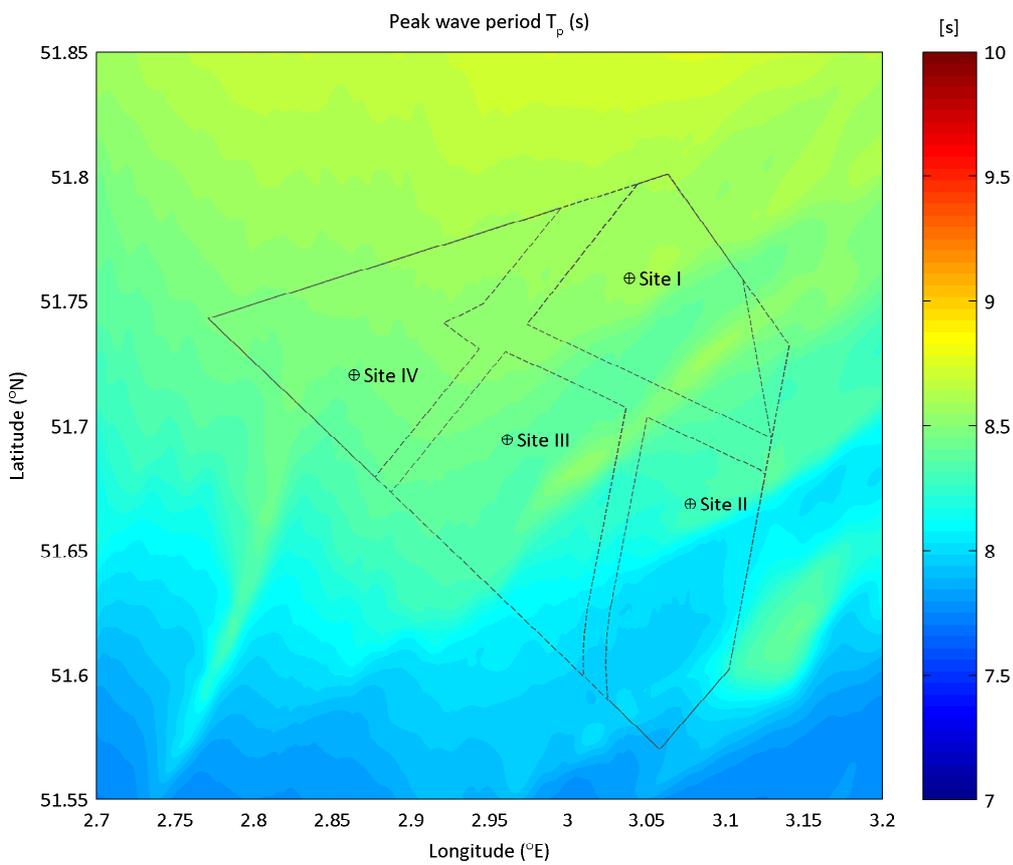
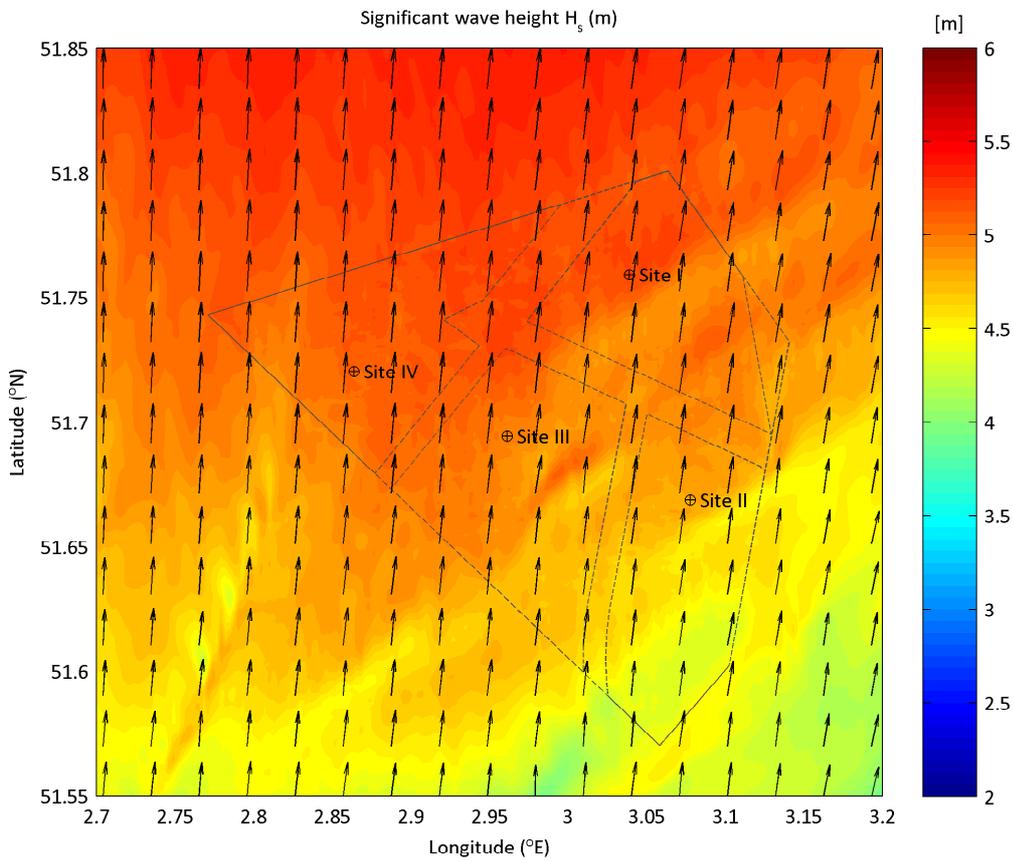
Extreme wave condition from Sector165 ( $^{\circ}$ N) - 195 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.040



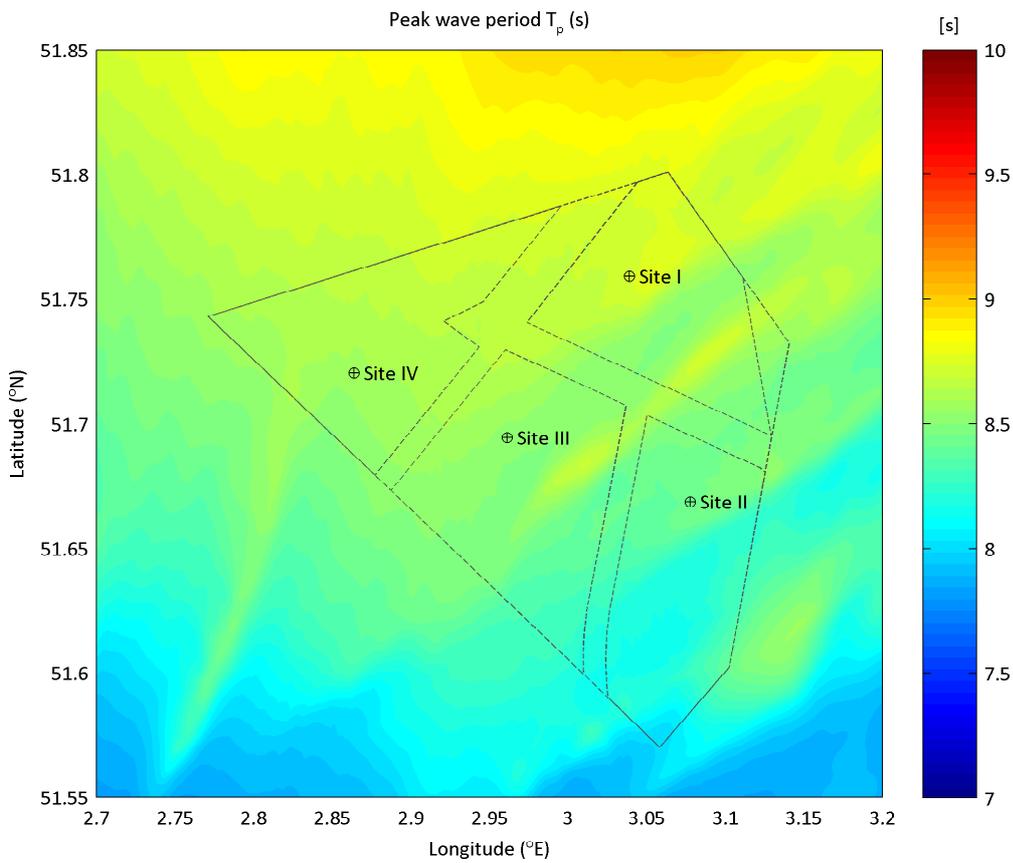
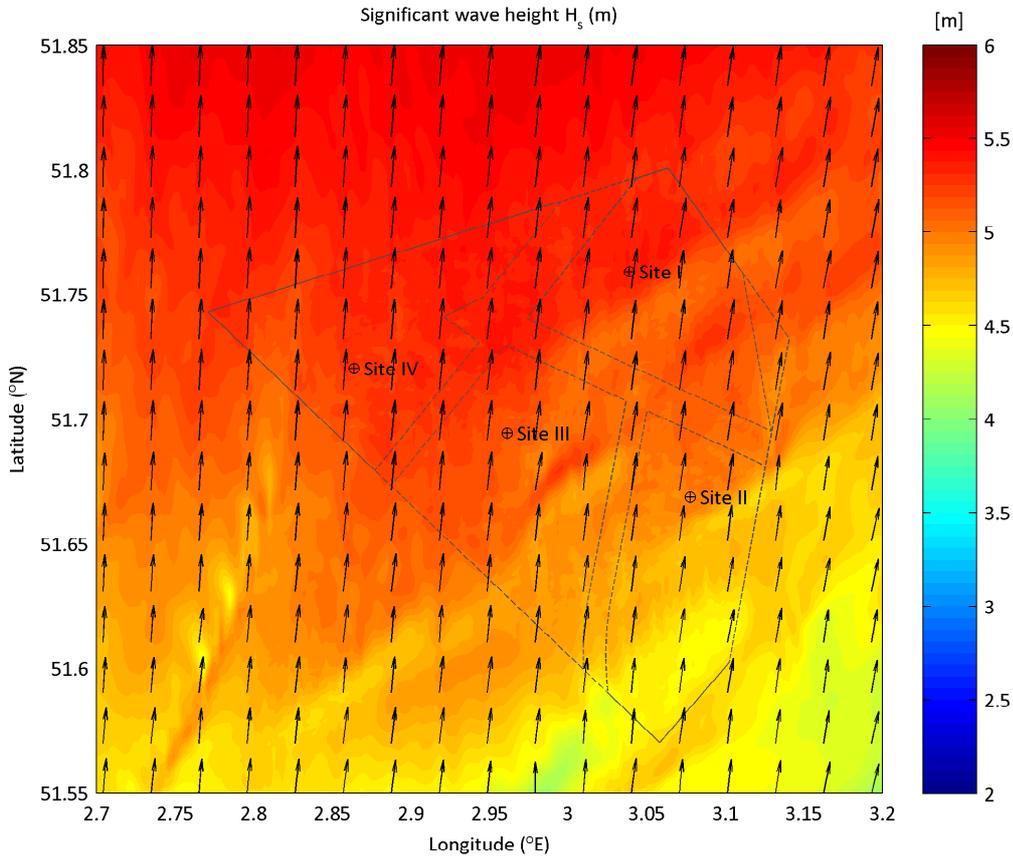
Extreme wave condition from Sector165 ( $^{\circ}$ N) - 195 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.041



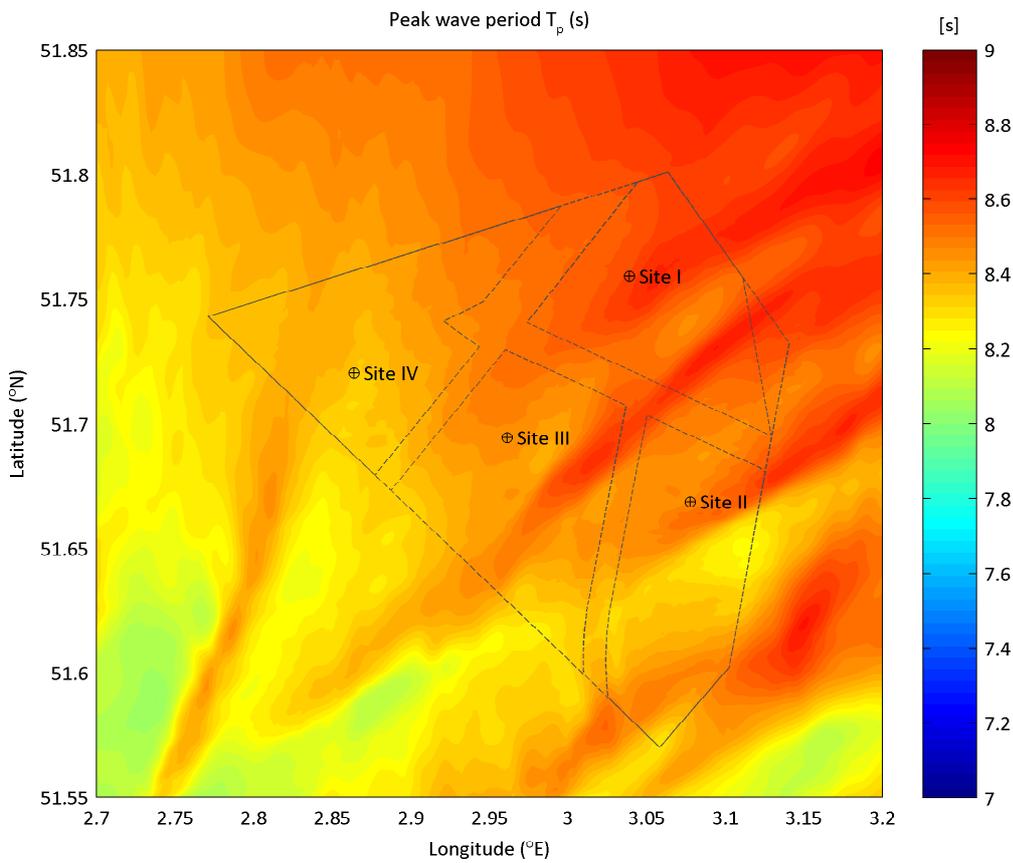
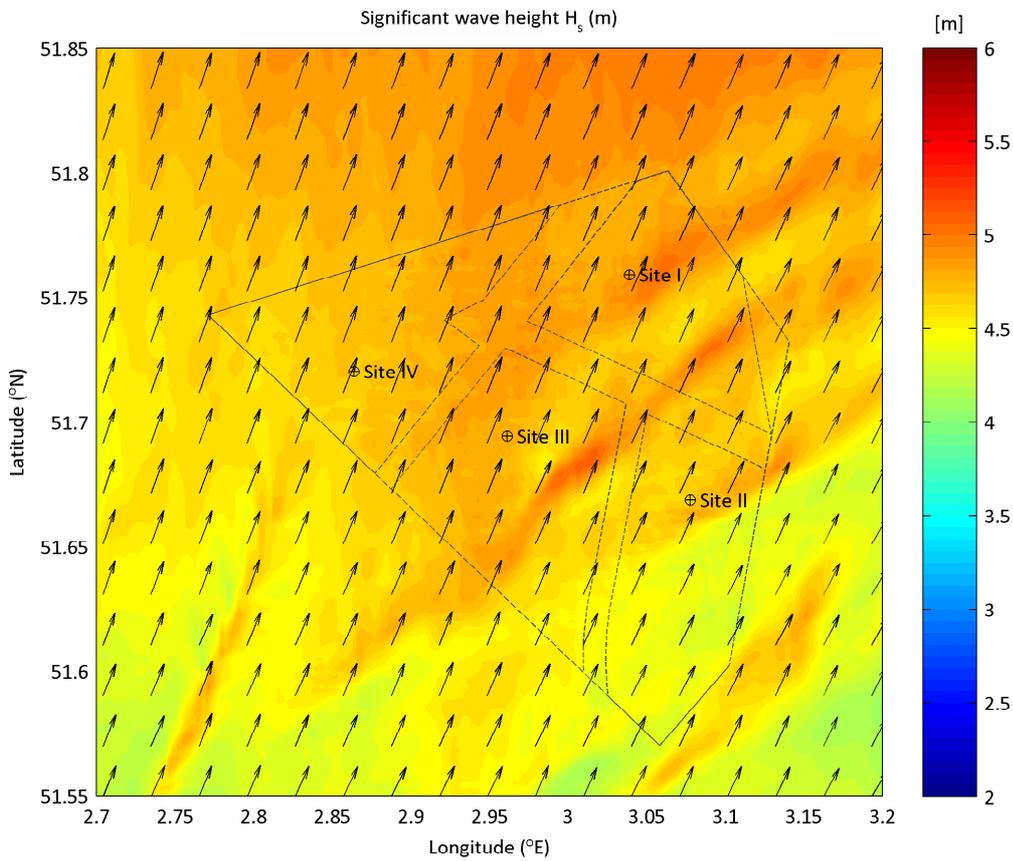
Extreme wave condition from Sector165 (°N) - 195 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.042



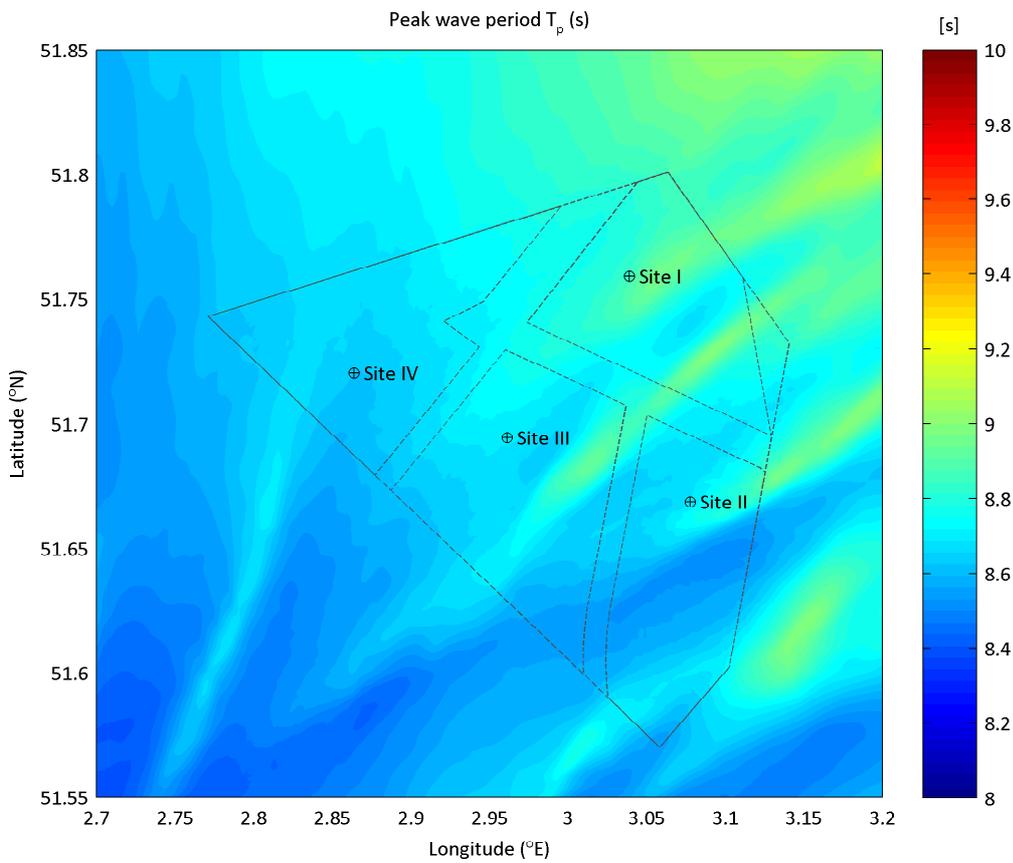
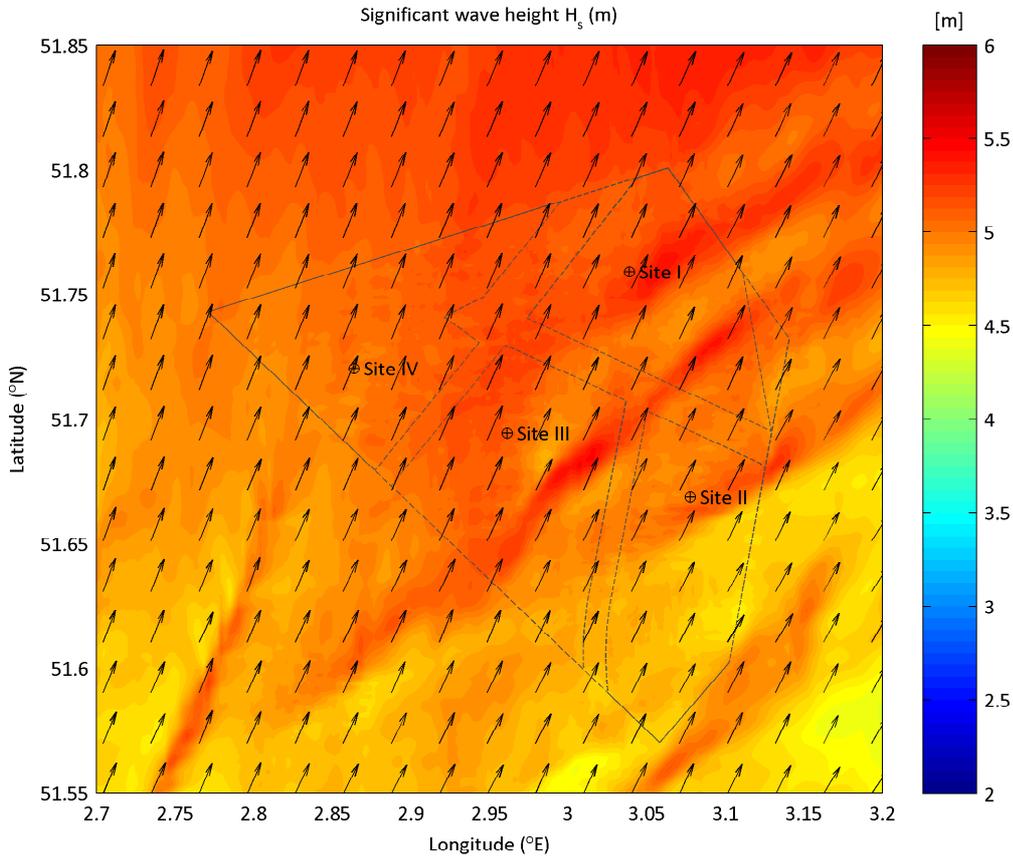
Extreme wave condition from Sector195 ( $^{\circ}$ N) - 225 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.043



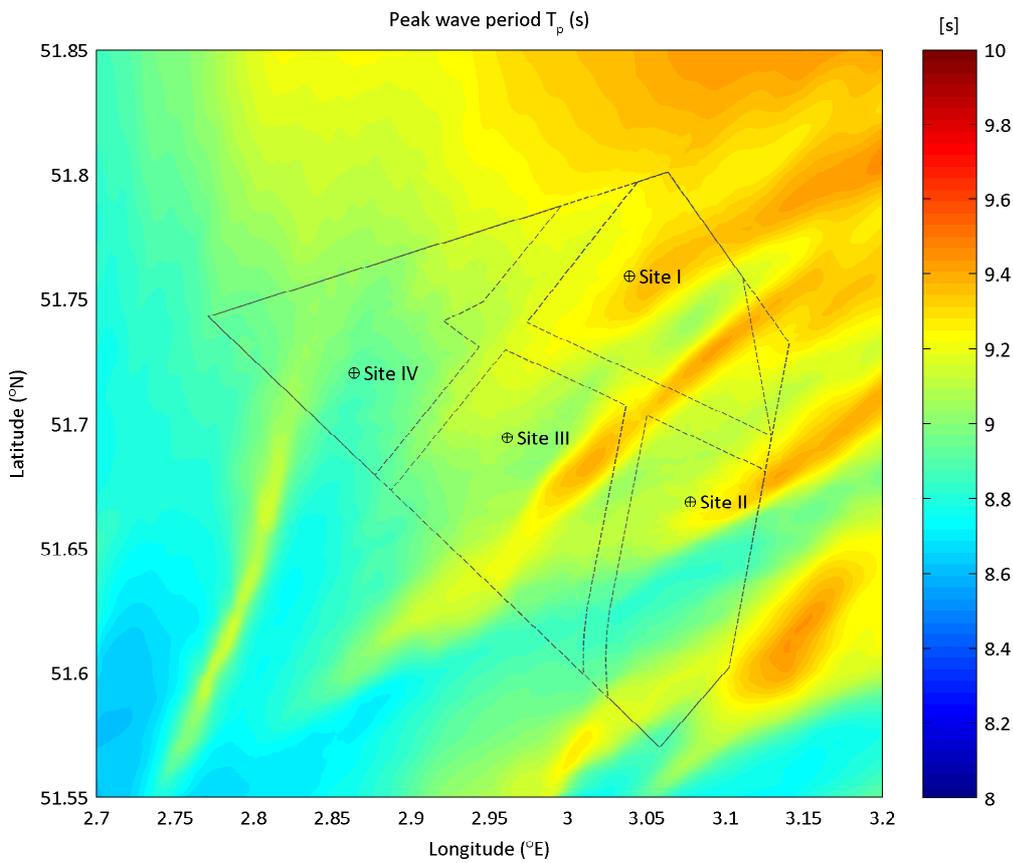
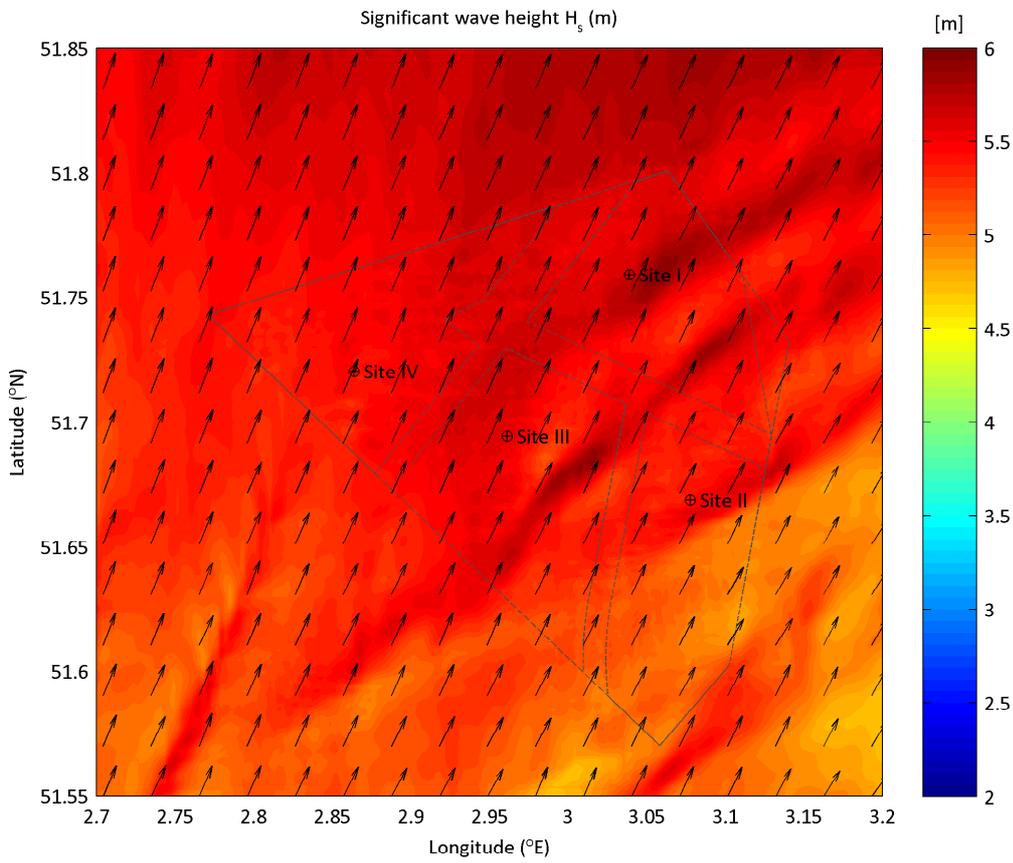
Extreme wave condition from Sector195 ( $^{\circ}$ N) - 225 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.044



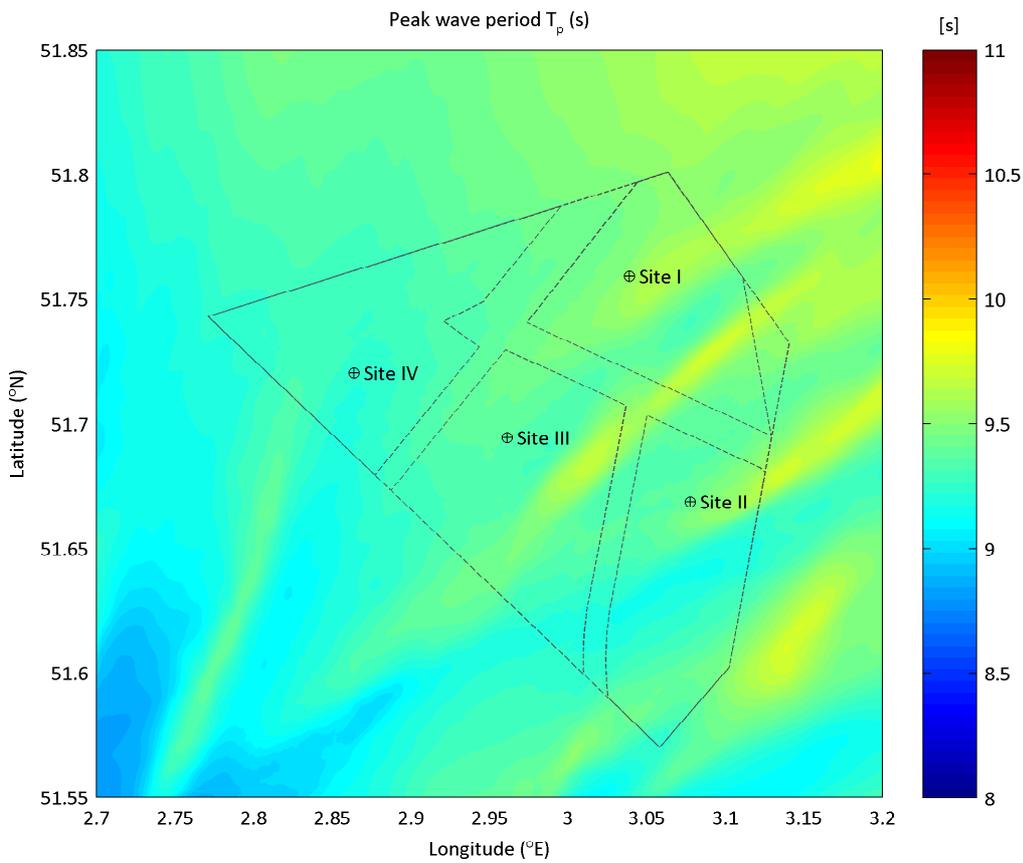
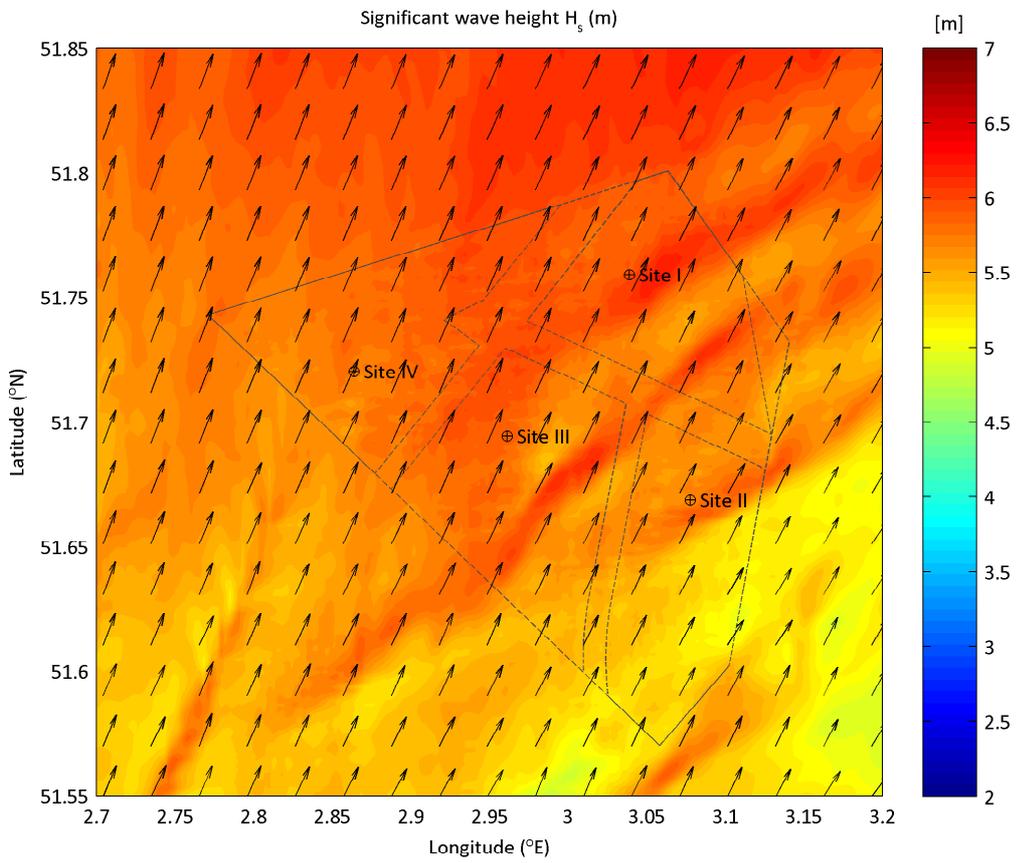
Extreme wave condition from Sector195 ( $^{\circ}$ N) - 225 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.045



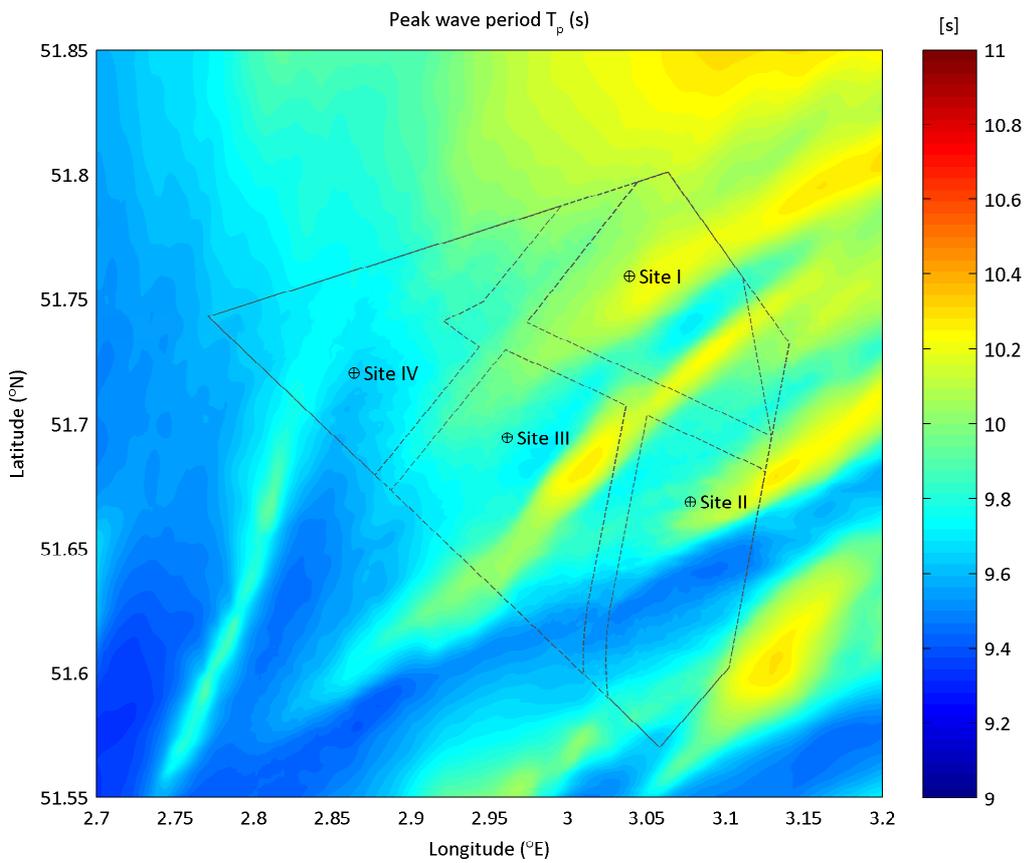
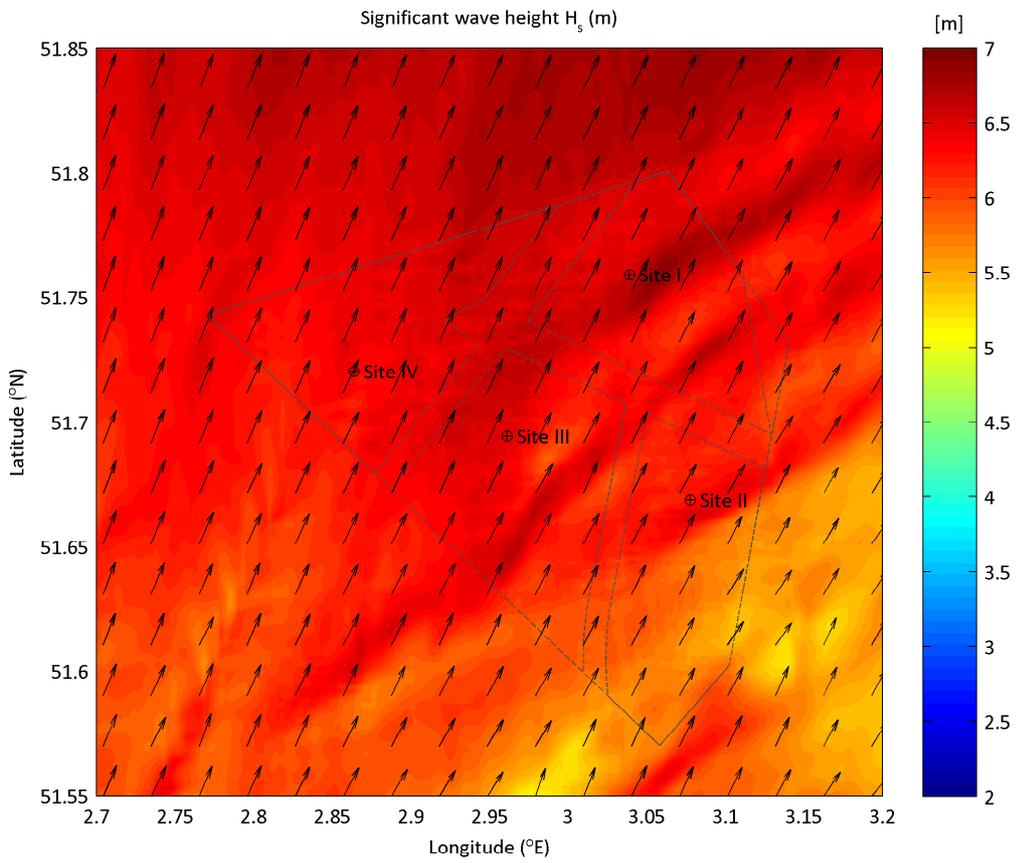
Extreme wave condition from Sector195 ( $^{\circ}$ N) - 225 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.046



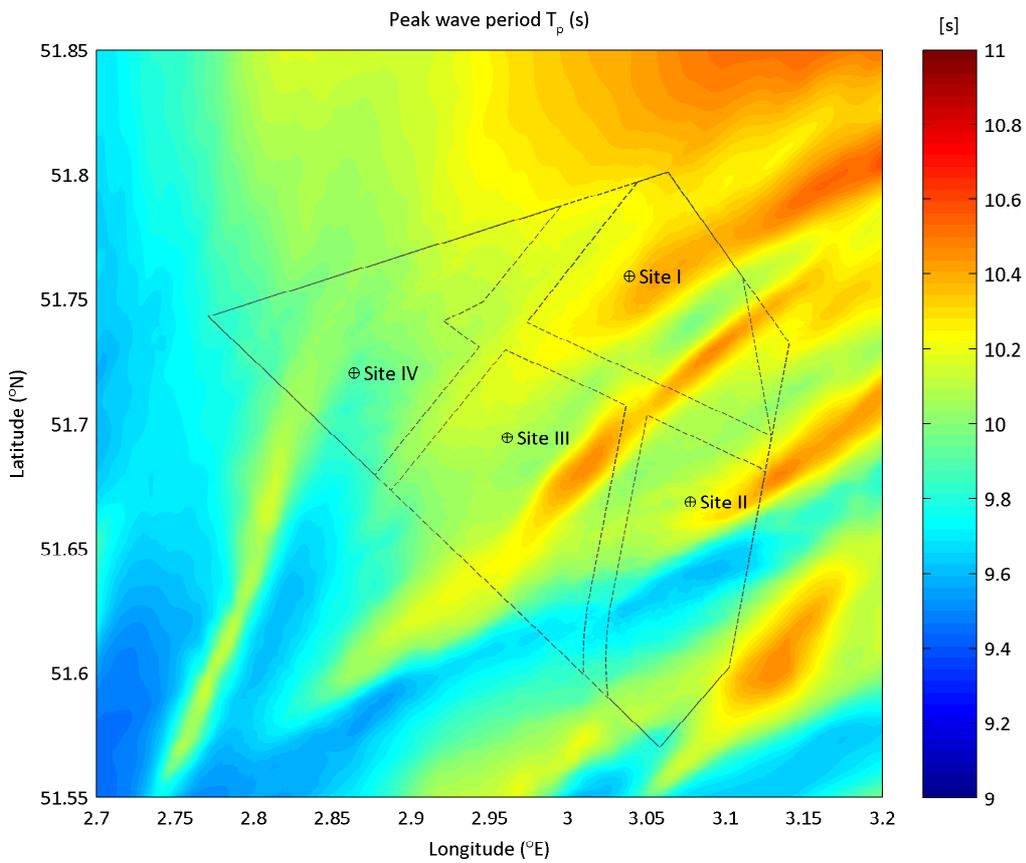
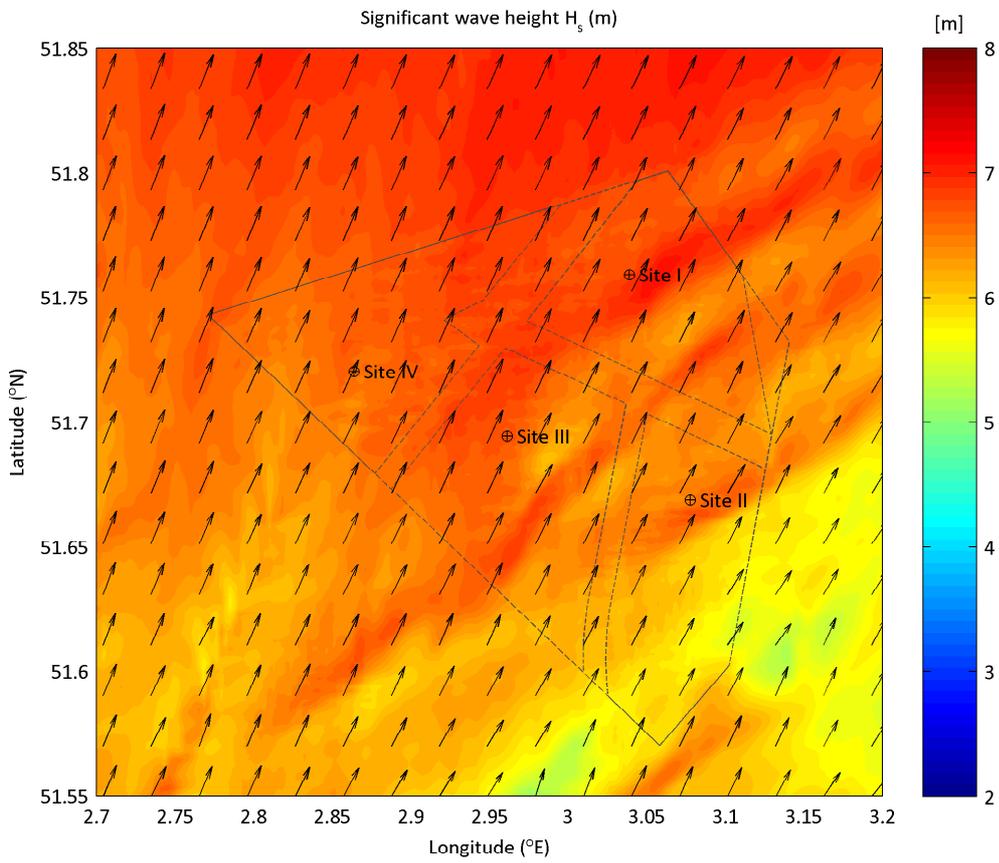
Extreme wave condition from Sector195 ( $^{\circ}$ N) - 225 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.047



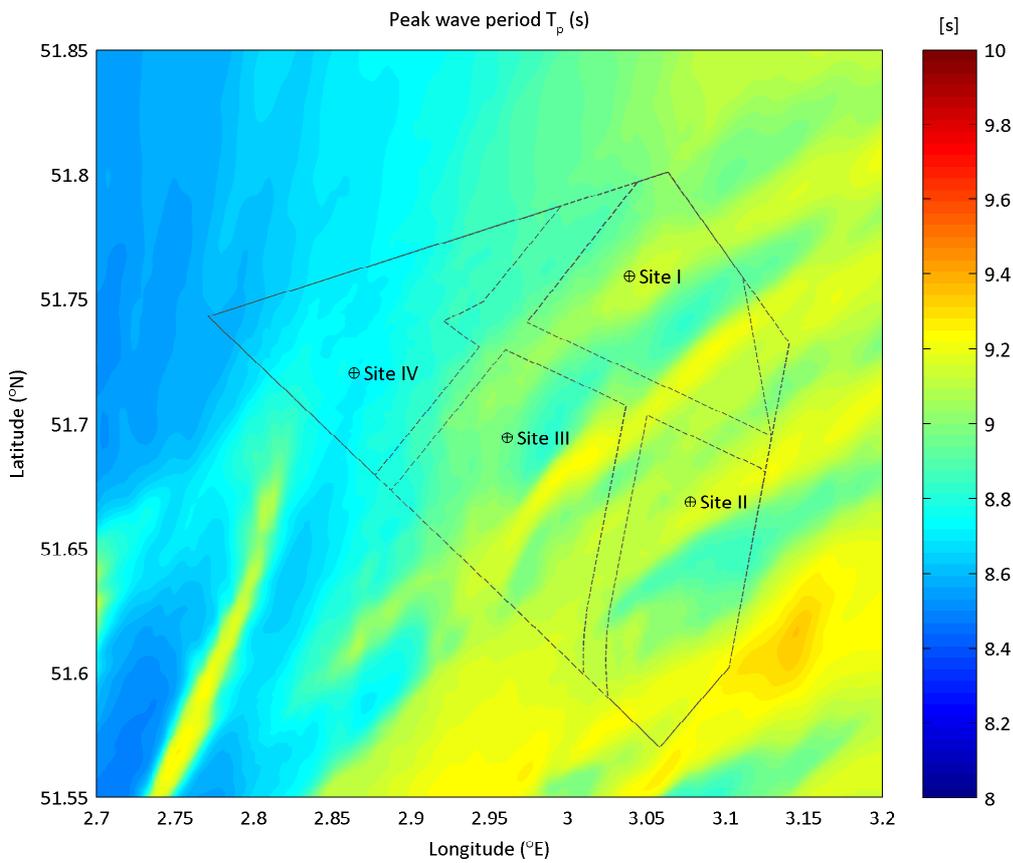
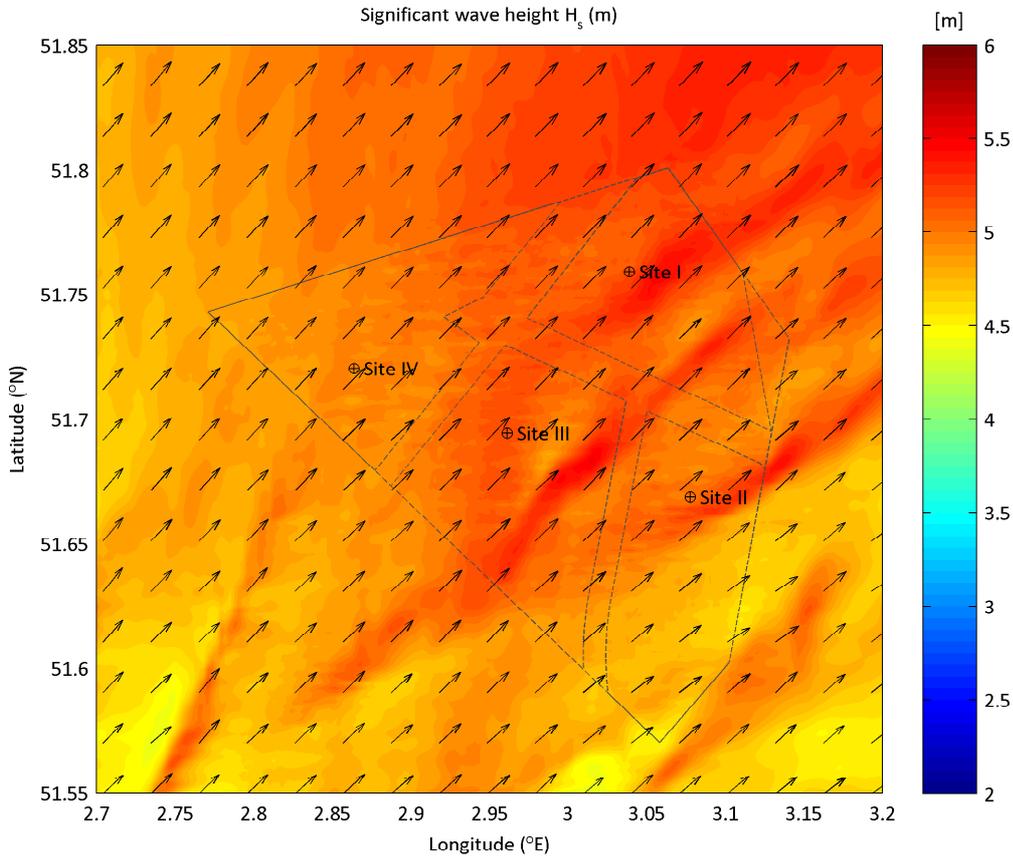
Extreme wave condition from Sector195 ( $^{\circ}$ N) - 225 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.048



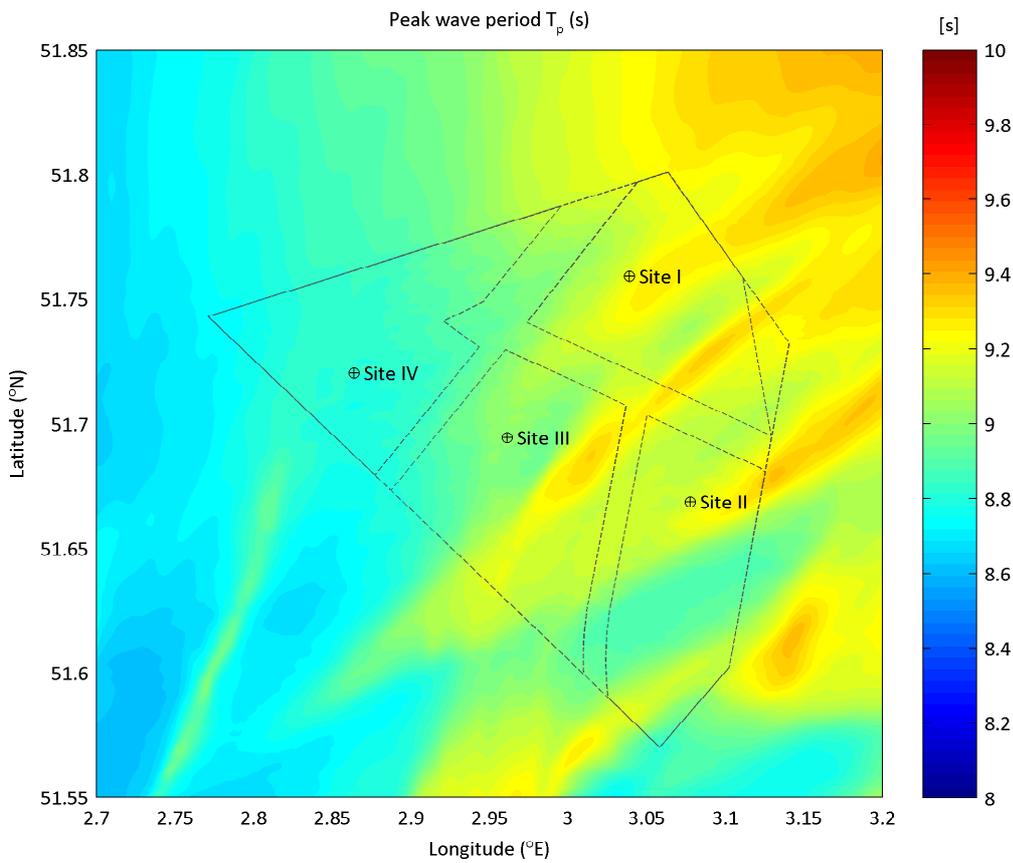
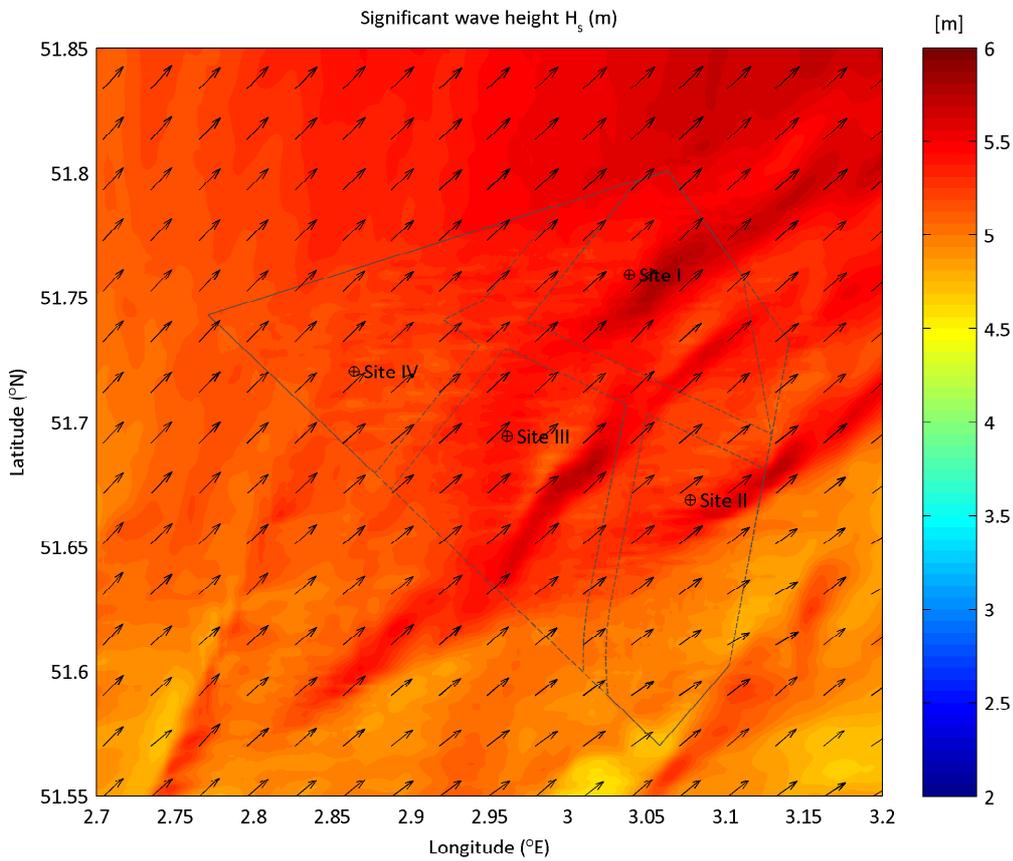
Extreme wave condition from Sector225 ( $^{\circ}$ N) - 255 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.049



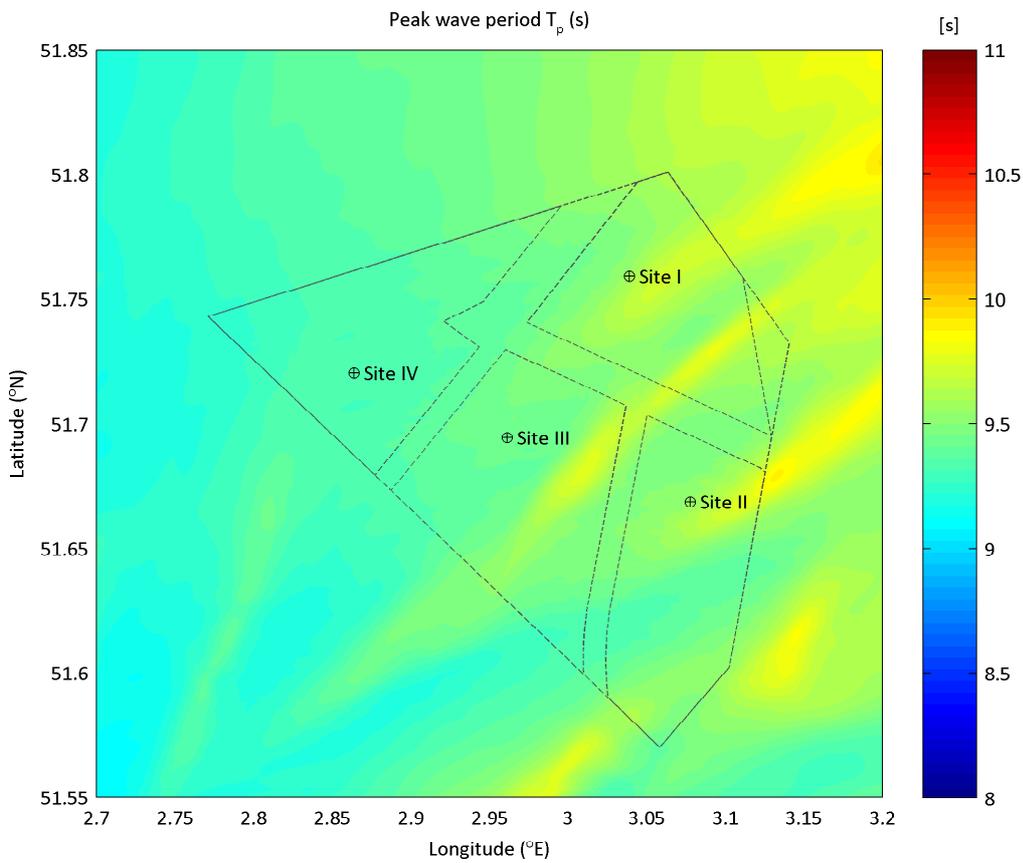
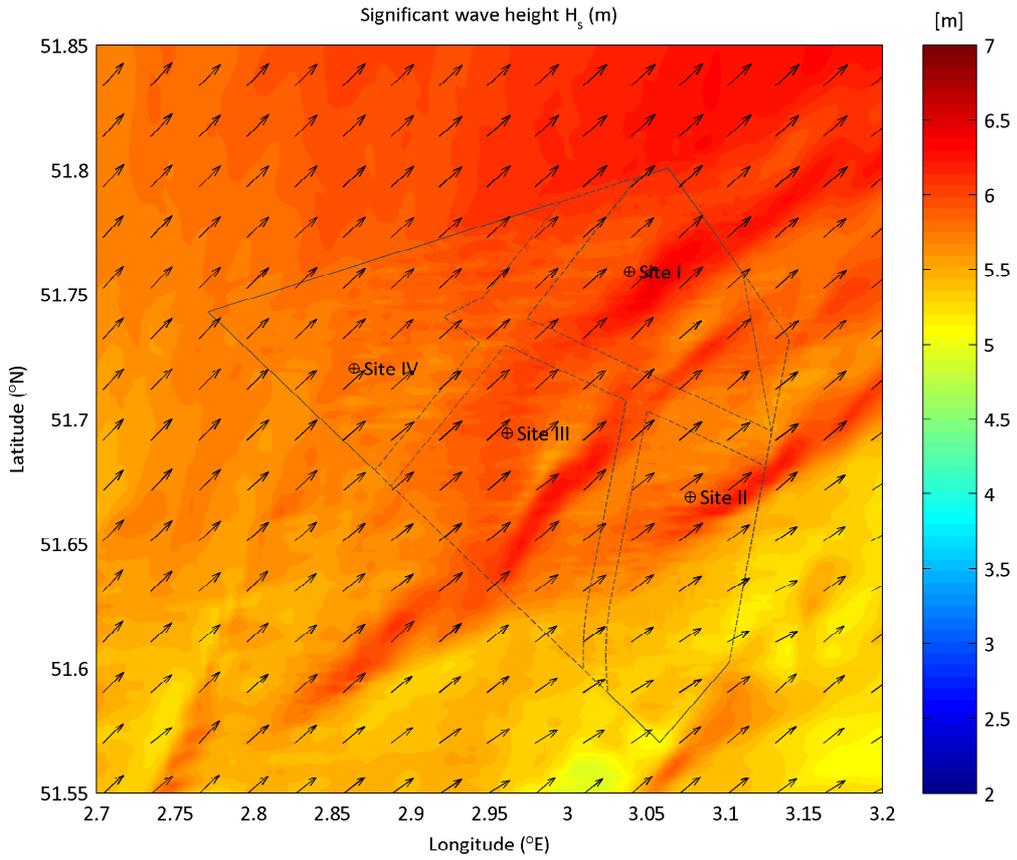
Extreme wave condition from Sector225 ( $^{\circ}$ N) - 255 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.050



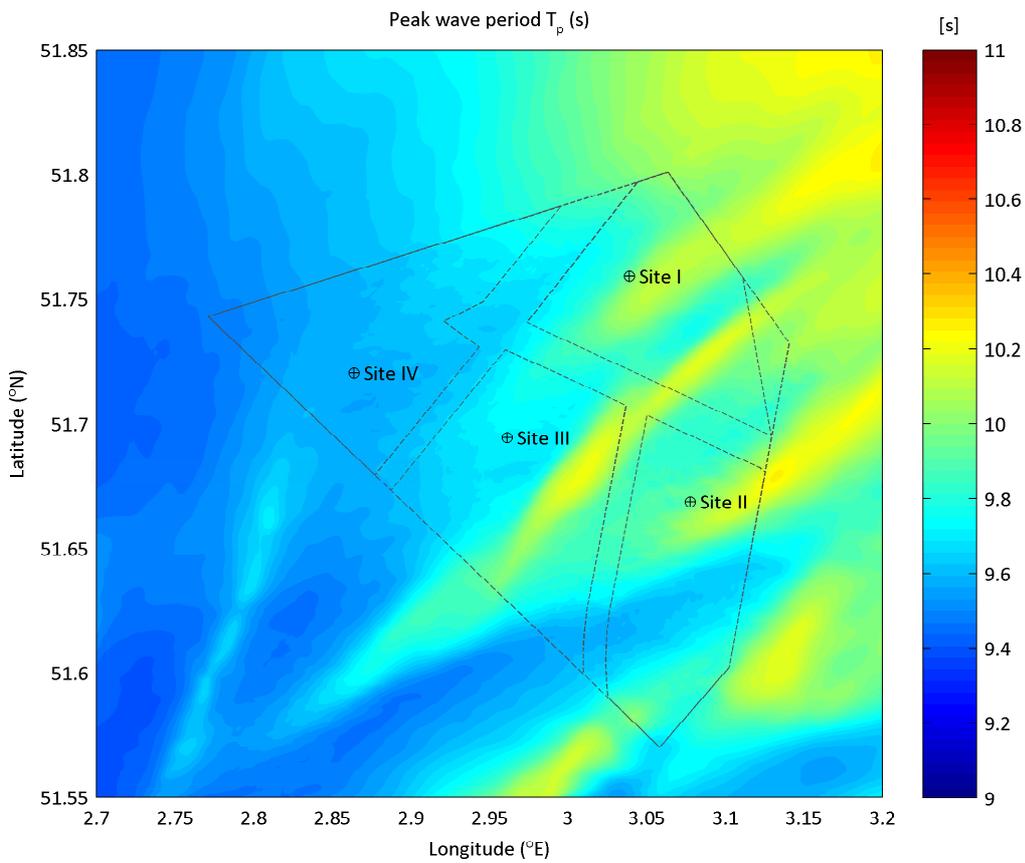
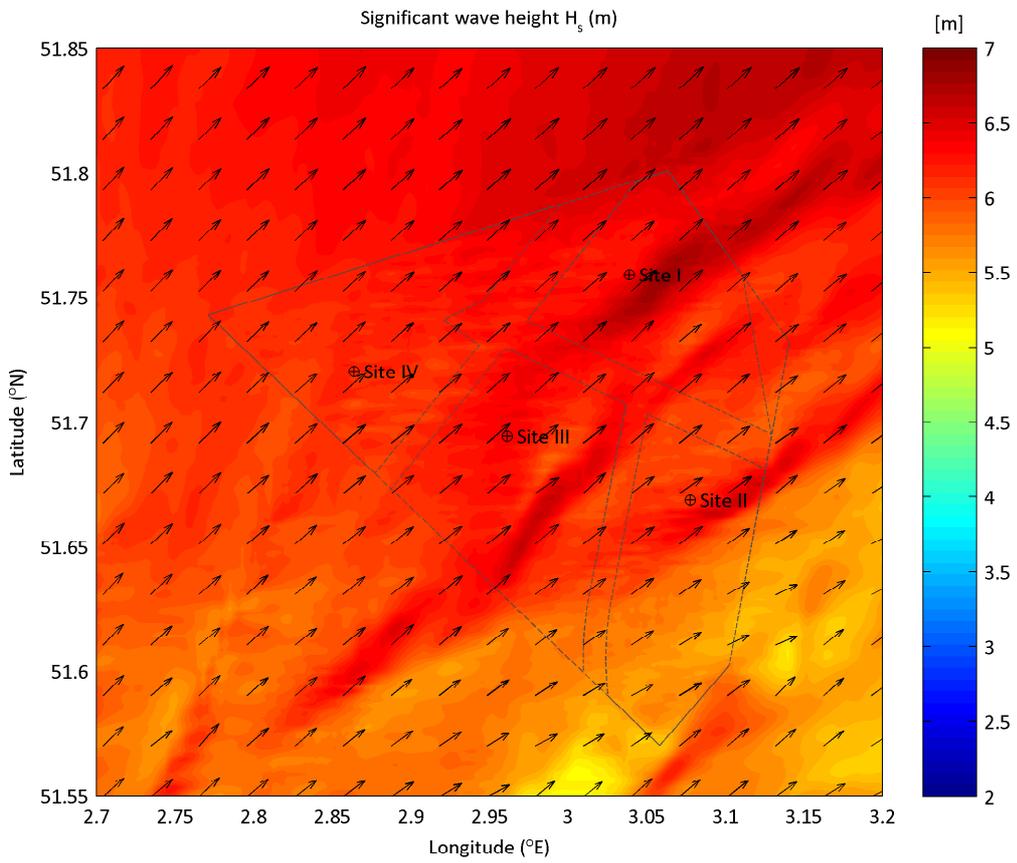
Extreme wave condition from Sector225 ( $^{\circ}$ N) - 255 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.051



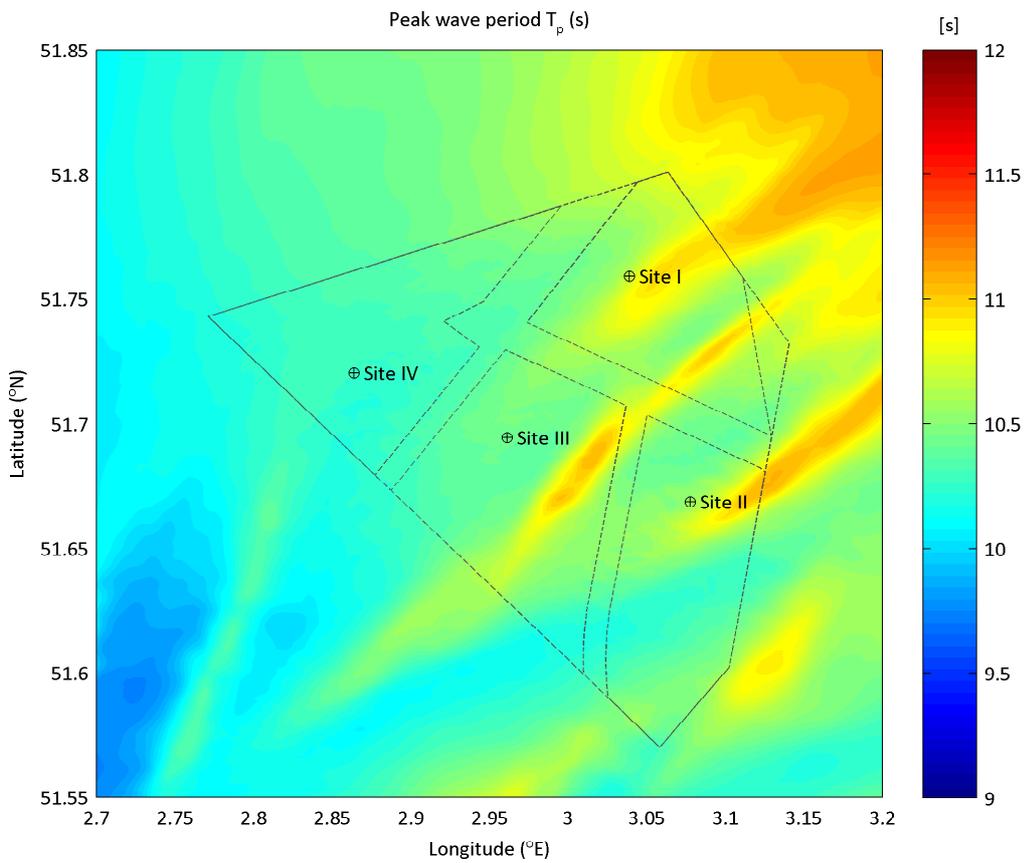
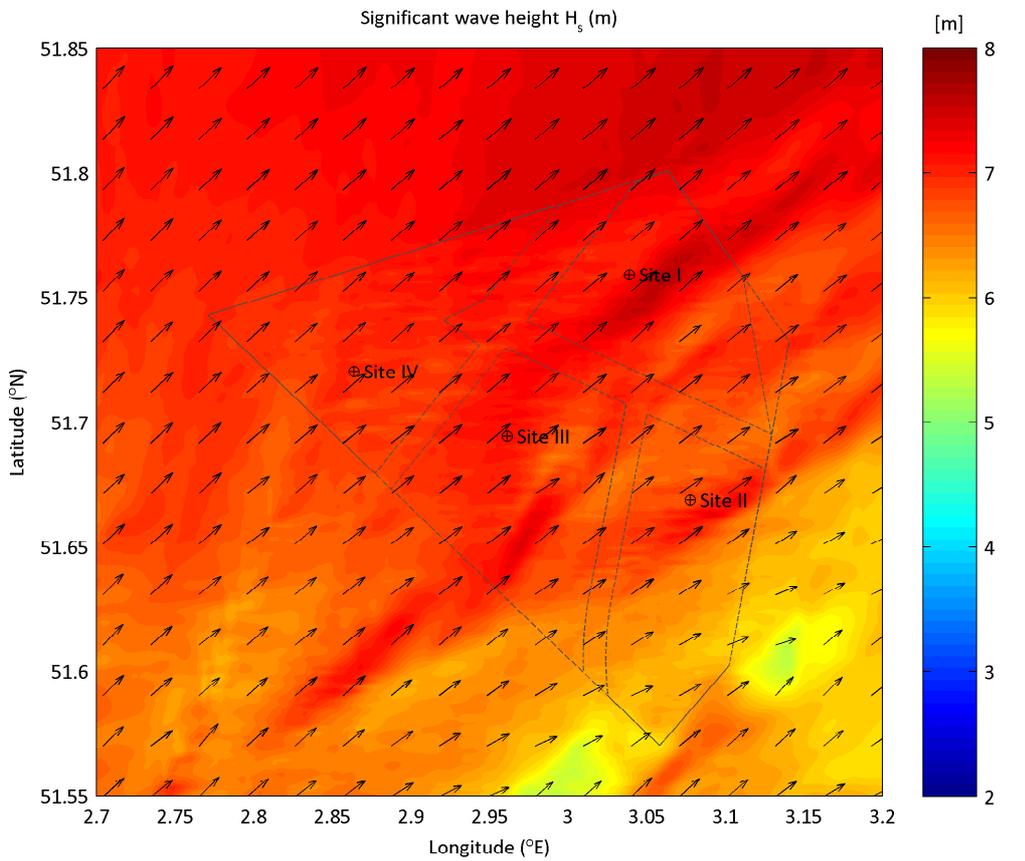
Extreme wave condition from Sector225 ( $^{\circ}$ N) - 255 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.052



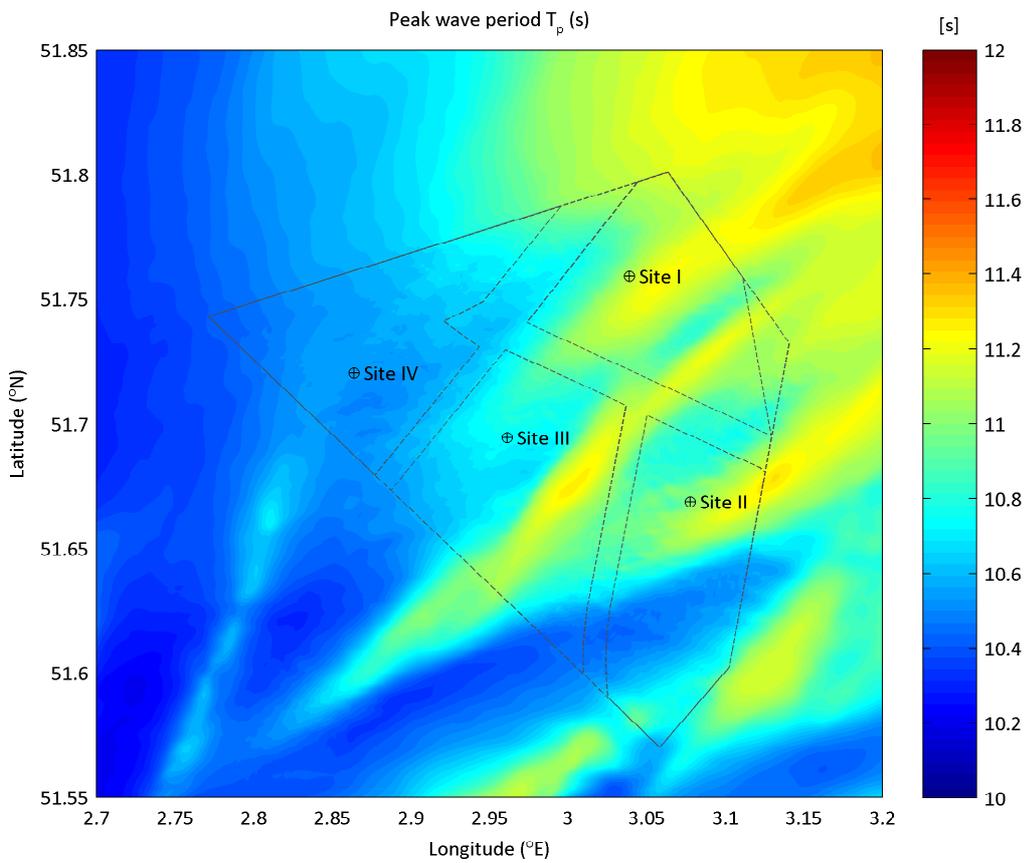
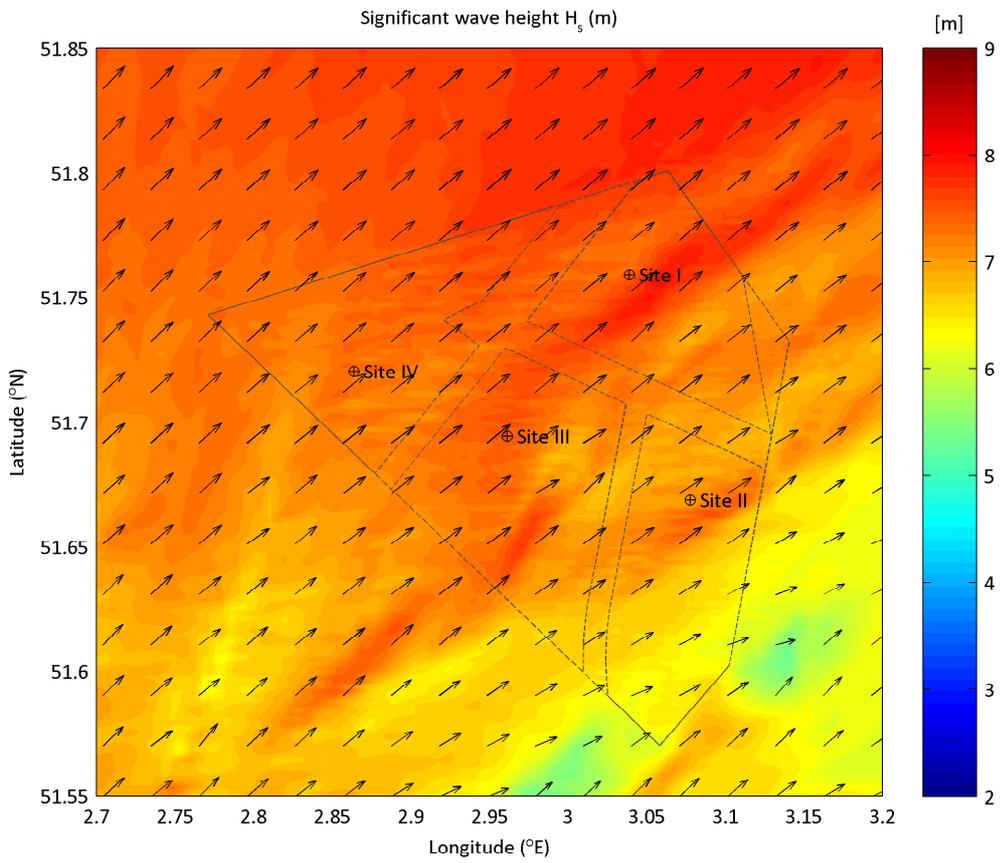
Extreme wave condition from Sector225 ( $^{\circ}$ N) - 255 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.053



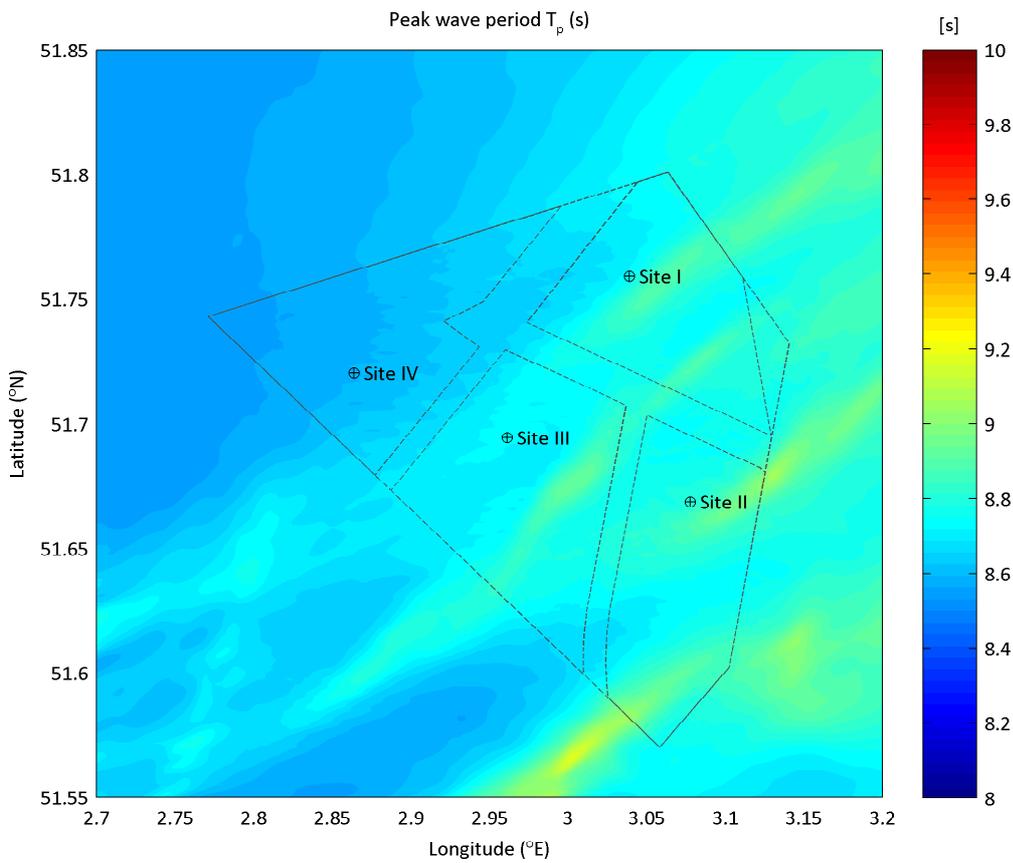
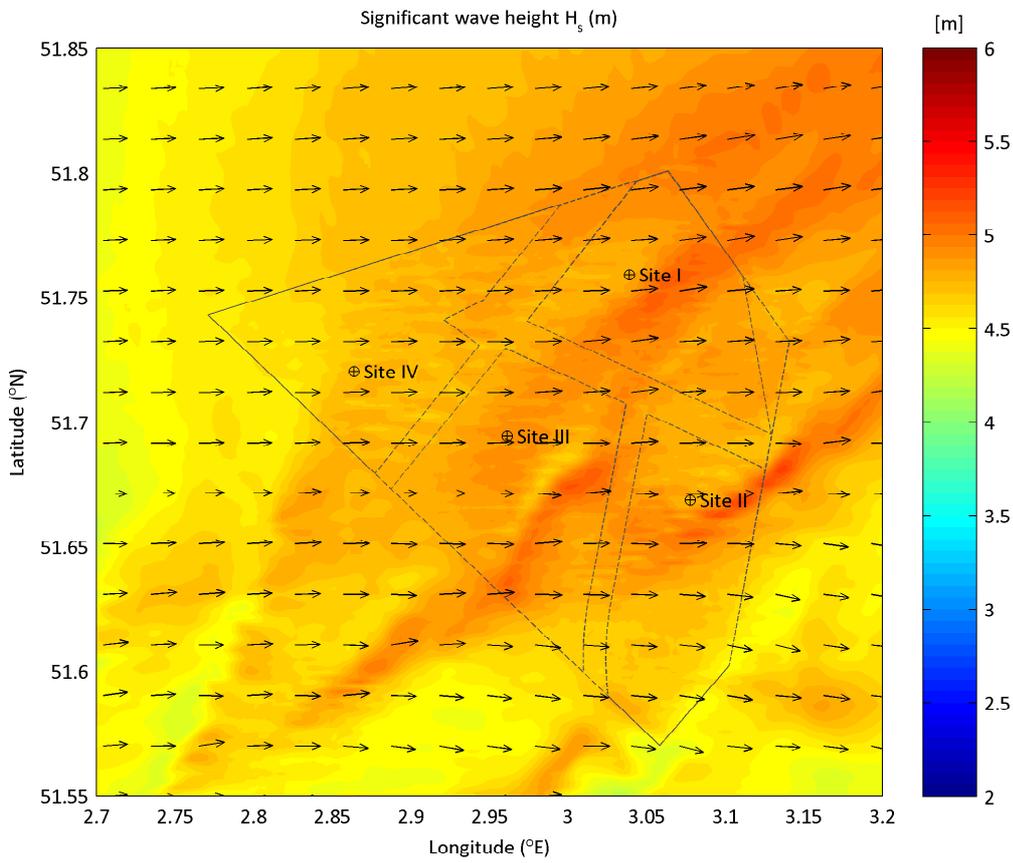
Extreme wave condition from Sector225 (°N) - 255 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.054



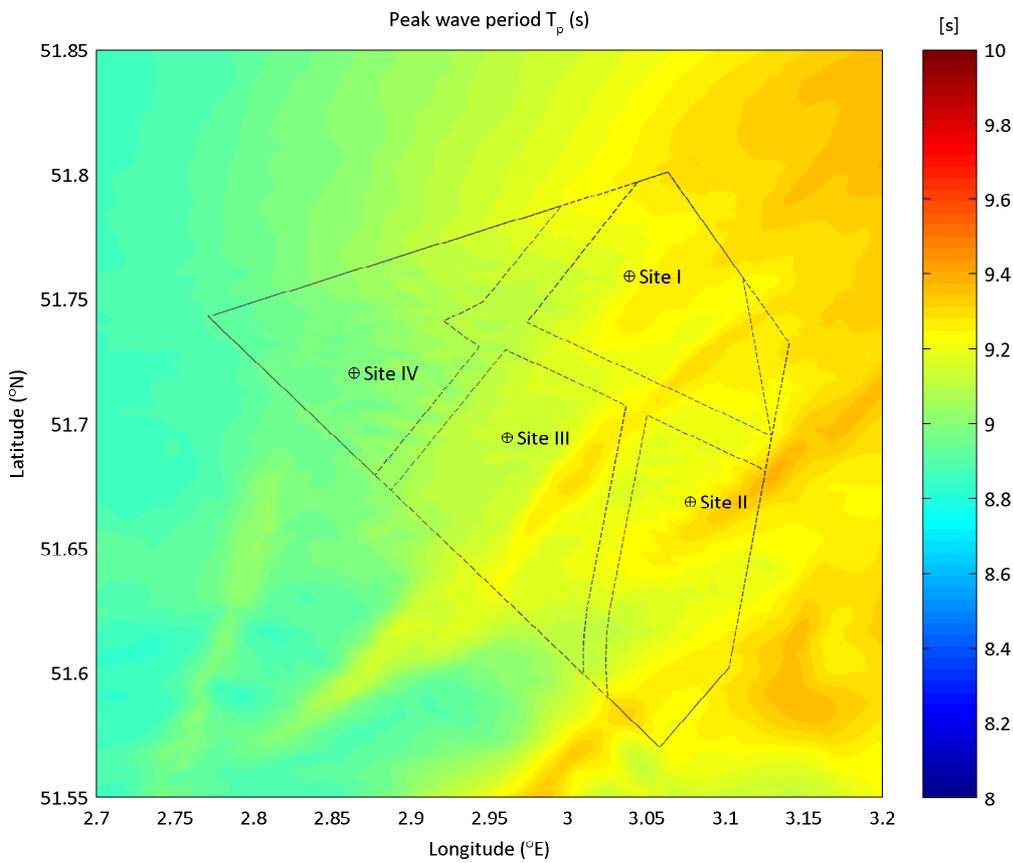
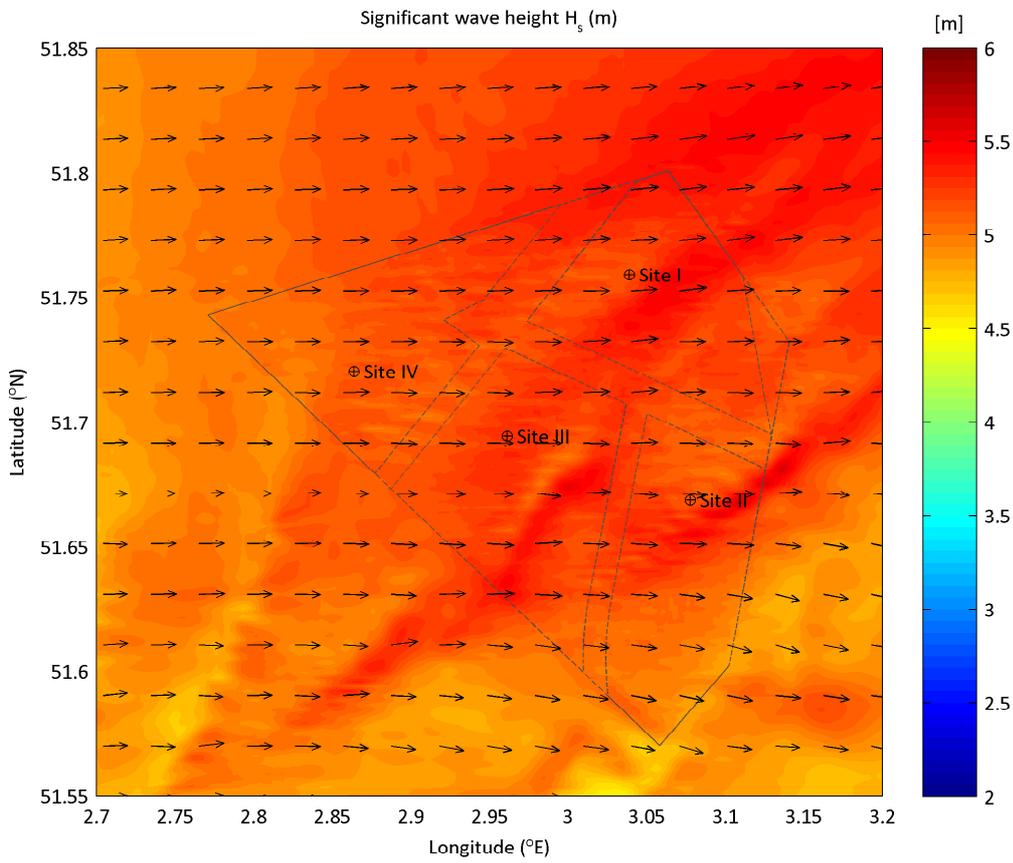
Extreme wave condition from Sector255 ( $^{\circ}$ N) - 285 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.055



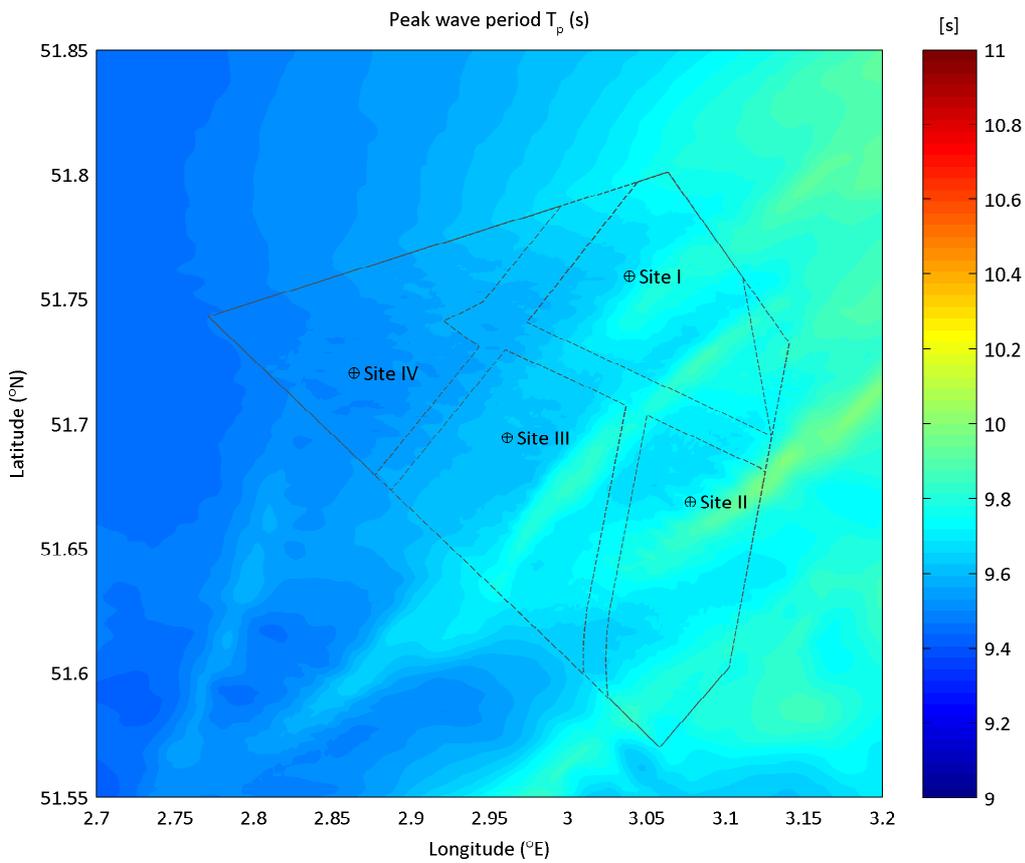
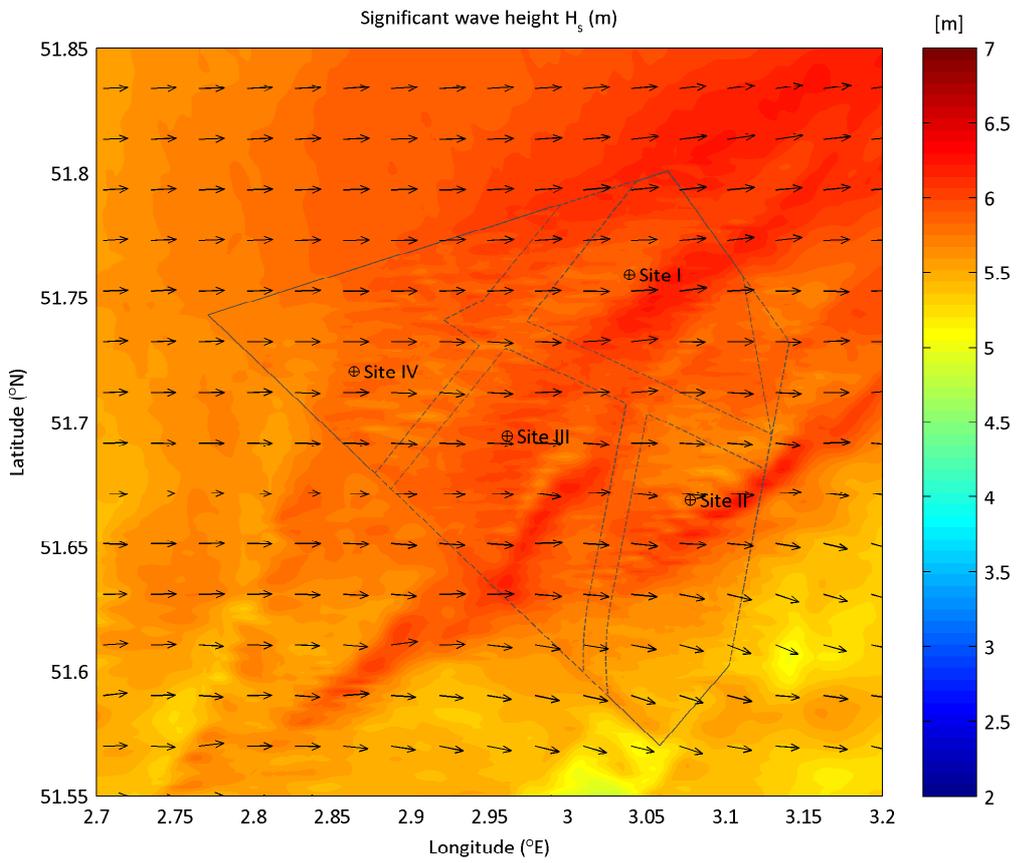
Extreme wave condition from Sector255 ( $^{\circ}$ N) - 285 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.056



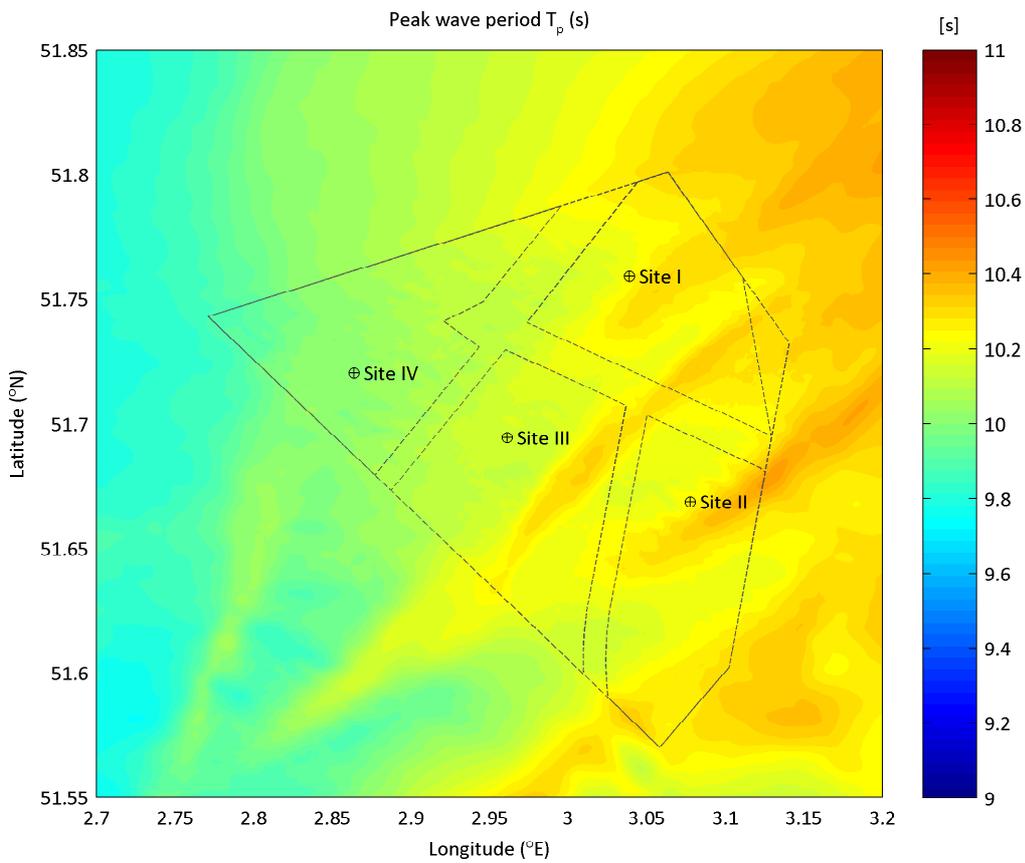
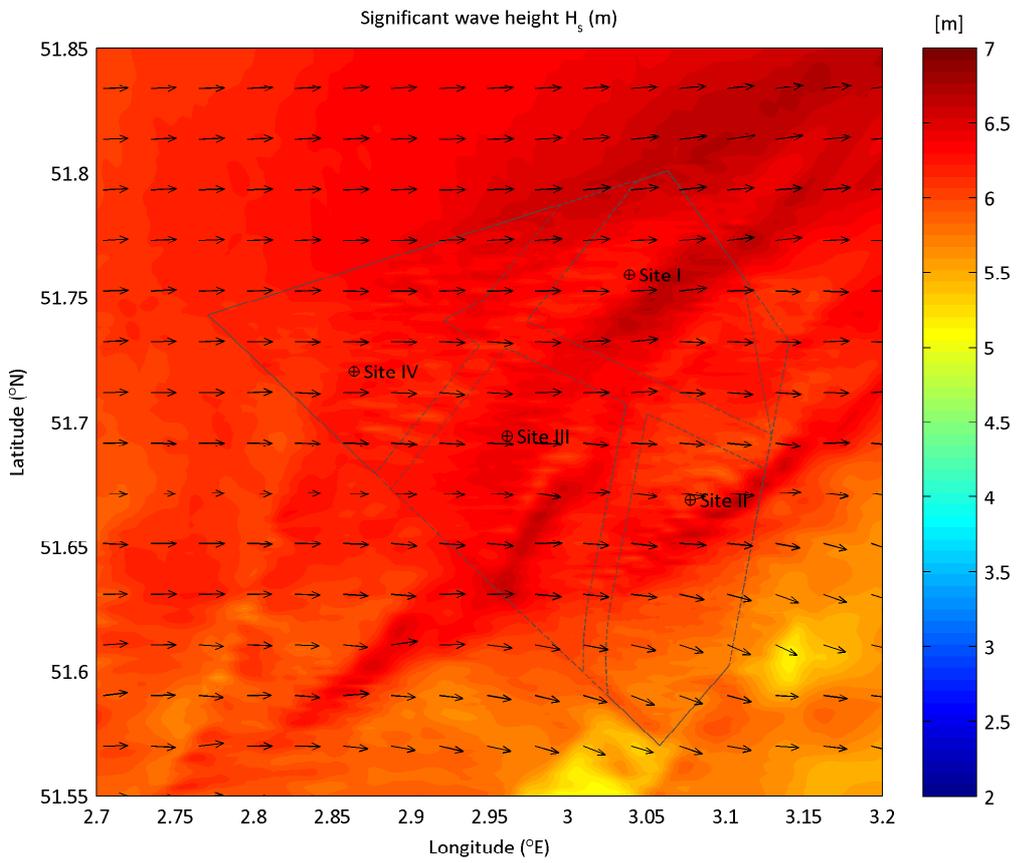
Extreme wave condition from Sector255 (°N) - 285 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.057



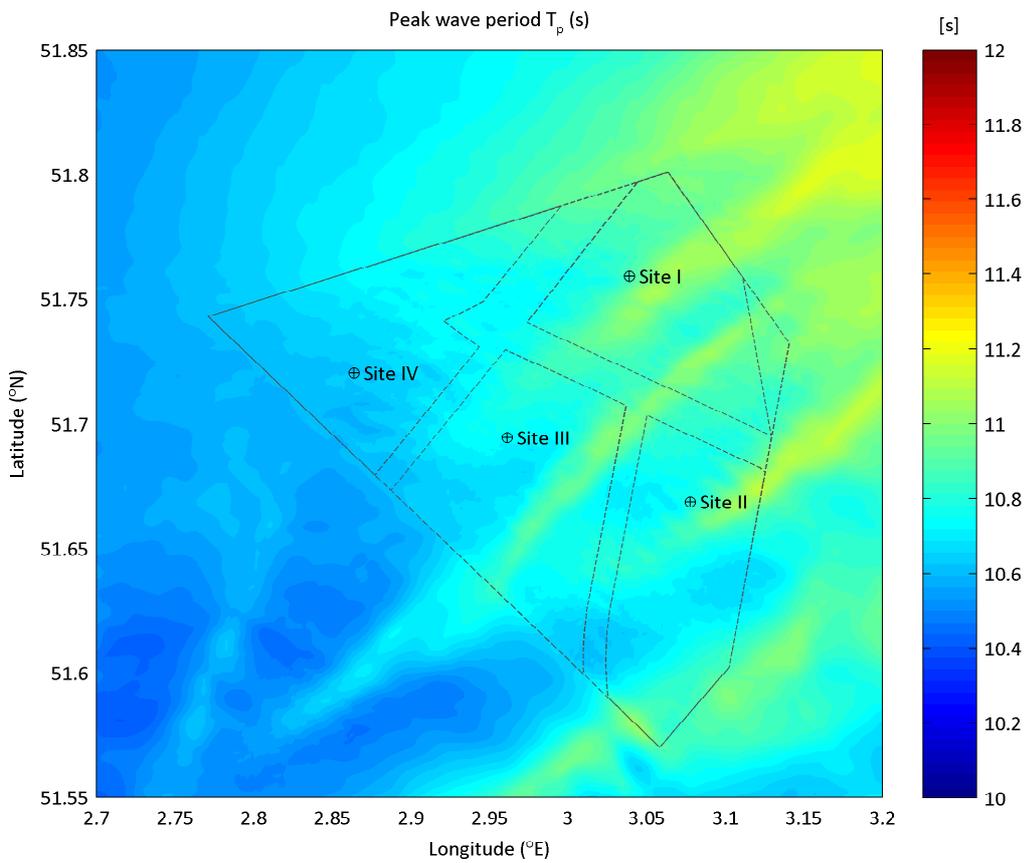
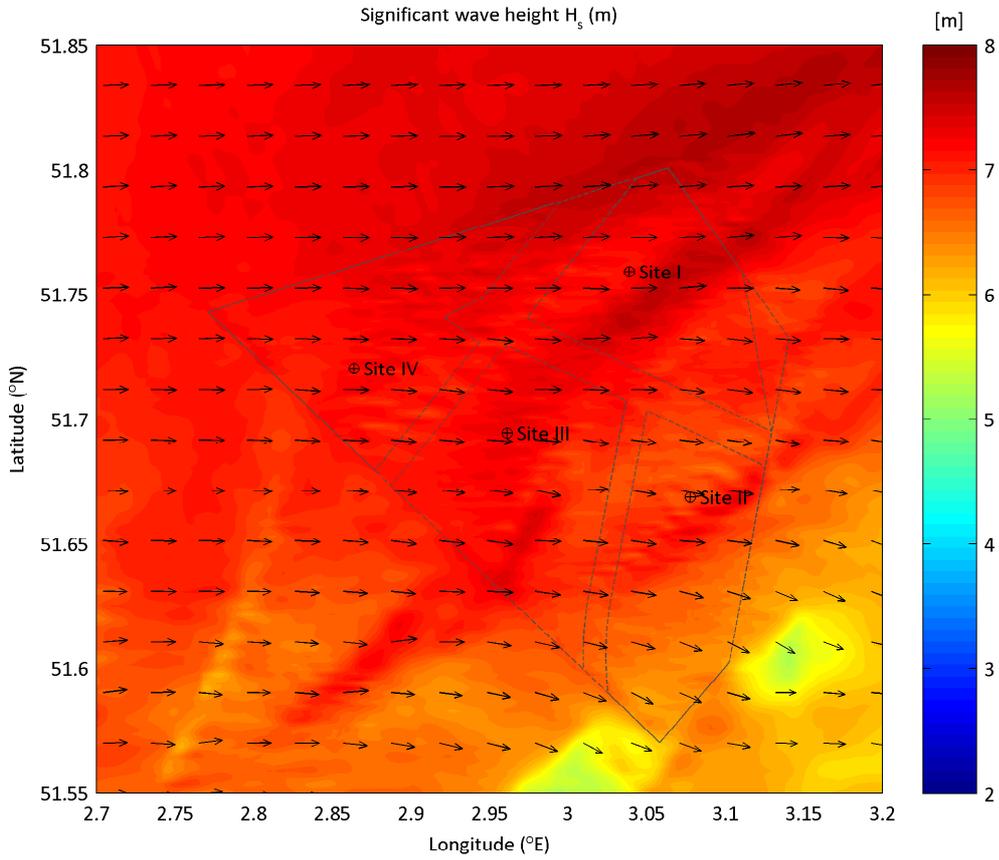
Extreme wave condition from Sector255 (°N) - 285 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.058



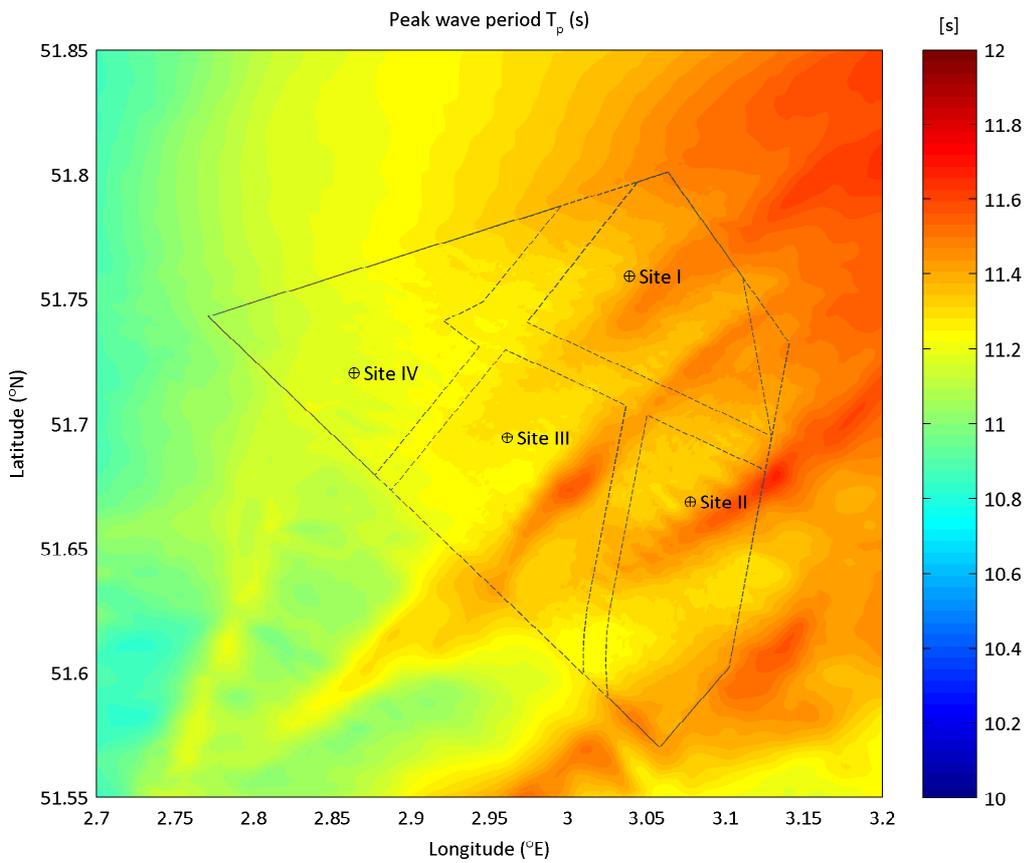
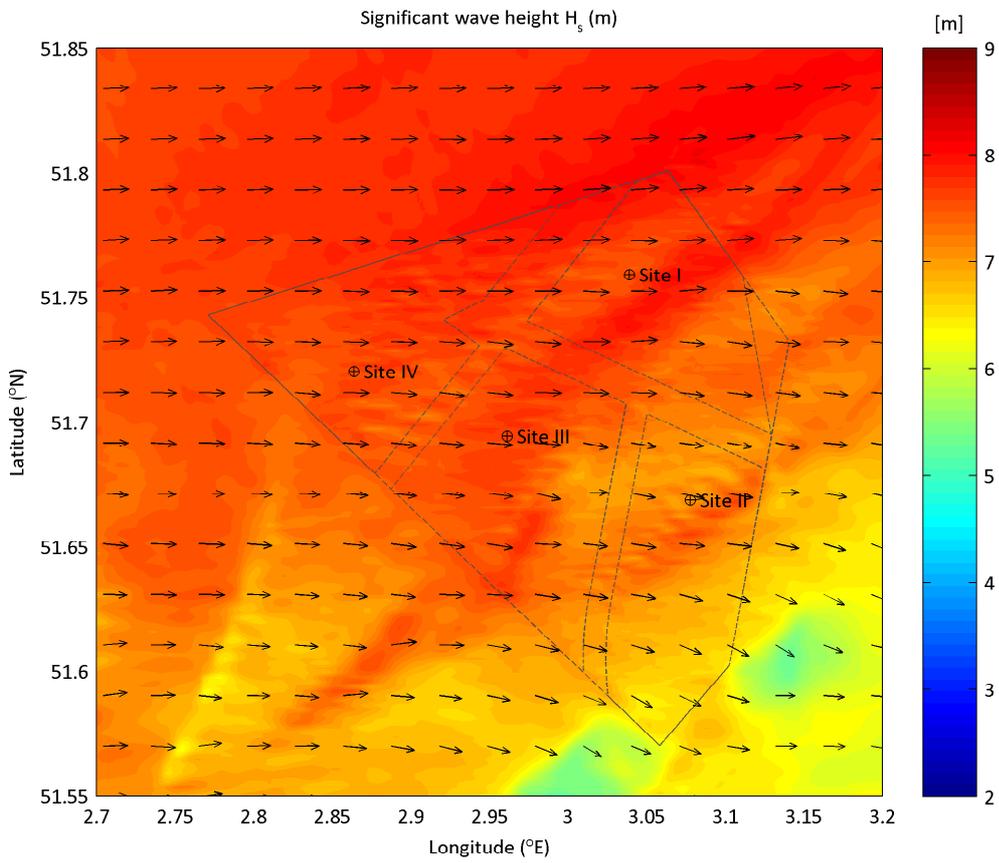
Extreme wave condition from Sector255 (°N) - 285 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.059



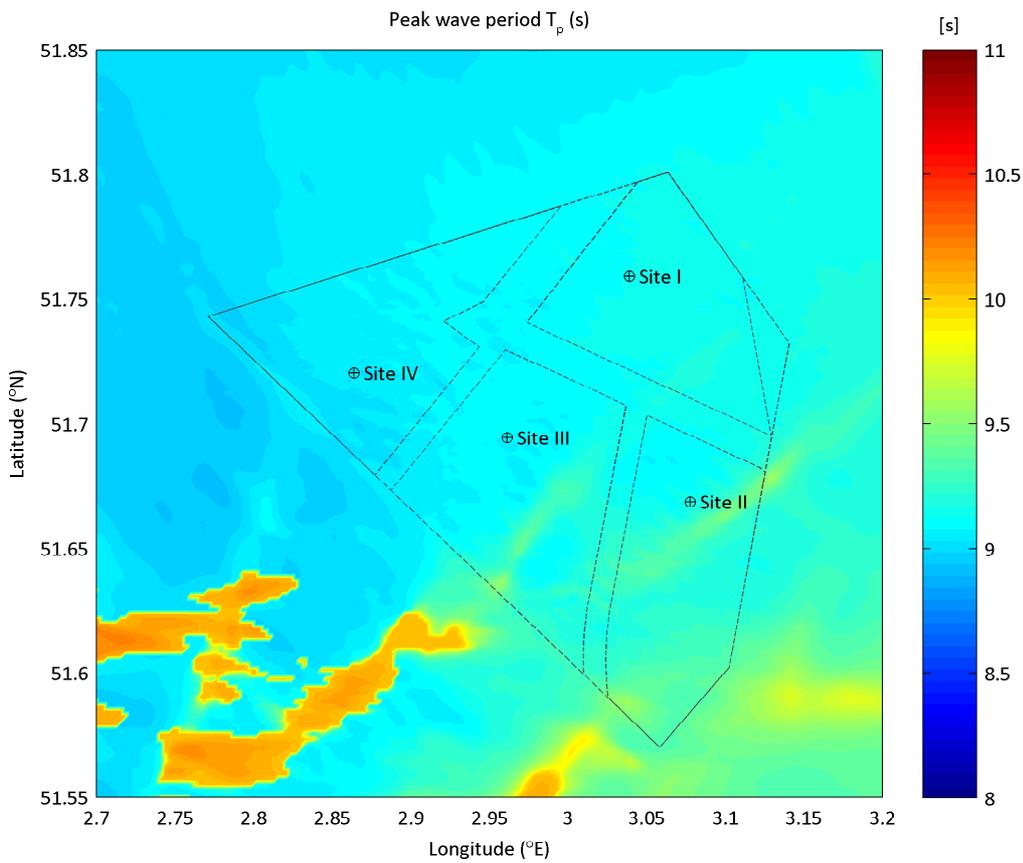
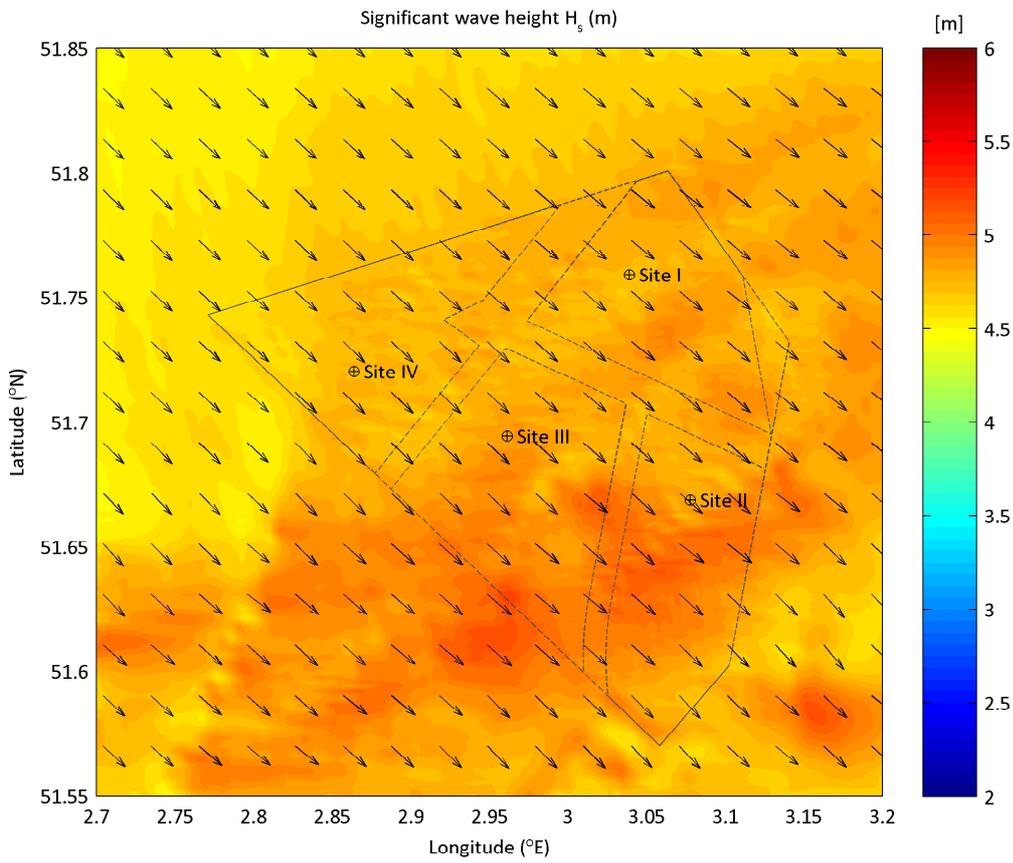
Extreme wave condition from Sector255 ( $^{\circ}$ N) - 285 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.060



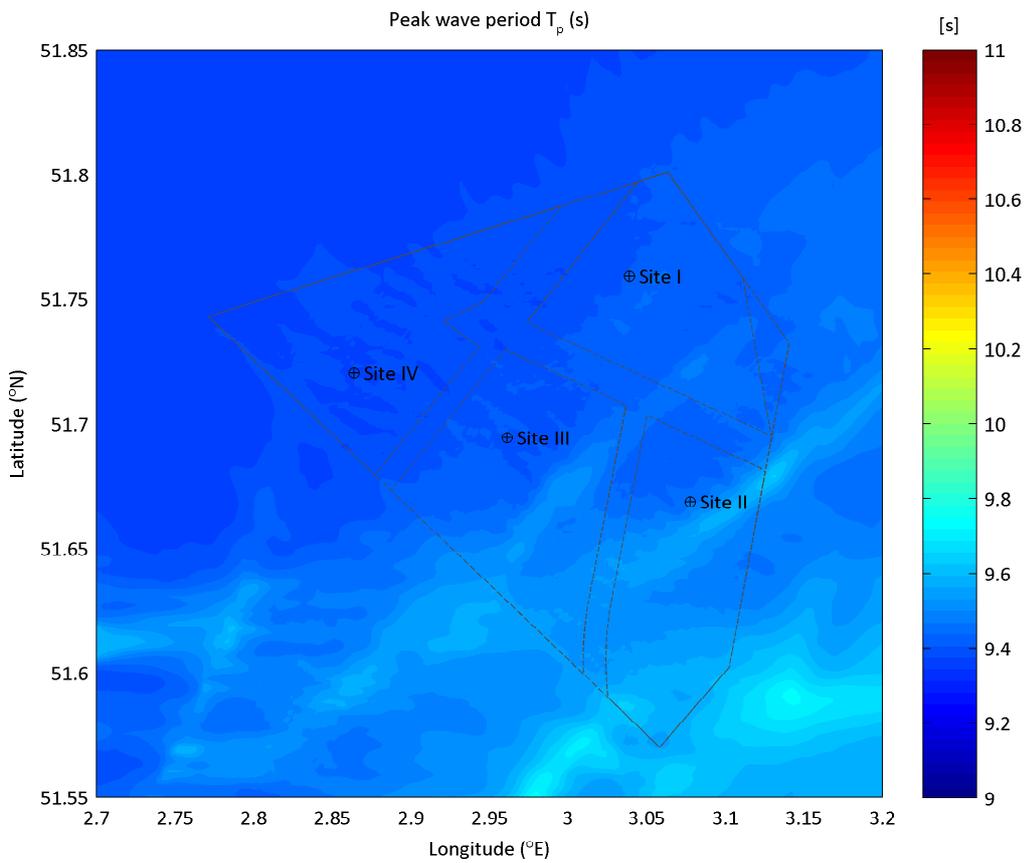
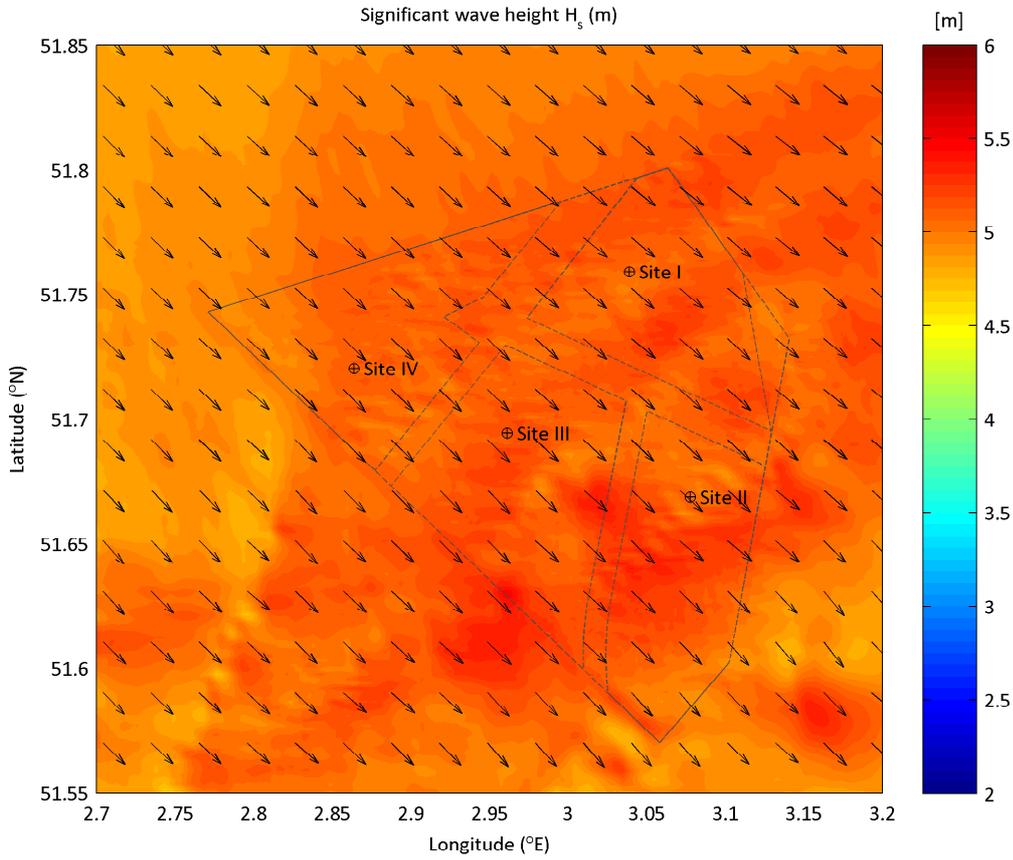
Extreme wave condition from Sector285 ( $^{\circ}$ N) - 315 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.061



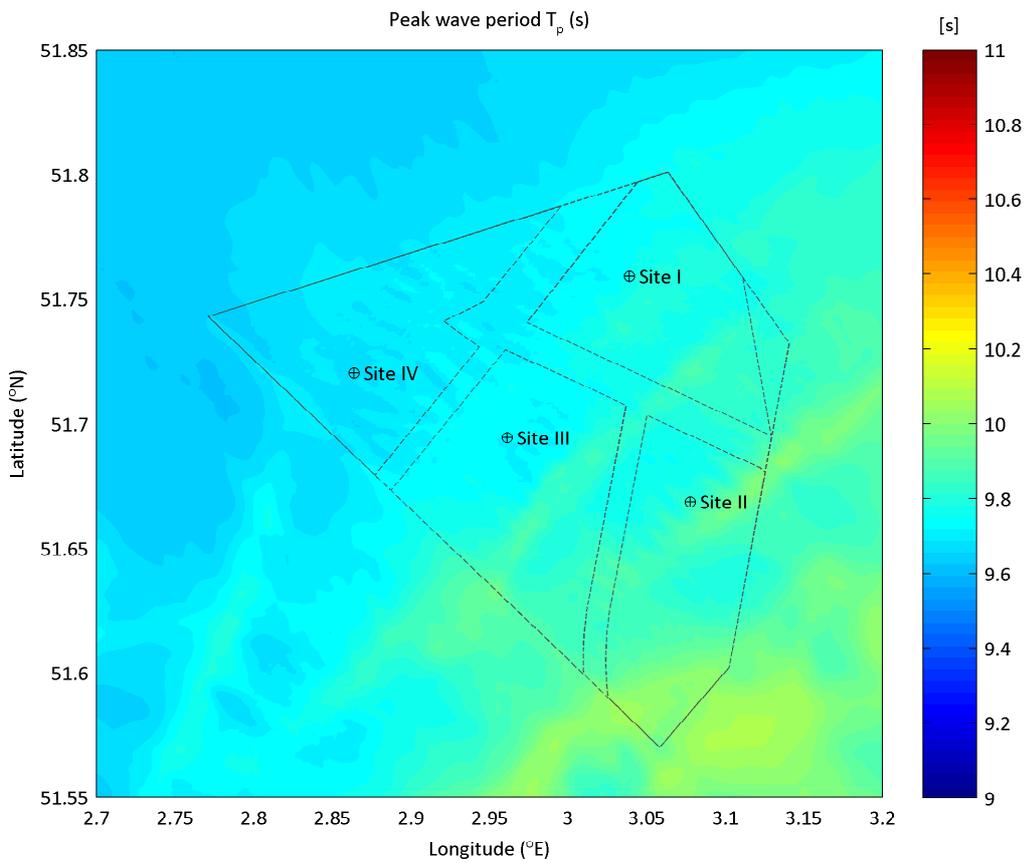
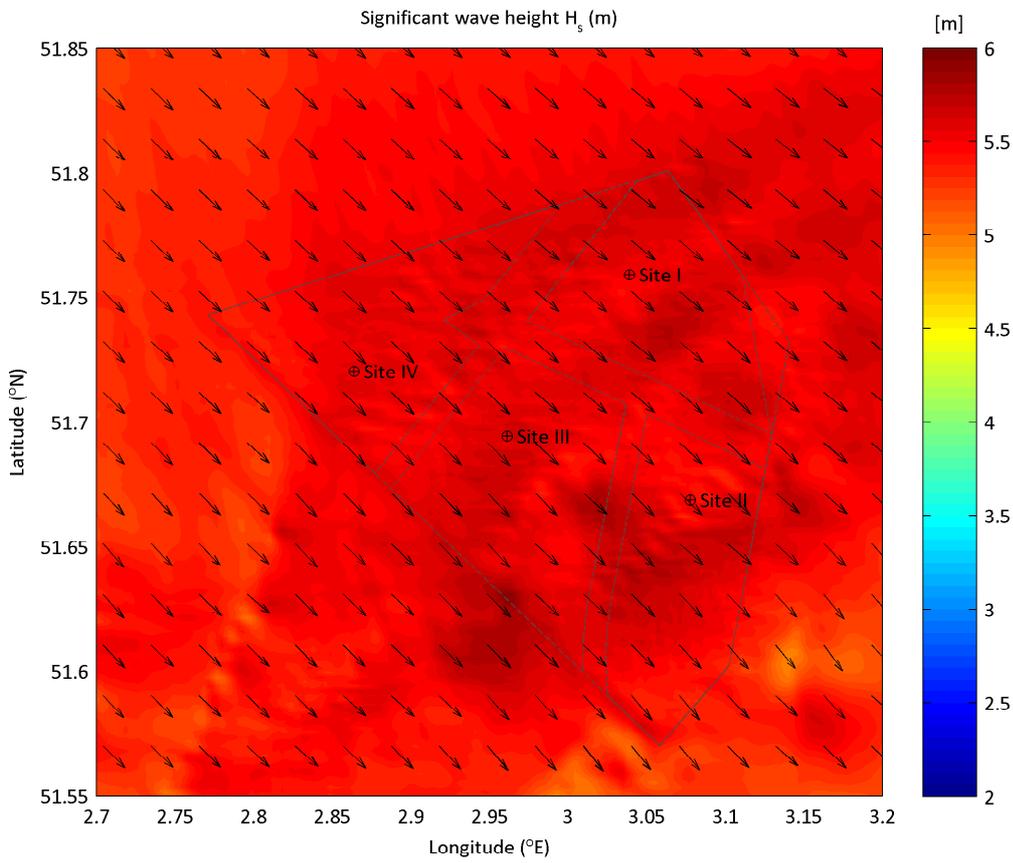
Extreme wave condition from Sector285 ( $^{\circ}$ N) - 315 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.062



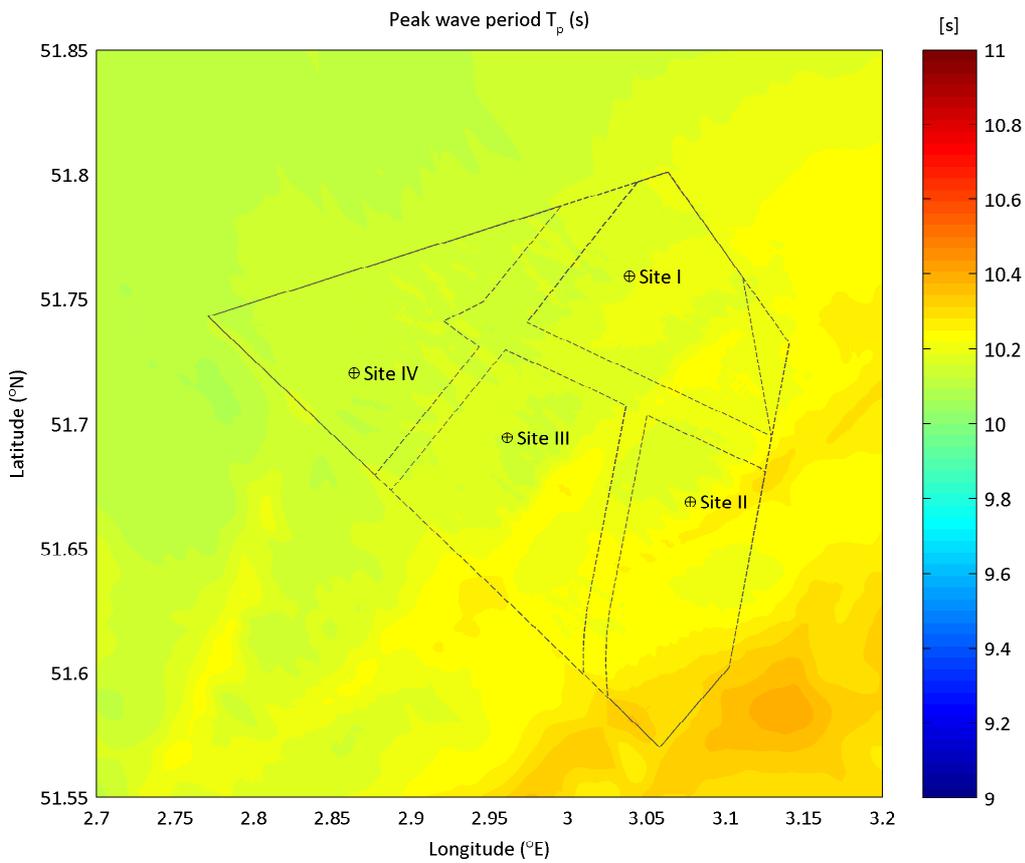
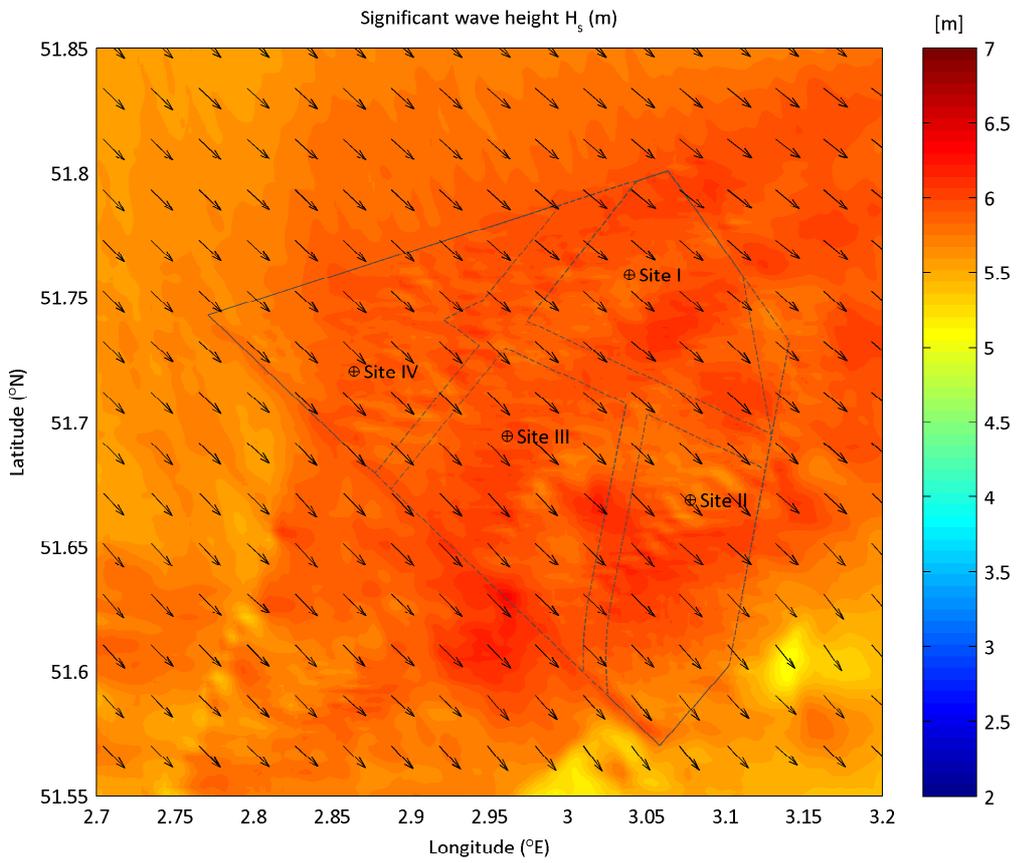
Extreme wave condition from Sector285 (°N) - 315 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.063



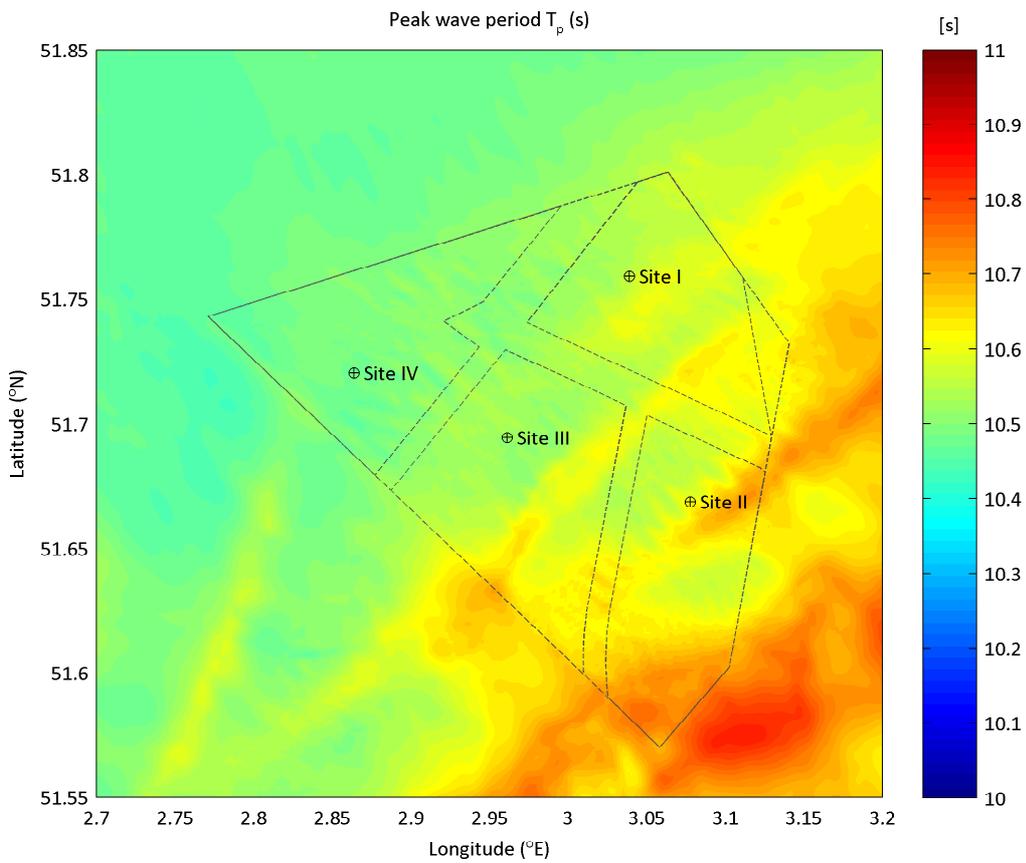
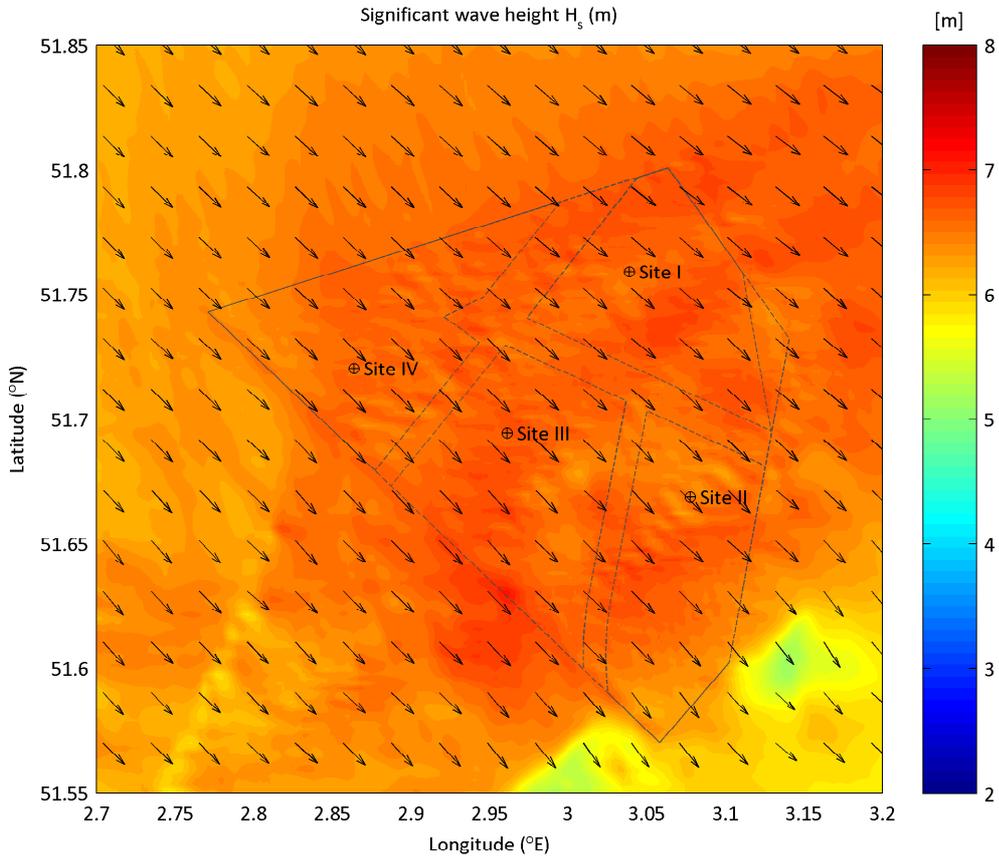
Extreme wave condition from Sector285 ( $^{\circ}$ N) - 315 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.064



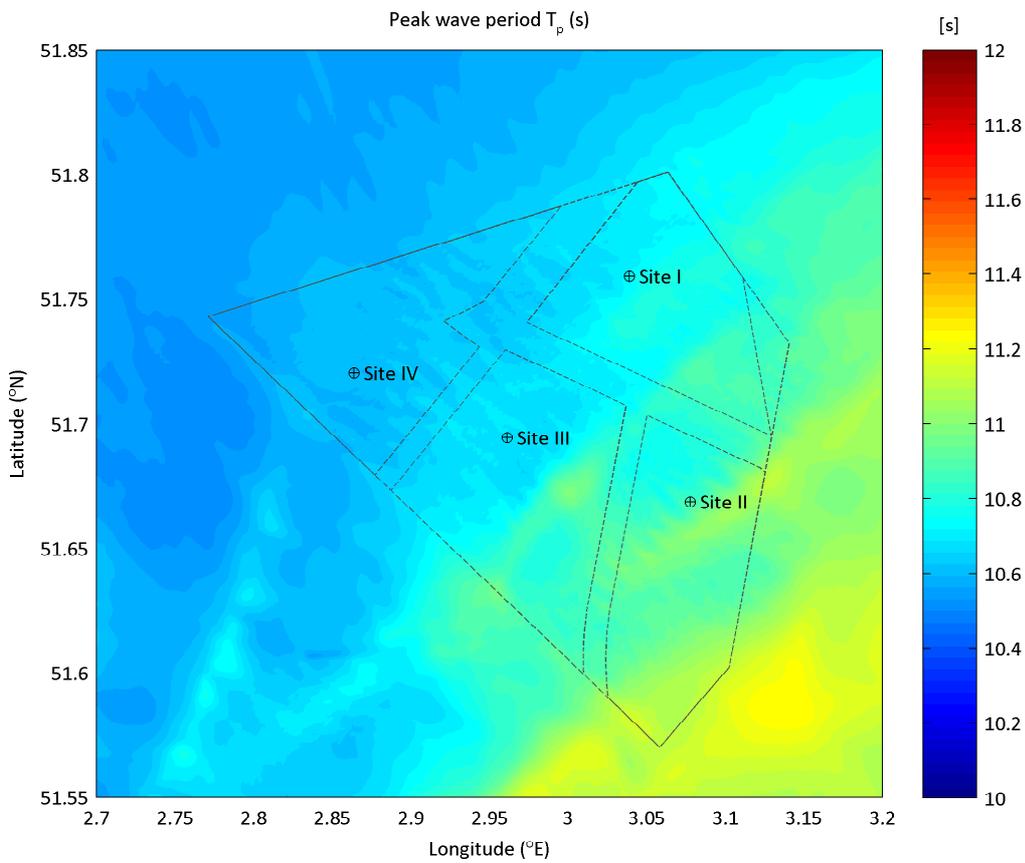
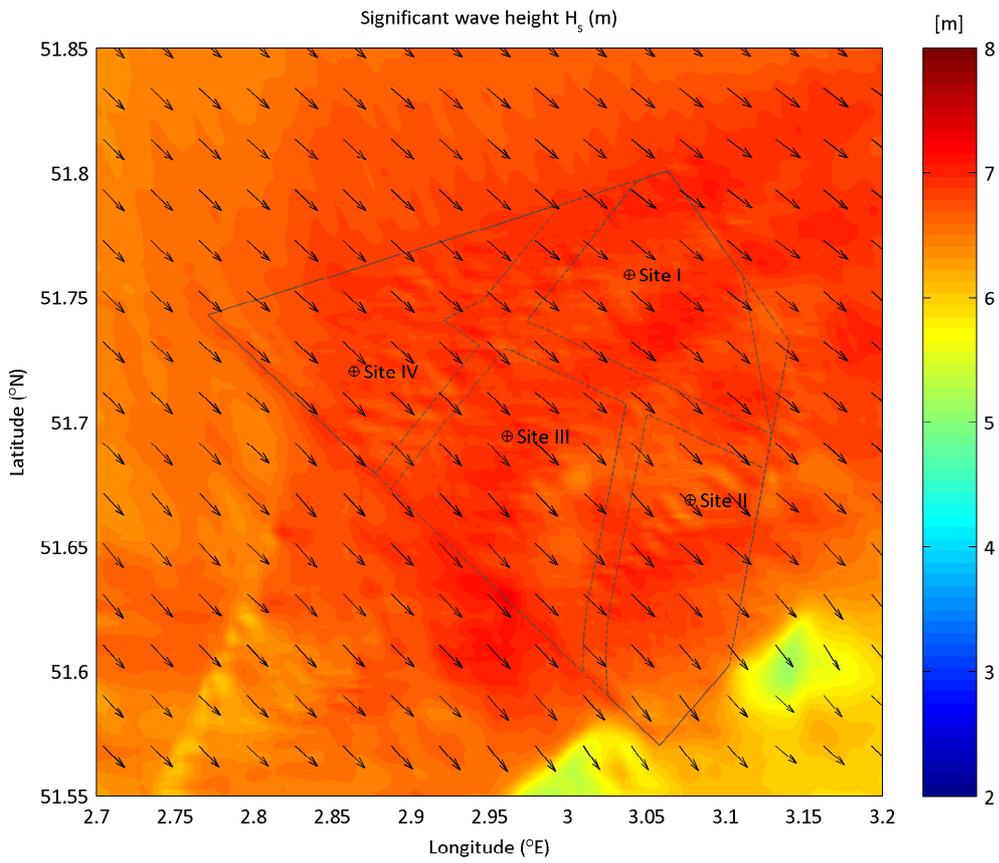
Extreme wave condition from Sector285 (°N) - 315 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.065



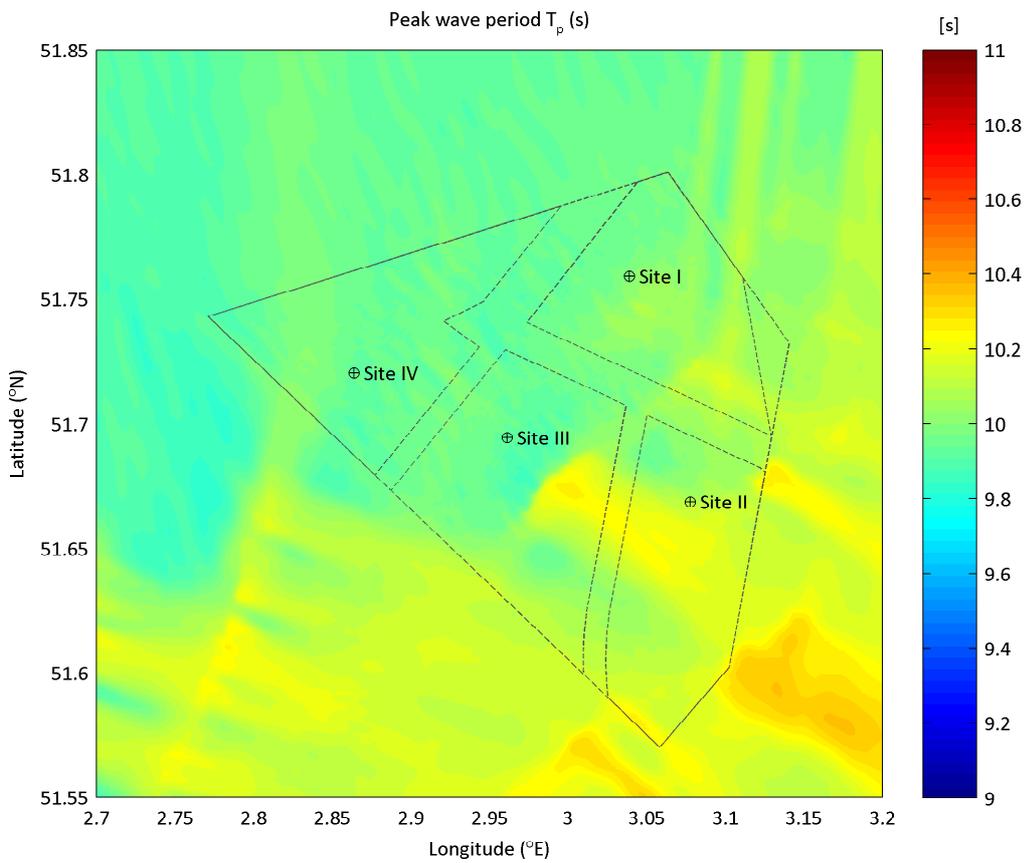
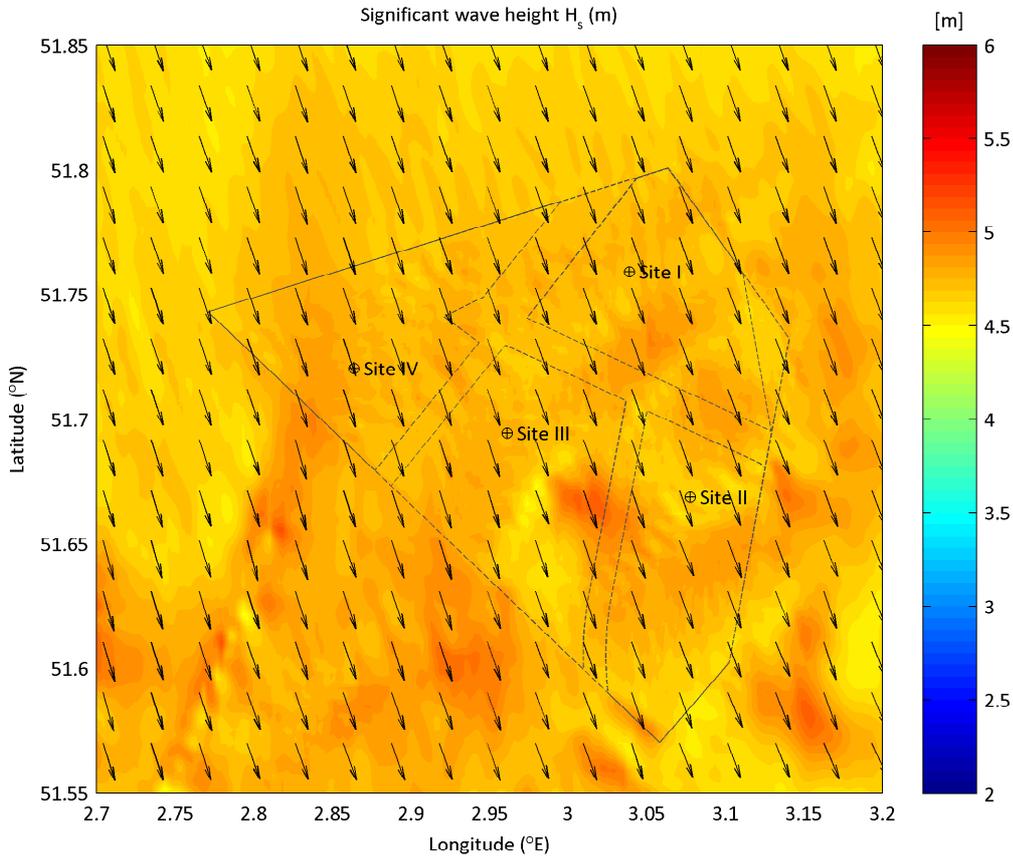
Extreme wave condition from Sector285 ( $^{\circ}$ N) - 315 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.066



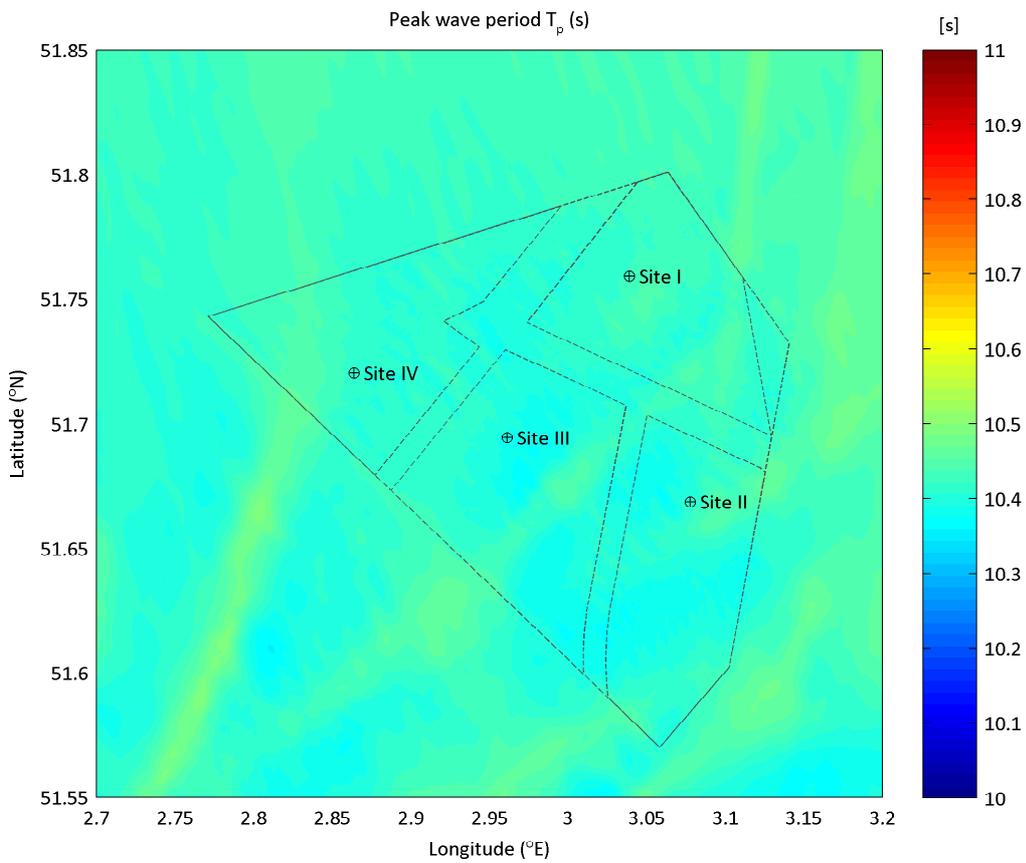
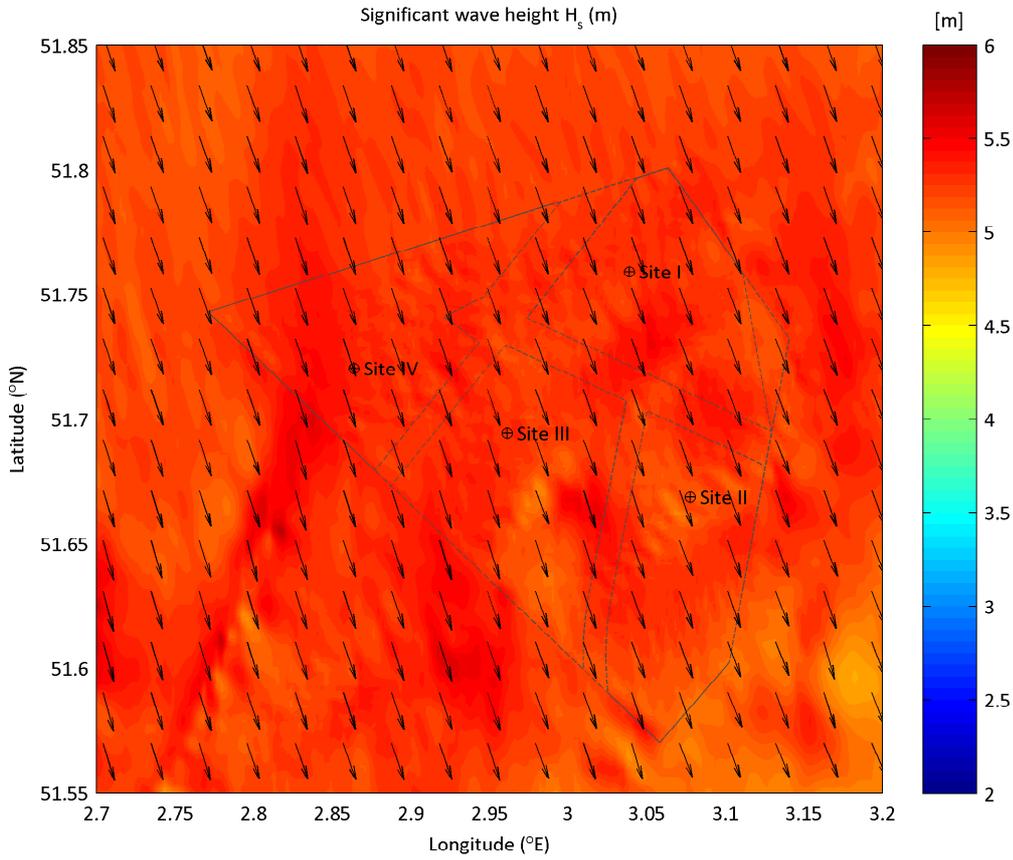
Extreme wave condition from Sector315 ( $^{\circ}$ N) - 345 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.067



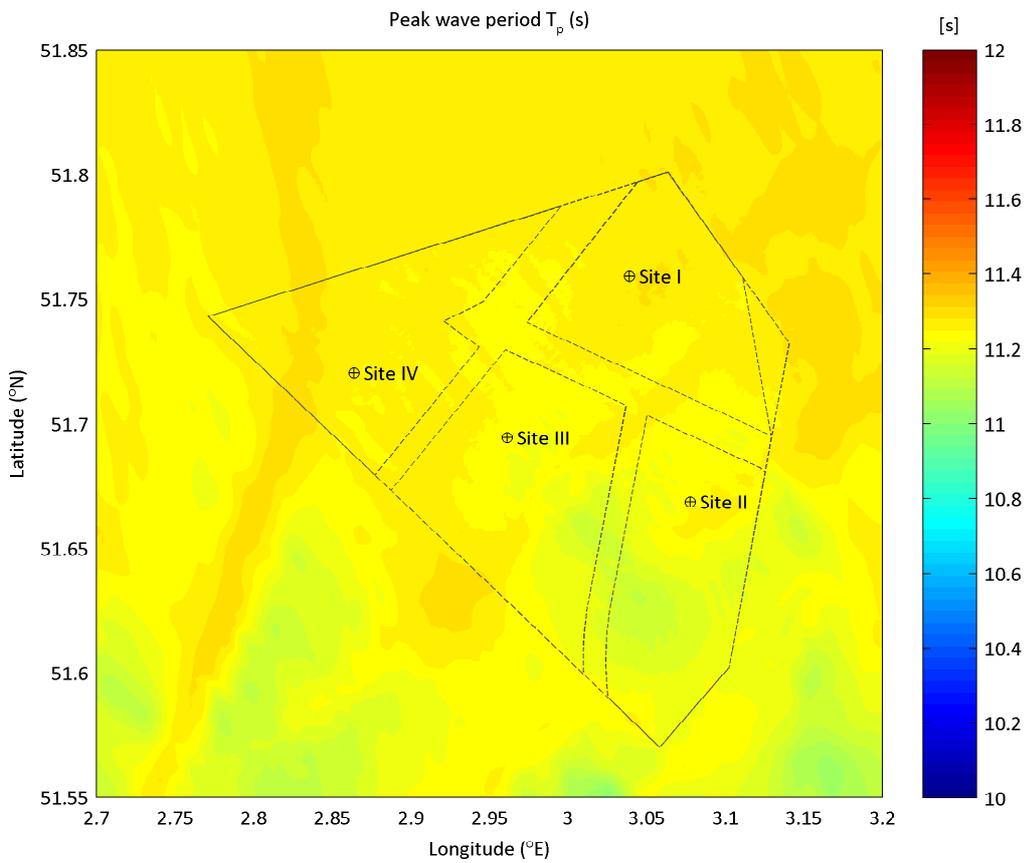
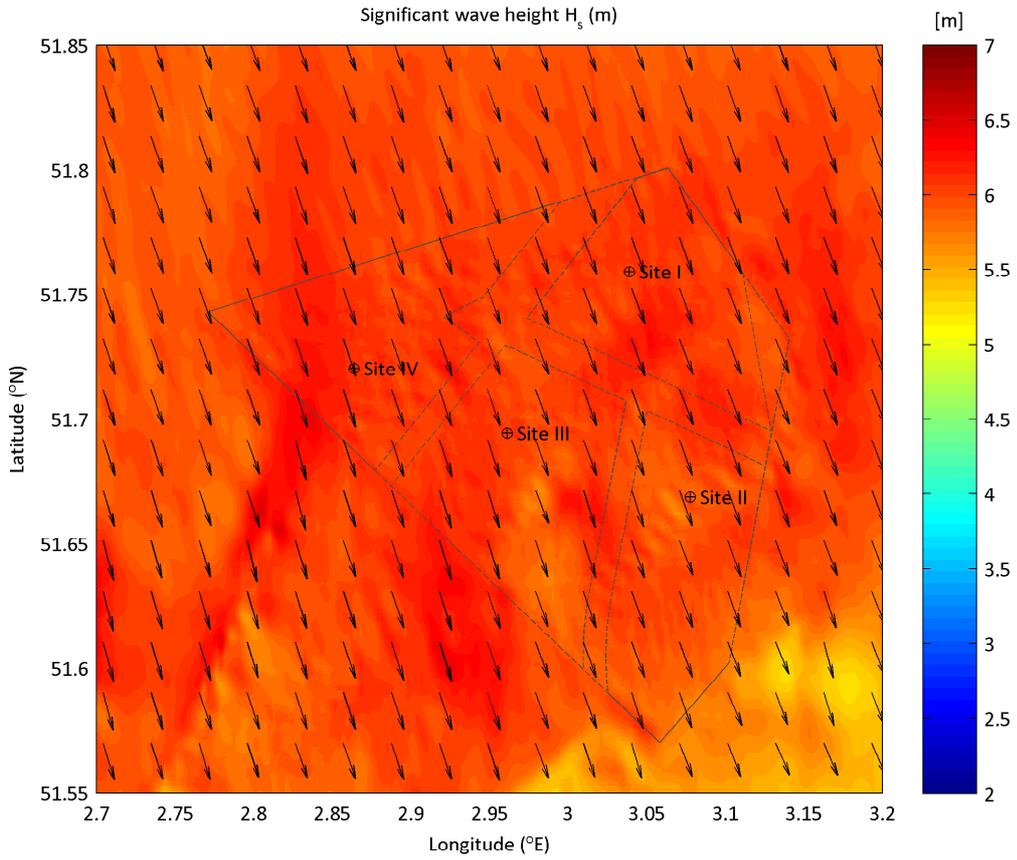
Extreme wave condition from Sector315 ( $^{\circ}$ N) - 345 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.068



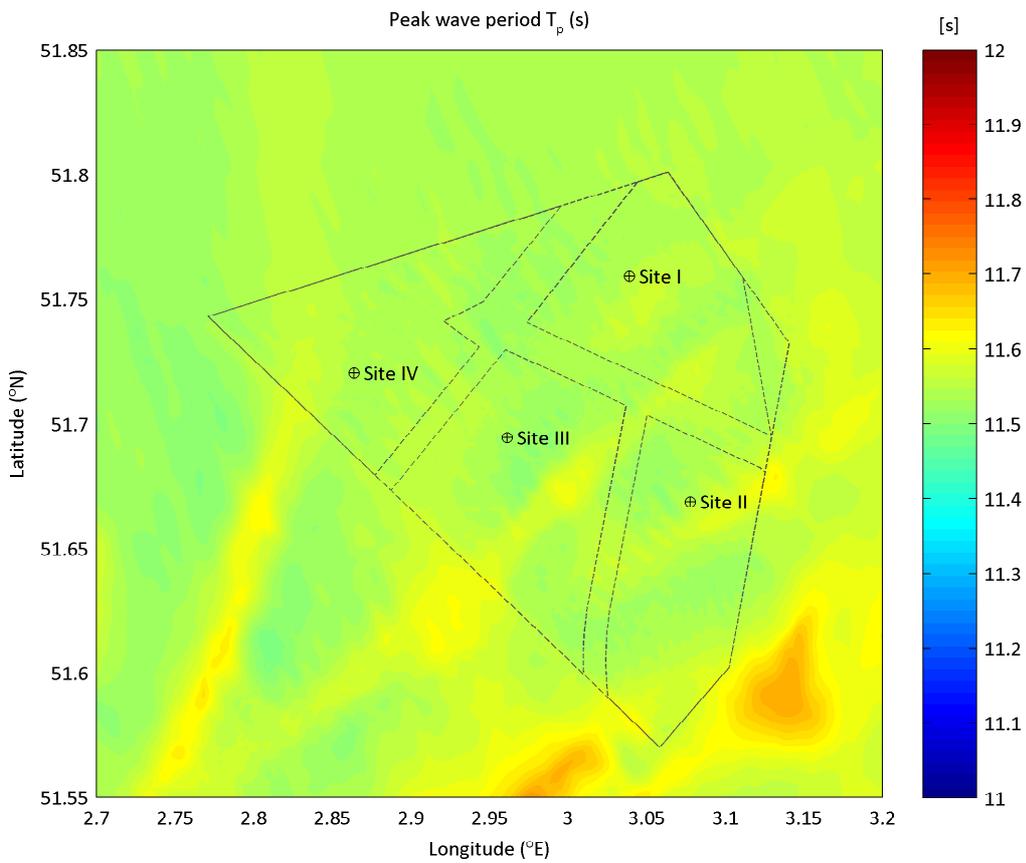
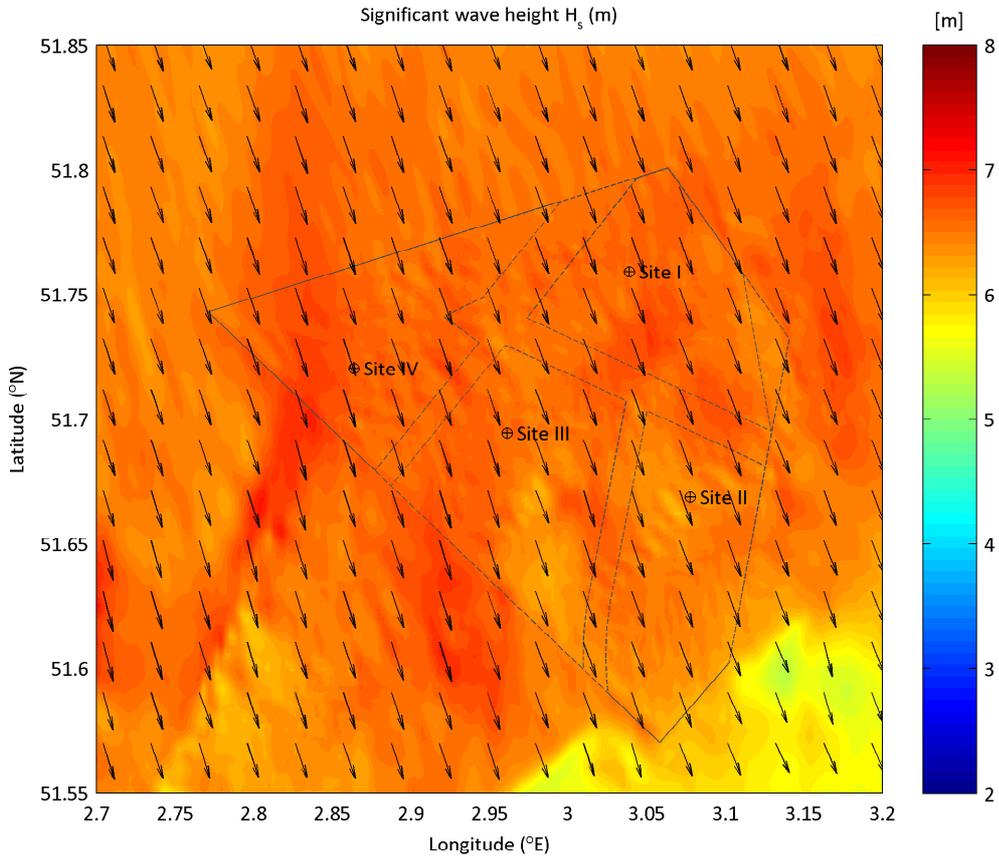
Extreme wave condition from Sector315 (°N) - 345 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.069



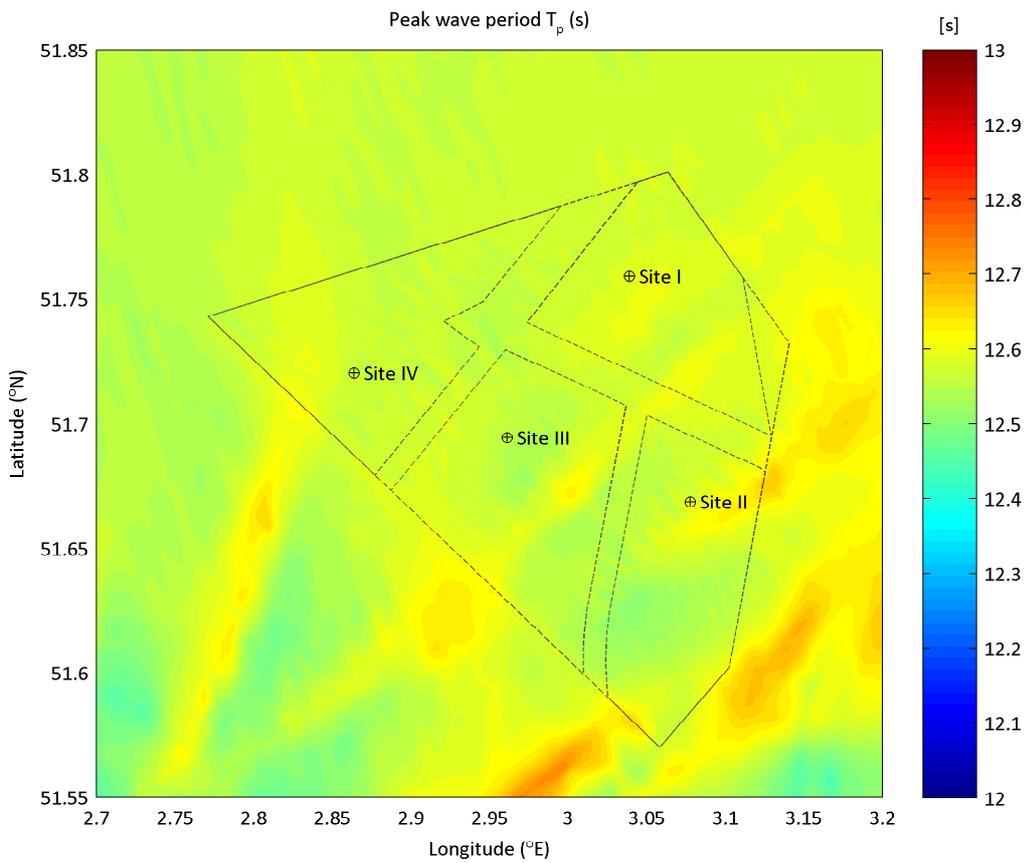
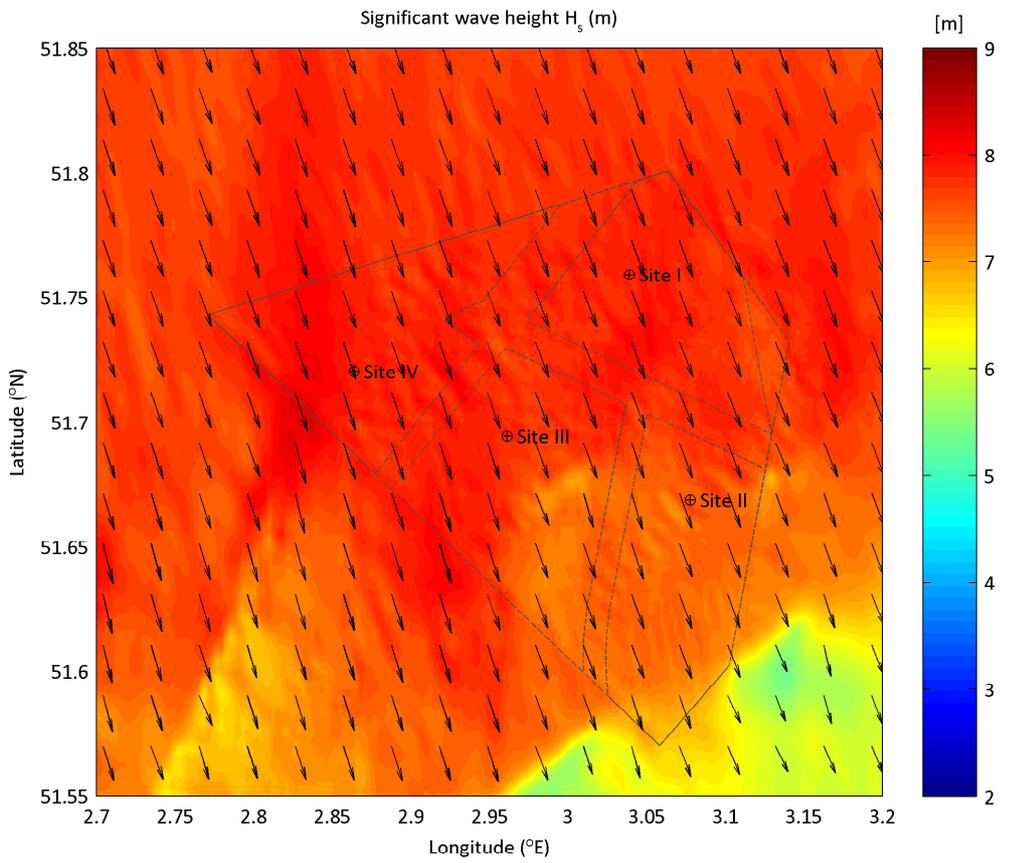
Extreme wave condition from Sector315 ( $^{\circ}$ N) - 345 ( $^{\circ}$ N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.070



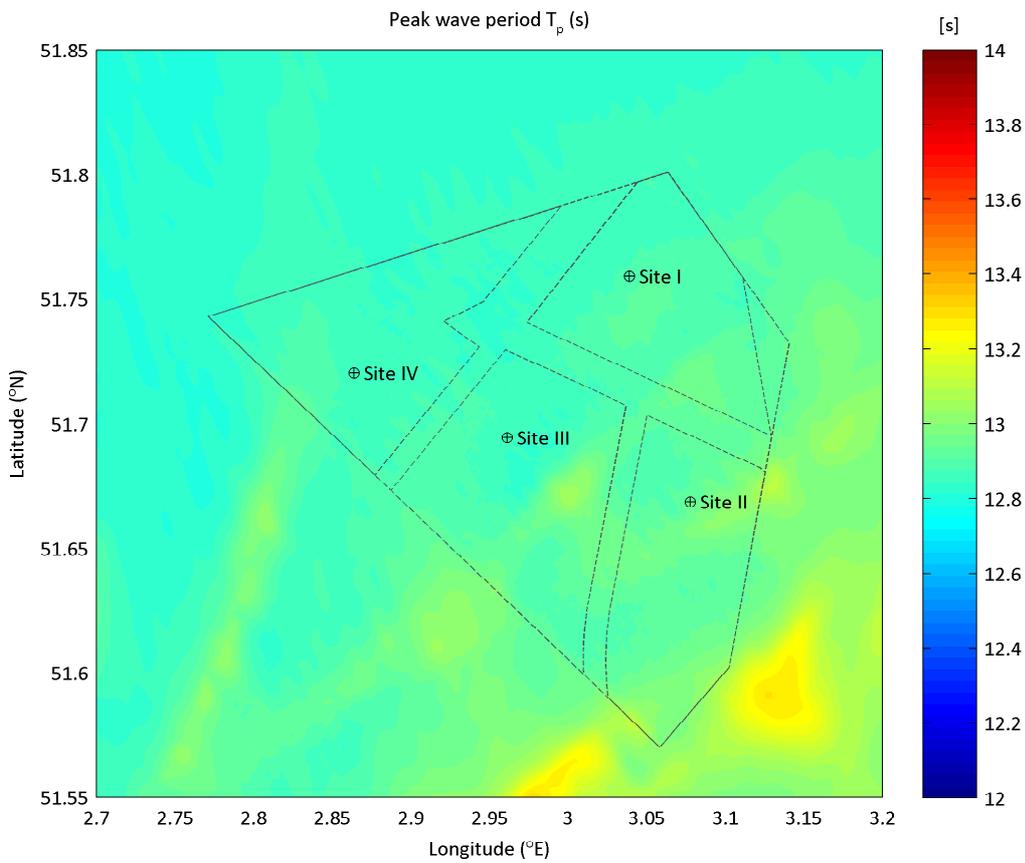
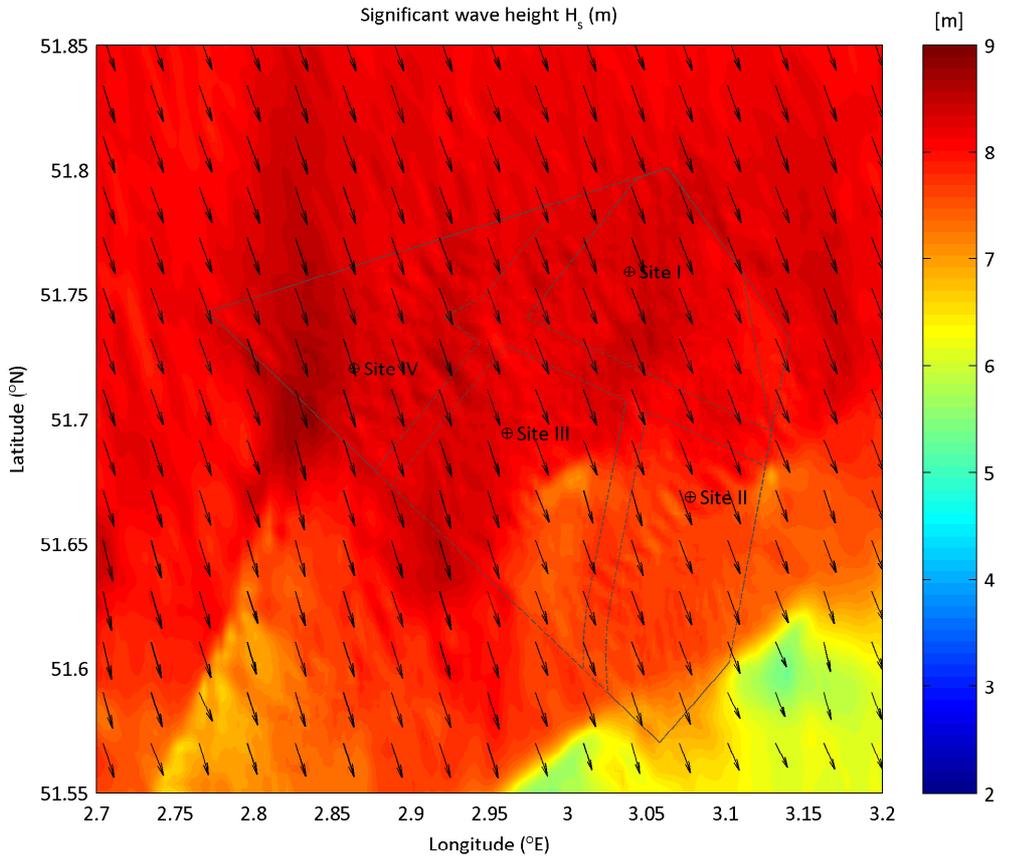
Extreme wave condition from Sector315 (°N) - 345 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.071



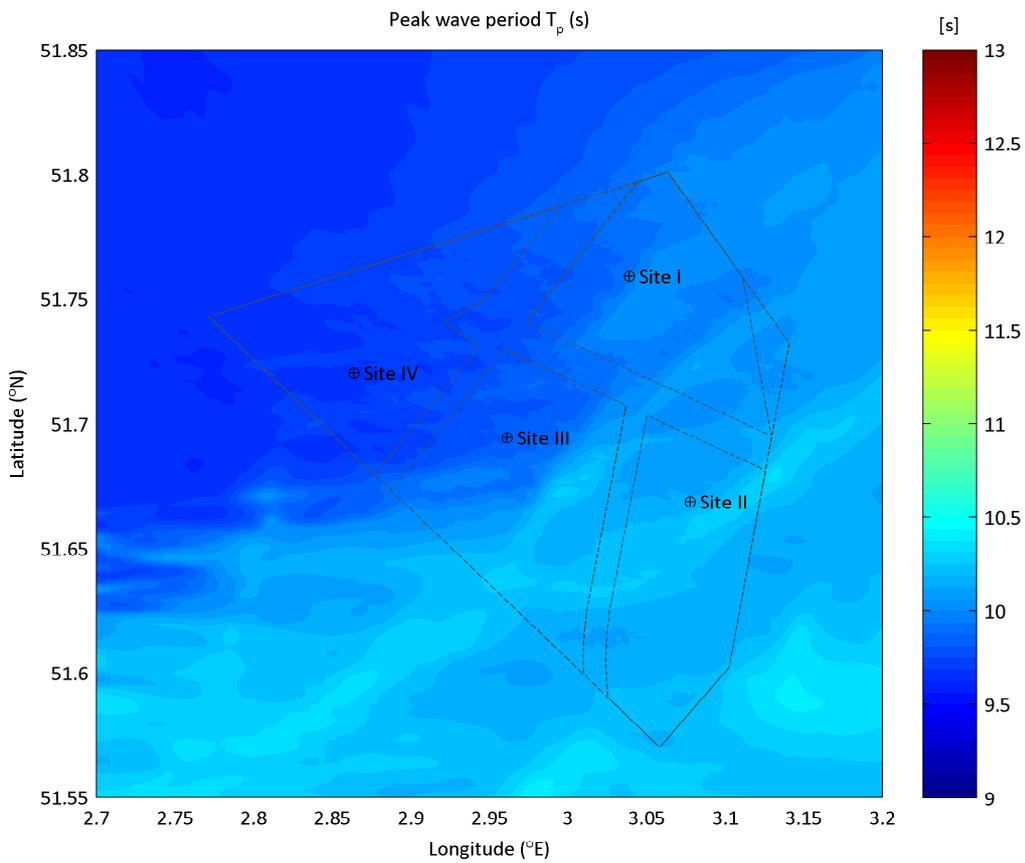
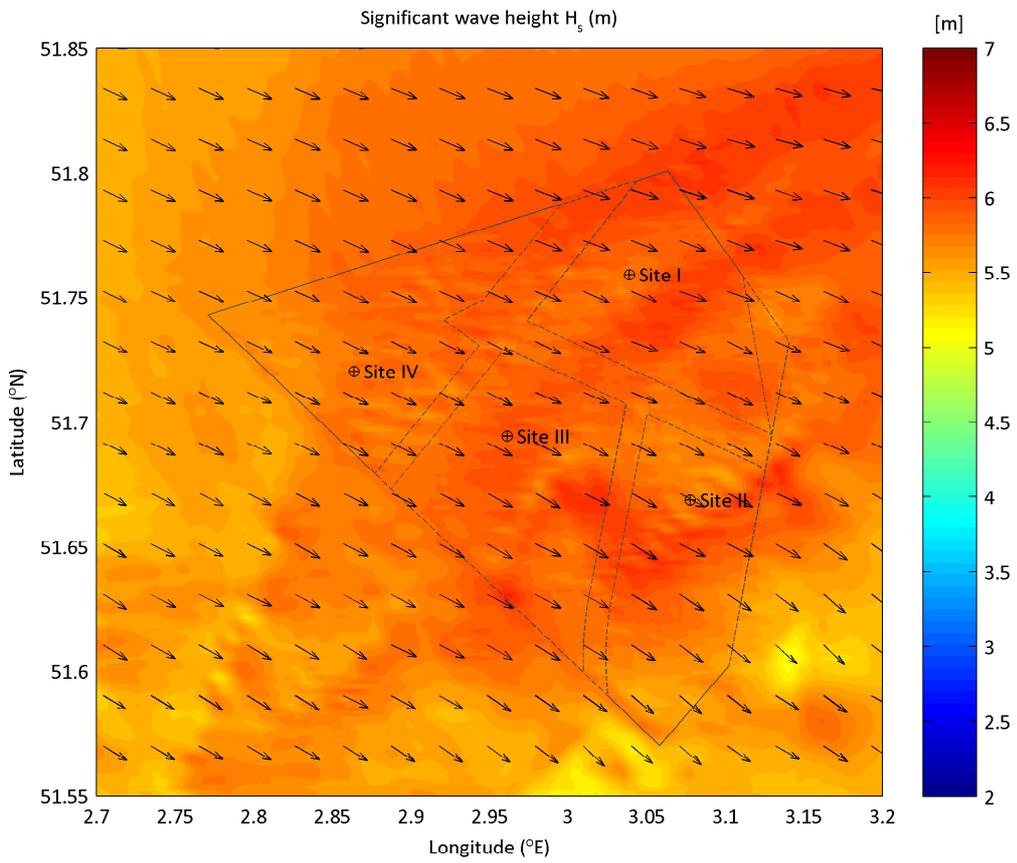
Extreme wave condition from Sector315 (°N) - 345 (°N)  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

App. B.4.072



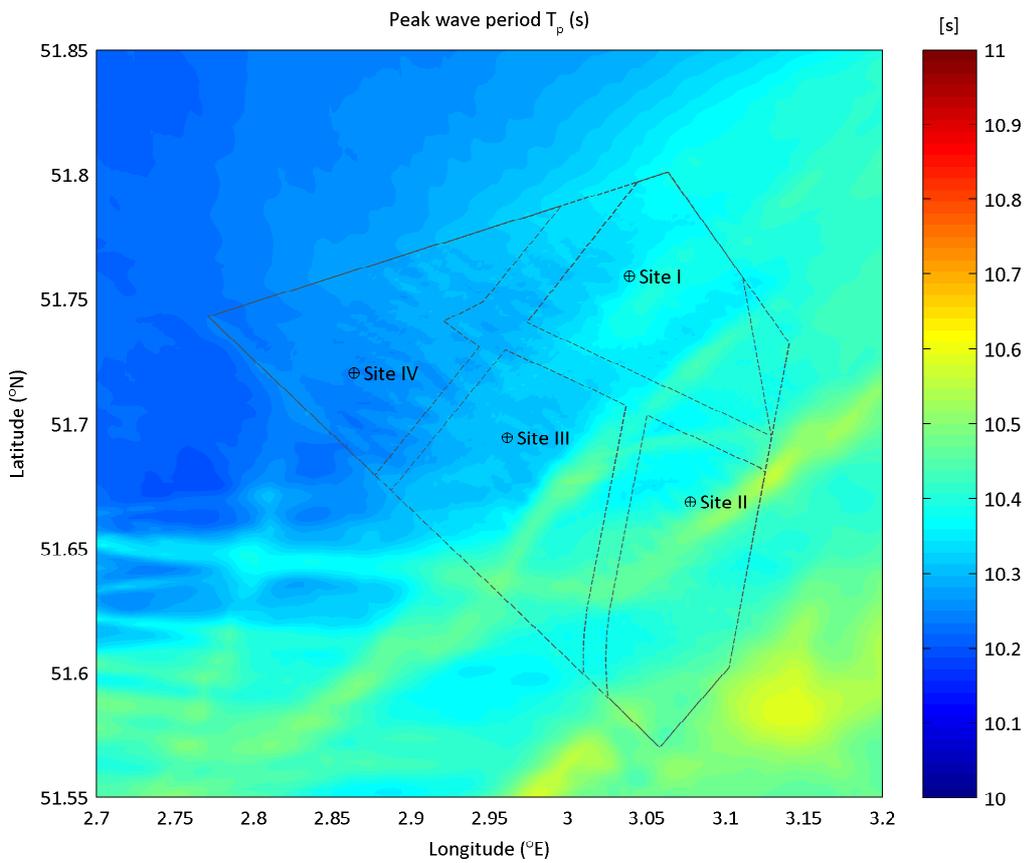
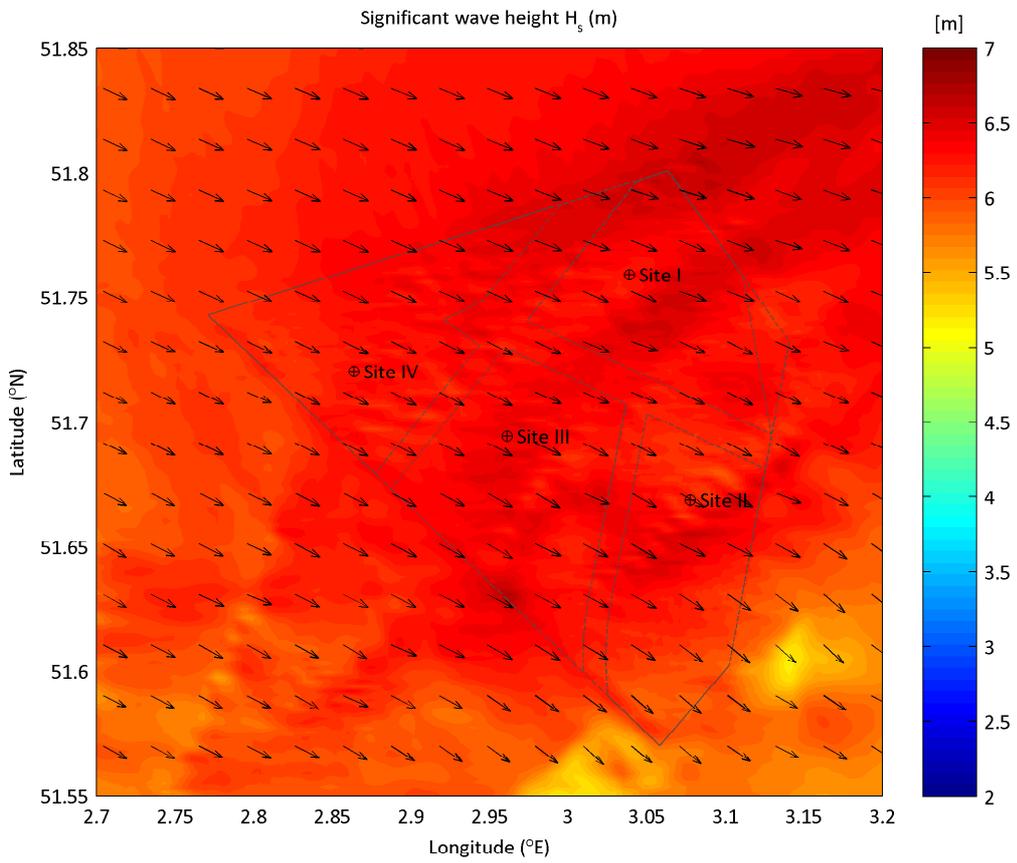
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 1yr

minimum still water level

**Deltares**

App. B.4.073



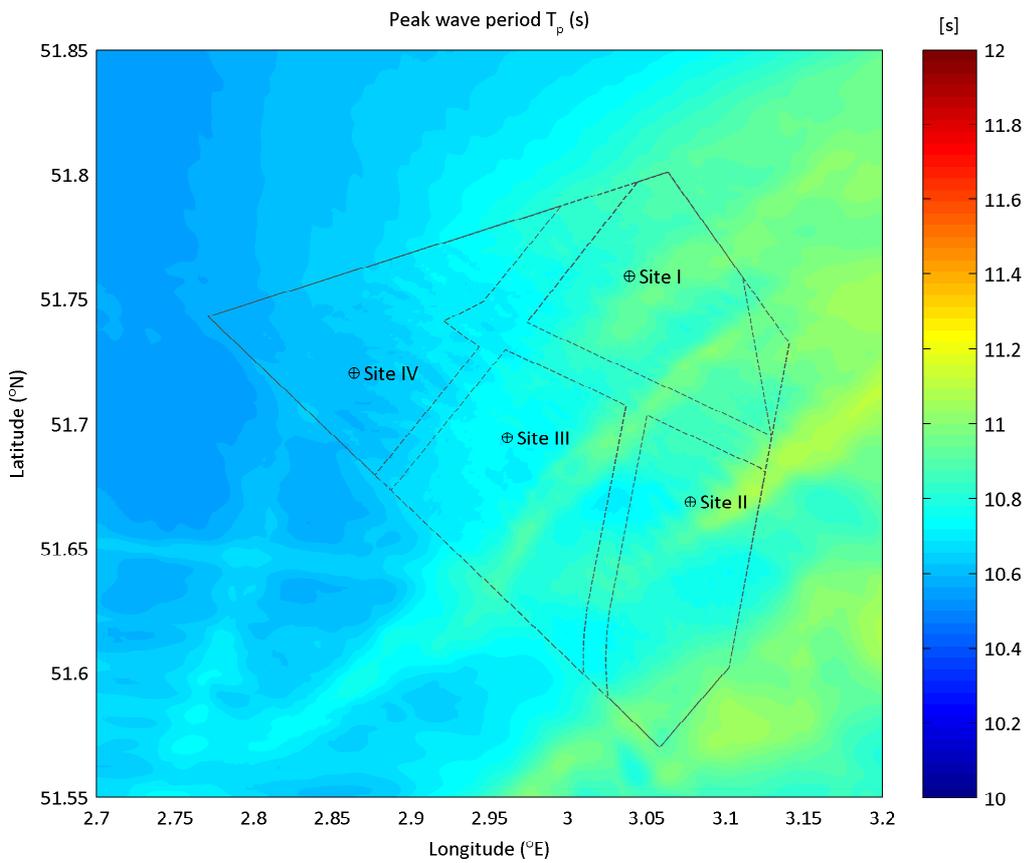
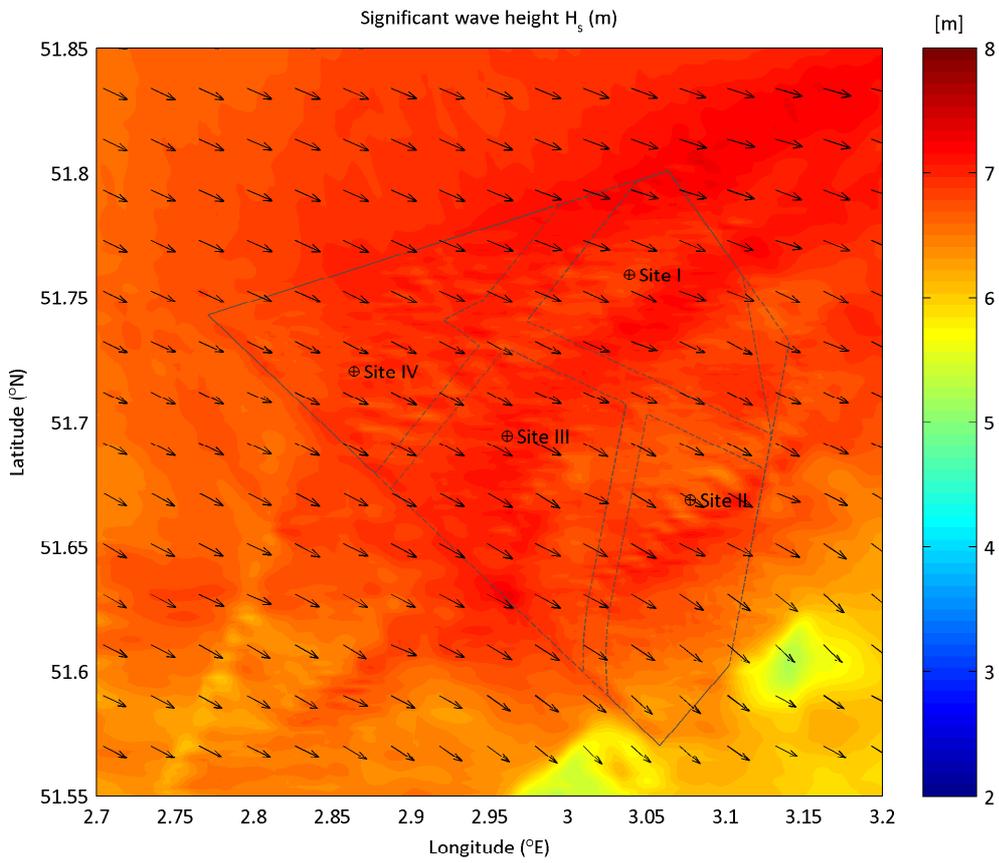
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 2yr

minimum still water level

**Deltares**

App. B.4.074



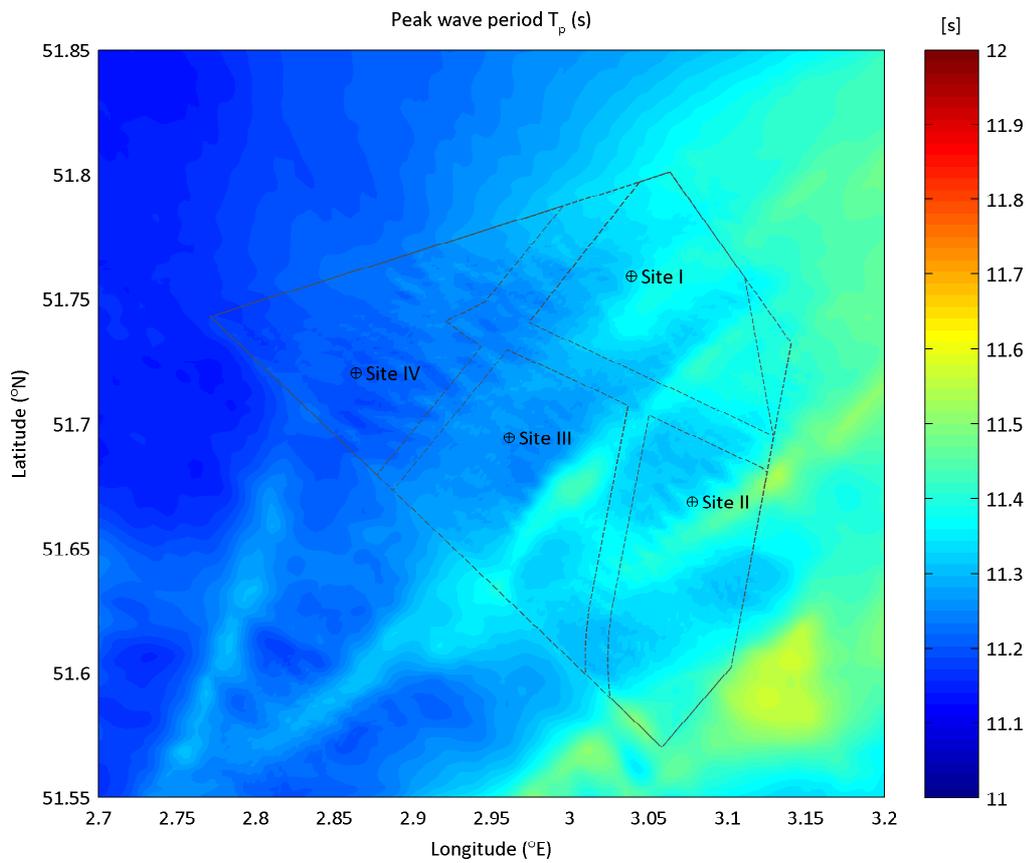
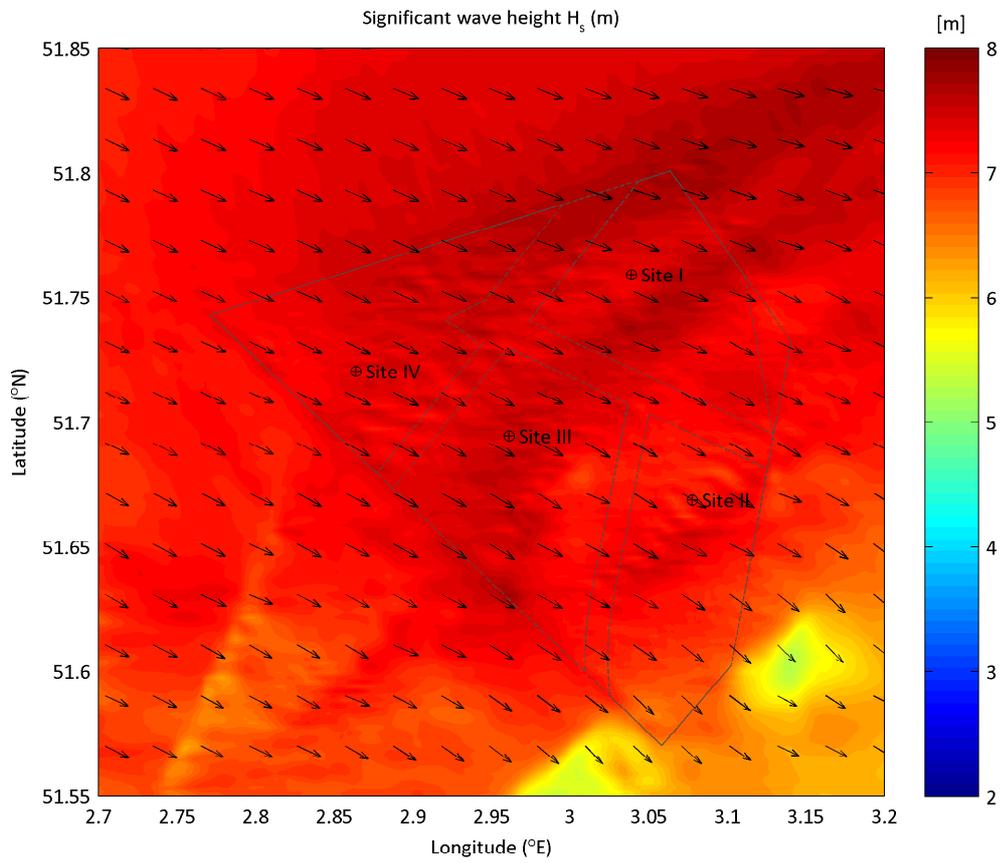
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 5yr

minimum still water level

**Deltares**

App. B.4.075



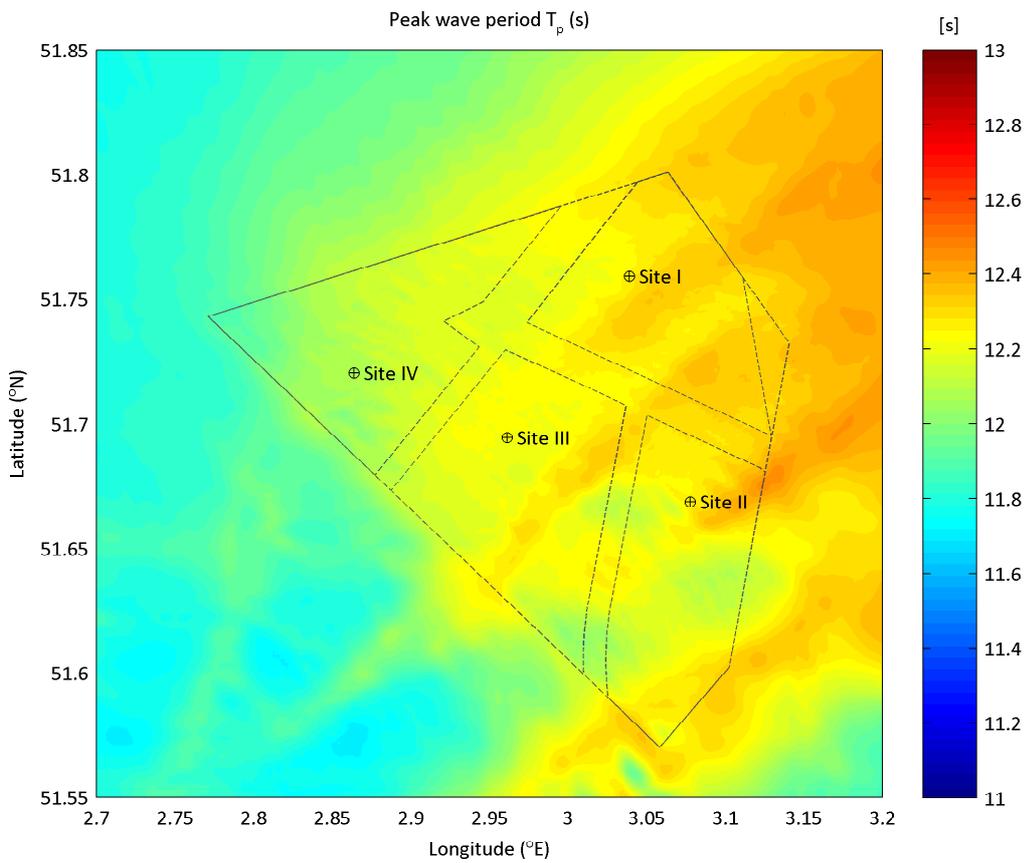
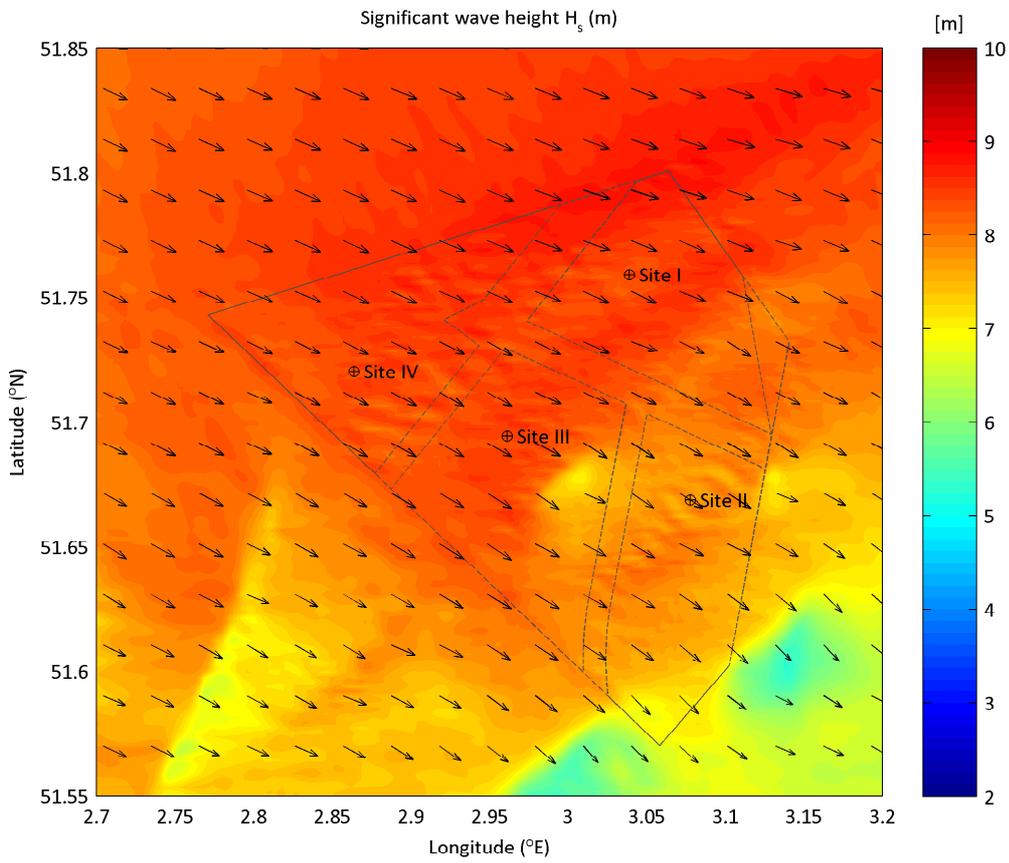
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 10yr

minimum still water level

**Deltares**

App. B.4.076



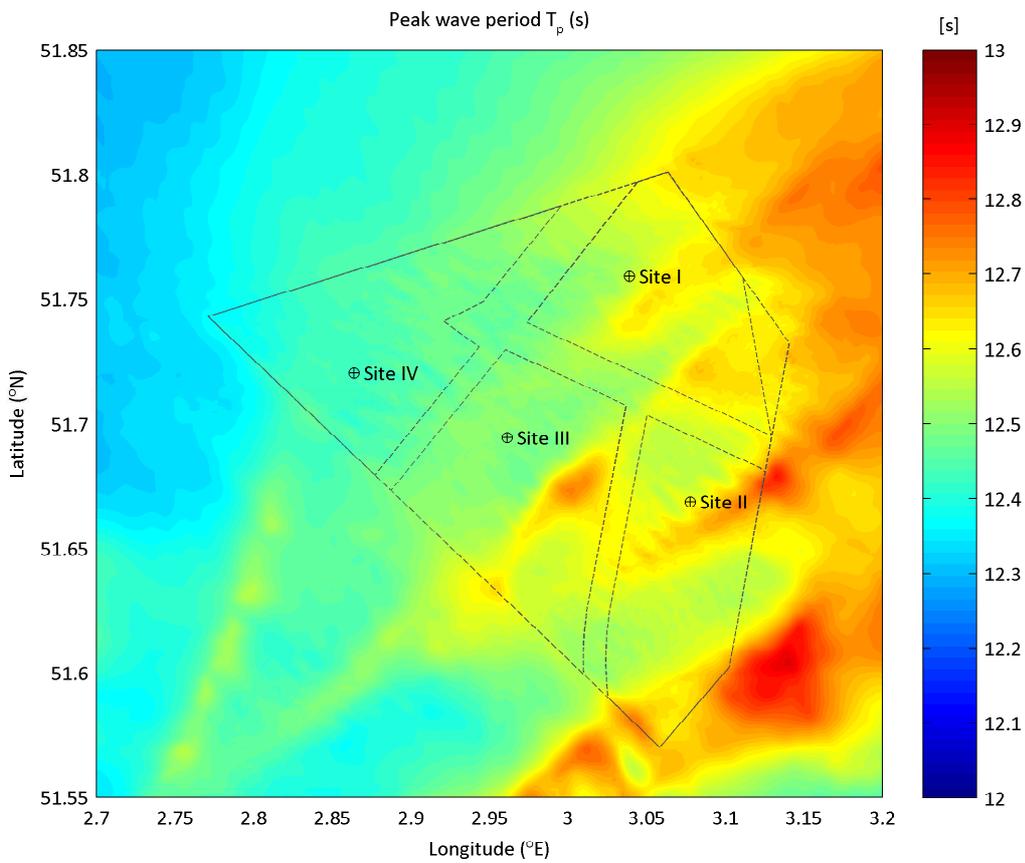
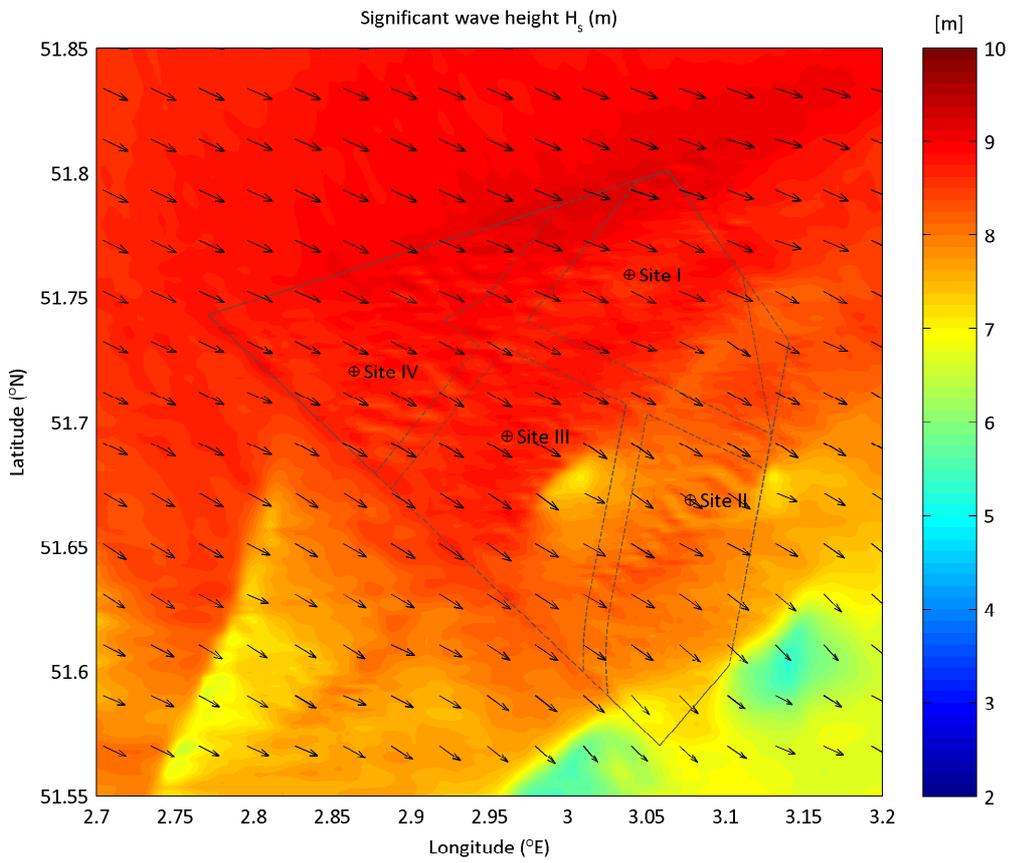
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 50yr

minimum still water level

**Deltares**

App. B.4.077



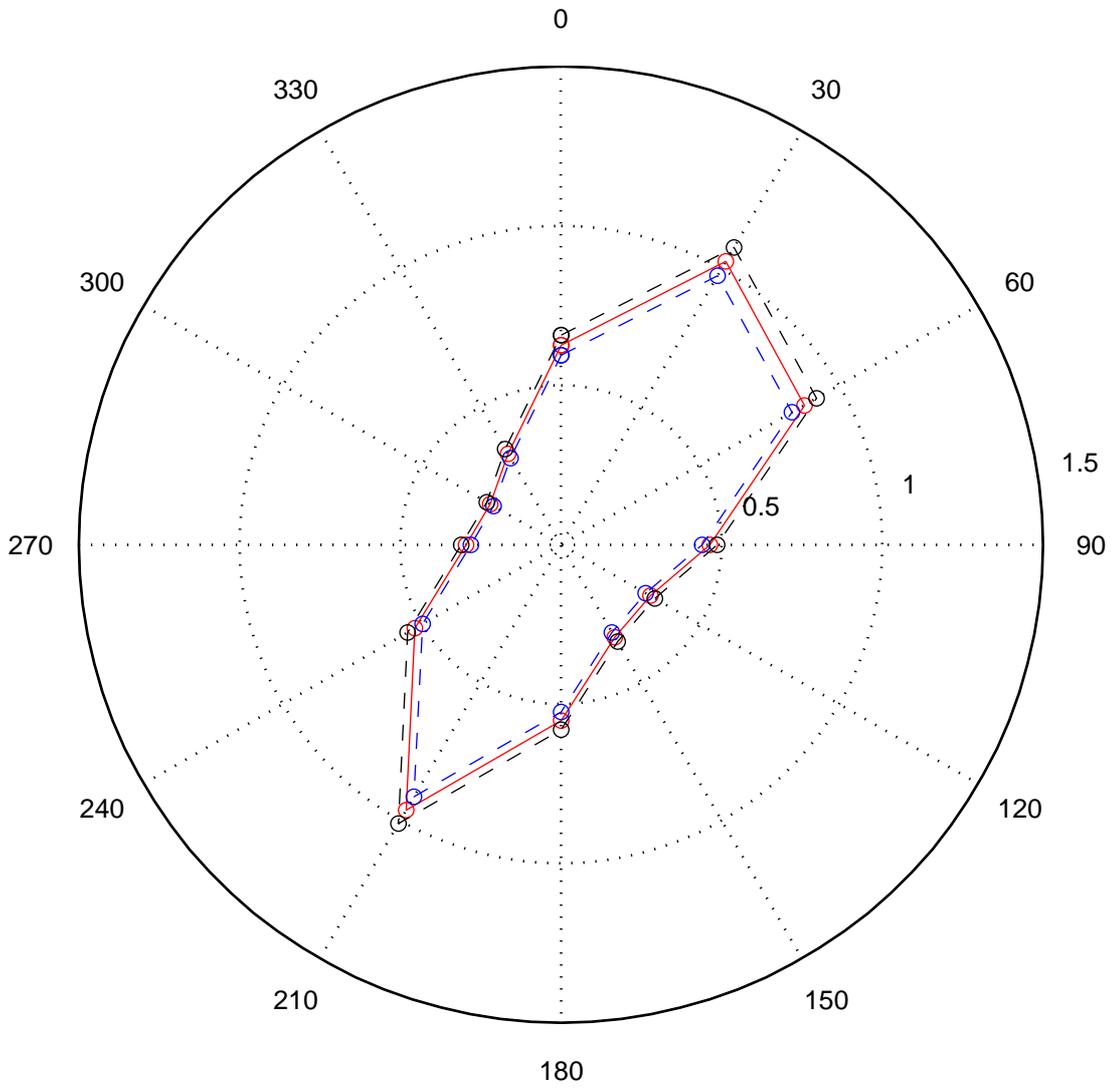
Extreme wave condition from SectorOMNI  
 upper plot: Significant wave height  $H_s$  (m) - lower plot: peak wave period  $T_p$  (s)  
 Nautical convention: coming from, clockwise from North

RP: 100yr

minimum still water level

**Deltares**

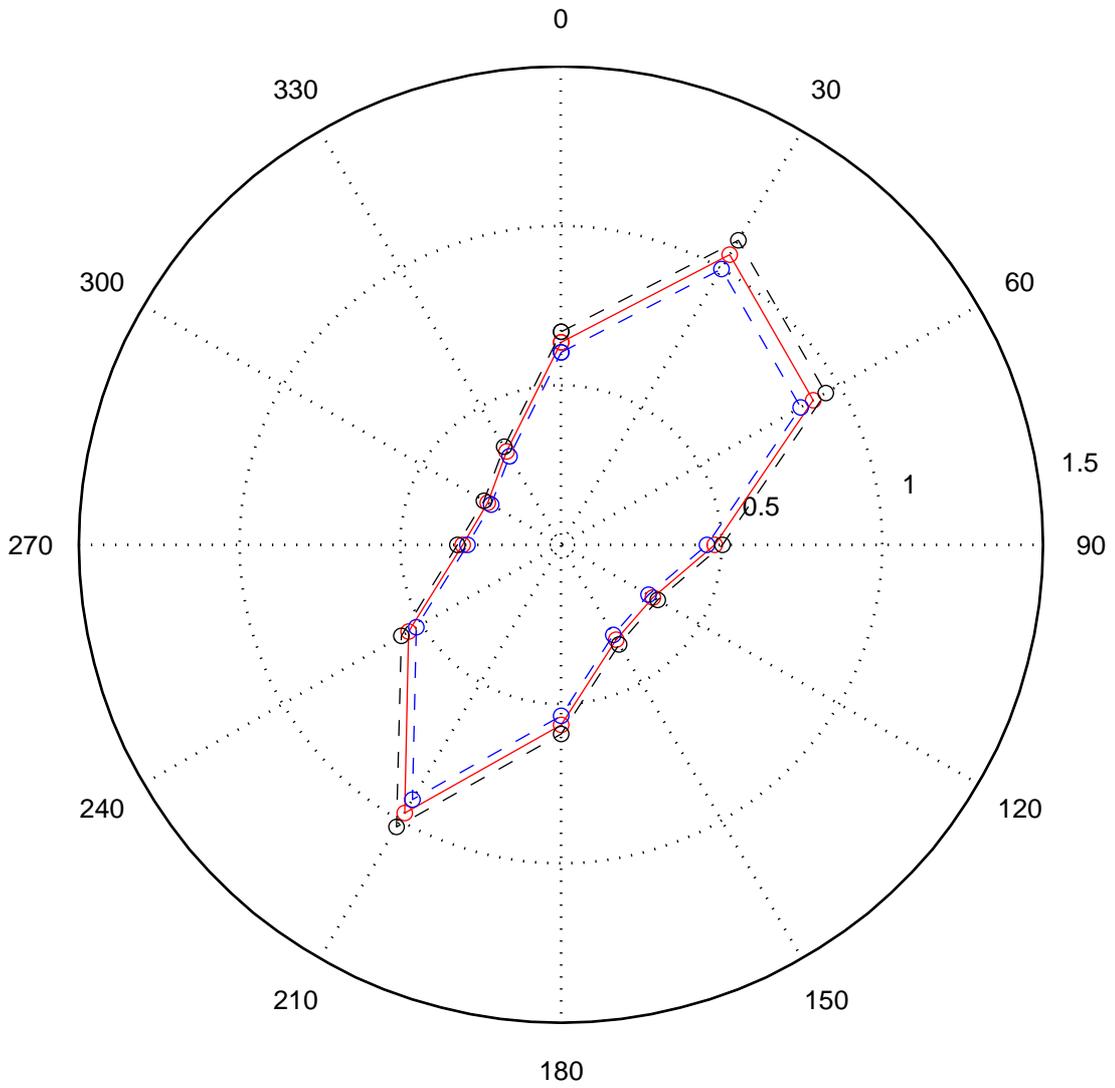
App. B.4.078



Directional extremes of UMAG based on GPD fits

UMAG

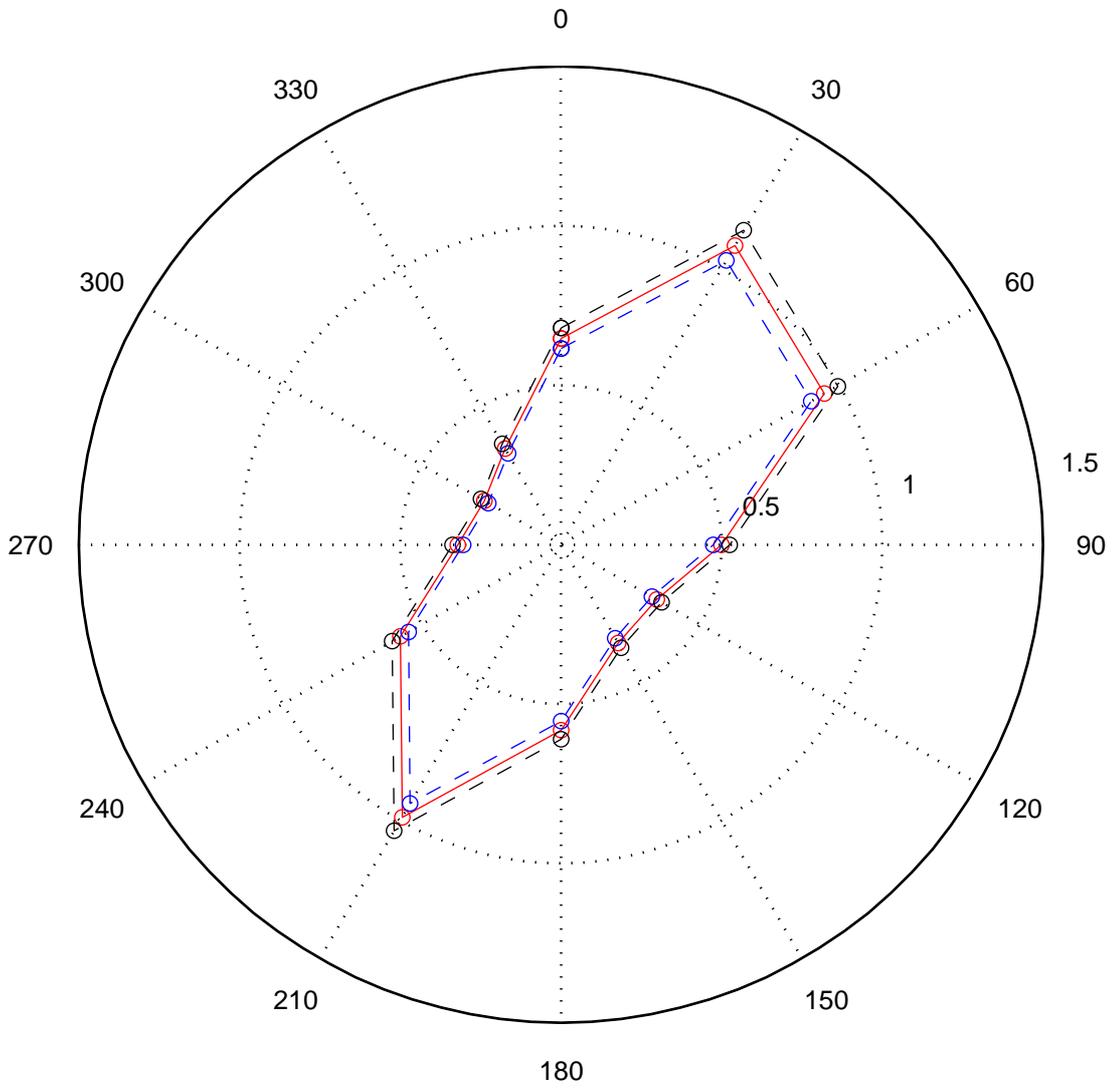
RP 1yr



Directional extremes of UMAG based on GPD fits

UMAG

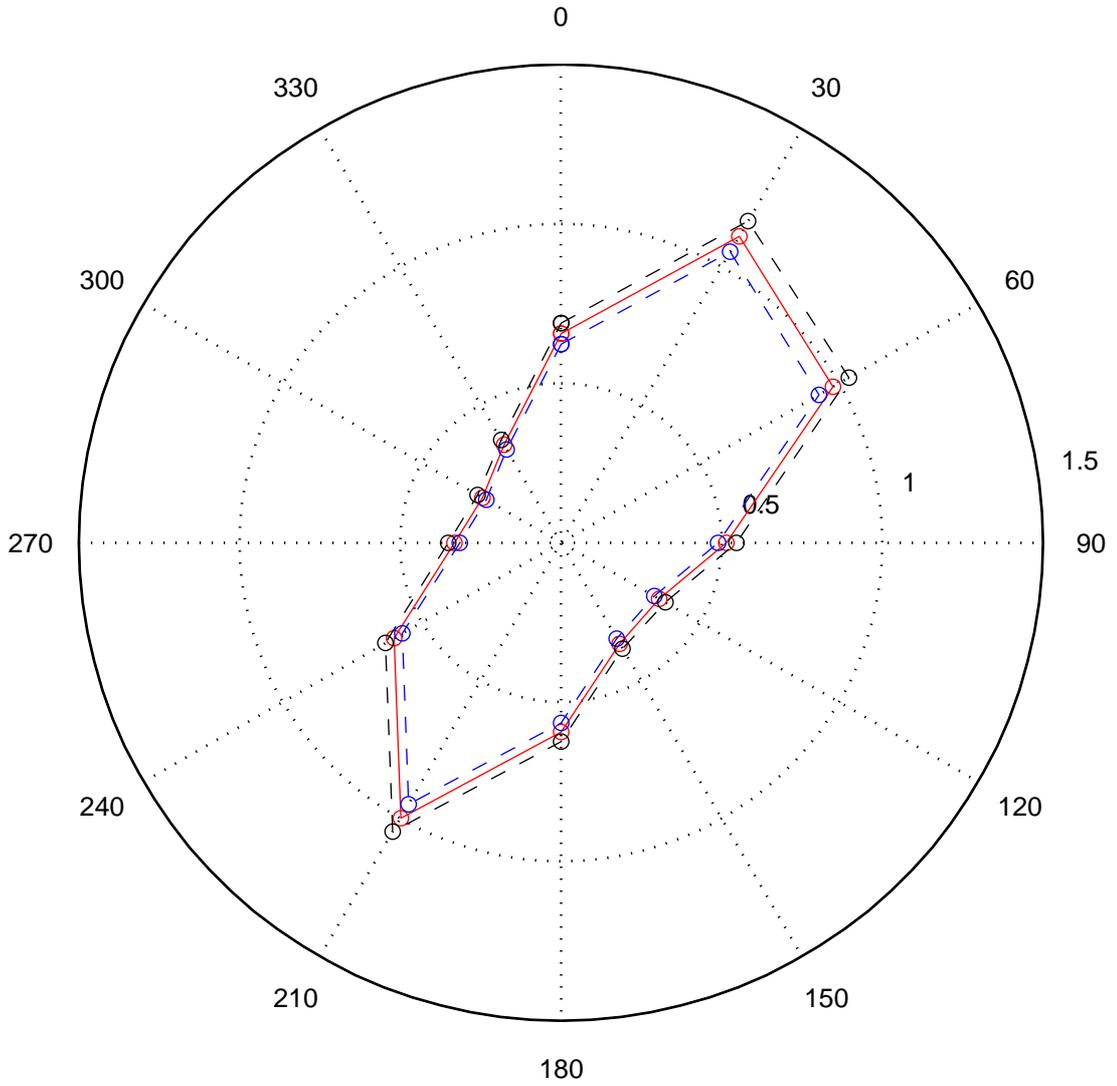
RP 2yr



Directional extremes of U-MAG based on GPD fits

UMAG

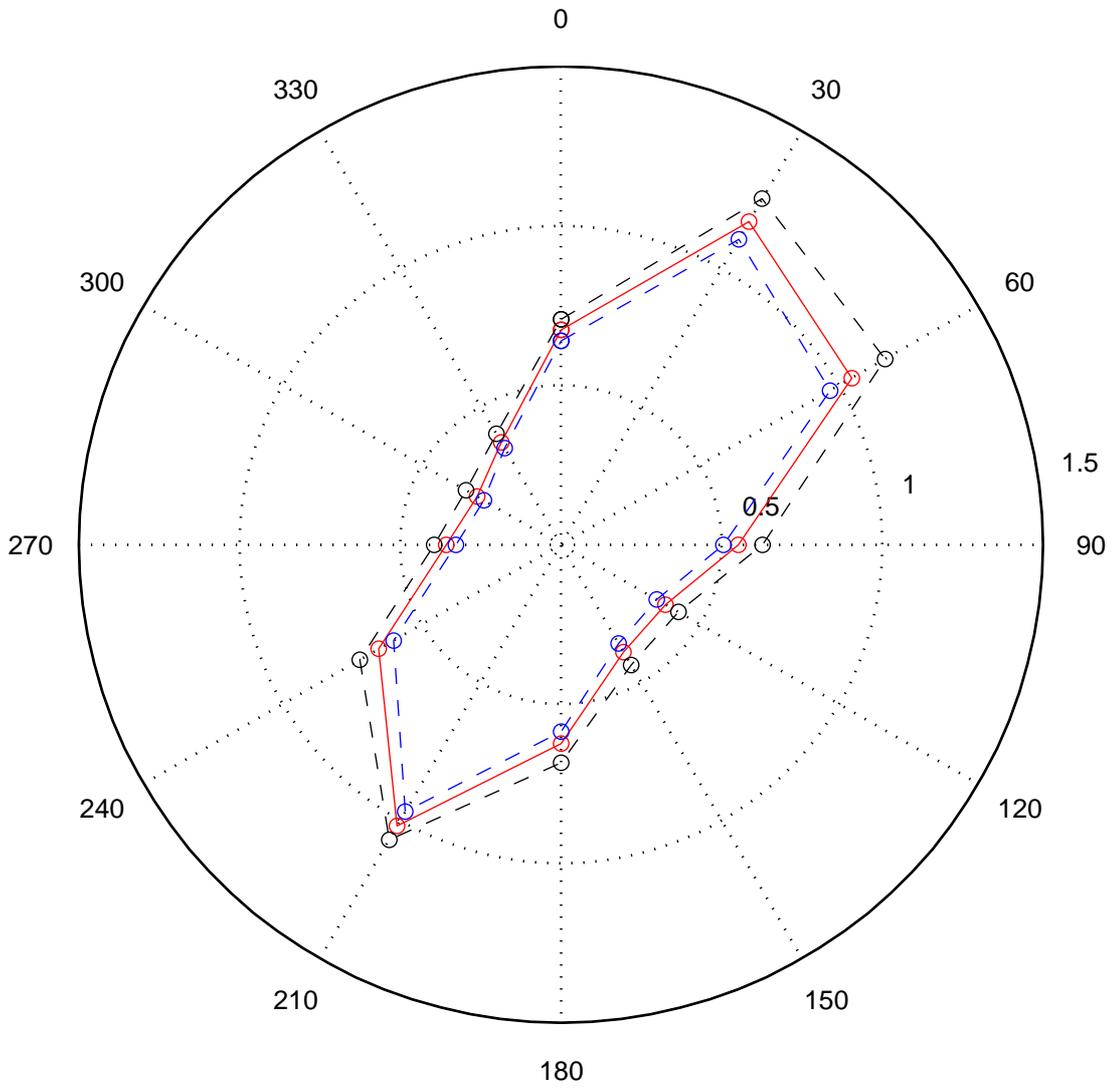
RP 5yr



Directional extremes of UMAG based on GPD fits

UMAG

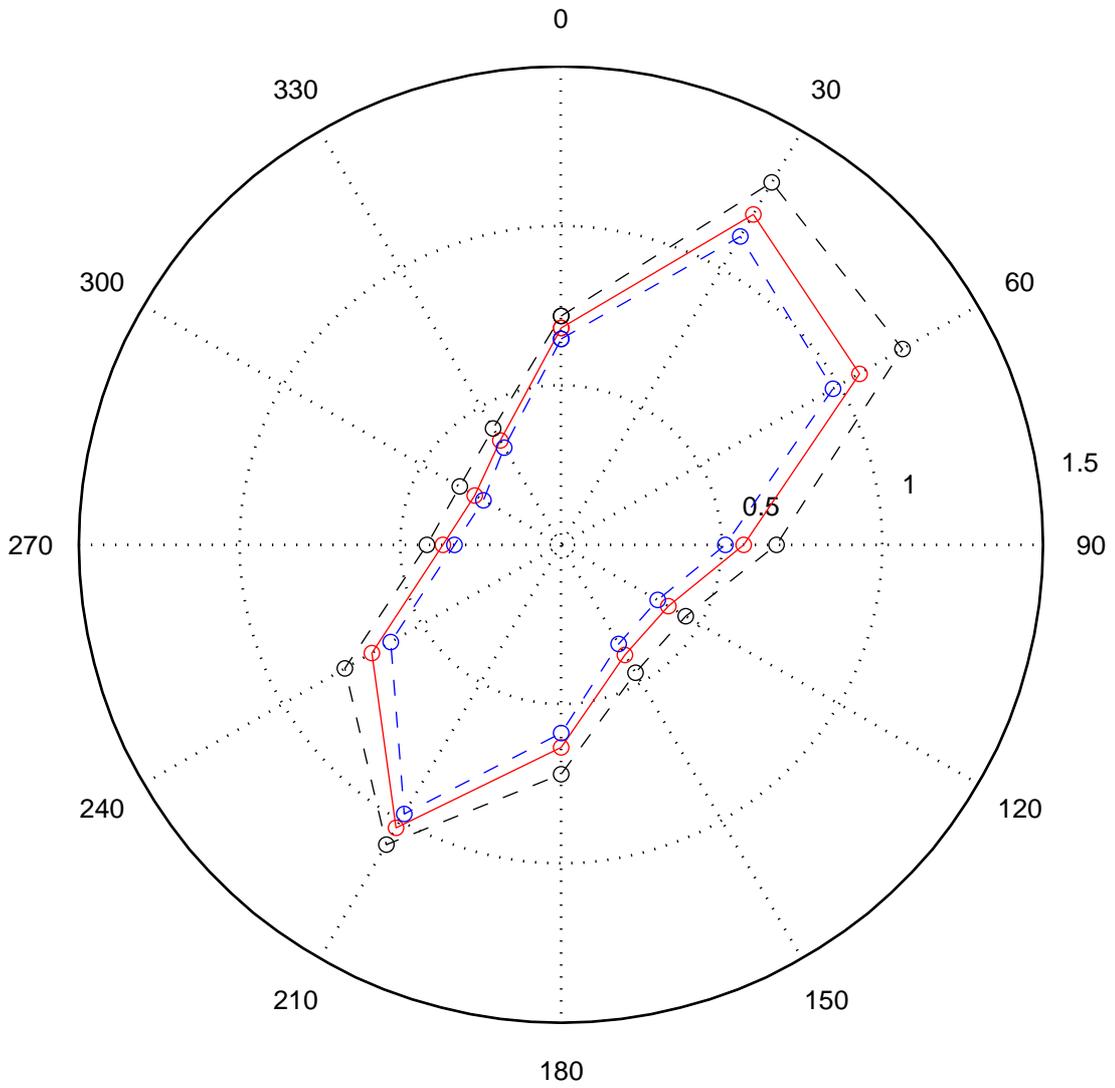
RP 10yr



Directional extremes of UMAG based on GPD fits

UMAG

RP 50yr



Directional extremes of UMAG based on GPD fits

UMAG

RP 100yr

		u <sub>dir</sub> (°N – "going to")												
		N	NNE	ENE	E	ESE	SSE	S	SWS	WSW	W	WNW	NNW	
u <sub>mag</sub> (m/s)	>1.6		0.00											0.00
	1.5–1.6		0.01	0.00										0.01
	1.4–1.5		0.03	0.00										0.03
	1.3–1.4		0.12	0.01					0.01					0.13
	1.2–1.3		0.42	0.02					0.06					0.50
	1.1–1.2	0.00	1.09	0.06				0.00	0.45					1.60
	1.0–1.1	0.00	2.17	0.19	0.00			0.00	1.65	0.00				4.02
	0.9–1.0	0.02	3.55	0.41	0.00			0.01	3.24	0.01				7.24
	0.8–0.9	0.09	4.51	0.77	0.00			0.05	4.71	0.02				10.15
	0.7–0.8	0.30	4.75	1.19	0.01	0.00	0.00	0.16	5.52	0.08				12.01
	0.6–0.7	0.78	4.20	1.58	0.05	0.00	0.00	0.44	5.26	0.25			0.00	12.56
	0.5–0.6	1.47	3.01	1.74	0.21	0.01	0.02	0.95	4.12	0.56	0.00		0.01	12.11
	0.4–0.5	2.01	1.80	1.52	0.61	0.11	0.20	1.43	2.71	0.99	0.06	0.02	0.17	11.63
	0.3–0.4	1.90	0.94	1.01	1.04	0.53	0.68	1.47	1.48	1.26	0.40	0.23	0.75	11.68
	0.2–0.3	1.17	0.47	0.47	0.87	0.87	0.93	0.85	0.75	1.03	0.90	0.85	1.13	10.30
	0.1–0.2	0.46	0.22	0.17	0.28	0.39	0.38	0.31	0.31	0.49	0.63	0.65	0.68	4.98
	0.0–0.1	0.10	0.07	0.06	0.06	0.06	0.07	0.07	0.08	0.11	0.12	0.13	0.12	1.05
		8.29	27.38	9.18	3.13	1.98	2.28	5.75	30.35	4.80	2.11	1.88	2.86	100.00
All Year, at 100% of the total water depth														Total

Joint occurrence table of current velocity vs. current direction  
Oceanographic convention: going to, clockwise from North

All Year

100% of the total water depth

**Deltares**

App. C.2.001

u<sub>dir</sub> (°N – "going to")

	N	NNE	ENE	E	ESE	SSE	S	SWS	WSW	W	WNW	NNW	
>1.6													
1.5–1.6		0.00											0.00
1.4–1.5		0.00											0.00
1.3–1.4		0.03	0.00										0.03
1.2–1.3		0.13	0.00					0.01					0.14
1.1–1.2		0.52	0.02					0.10					0.63
1.0–1.1		1.50	0.06				0.00	0.87					2.43
0.9–1.0	0.00	3.12	0.21				0.00	2.67	0.00				6.00
0.8–0.9	0.02	4.66	0.52	0.00			0.01	4.64	0.00				9.84
0.7–0.8	0.13	5.27	1.01	0.00			0.05	5.96	0.01				12.43
0.6–0.7	0.53	4.93	1.51	0.01	0.00	0.00	0.23	6.07	0.09				13.38
0.5–0.6	1.35	3.57	1.83	0.09	0.00	0.00	0.70	4.93	0.37			0.00	12.84
0.4–0.5	2.17	2.04	1.77	0.46	0.03	0.07	1.40	3.19	0.89	0.01	0.00	0.05	12.07
0.3–0.4	2.32	0.95	1.18	1.10	0.39	0.55	1.68	1.64	1.41	0.24	0.09	0.57	12.13
0.2–0.3	1.42	0.42	0.49	1.06	1.00	1.10	0.99	0.70	1.30	1.00	0.83	1.37	11.67
0.1–0.2	0.49	0.18	0.13	0.30	0.47	0.42	0.27	0.26	0.54	0.79	0.85	0.81	5.52
0.0–0.1	0.09	0.05	0.04	0.04	0.05	0.04	0.05	0.06	0.10	0.12	0.13	0.12	0.89
	8.52	27.35	8.78	3.06	1.94	2.18	5.36	31.09	4.72	2.16	1.91	2.93	100.00
													Total

All Year, at 75% of the total water depth

Joint occurrence table of current velocity vs. current direction  
 Oceanographic convention: going to, clockwise from North

All Year

75% of the total water depth

**Deltares**

App. C.2.002

$u_{dir}$  (°N – "going to")

	N	NNE	ENE	E	ESE	SSE	S	SWS	WSW	W	WNW	NNW	
>1.6													
1.5–1.6													
1.4–1.5													
1.3–1.4		0.00											0.00
1.2–1.3		0.02	0.00										0.02
1.1–1.2		0.11	0.00					0.00					0.11
1.0–1.1		0.57	0.01					0.13					0.72
0.9–1.0		2.02	0.06				0.00	1.49					3.56
0.8–0.9	0.00	4.27	0.24				0.00	4.02					8.54
0.7–0.8	0.02	5.74	0.69	0.00			0.00	6.10	0.00				12.55
0.6–0.7	0.23	5.81	1.33	0.00			0.05	6.86	0.01				14.30
0.5–0.6	1.03	4.52	1.88	0.03	0.00	0.00	0.36	6.10	0.13				14.04
0.4–0.5	2.22	2.53	2.05	0.24	0.00	0.01	1.22	4.08	0.65	0.00		0.00	13.00
0.3–0.4	2.83	1.02	1.51	1.01	0.16	0.29	1.92	1.89	1.52	0.07	0.01	0.26	12.49
0.2–0.3	1.86	0.35	0.59	1.32	1.11	1.27	1.23	0.69	1.69	0.96	0.67	1.57	13.31
0.1–0.2	0.54	0.13	0.11	0.37	0.58	0.53	0.24	0.22	0.62	1.05	1.15	1.06	6.61
0.0–0.1	0.06	0.04	0.02	0.03	0.03	0.03	0.03	0.05	0.09	0.12	0.14	0.11	0.76
	8.80	27.12	8.49	2.99	1.89	2.12	5.05	31.63	4.71	2.20	1.97	3.01	100.00
													Total

All Year, at 50% of the total water depth

Joint occurrence table of current velocity vs. current direction  
 Oceanographic convention: going to, clockwise from North

All Year

50% of the total water depth

**Deltares**

App. C.2.003

u<sub>dir</sub> (°N – "going to")

	N	NNE	ENE	E	ESE	SSE	S	SWS	WSW	W	WNW	NNW	
>1.6													
1.5–1.6													
1.4–1.5													
1.3–1.4													
1.2–1.3													
1.1–1.2		0.00											0.00
1.0–1.1		0.04	0.00					0.00					0.04
0.9–1.0		0.36	0.01					0.07					0.43
0.8–0.9		2.20	0.03					1.76					3.99
0.7–0.8		5.34	0.21					5.31					10.86
0.6–0.7	0.01	6.78	0.85				0.00	7.39					15.03
0.5–0.6	0.43	6.29	1.70	0.00			0.05	7.66	0.01				16.13
0.4–0.5	1.92	3.86	2.28	0.05	0.00	0.00	0.66	6.05	0.22				15.03
0.3–0.4	3.31	1.46	2.09	0.64	0.02	0.04	1.98	2.77	1.37	0.00		0.03	13.70
0.2–0.3	2.71	0.37	0.90	1.66	0.91	1.19	1.81	0.78	2.27	0.58	0.24	1.36	14.79
0.1–0.2	0.66	0.10	0.13	0.56	0.91	0.82	0.31	0.20	0.84	1.55	1.63	1.61	9.30
0.0–0.1	0.06	0.03	0.02	0.02	0.02	0.02	0.02	0.04	0.08	0.13	0.15	0.12	0.70
	9.10	26.79	8.22	2.93	1.86	2.07	4.82	32.02	4.78	2.27	2.03	3.11	100.00
													Total

All Year, at 25% of the total water depth

Joint occurrence table of current velocity vs. current direction  
 Oceanographic convention: going to, clockwise from North

All Year

25% of the total water depth

**Deltares**

App. C.2.004

		u <sub>dir</sub> (°N – "going to")												
		N	NNE	ENE	E	ESE	SSE	S	SWS	WSW	W	WNW	NNW	
u <sub>mag</sub> (m/s)	>1.6													
	1.5–1.6													
	1.4–1.5													
	1.3–1.4													
	1.2–1.3													
	1.1–1.2													
	1.0–1.1													
	0.9–1.0													
	0.8–0.9		0.01											0.01
	0.7–0.8		0.28	0.00					0.08					0.37
	0.6–0.7		3.74	0.04					3.67					7.45
	0.5–0.6	0.00	8.28	0.54					8.75					17.57
	0.4–0.5	0.32	8.38	1.89	0.00			0.01	9.80	0.00				20.40
0.3–0.4	2.73	4.59	2.87	0.07	0.00	0.00	0.89	7.39	0.30				18.84	
0.2–0.3	4.51	1.05	2.22	1.34	0.16	0.28	2.75	2.17	2.48	0.03	0.00	0.26	17.26	
0.1–0.2	1.65	0.13	0.44	1.43	1.58	1.70	1.01	0.33	2.00	2.02	1.73	2.72	16.75	
0.0–0.1	0.09	0.02	0.02	0.04	0.08	0.06	0.02	0.04	0.13	0.27	0.35	0.24	1.36	
		9.30	26.48	8.02	2.88	1.83	2.04	4.69	32.23	4.91	2.31	2.08	3.23	100.00
														Total

All Year, at 5% of the total water depth

Joint occurrence table of current velocity vs. current direction  
 Oceanographic convention: going to, clockwise from North

All Year

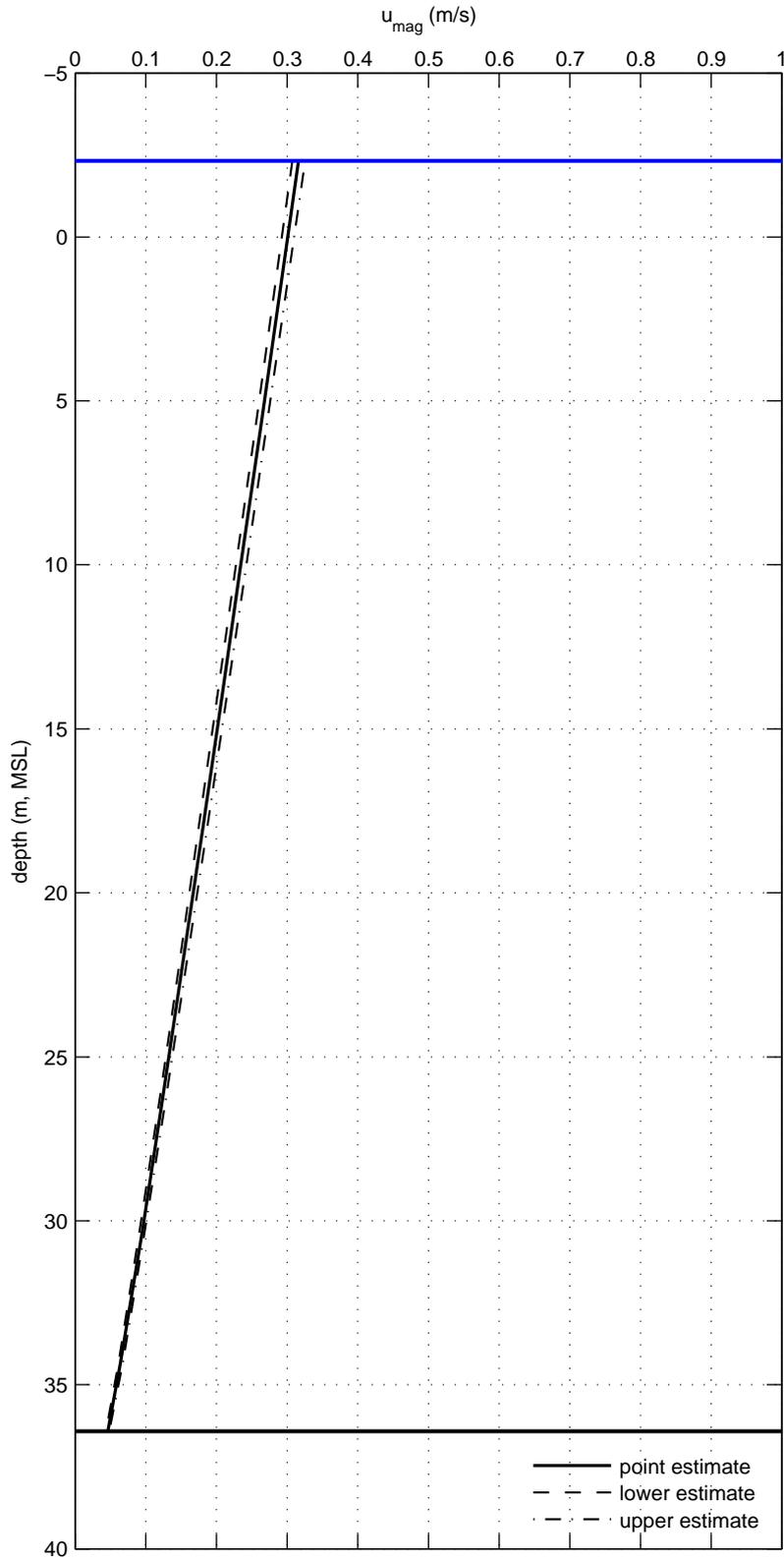
5% of the total water depth

**Deltares**

App. C.2.005

RP = 1 yr (U10 = 16.3 m/s)

Dir sector N



Current profile for directional sector N

RP = 1 yr

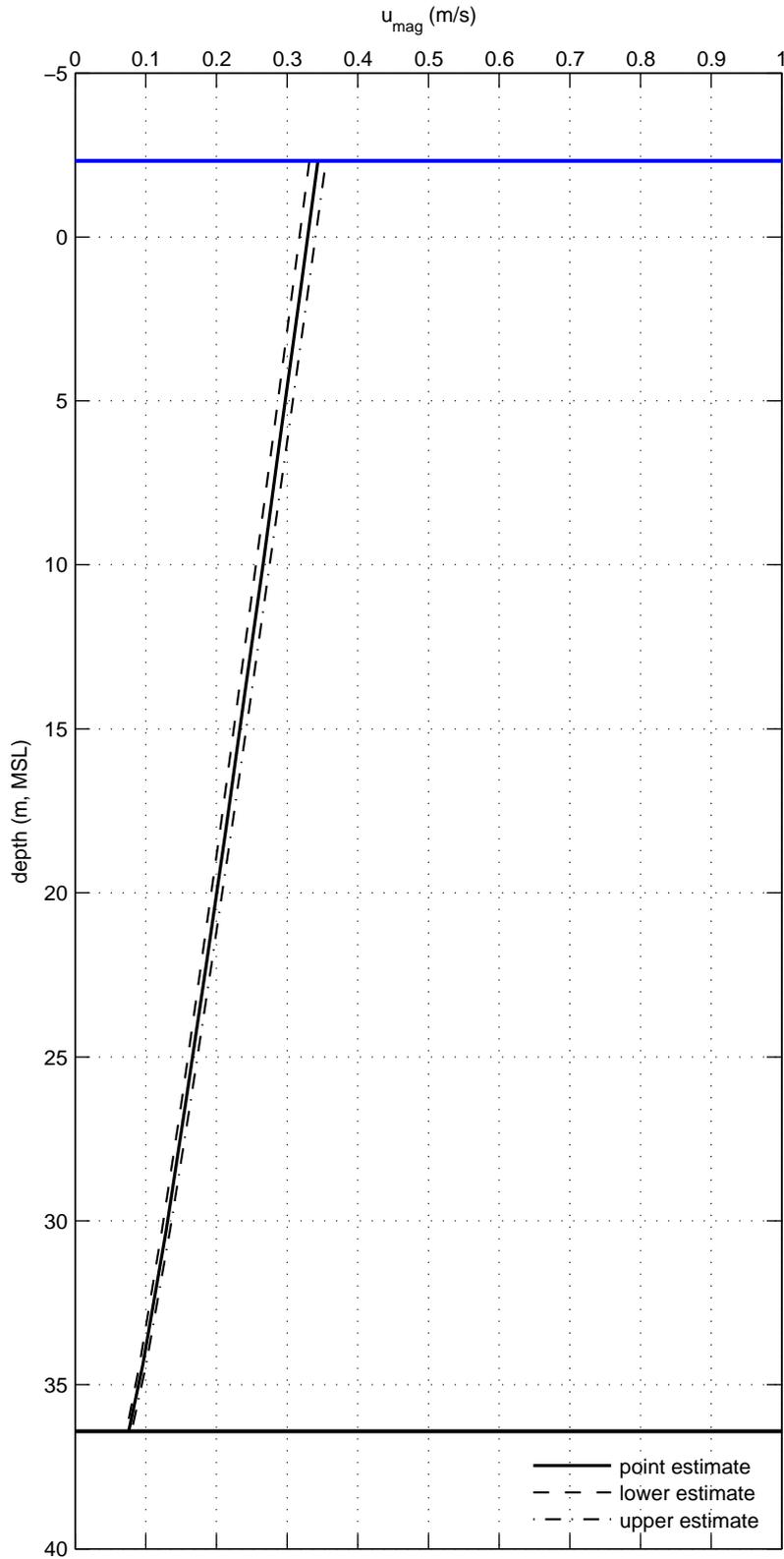
U10 = 16.3 m/s

Deltares

App. C.3.001

RP = 1 yr (U10 = 15.1 m/s)

Dir sector NNE



Current profile for directional sector NNE

RP = 1 yr

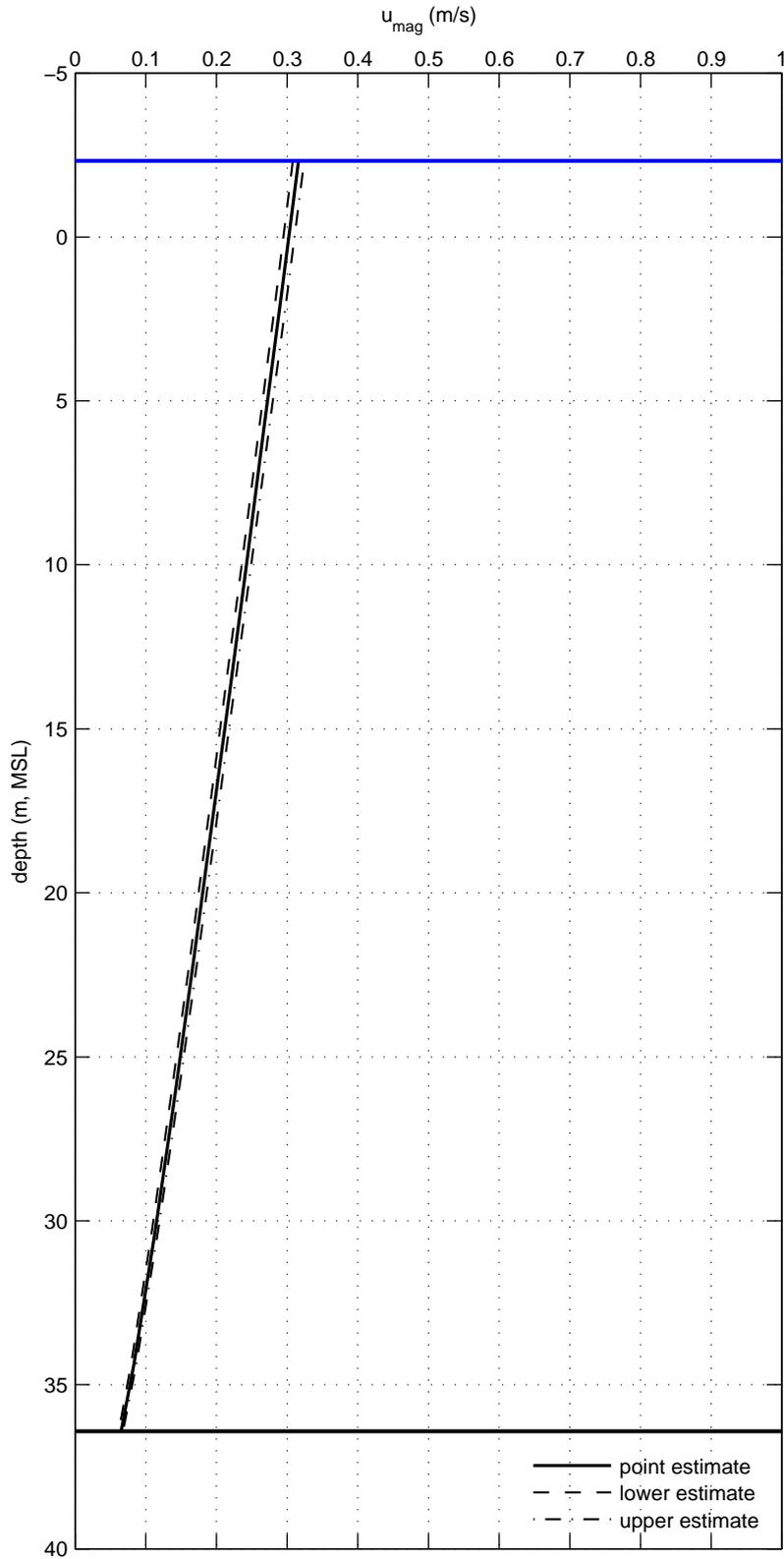
U10 = 15.1 m/s

Deltares

App. C.3.002

RP = 1 yr (U10 = 14.4 m/s)

Dir sector ENE



Current profile for directional sector ENE

RP = 1 yr

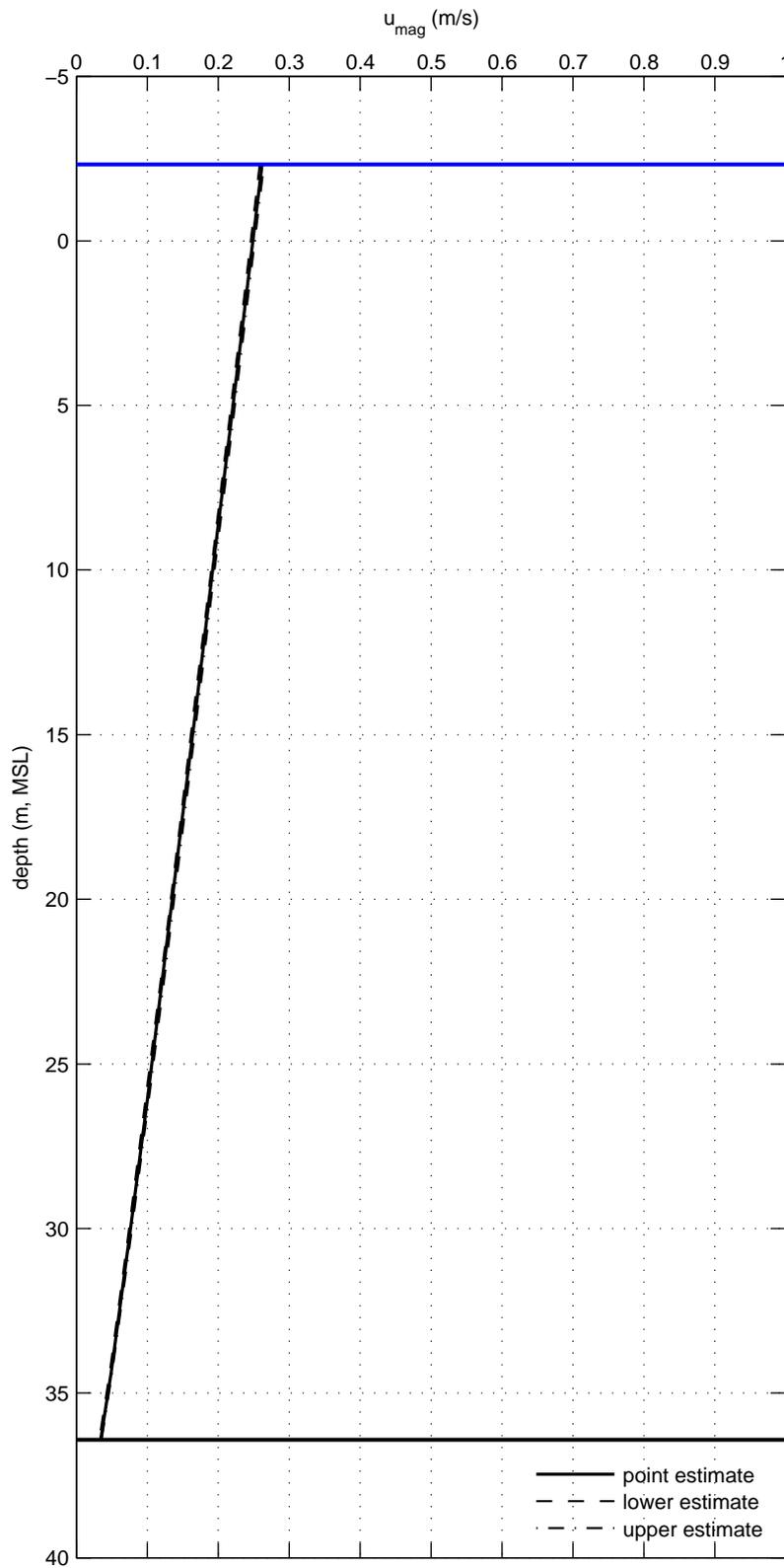
U10 = 14.4 m/s

Deltares

App. C.3.003

RP = 1 yr (U10 = 13.9 m/s)

Dir sector E



Current profile for directional sector E

RP = 1 yr

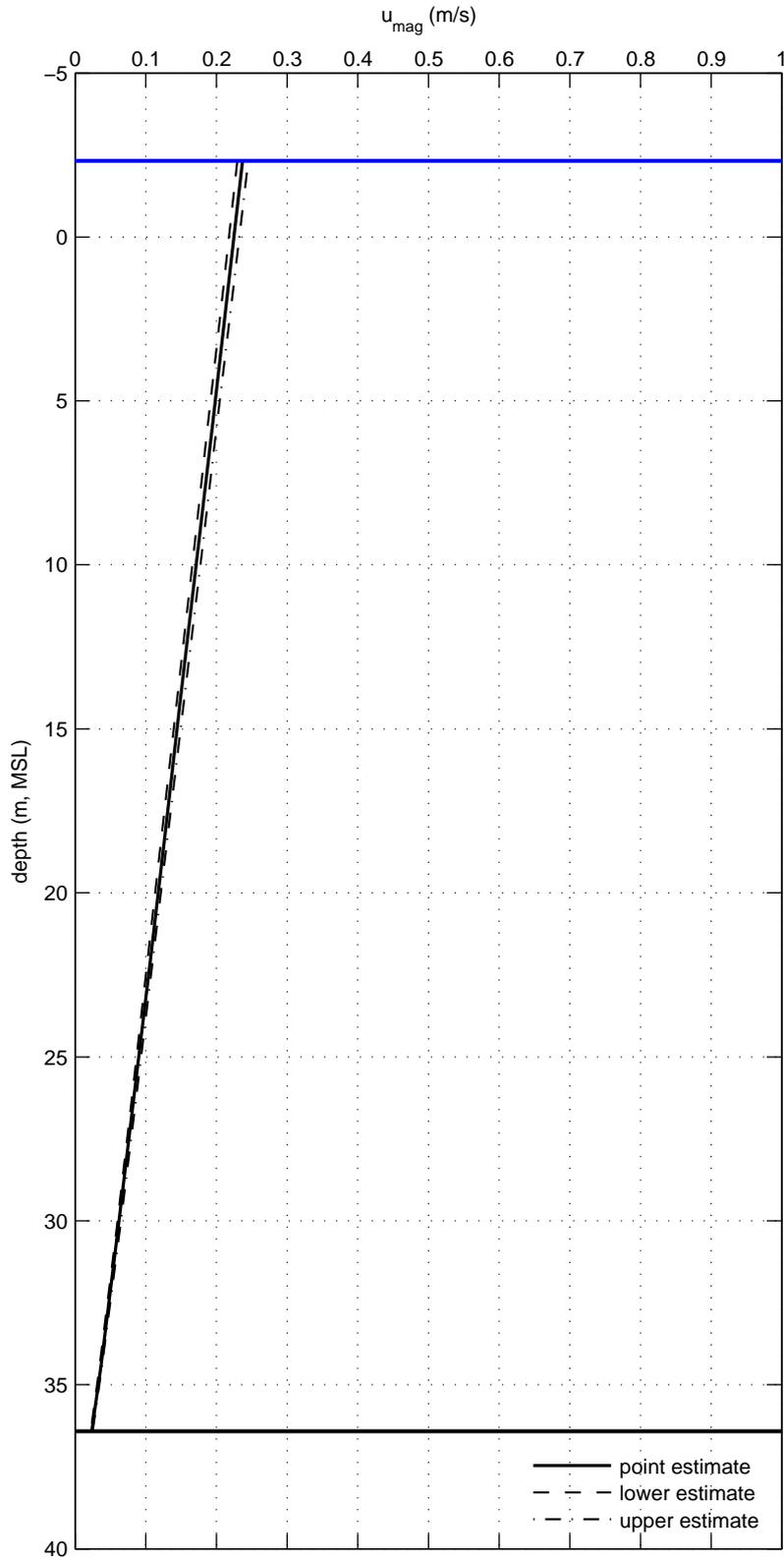
U10 = 13.9 m/s

**Deltares**

App. C.3.004

RP = 1 yr (U10 = 13.4 m/s)

Dir sector ESE



Current profile for directional sector ESE

RP = 1 yr

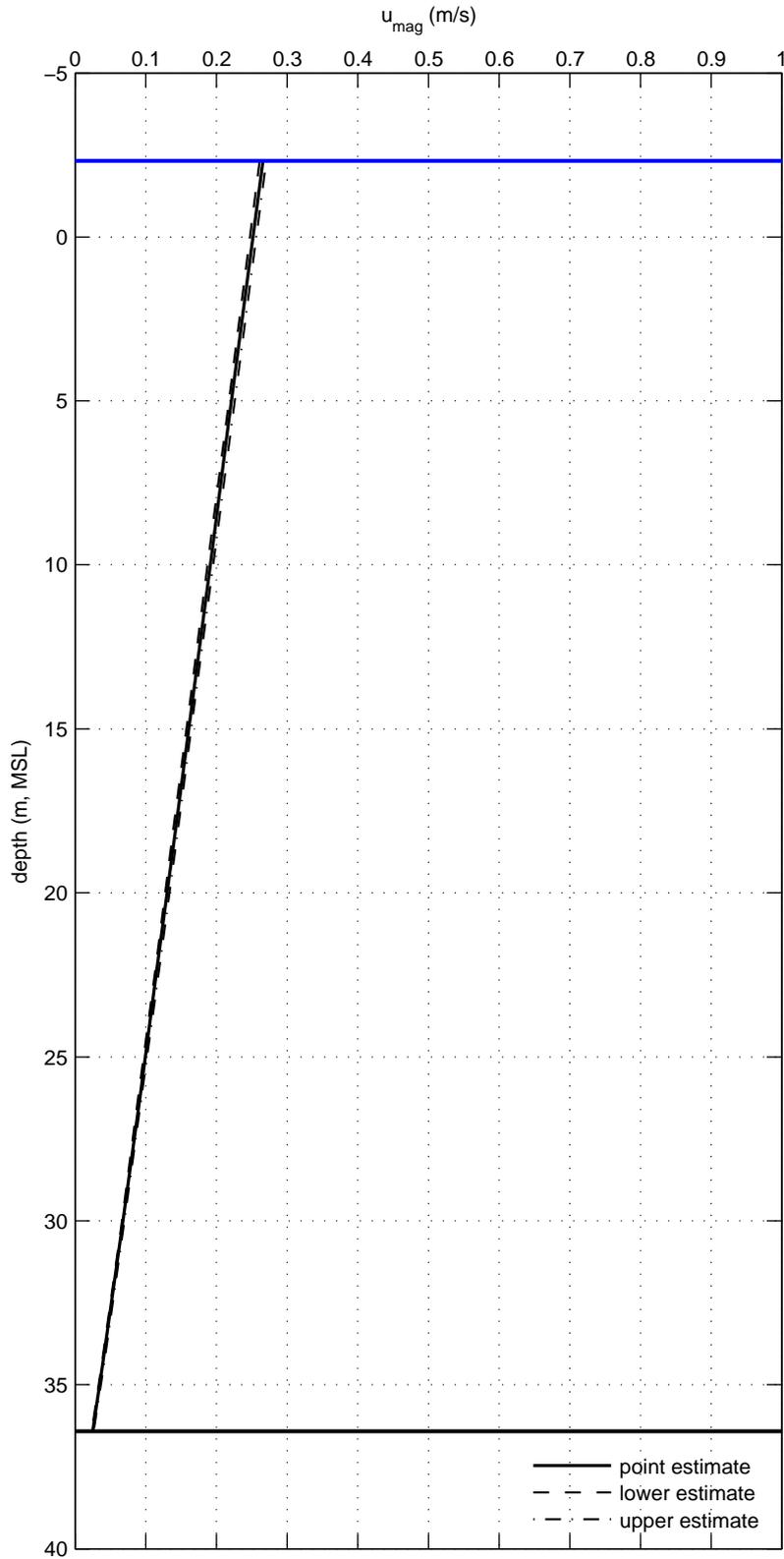
U10 = 13.4 m/s

Deltares

App. C.3.005

RP = 1 yr (U10 = 15.2 m/s)

Dir sector SSE



Current profile for directional sector SSE

RP = 1 yr

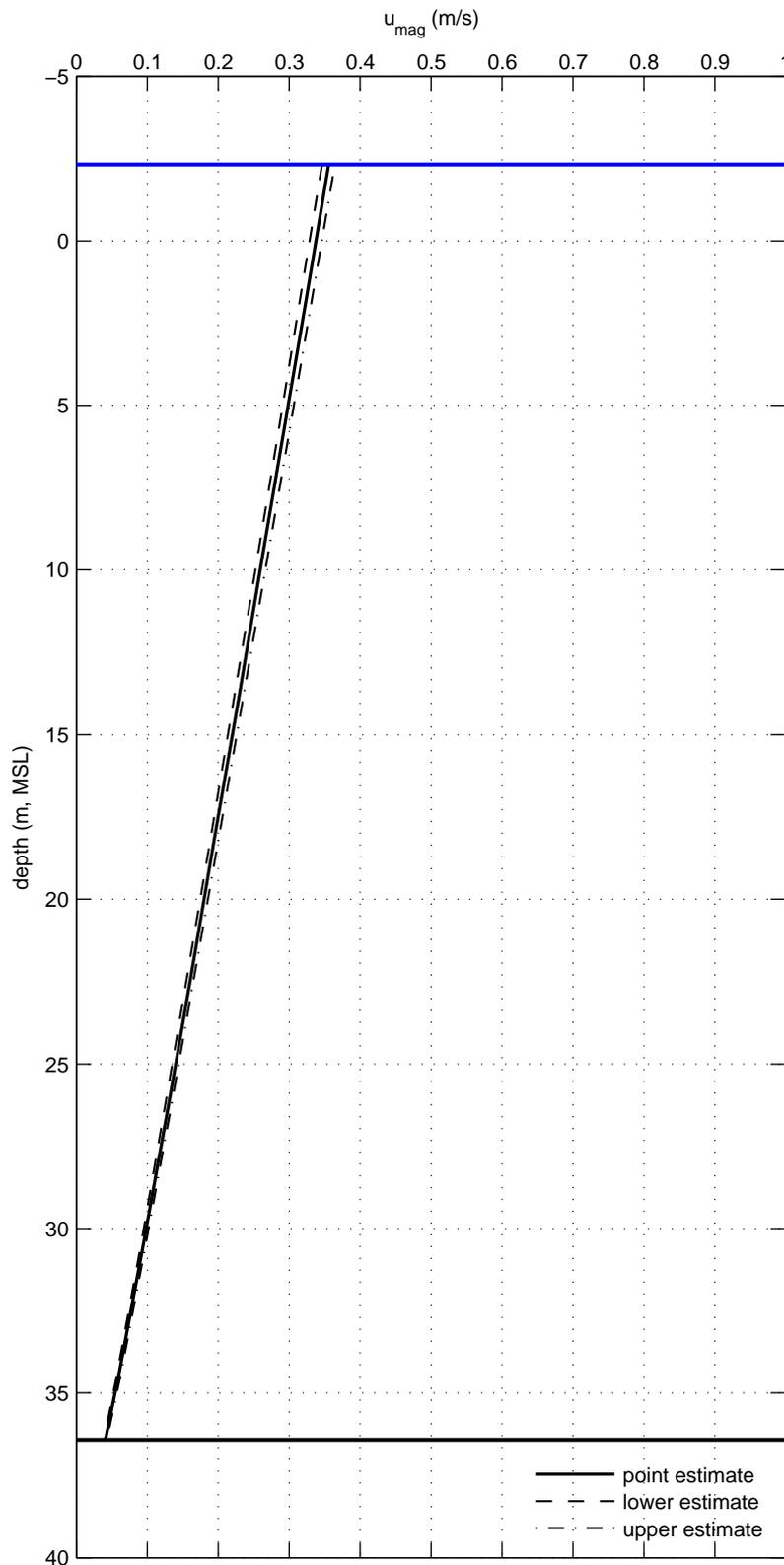
U10 = 15.2 m/s

Deltares

App. C.3.006

RP = 1 yr (U10 = 19.5 m/s)

Dir sector S



Current profile for directional sector S

RP = 1 yr

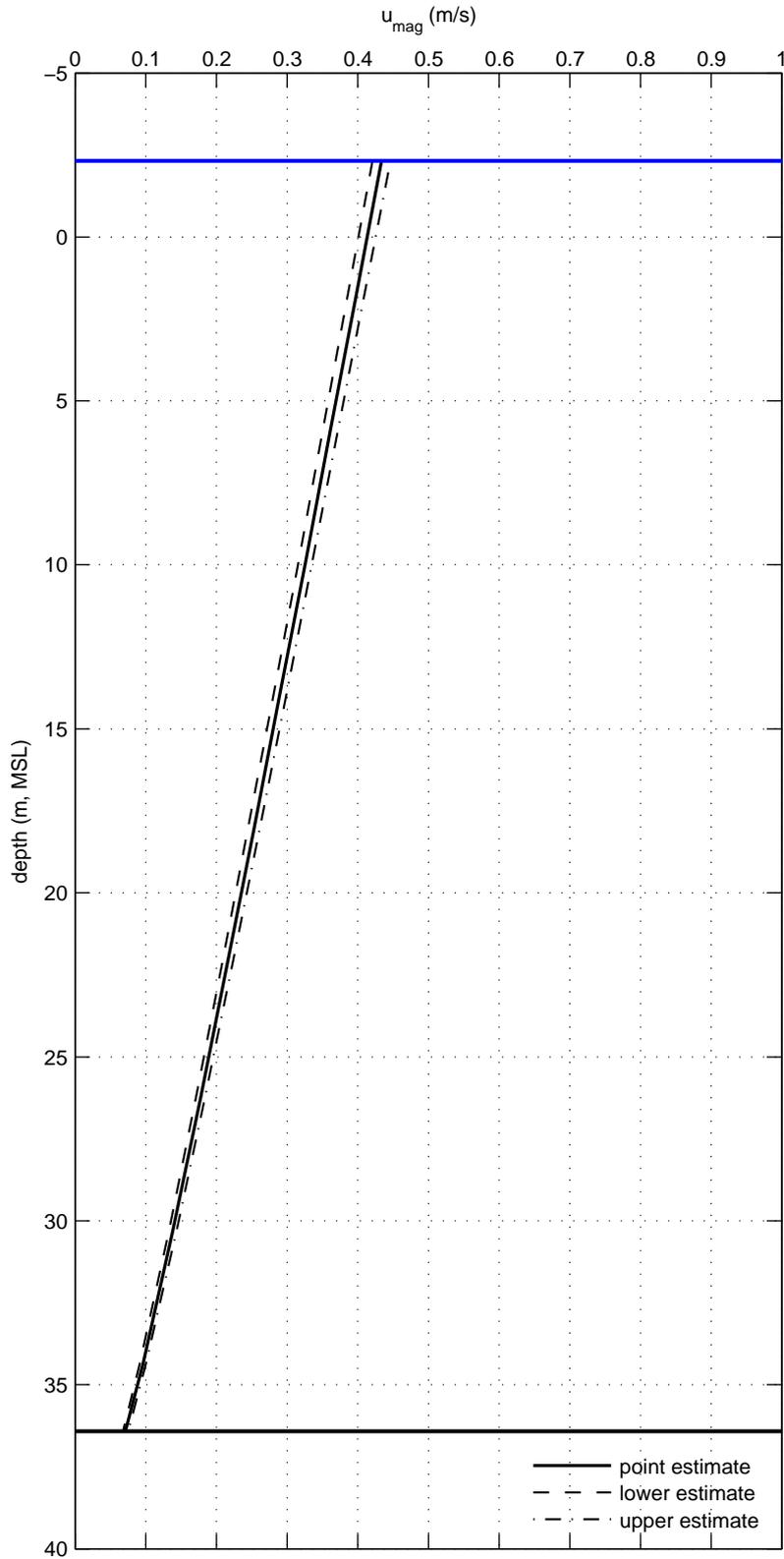
U10 = 19.5 m/s

Deltares

App. C.3.007

RP = 1 yr (U10 = 21.6 m/s)

Dir sector SSW



Current profile for directional sector SSW

RP = 1 yr

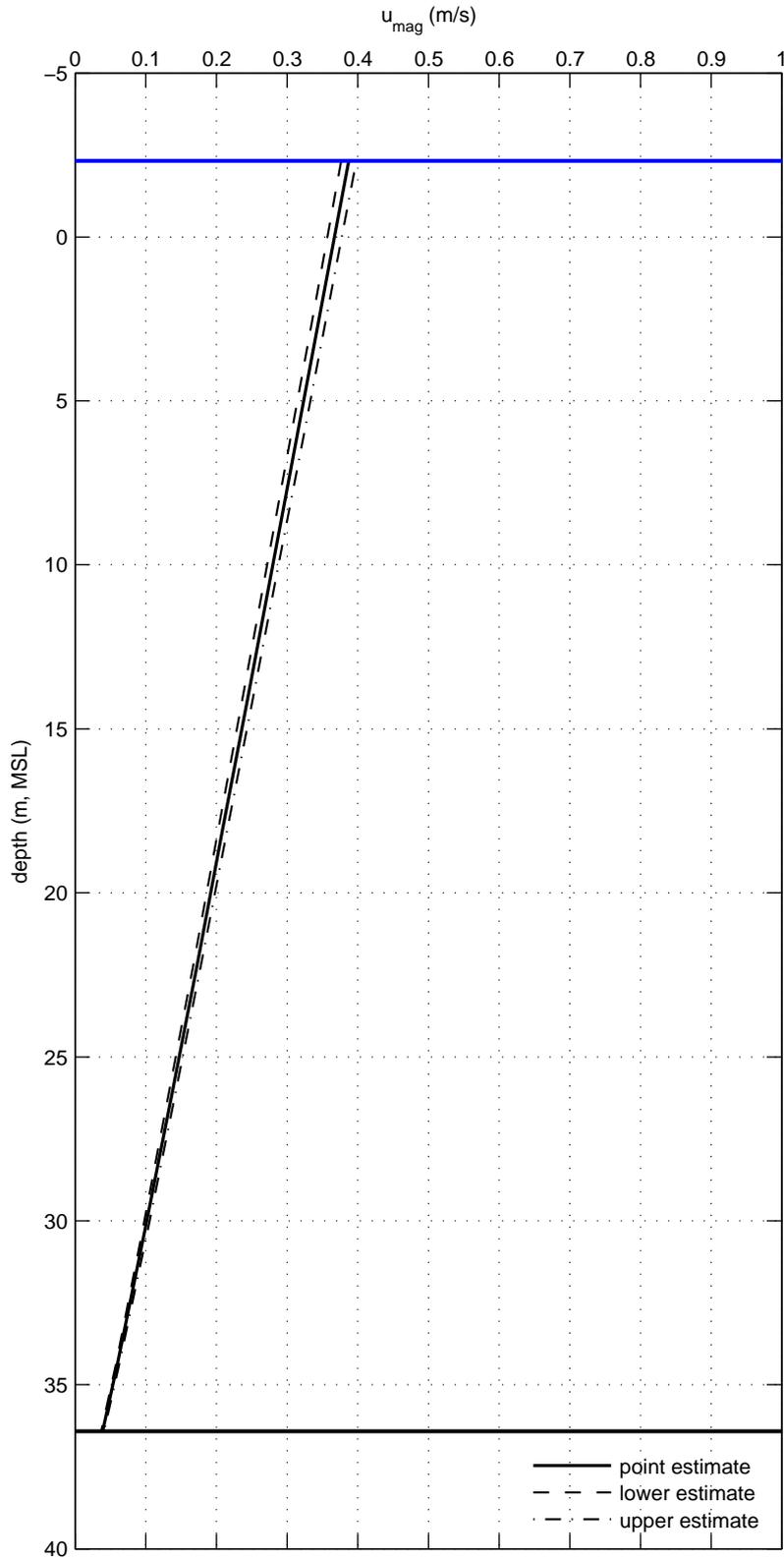
U10 = 21.6 m/s

Deltares

App. C.3.008

RP = 1 yr (U10 = 21.8 m/s)

Dir sector WSW



Current profile for directional sector WSW

RP = 1 yr

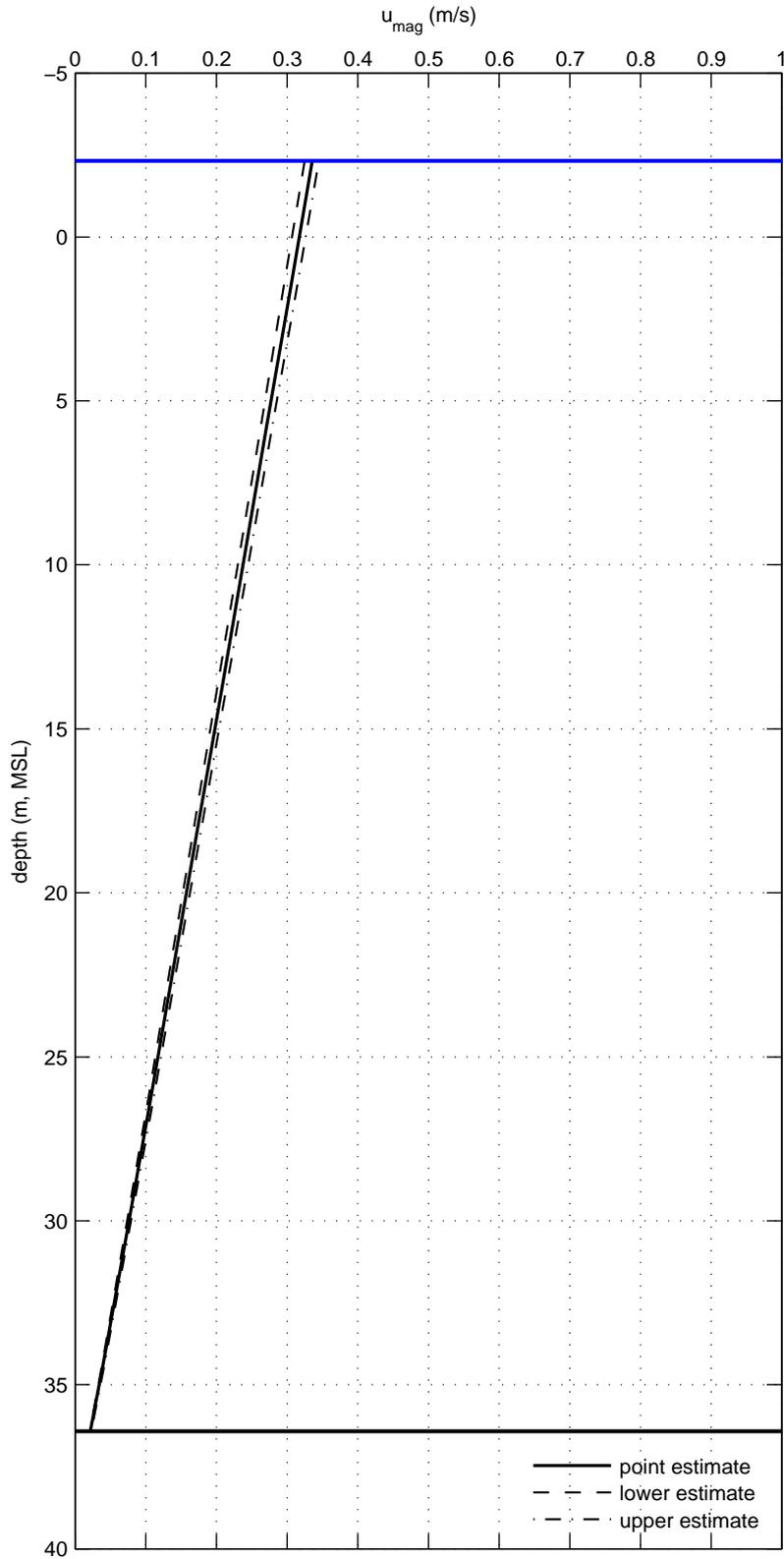
U10 = 21.8 m/s

**Deltares**

App. C.3.009

RP = 1 yr (U10 = 20.1 m/s)

Dir sector W



Current profile for directional sector W

RP = 1 yr

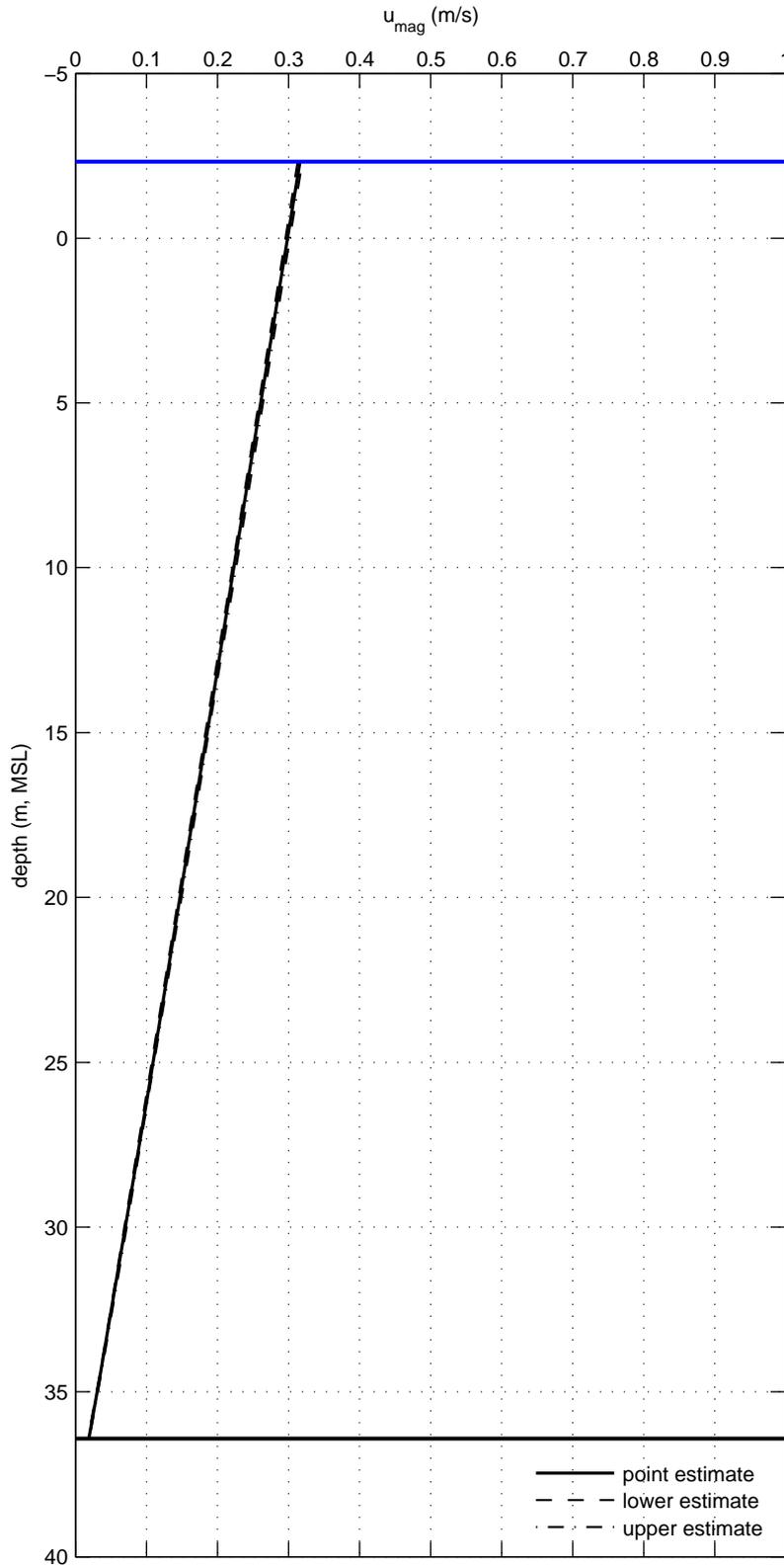
U10 = 20.1 m/s

Deltares

App. C.3.010

RP = 1 yr (U10 = 19.1 m/s)

Dir sector WNW



Current profile for directional sector WNW

RP = 1 yr

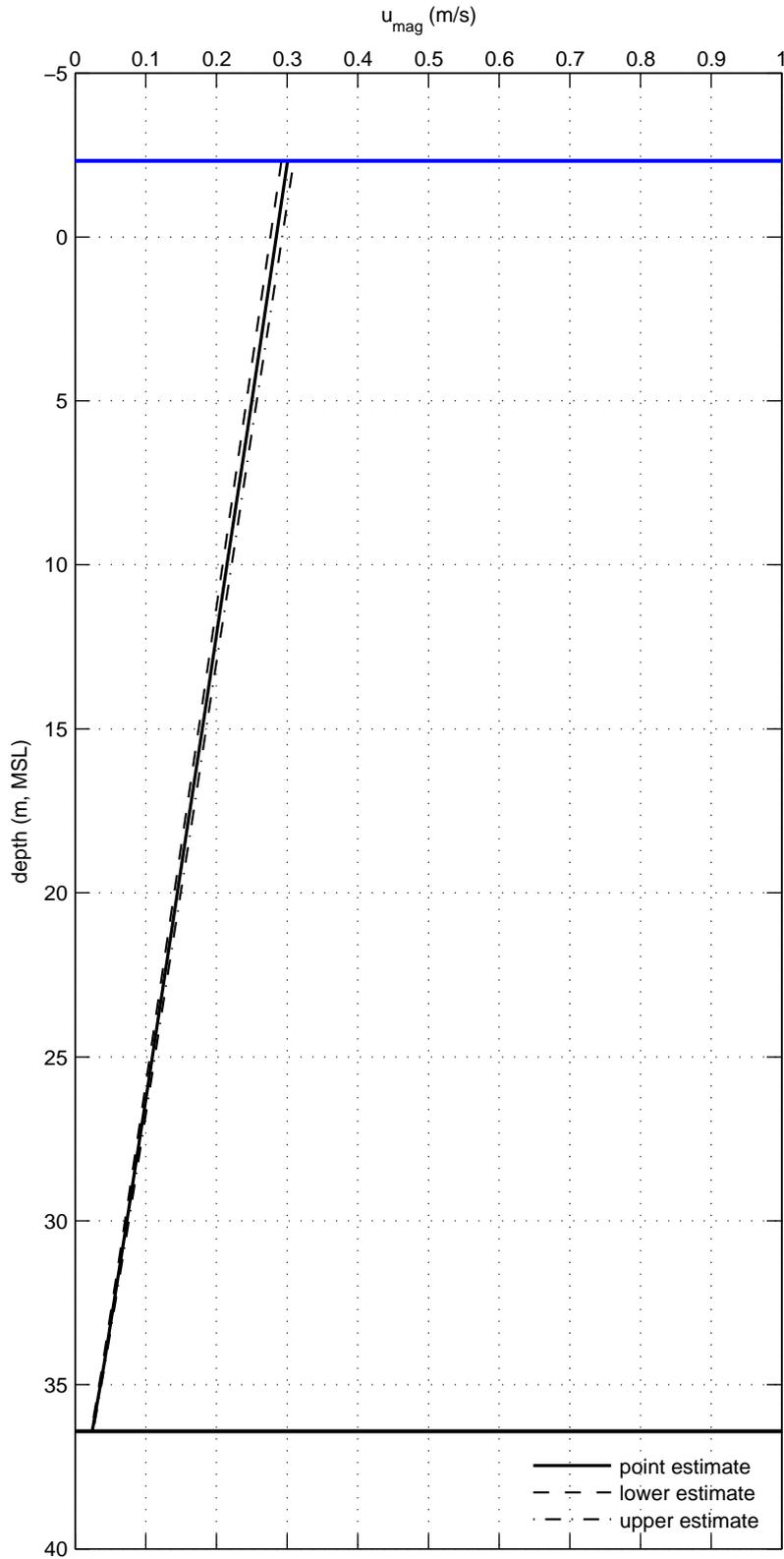
U10 = 19.1 m/s

**Deltares**

App. C.3.011

RP = 1 yr (U10 = 17.6 m/s)

Dir sector NNW



Current profile for directional sector NNW

RP = 1 yr

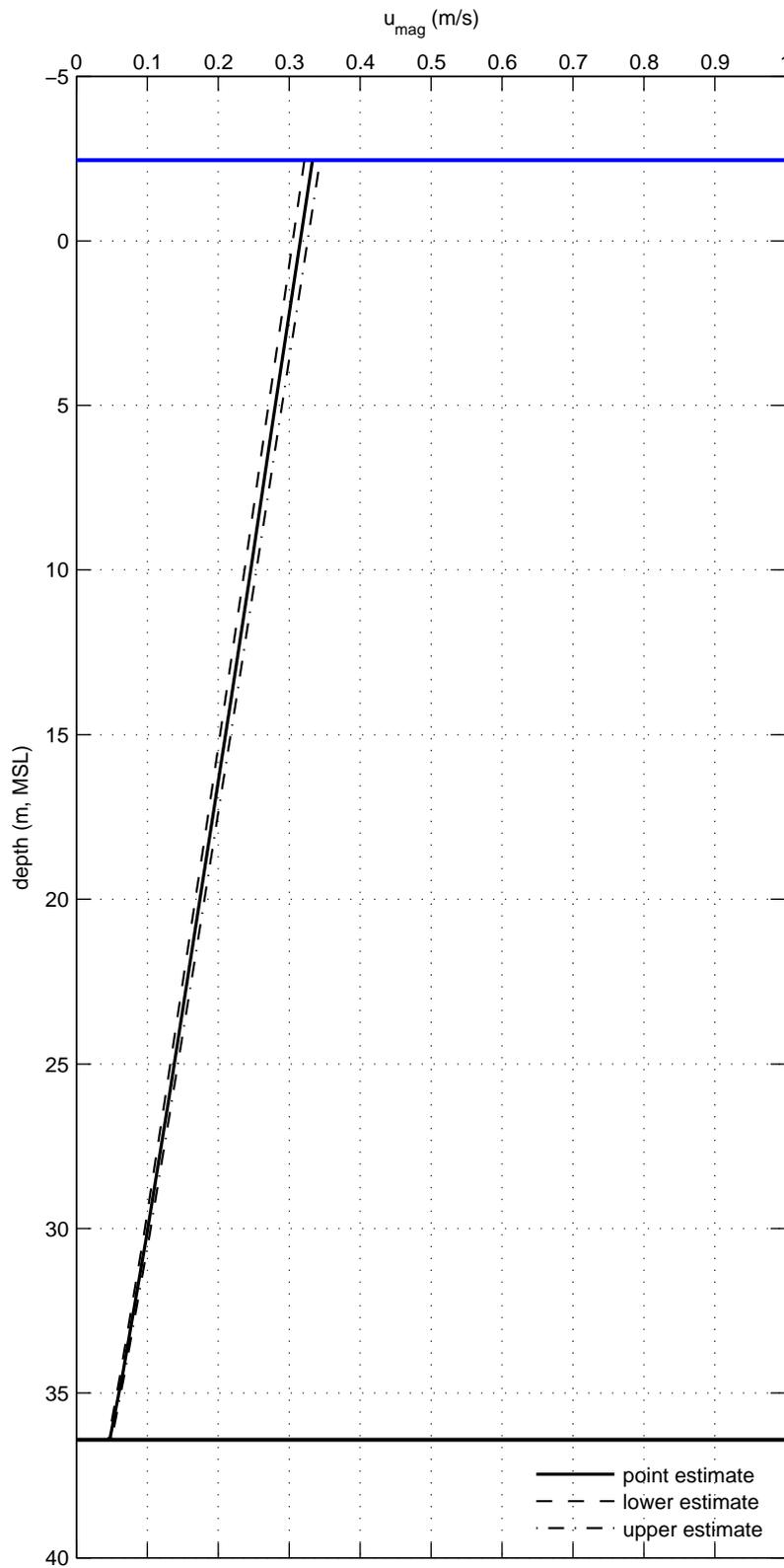
U10 = 17.6 m/s

Deltares

App. C.3.012

RP = 2 yr (U10 = 17.4 m/s)

Dir sector N



Current profile for directional sector N

RP = 2 yr

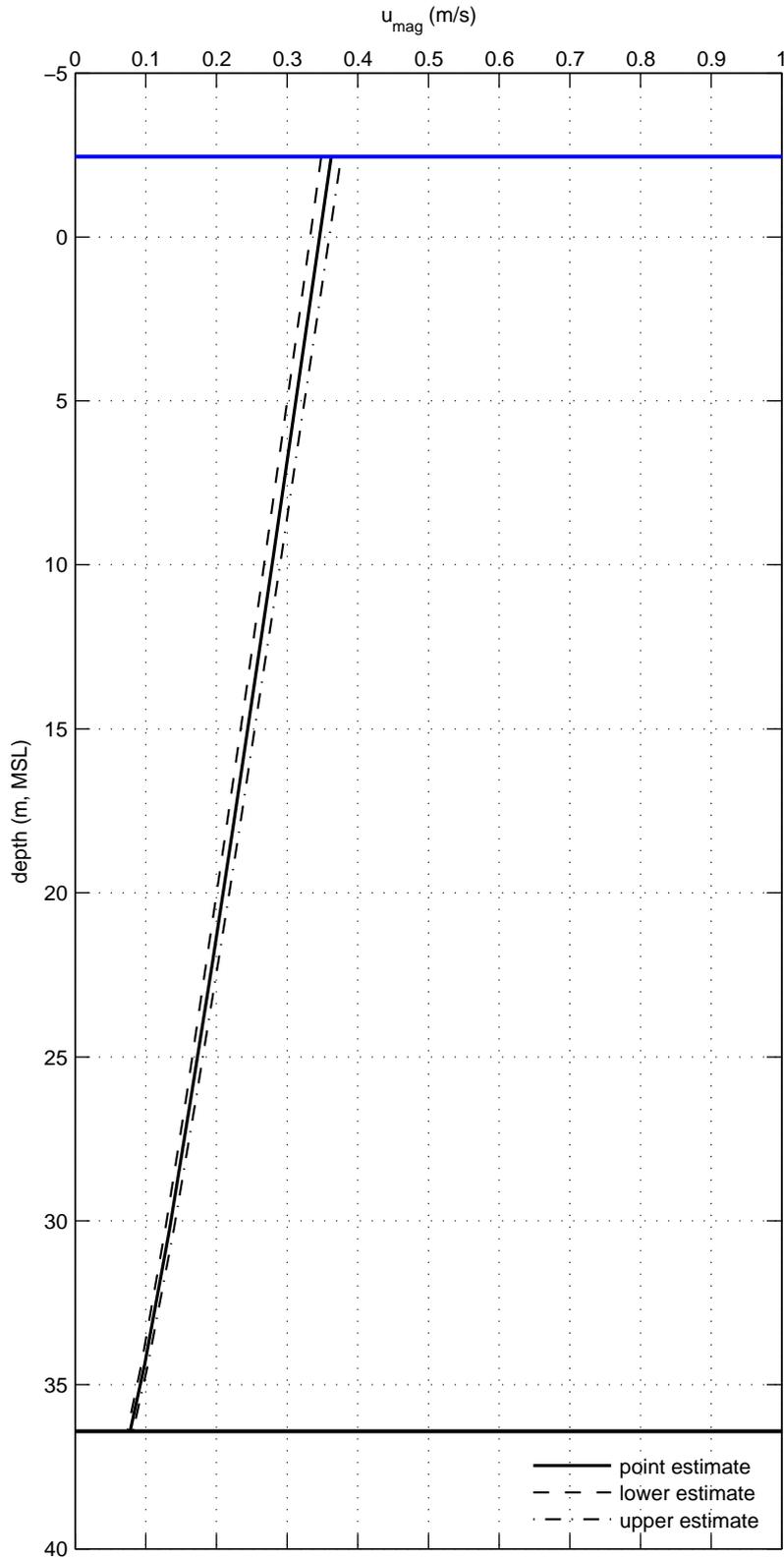
U10 = 17.4 m/s

Deltares

App. C.3.013

RP = 2 yr (U10 = 16.2 m/s)

Dir sector NNE



Current profile for directional sector NNE

RP = 2 yr

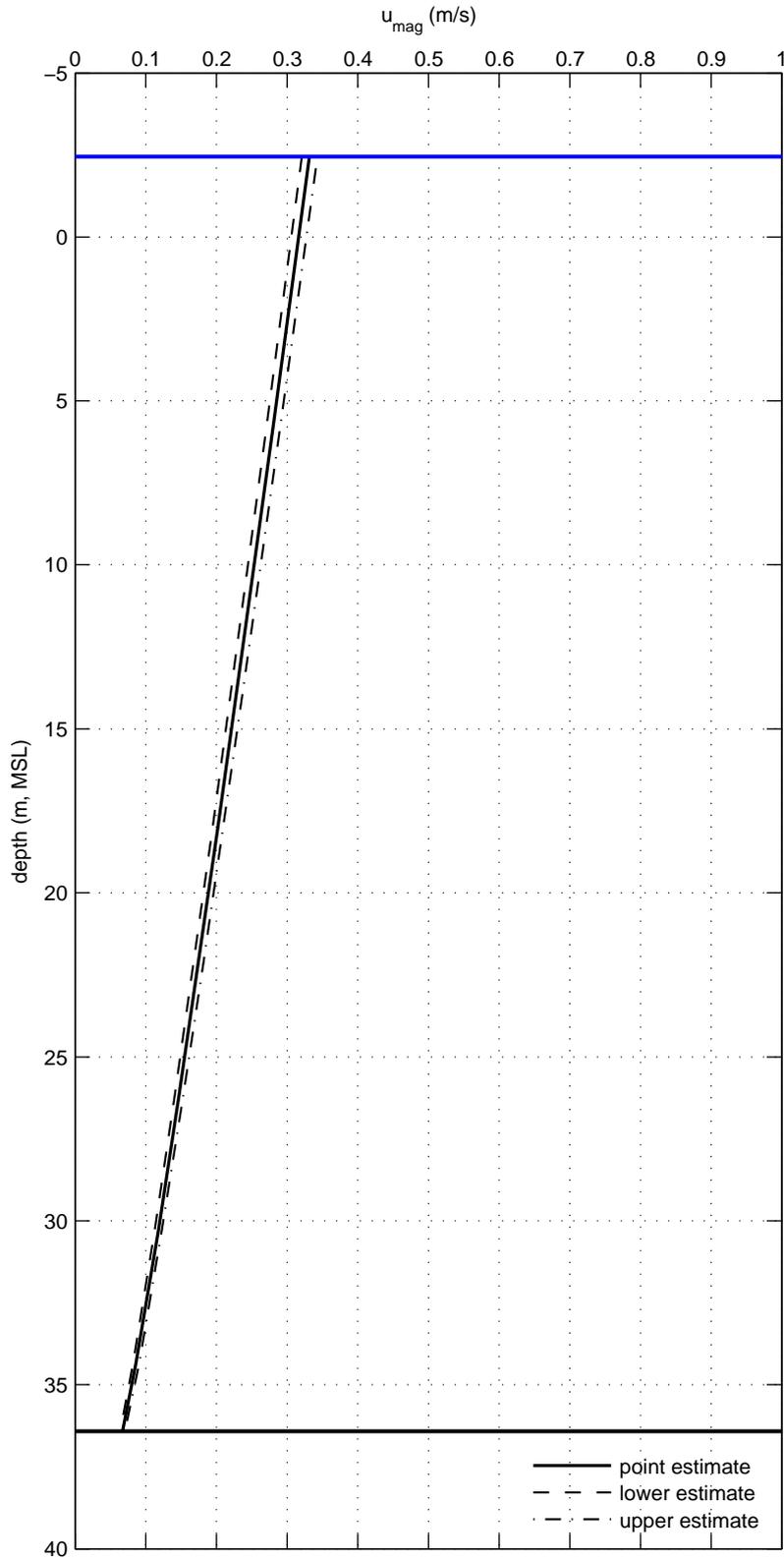
U10 = 16.2 m/s

Deltares

App. C.3.014

RP = 2 yr (U10 = 15.2 m/s)

Dir sector ENE



Current profile for directional sector ENE

RP = 2 yr

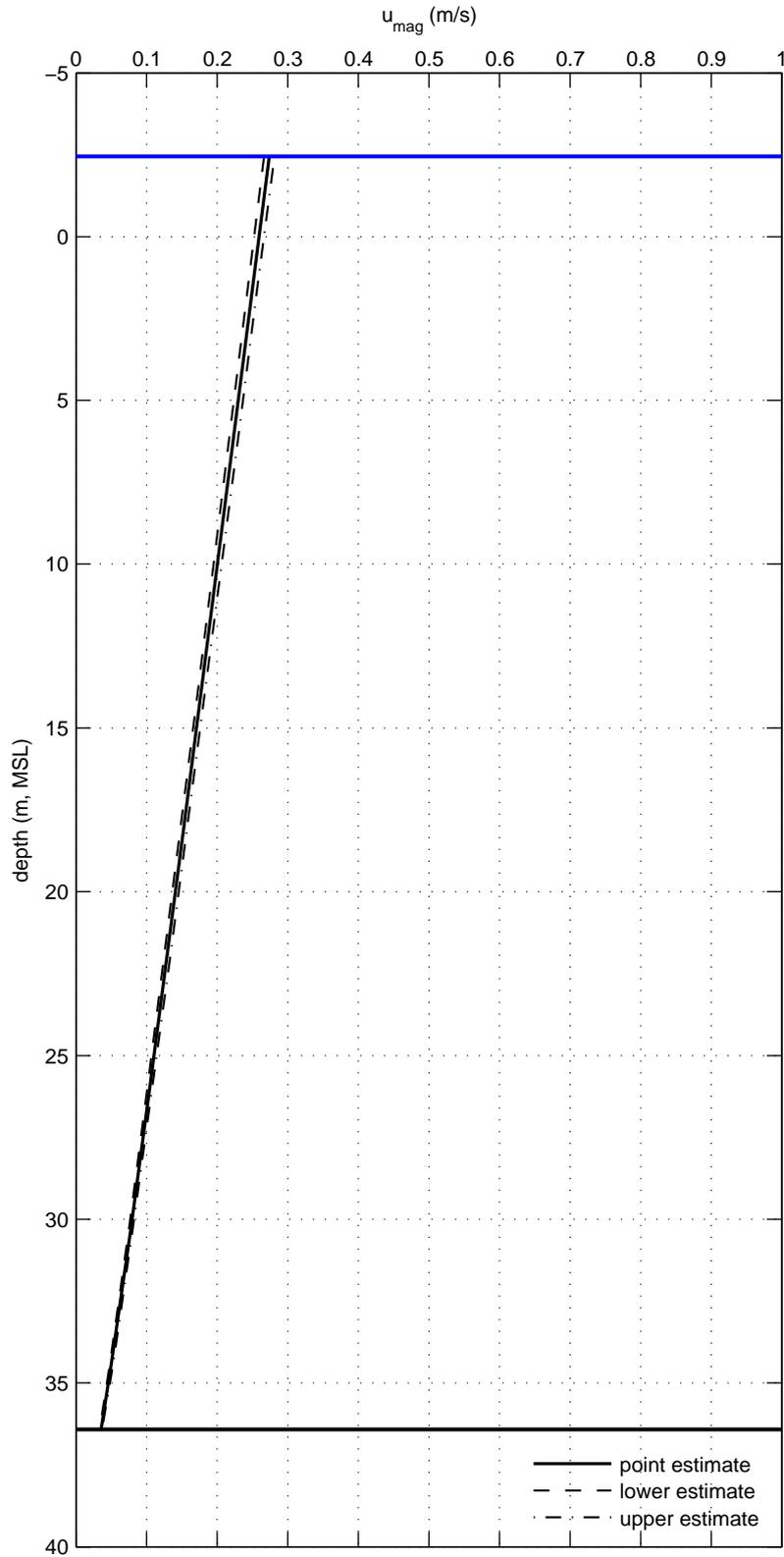
U10 = 15.2 m/s

Deltares

App. C.3.015

RP = 2 yr (U10 = 14.6 m/s)

Dir sector E



Current profile for directional sector E

RP = 2 yr

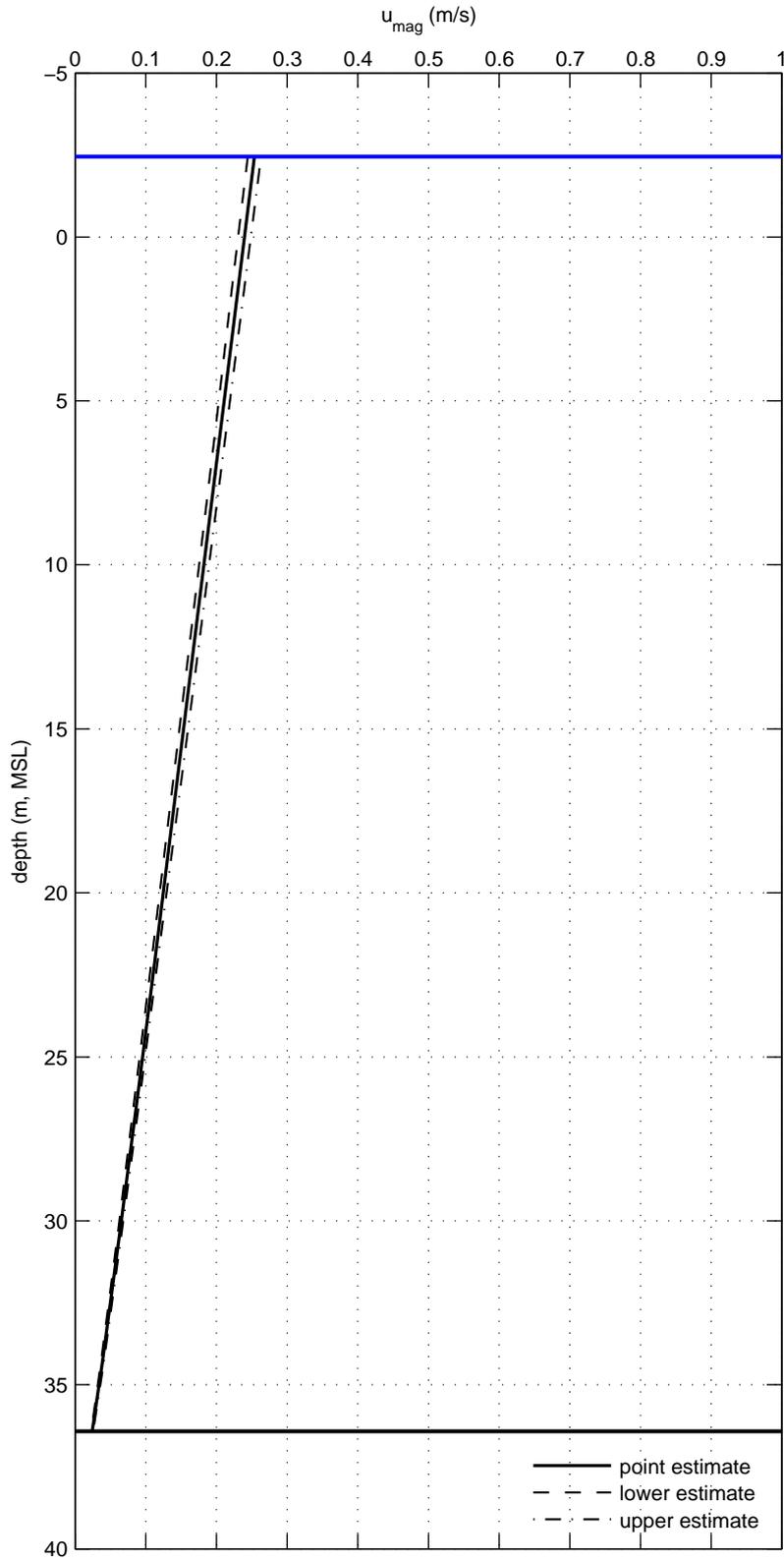
U10 = 14.6 m/s

Deltares

App. C.3.016

RP = 2 yr (U10 = 14.4 m/s)

Dir sector ESE



Current profile for directional sector ESE

RP = 2 yr

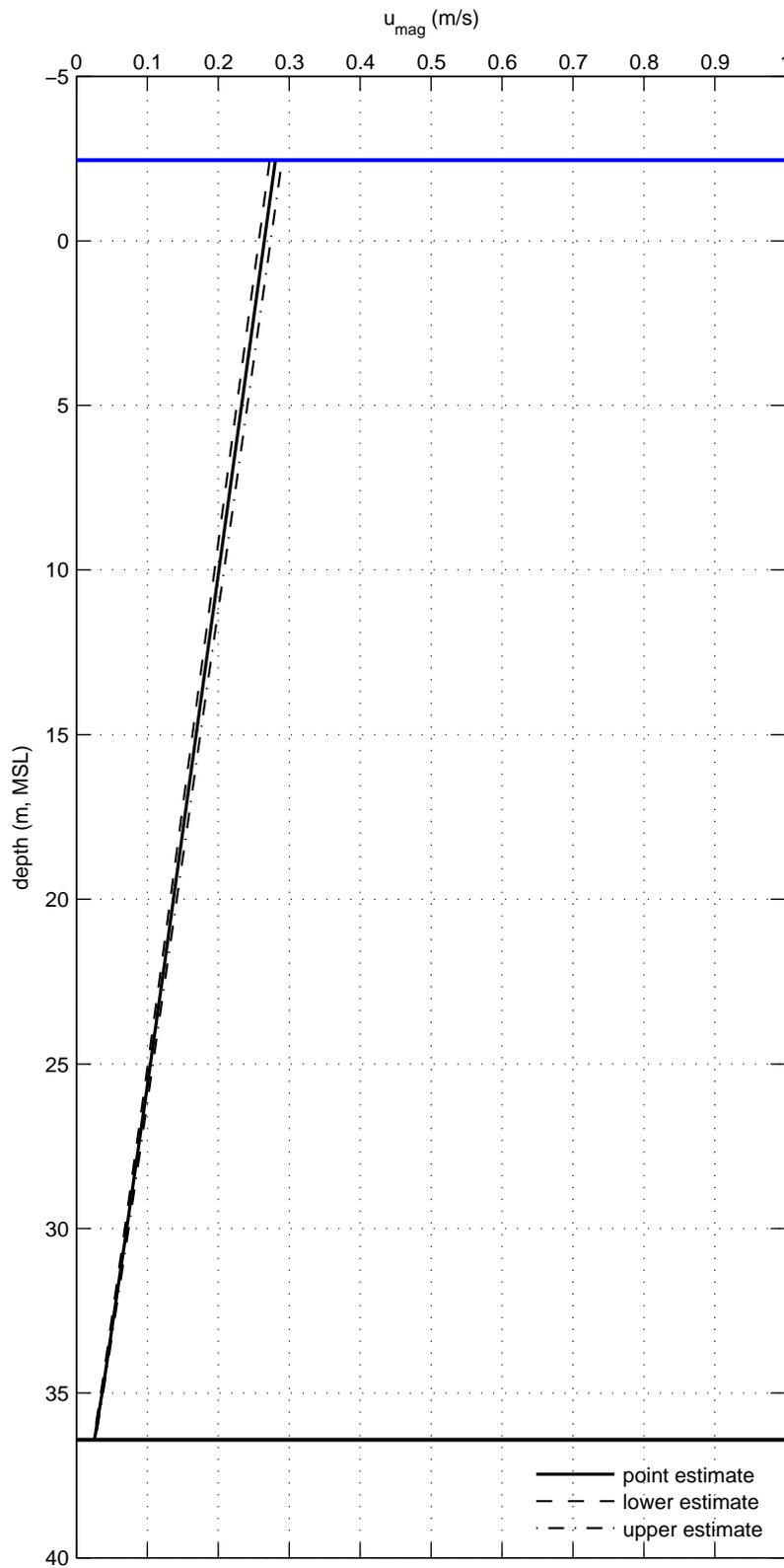
U10 = 14.4 m/s

Deltares

App. C.3.017

RP = 2 yr (U10 = 16.1 m/s)

Dir sector SSE



Current profile for directional sector SSE

RP = 2 yr

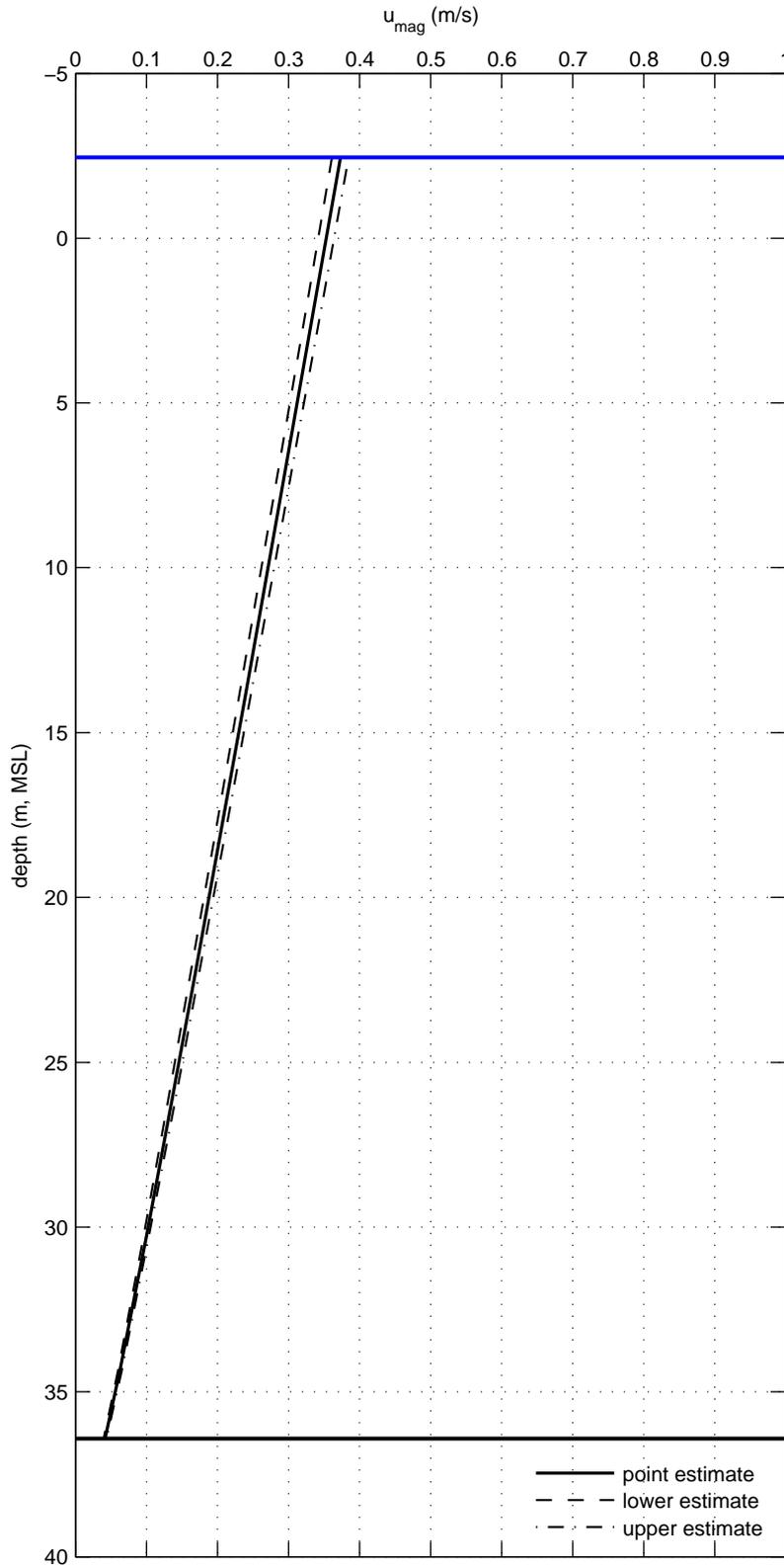
U10 = 16.1 m/s

**Deltares**

App. C.3.018

RP = 2 yr (U10 = 20.6 m/s)

Dir sector S



Current profile for directional sector S

RP = 2 yr

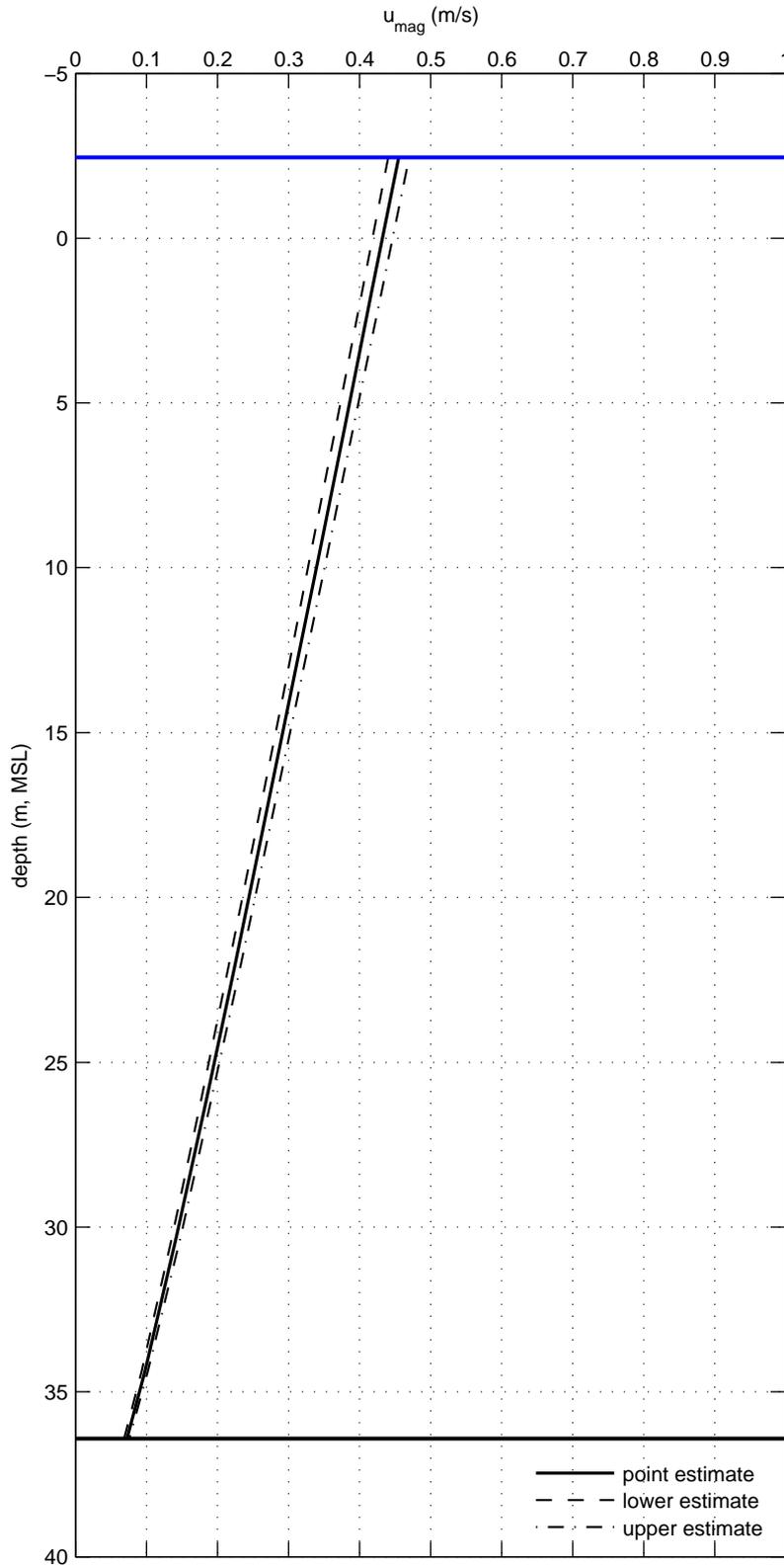
U10 = 20.6 m/s

**Deltares**

App. C.3.019

RP = 2 yr (U10 = 22.9 m/s)

Dir sector SSW



Current profile for directional sector SSW

RP = 2 yr

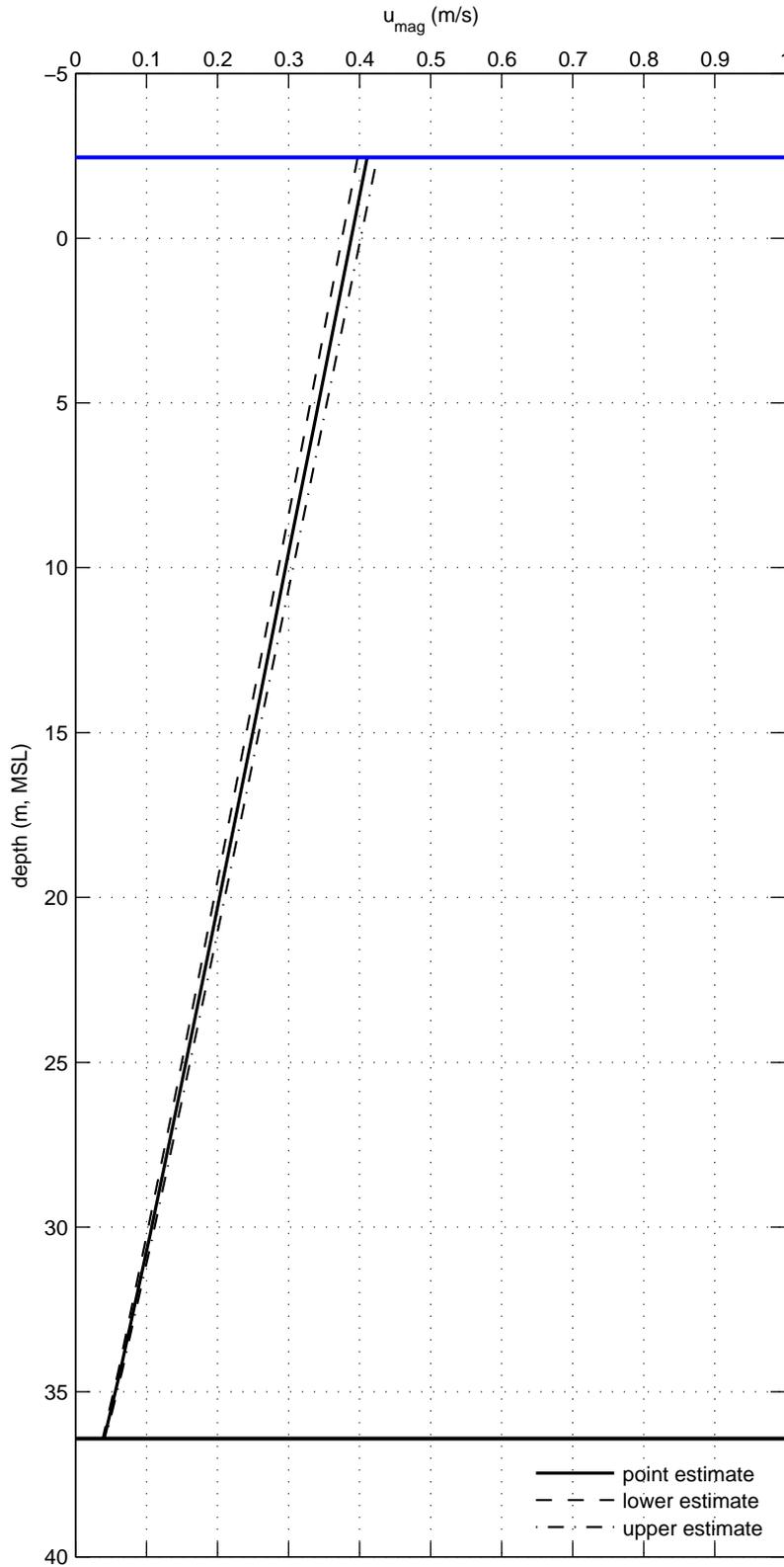
U10 = 22.9 m/s

Deltares

App. C.3.020

RP = 2 yr (U10 = 23.2 m/s)

Dir sector WSW



Current profile for directional sector WSW

RP = 2 yr

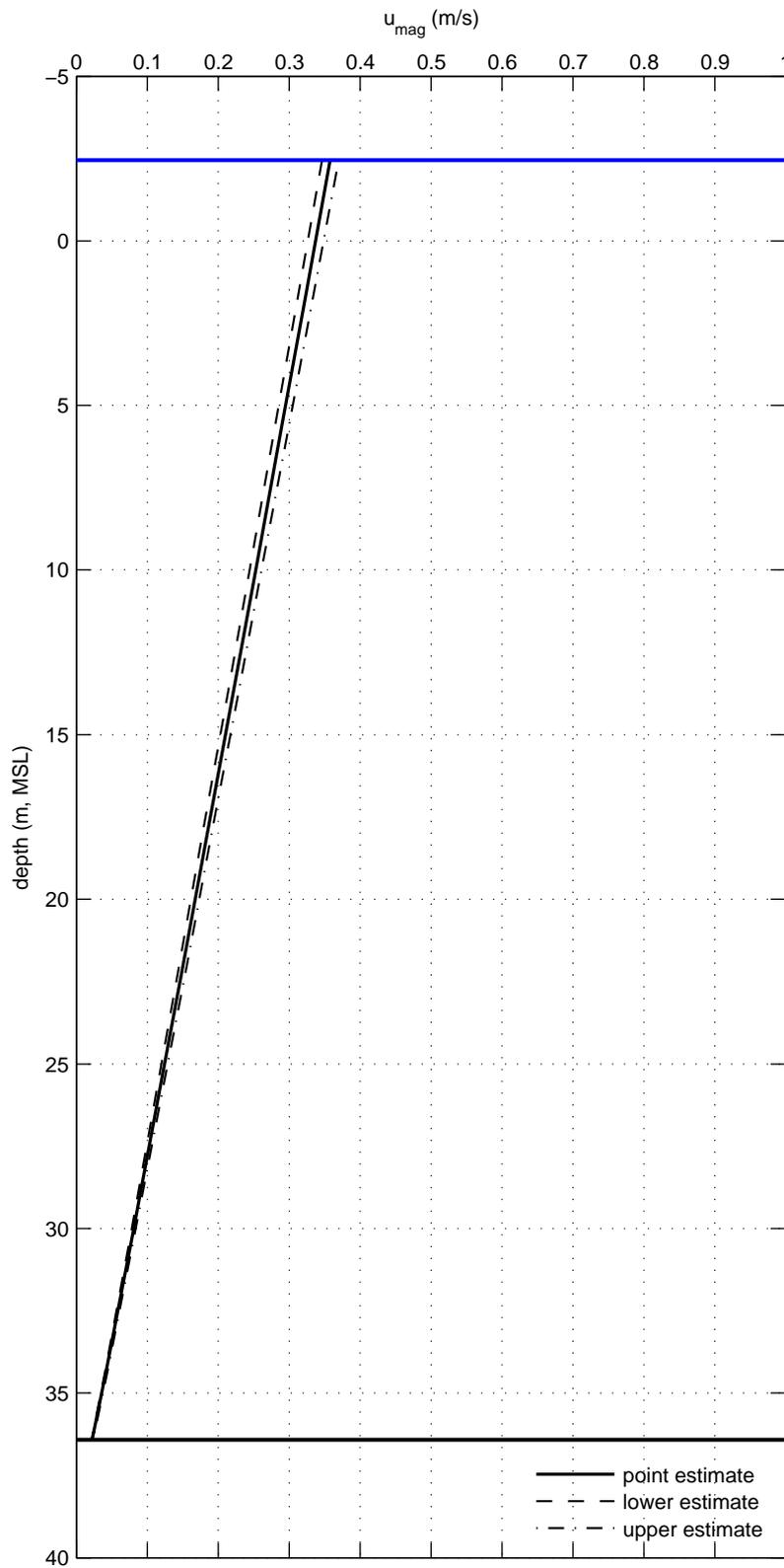
U10 = 23.2 m/s

Deltares

App. C.3.021

RP = 2 yr (U10 = 21.6 m/s)

Dir sector W



Current profile for directional sector W

RP = 2 yr

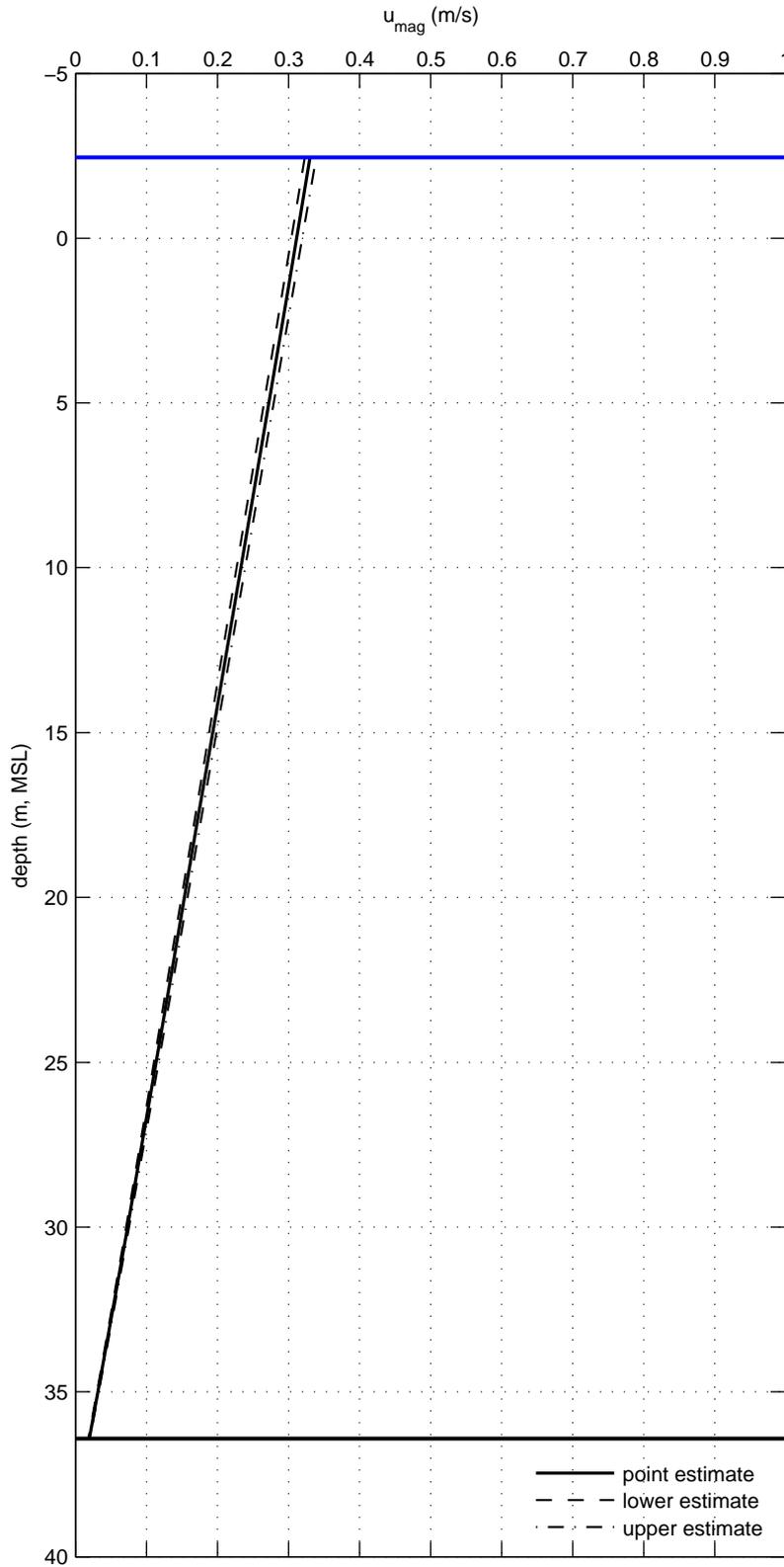
U10 = 21.6 m/s

**Deltares**

App. C.3.022

RP = 2 yr (U10 = 20.1 m/s)

Dir sector WNW



Current profile for directional sector WNW

RP = 2 yr

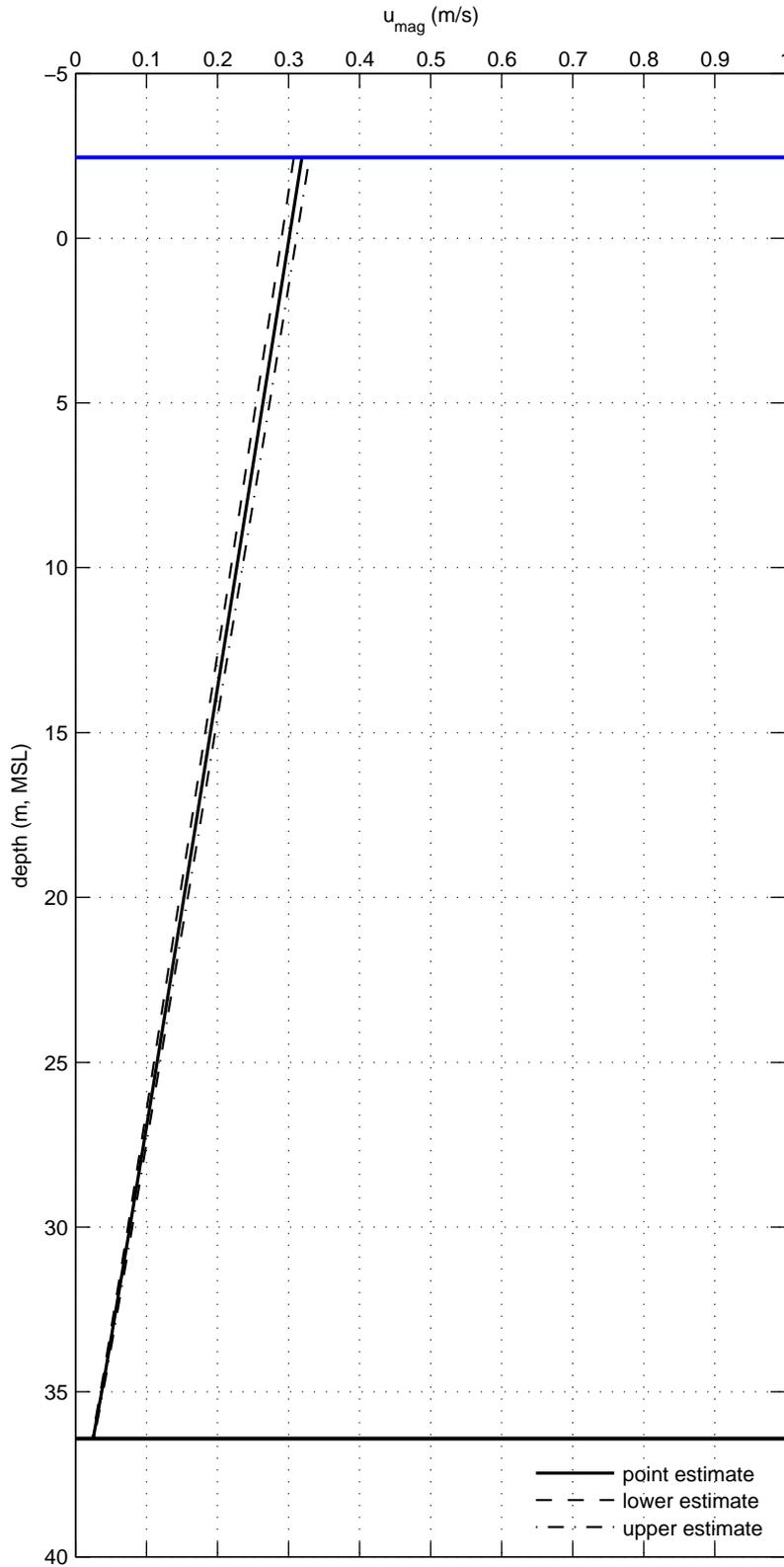
U10 = 20.1 m/s

**Deltares**

App. C.3.023

RP = 2 yr (U10 = 18.7 m/s)

Dir sector NNW



Current profile for directional sector NNW

RP = 2 yr

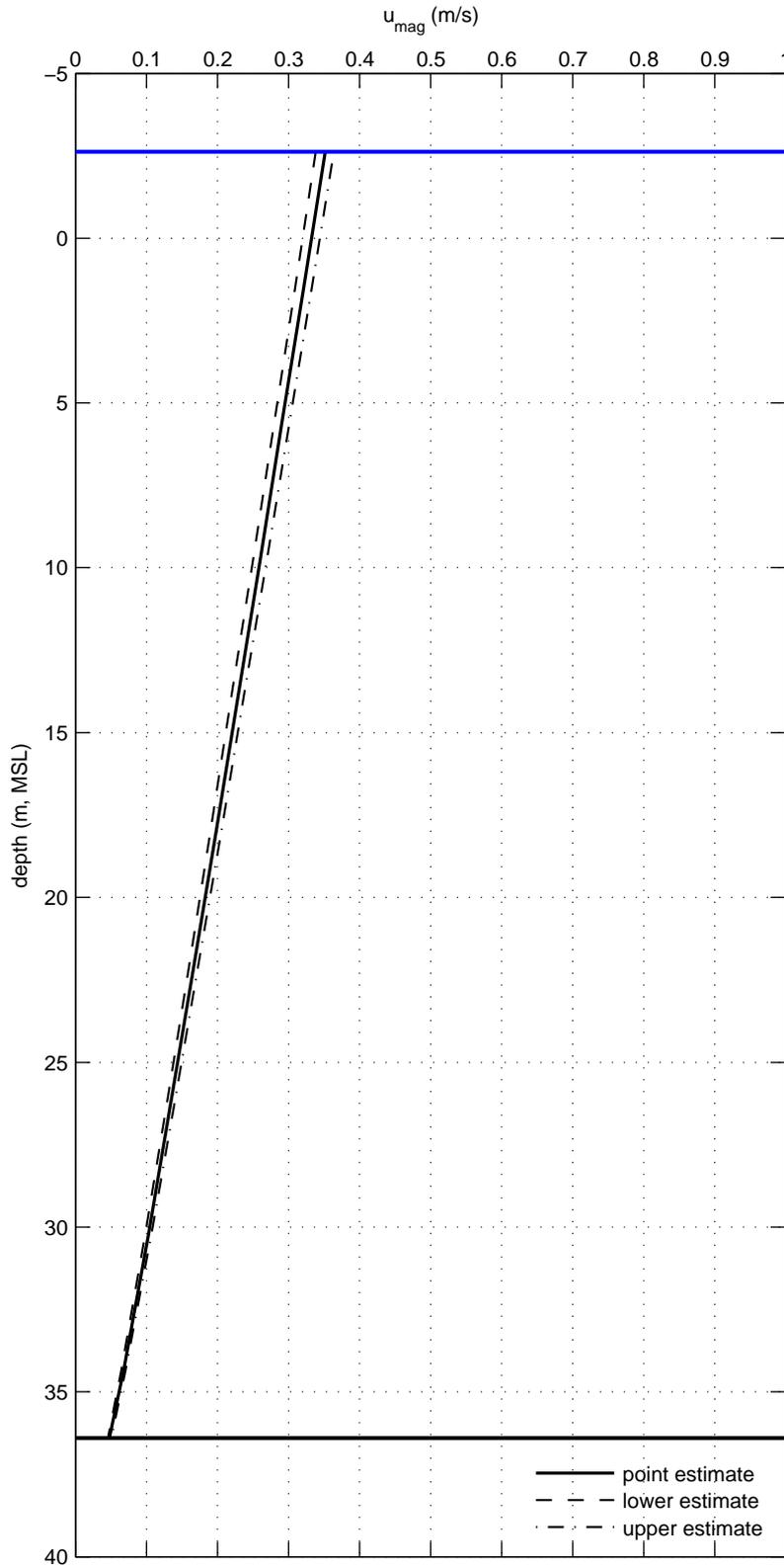
U10 = 18.7 m/s

**Deltares**

App. C.3.024

RP = 5 yr (U10 = 18.5 m/s)

Dir sector N



Current profile for directional sector N

RP = 5 yr

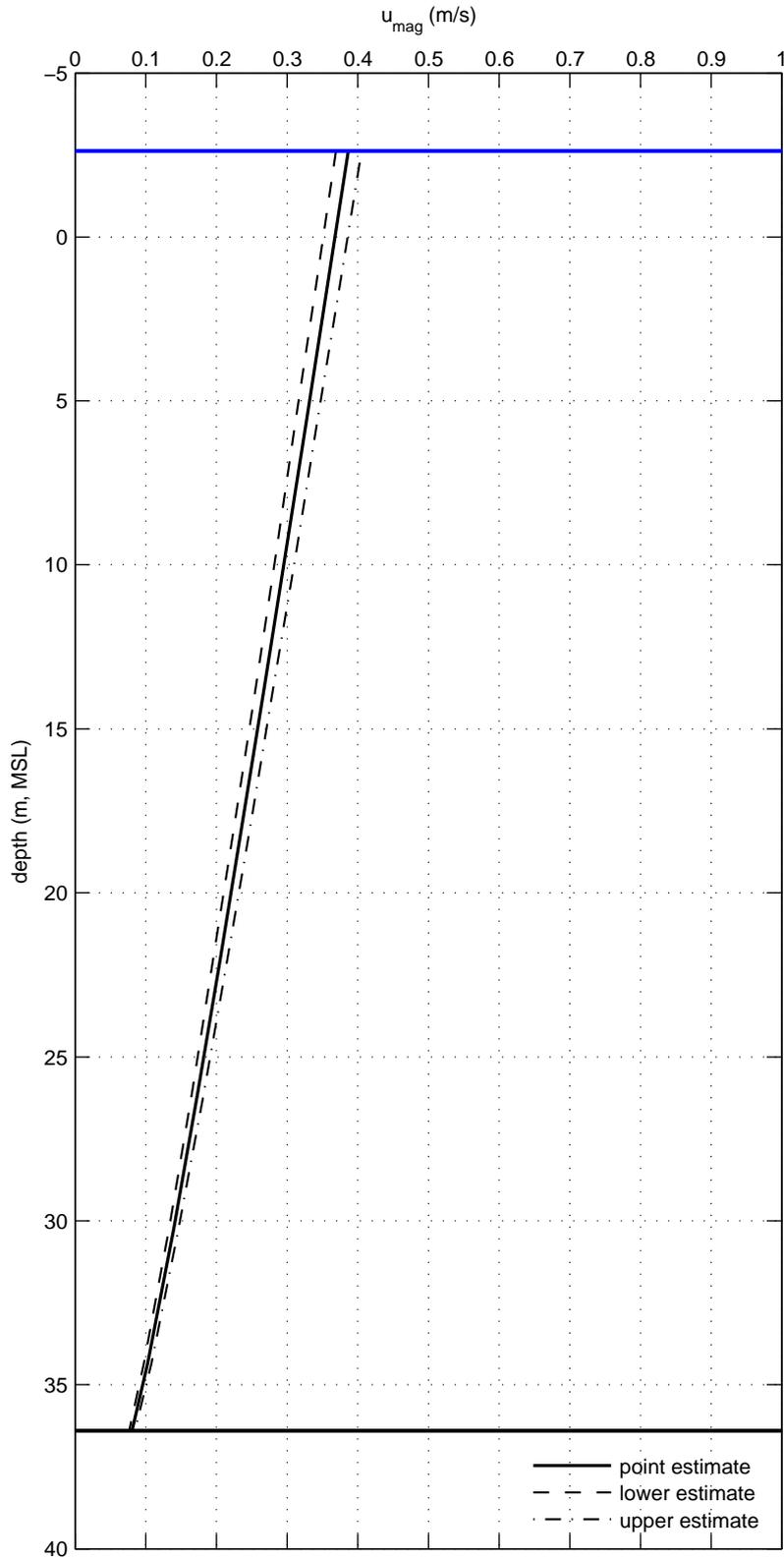
U10 = 18.5 m/s

Deltares

App. C.3.025

RP = 5 yr (U10 = 17.5 m/s)

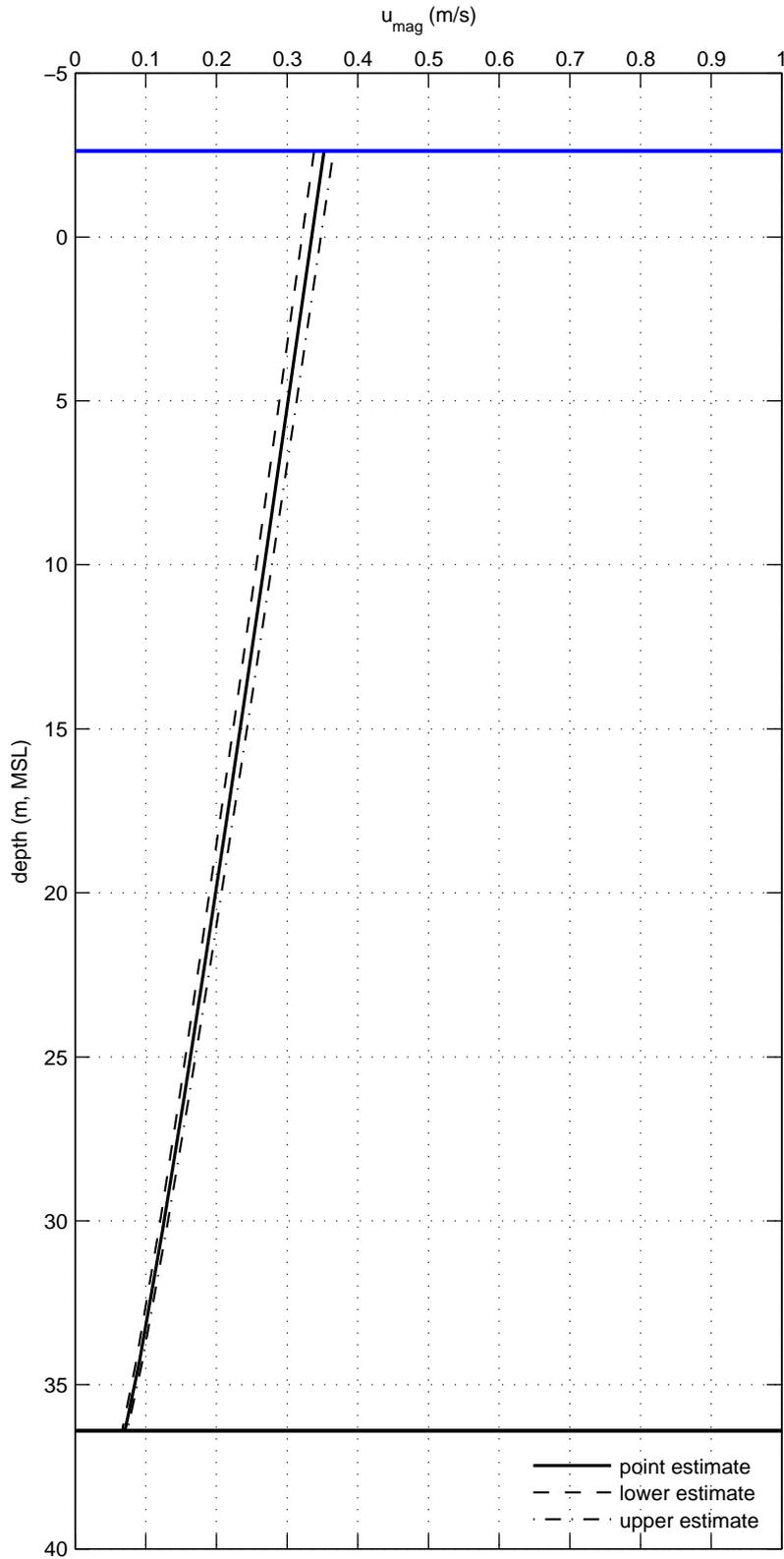
Dir sector NNE



Current profile for directional sector NNE	RP = 5 yr	U10 = 17.5 m/s
<b>Deltares</b>		App. C.3.026

RP = 5 yr (U10 = 16.3 m/s)

Dir sector ENE



Current profile for directional sector ENE

RP = 5 yr

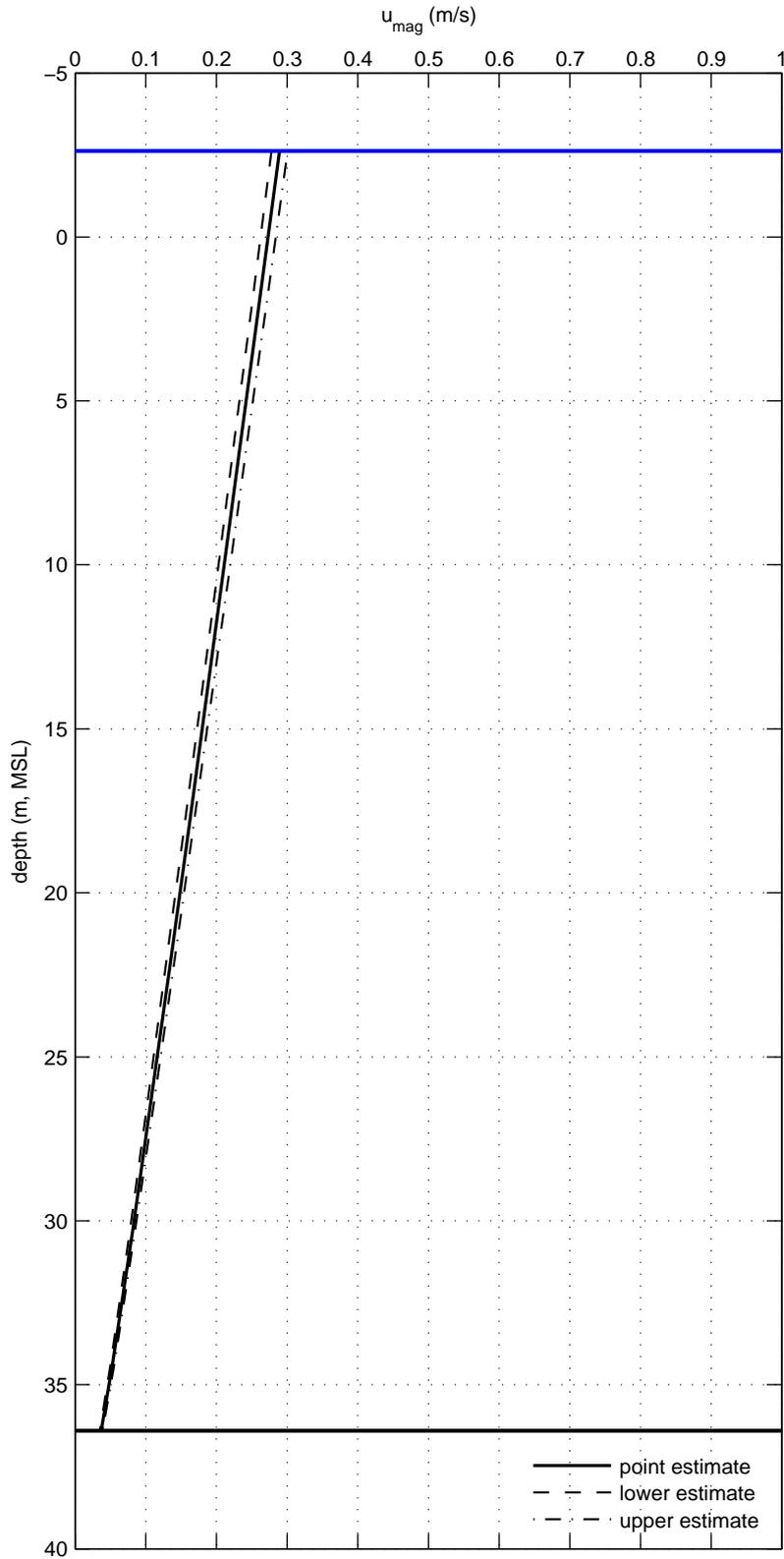
U10 = 16.3 m/s

Deltares

App. C.3.027

RP = 5 yr (U10 = 15.5 m/s)

Dir sector E



Current profile for directional sector E

RP = 5 yr

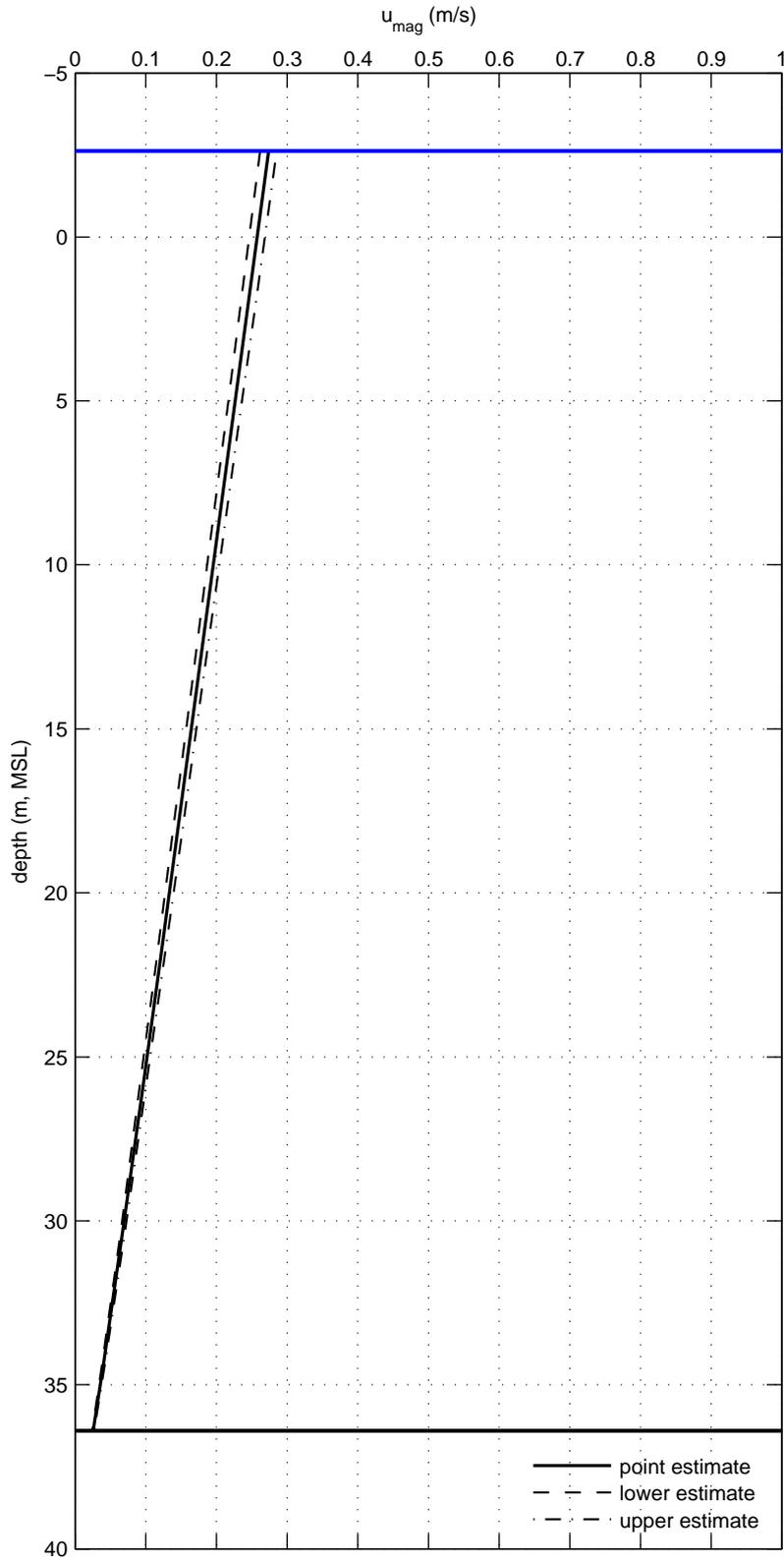
U10 = 15.5 m/s

Deltares

App. C.3.028

RP = 5 yr (U10 = 15.6 m/s)

Dir sector ESE



Current profile for directional sector ESE

RP = 5 yr

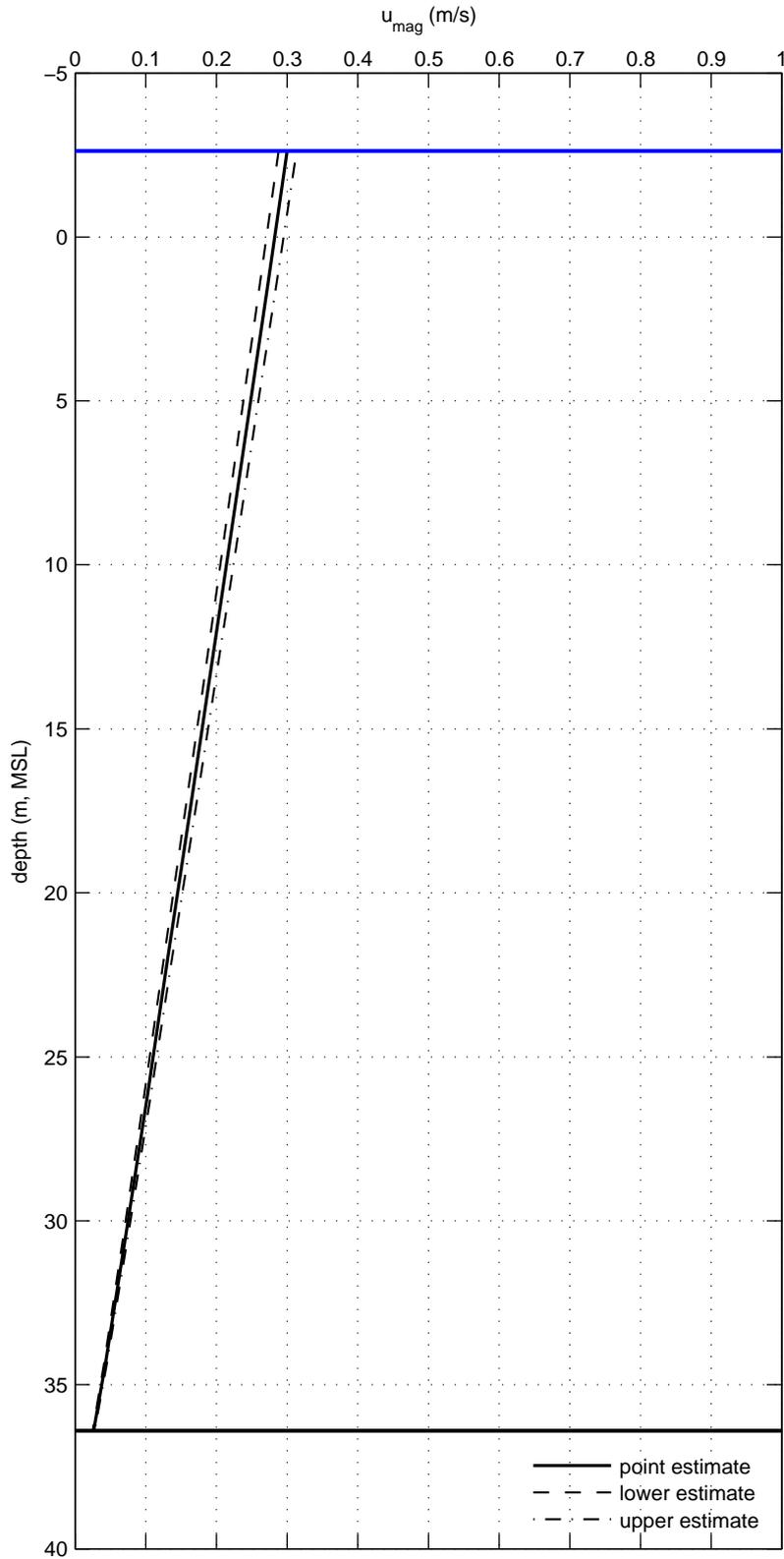
U10 = 15.6 m/s

Deltares

App. C.3.029

RP = 5 yr (U10 = 17.3 m/s)

Dir sector SSE



Current profile for directional sector SSE

RP = 5 yr

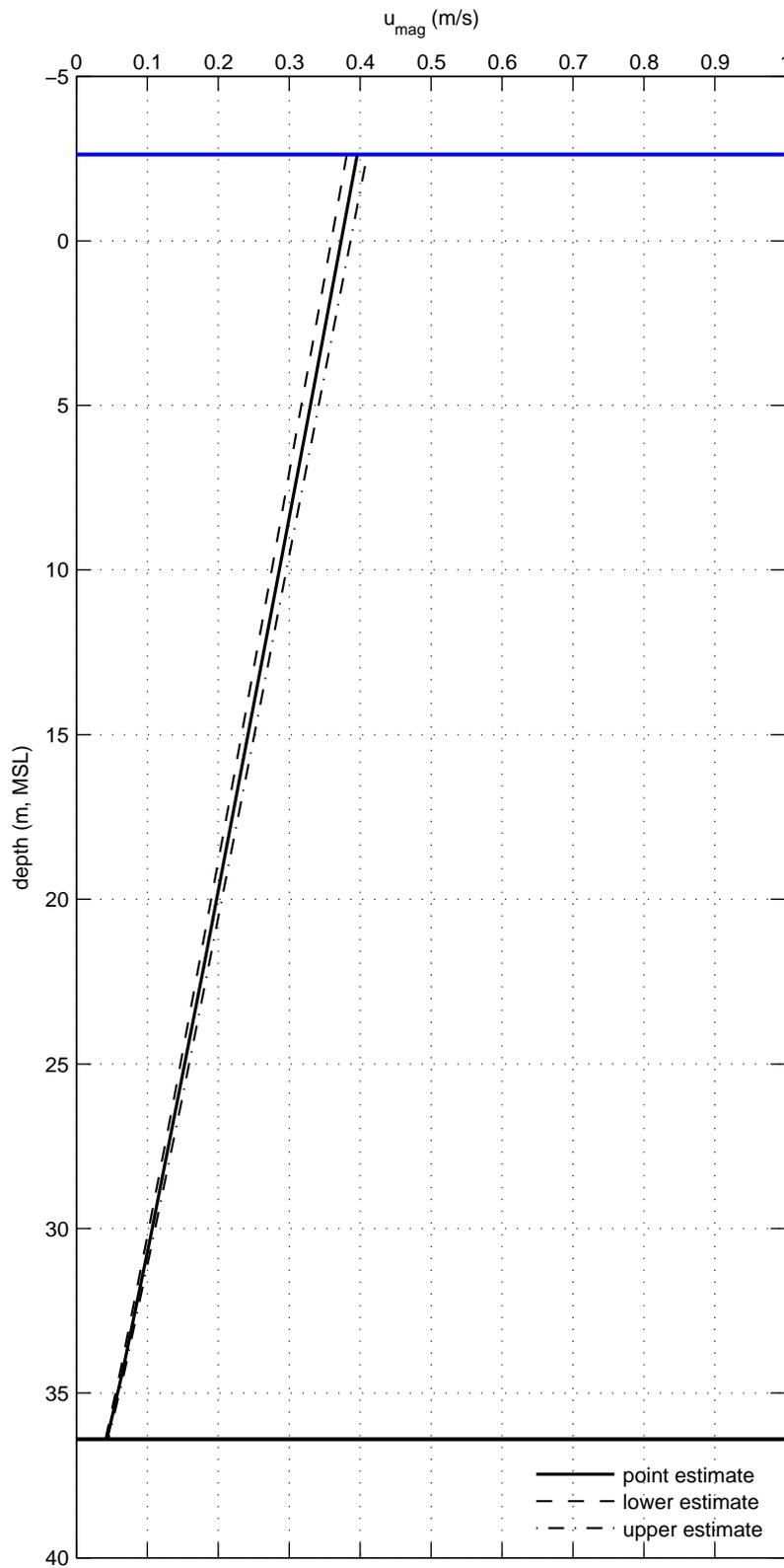
U10 = 17.3 m/s

Deltares

App. C.3.030

RP = 5 yr (U10 = 22.0 m/s)

Dir sector S



Current profile for directional sector S

RP = 5 yr

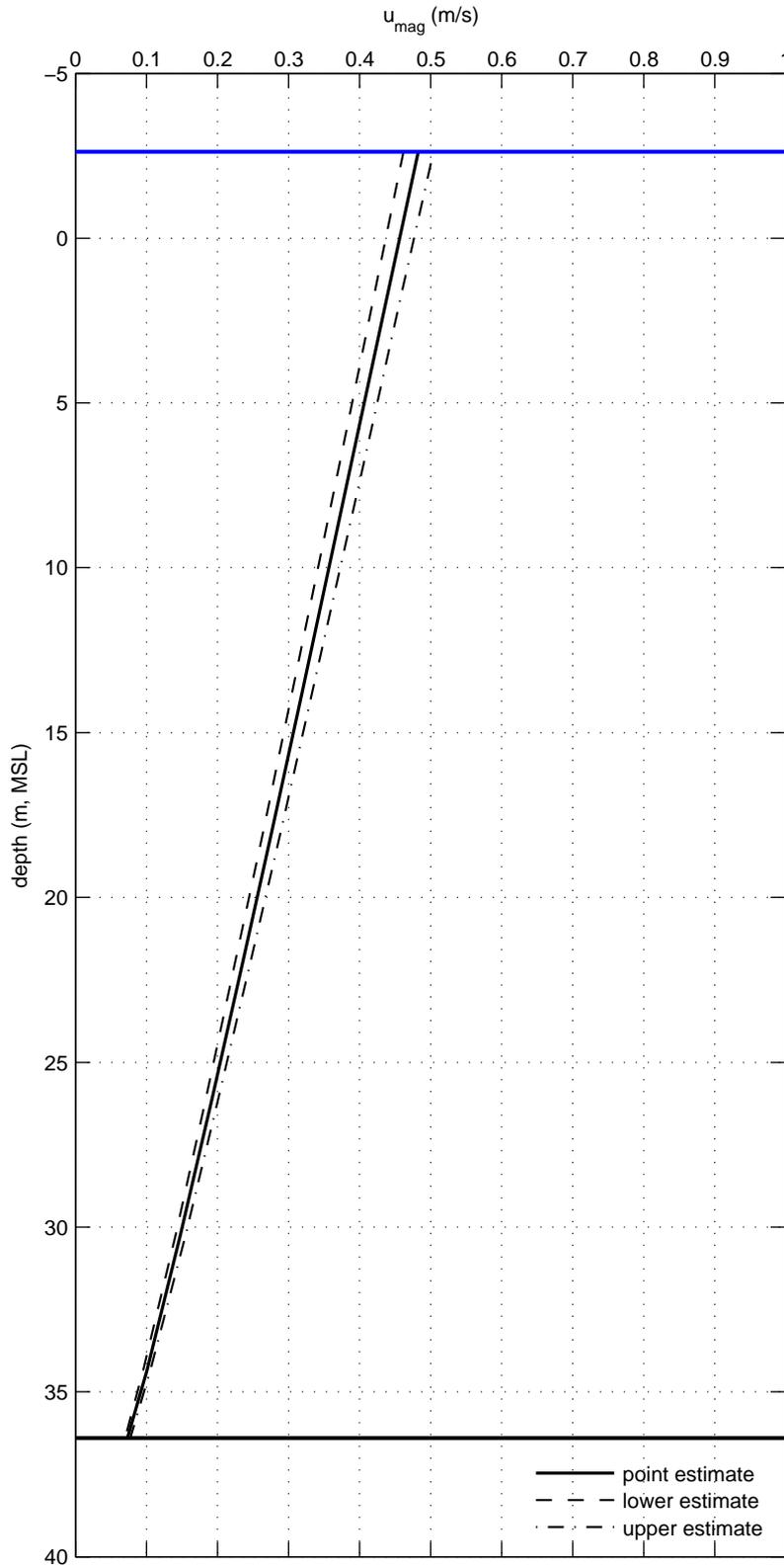
U10 = 22.0 m/s

Deltares

App. C.3.031

RP = 5 yr (U10 = 24.7 m/s)

Dir sector SSW



Current profile for directional sector SSW

RP = 5 yr

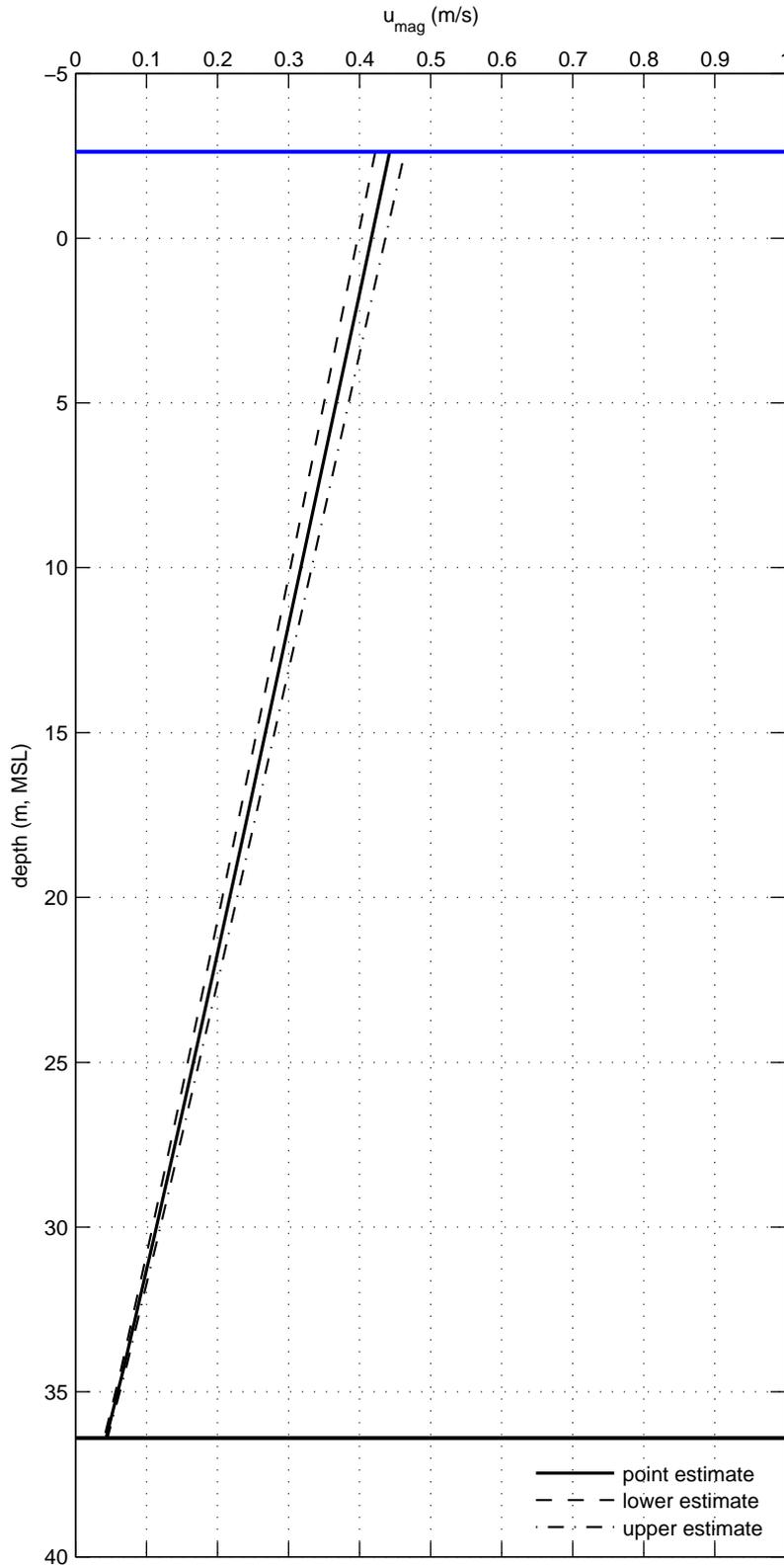
U10 = 24.7 m/s

Deltares

App. C.3.032

RP = 5 yr (U10 = 25.1 m/s)

Dir sector WSW



Current profile for directional sector WSW

RP = 5 yr

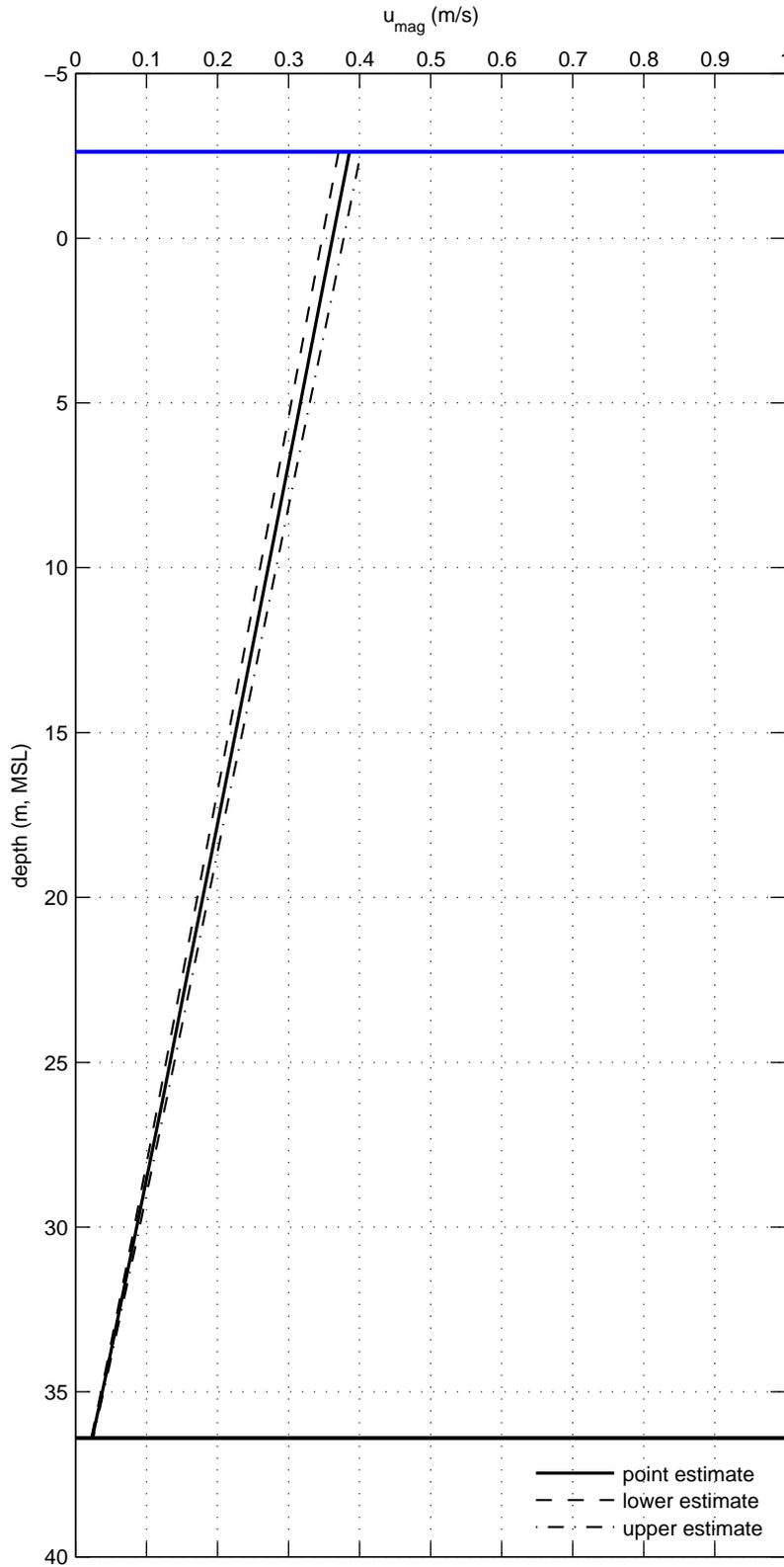
U10 = 25.1 m/s

**Deltares**

App. C.3.033

RP = 5 yr (U10 = 23.3 m/s)

Dir sector W



Current profile for directional sector W

RP = 5 yr

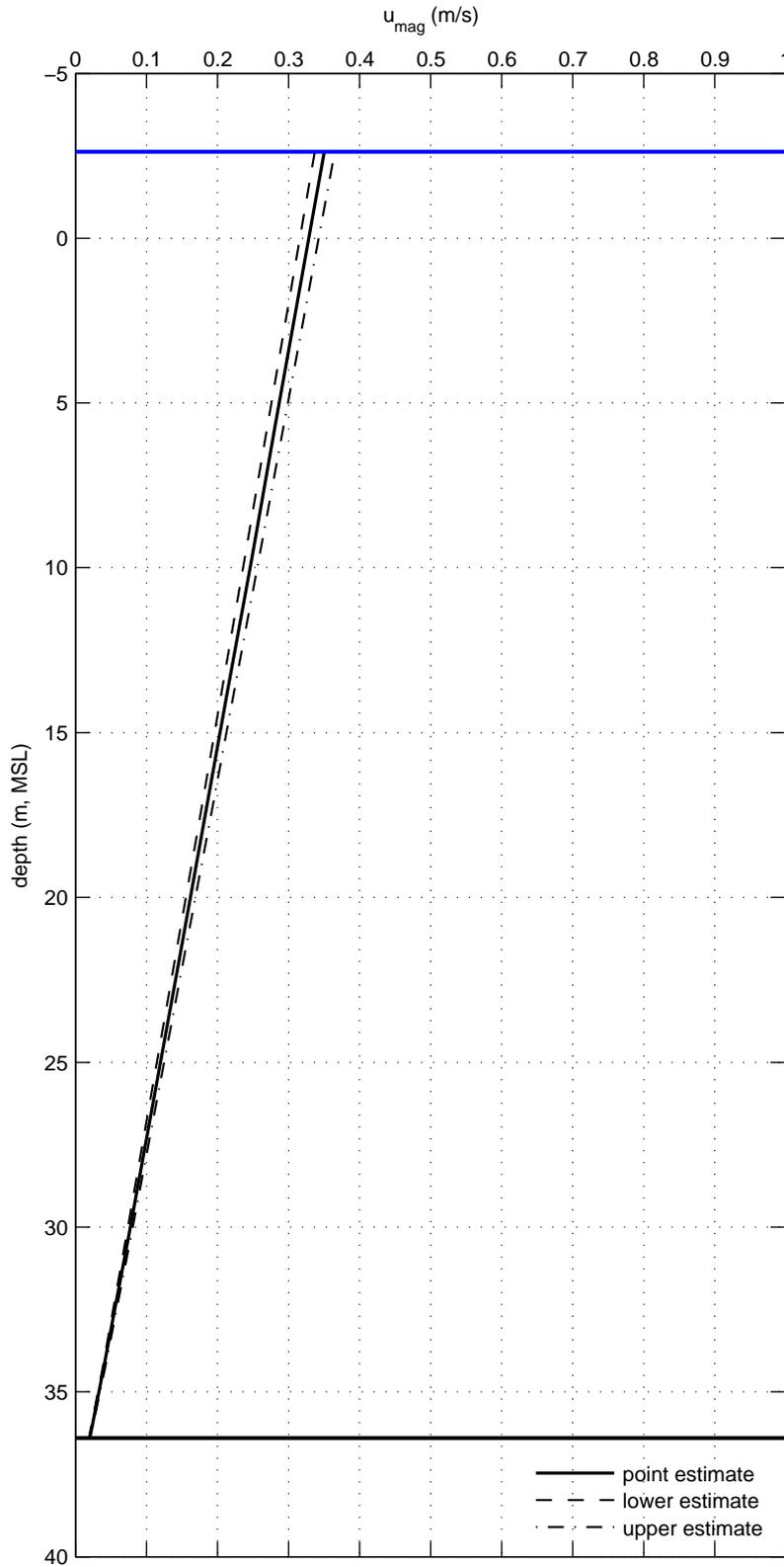
U10 = 23.3 m/s

Deltares

App. C.3.034

RP = 5 yr (U10 = 21.3 m/s)

Dir sector WNW



Current profile for directional sector WNW

RP = 5 yr

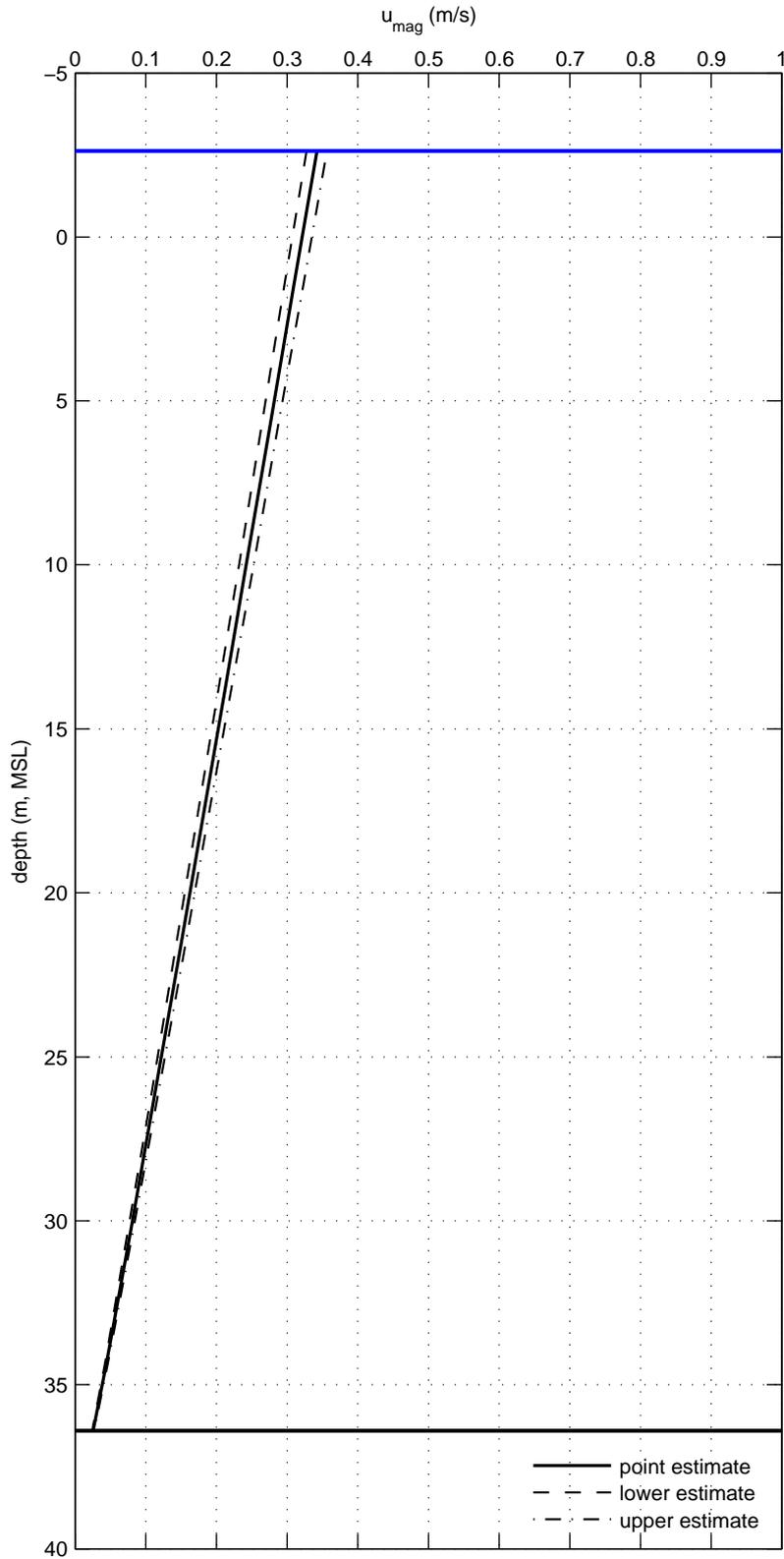
U10 = 21.3 m/s

Deltares

App. C.3.035

RP = 5 yr (U10 = 20.2 m/s)

Dir sector NNW



Current profile for directional sector NNW

RP = 5 yr

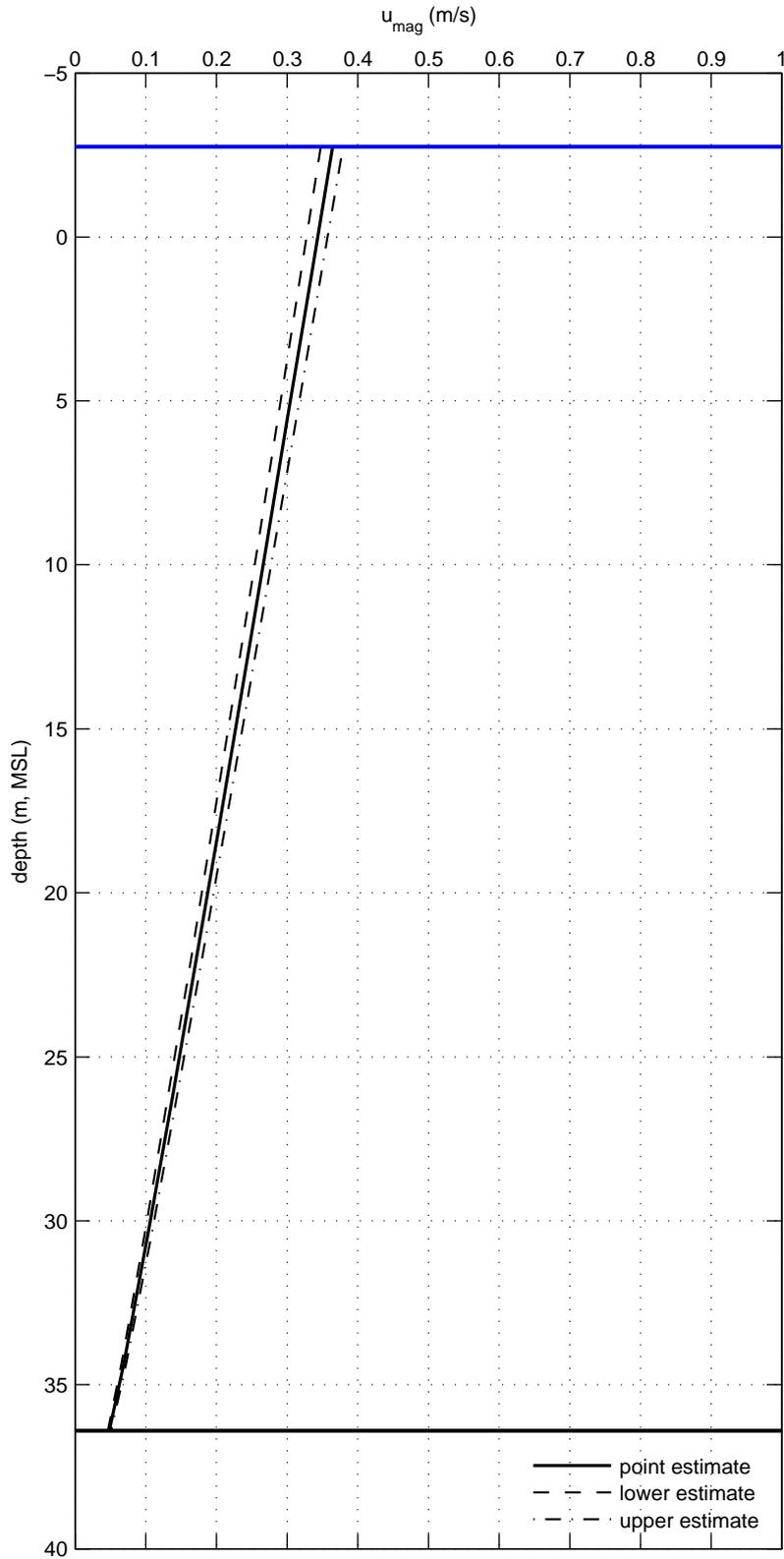
U10 = 20.2 m/s

**Deltares**

App. C.3.036

RP = 10 yr (U10 = 19.3 m/s)

Dir sector N



Current profile for directional sector N

RP = 10 yr

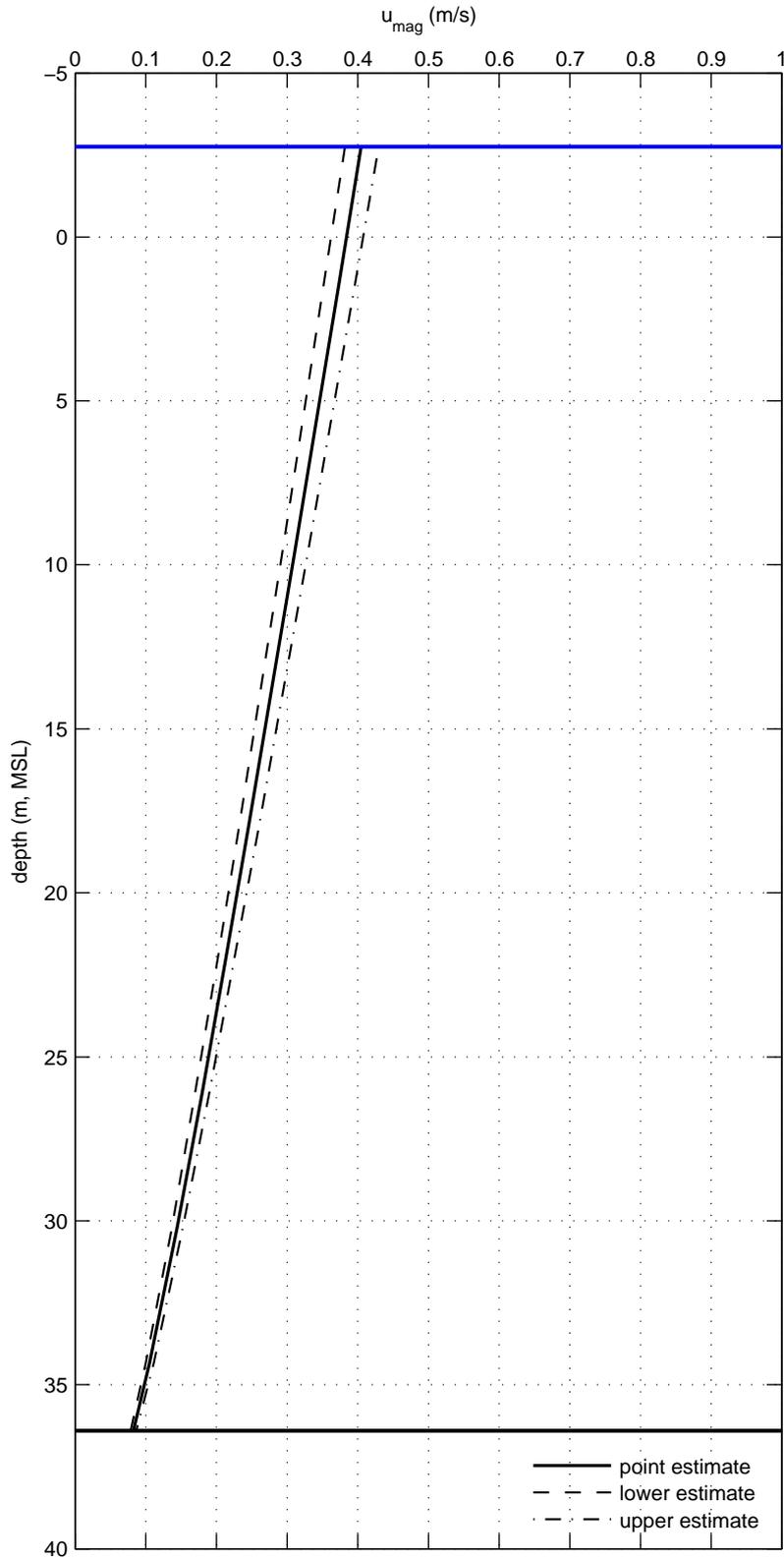
U10 = 19.3 m/s

Deltares

App. C.3.037

RP = 10 yr (U10 = 18.5 m/s)

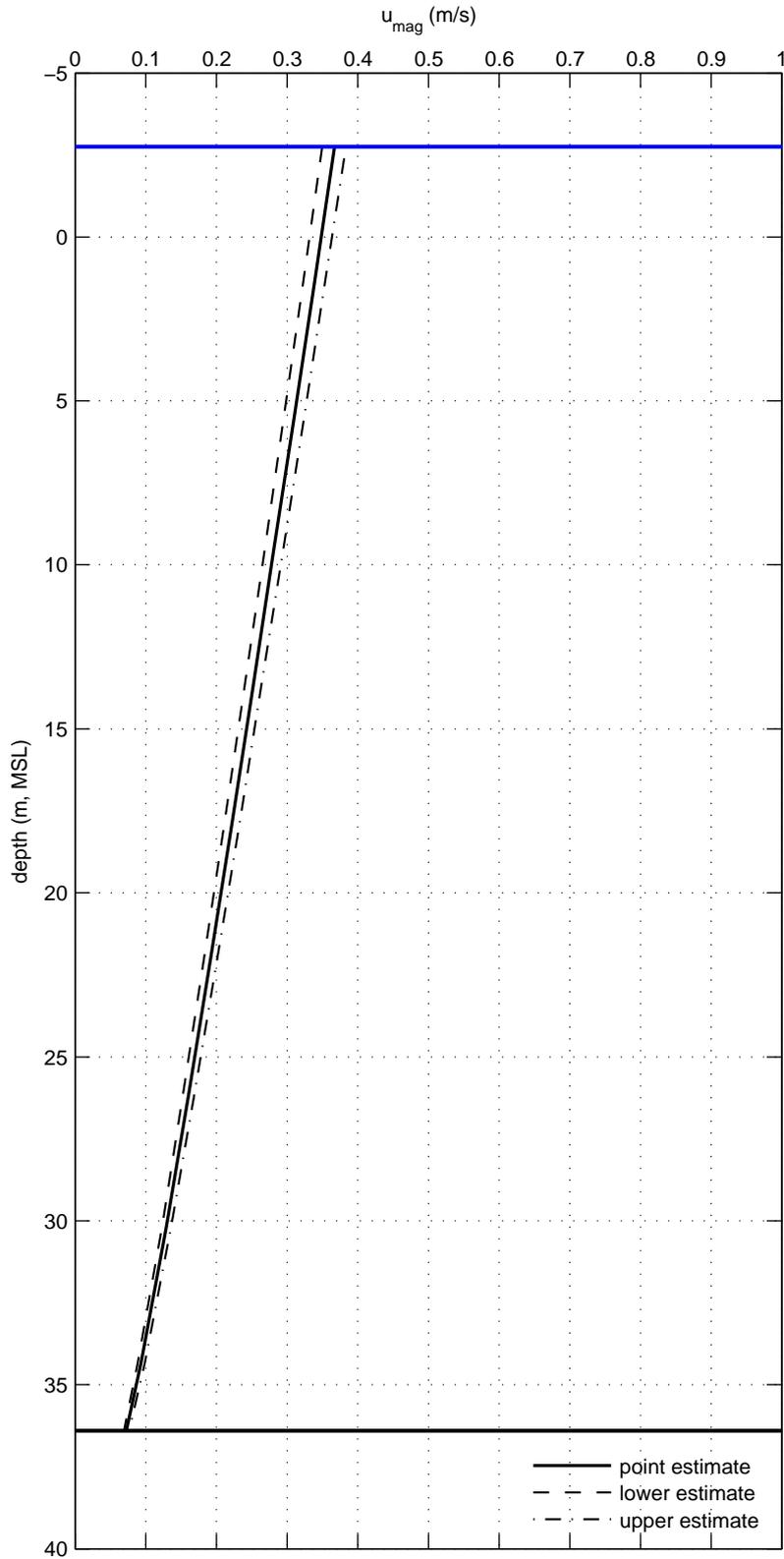
Dir sector NNE



Current profile for directional sector NNE	RP = 10 yr	U10 = 18.5 m/s
<b>Deltares</b>		App. C.3.038

RP = 10 yr (U10 = 17.1 m/s)

Dir sector ENE



Current profile for directional sector ENE

RP = 10 yr

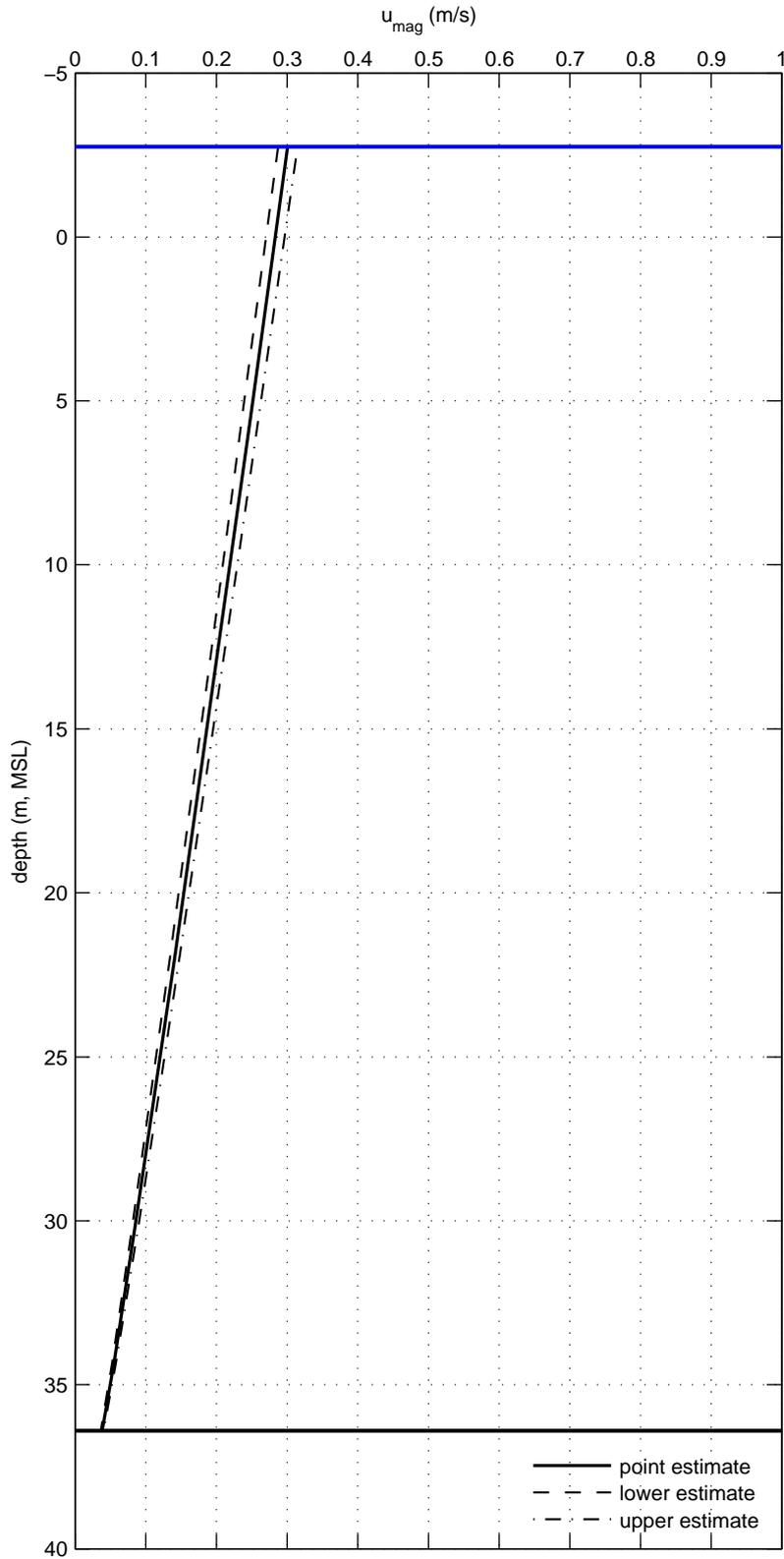
U10 = 17.1 m/s

Deltares

App. C.3.039

RP = 10 yr (U10 = 16.2 m/s)

Dir sector E



Current profile for directional sector E

RP = 10 yr

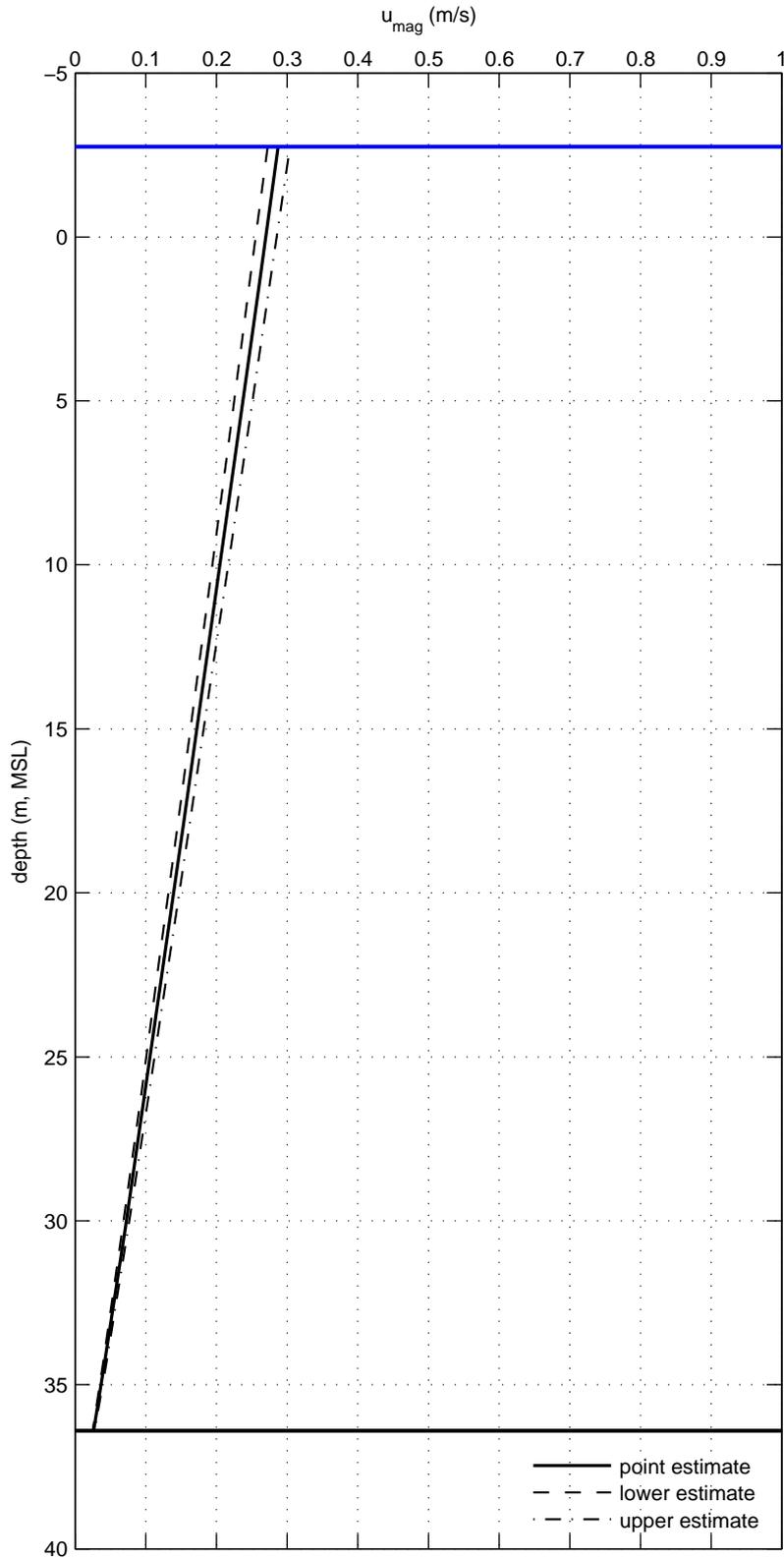
U10 = 16.2 m/s

**Deltares**

App. C.3.040

RP = 10 yr (U10 = 16.5 m/s)

Dir sector ESE



Current profile for directional sector ESE

RP = 10 yr

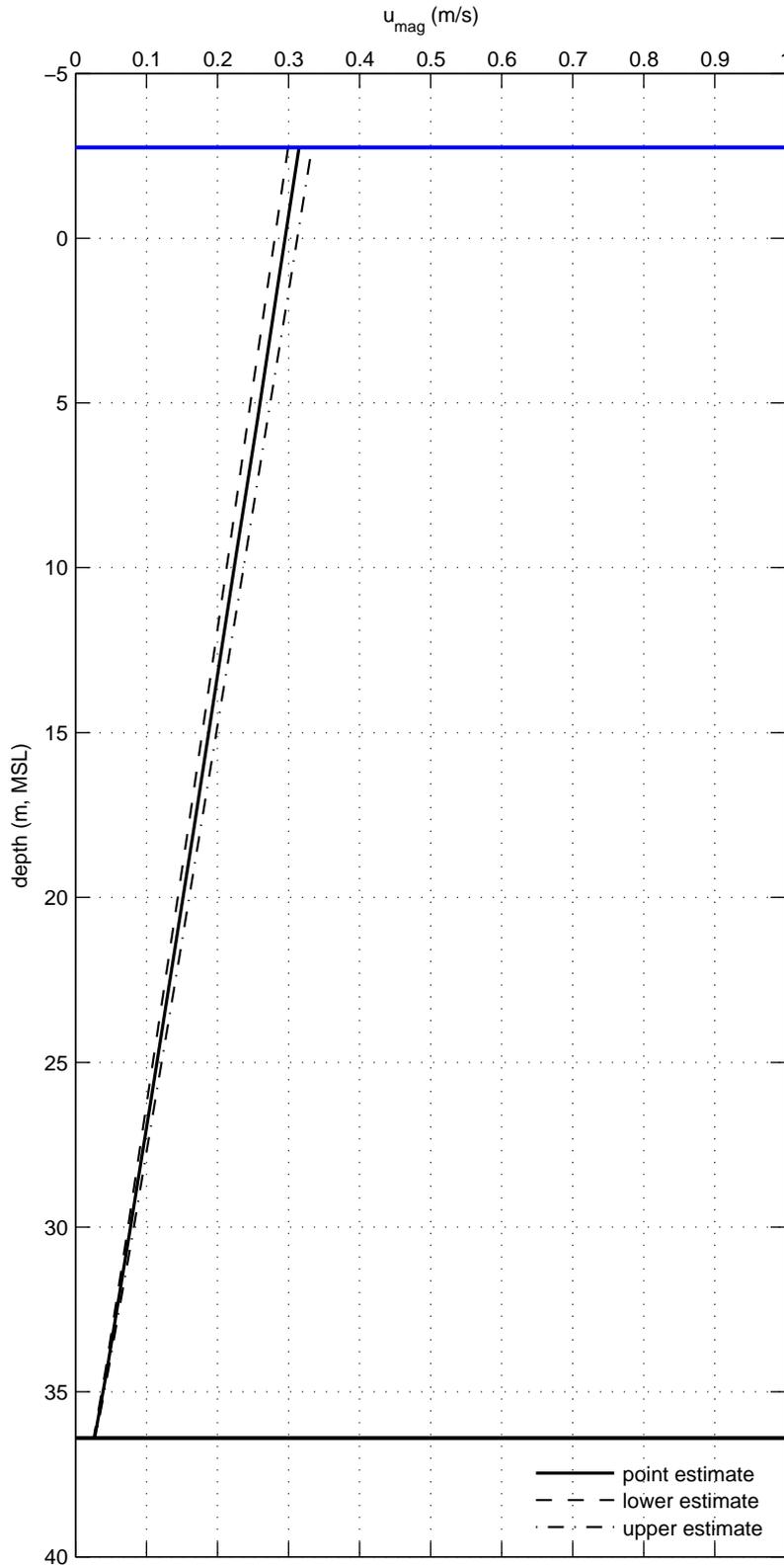
U10 = 16.5 m/s

Deltares

App. C.3.041

RP = 10 yr (U10 = 18.2 m/s)

Dir sector SSE



Current profile for directional sector SSE

RP = 10 yr

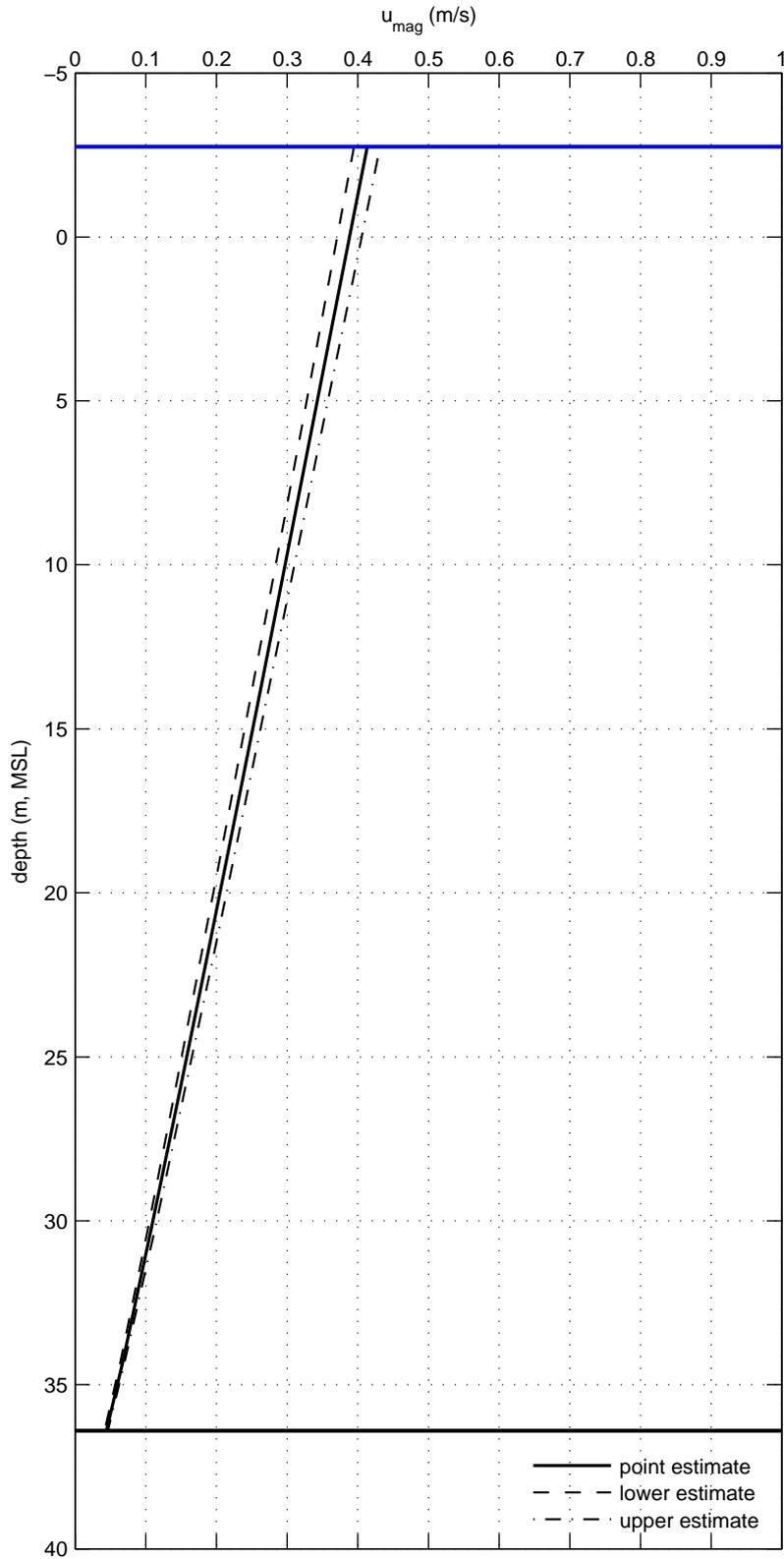
U10 = 18.2 m/s

Deltares

App. C.3.042

RP = 10 yr (U10 = 23.1 m/s)

Dir sector S



Current profile for directional sector S

RP = 10 yr

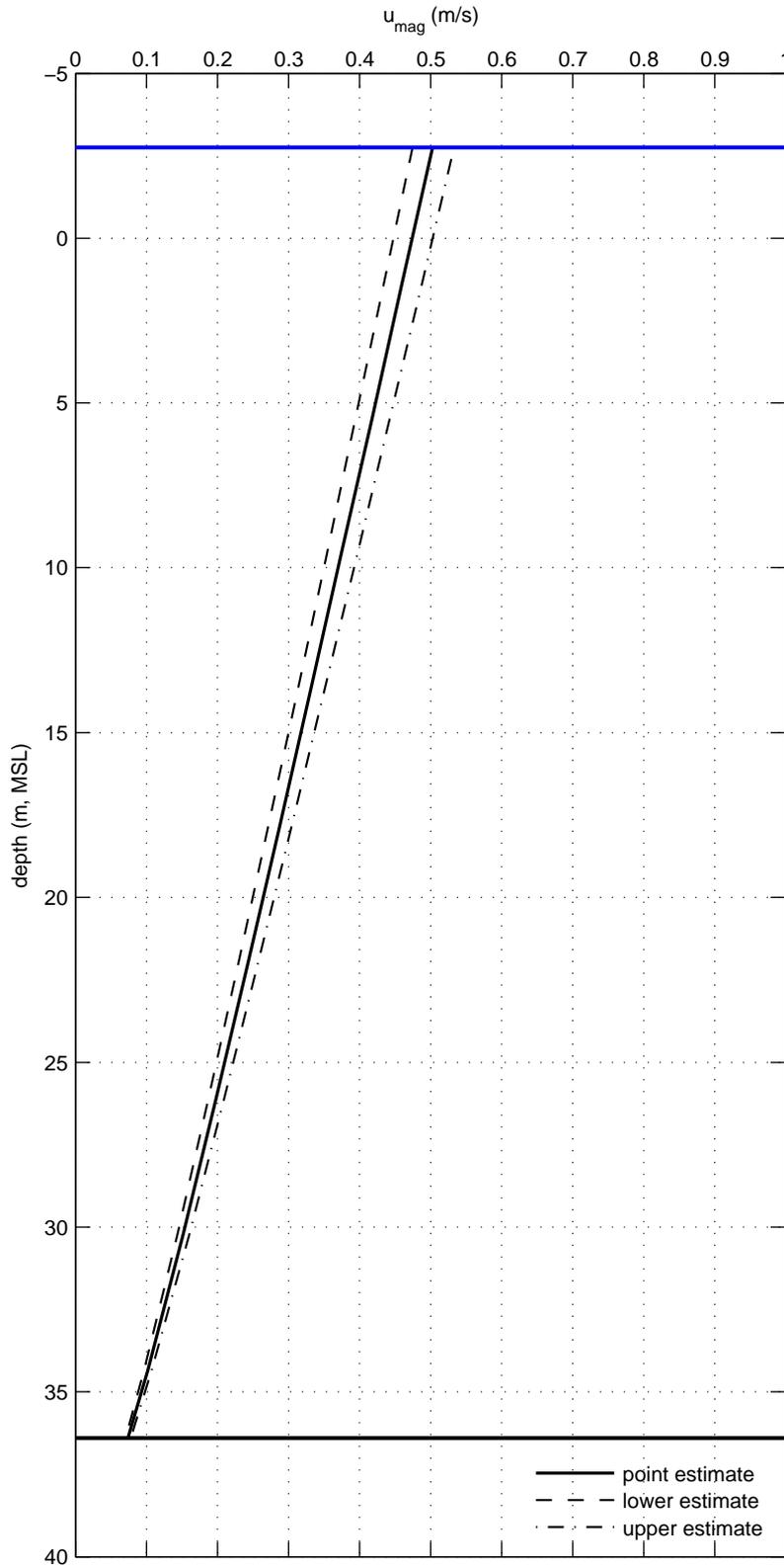
U10 = 23.1 m/s

**Deltares**

App. C.3.043

RP = 10 yr (U10 = 25.9 m/s)

Dir sector SSW



Current profile for directional sector SSW

RP = 10 yr

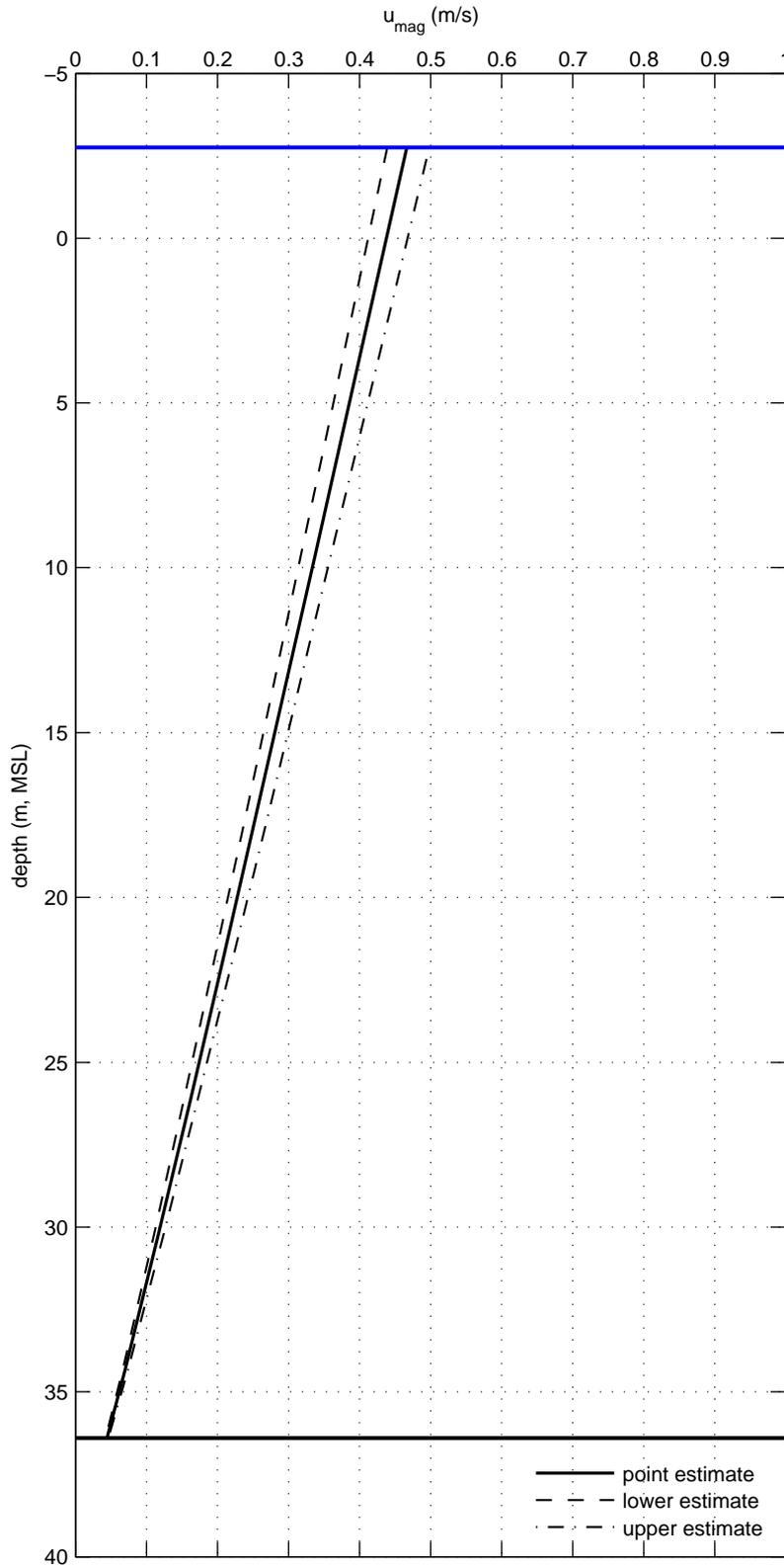
U10 = 25.9 m/s

Deltares

App. C.3.044

RP = 10 yr (U10 = 26.6 m/s)

Dir sector WSW



Current profile for directional sector WSW

RP = 10 yr

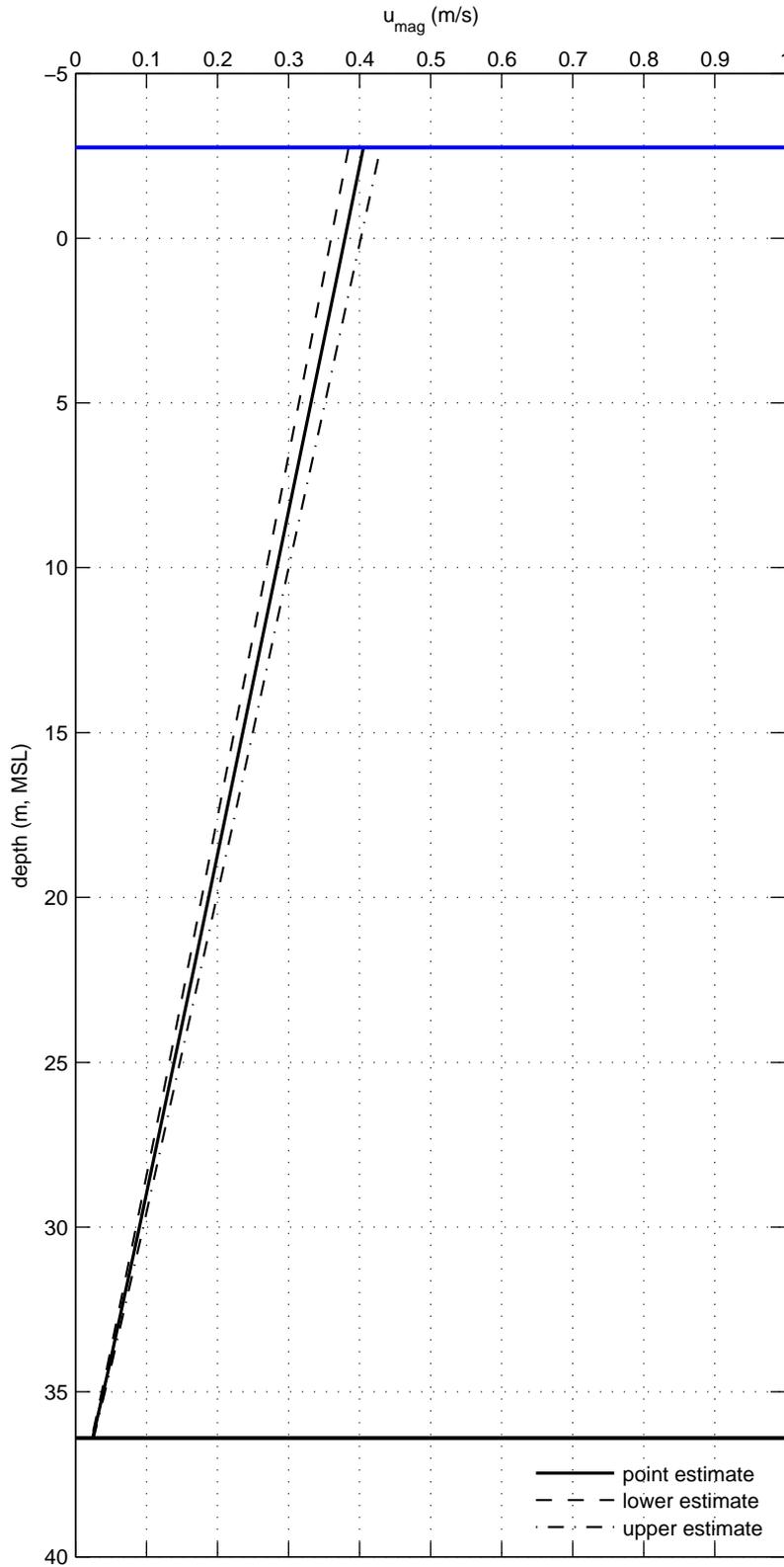
U10 = 26.6 m/s

**Deltares**

App. C.3.045

RP = 10 yr (U10 = 24.5 m/s)

Dir sector W



Current profile for directional sector W

RP = 10 yr

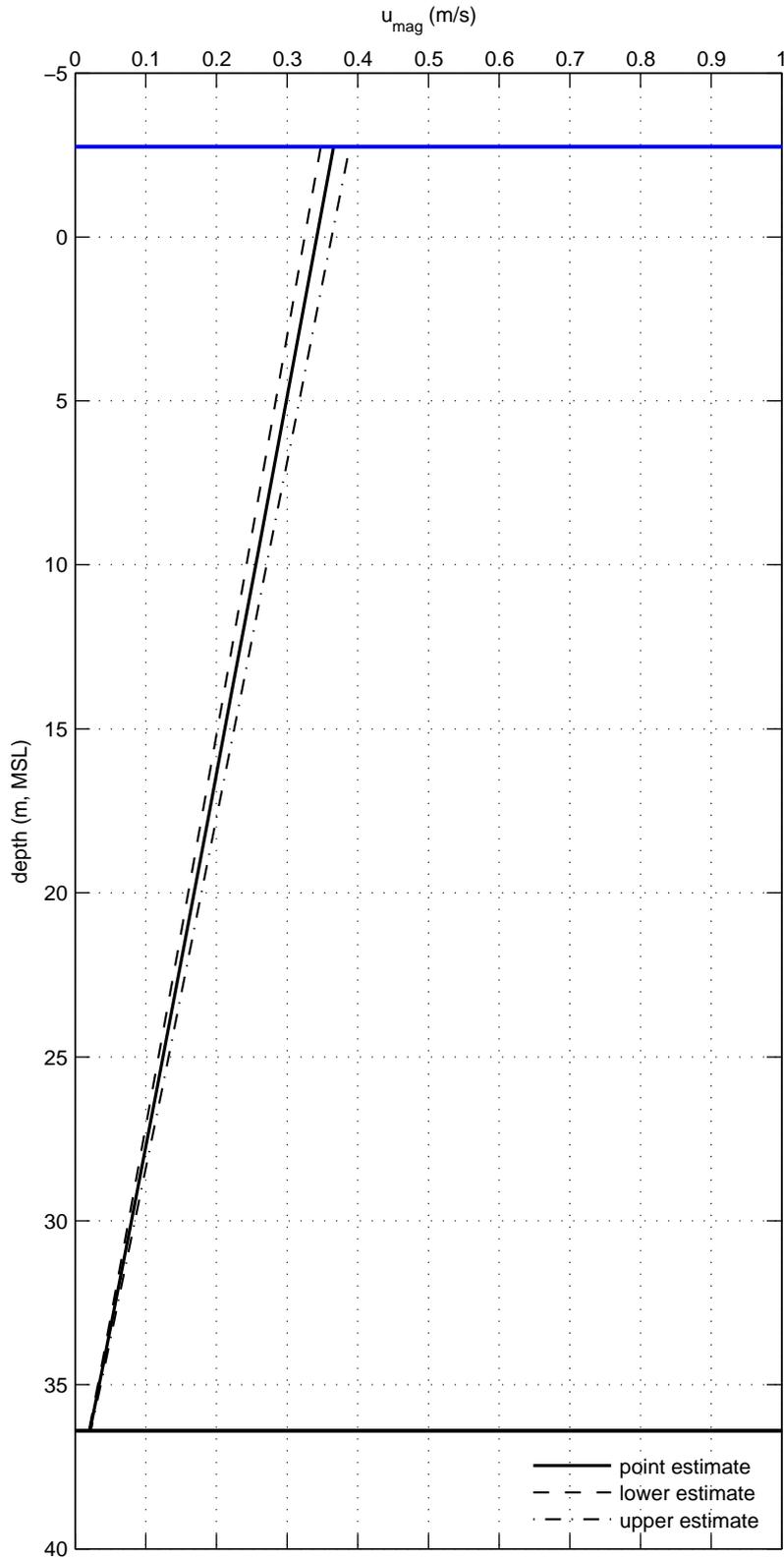
U10 = 24.5 m/s

Deltares

App. C.3.046

RP = 10 yr (U10 = 22.3 m/s)

Dir sector WNW



Current profile for directional sector WNW

RP = 10 yr

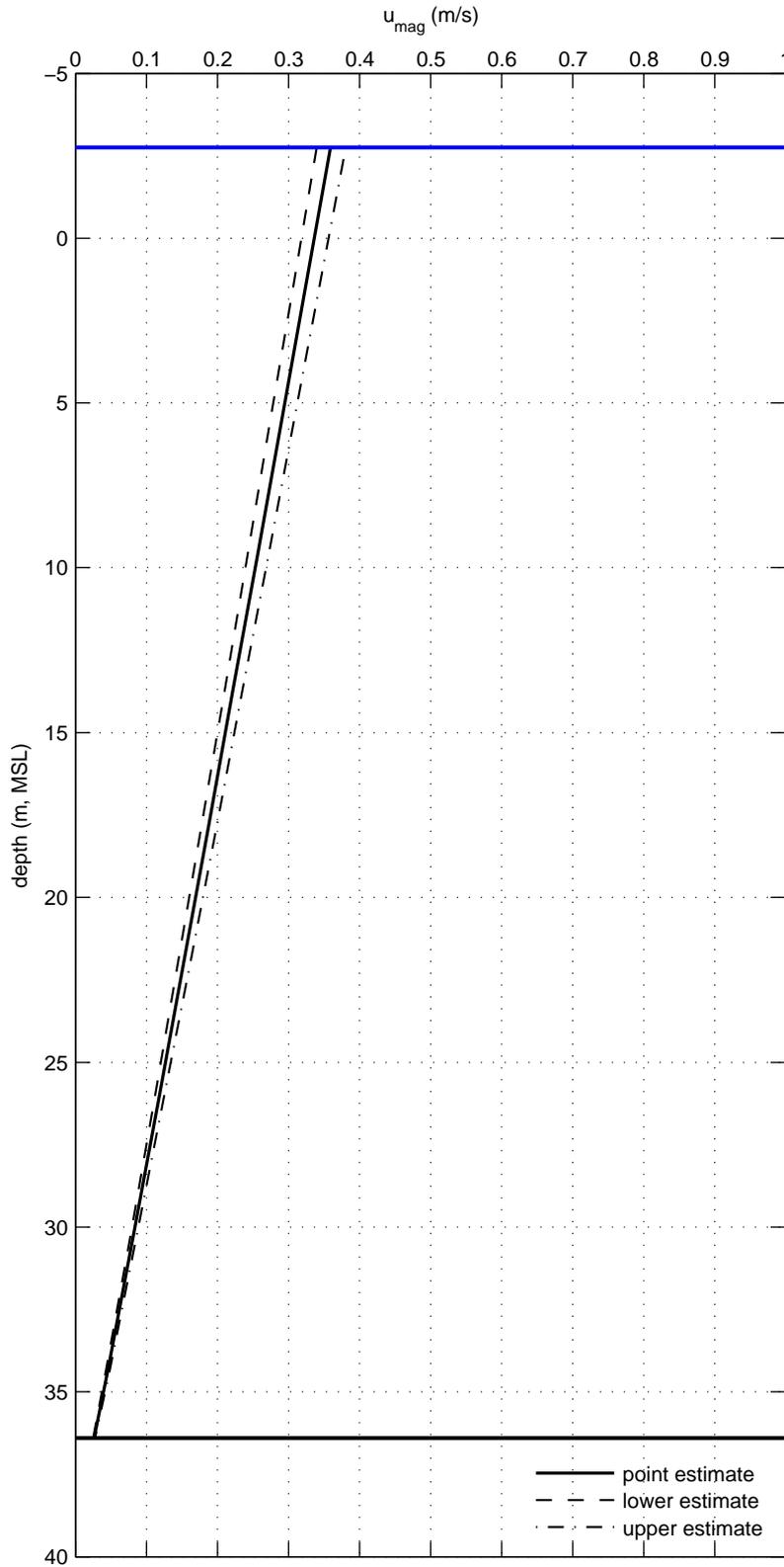
U10 = 22.3 m/s

Deltares

App. C.3.047

RP = 10 yr (U10 = 21.2 m/s)

Dir sector NNW



Current profile for directional sector NNW

RP = 10 yr

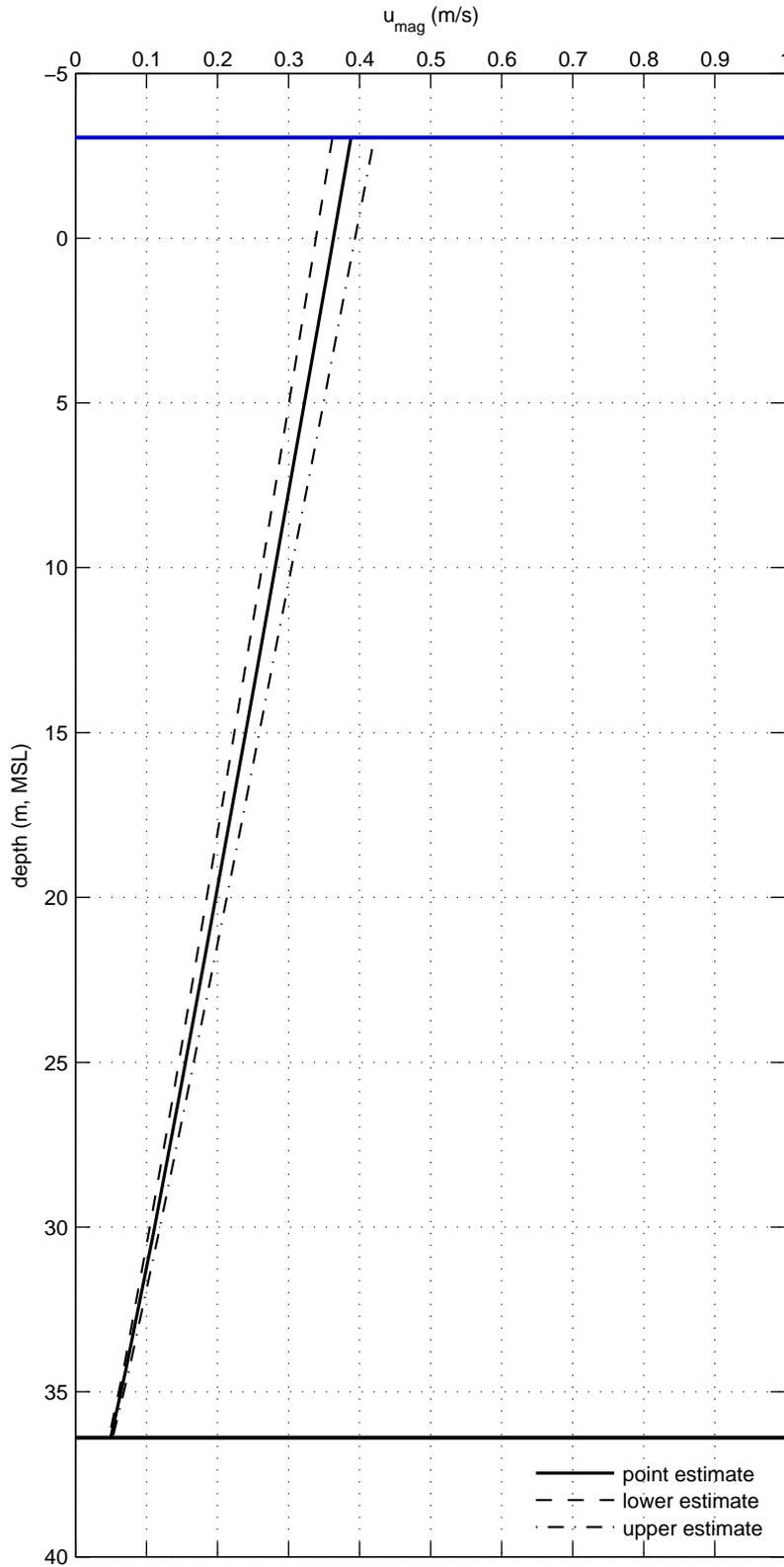
U10 = 21.2 m/s

Deltares

App. C.3.048

RP = 50 yr (U10 = 20.8 m/s)

Dir sector N



Current profile for directional sector N

RP = 50 yr

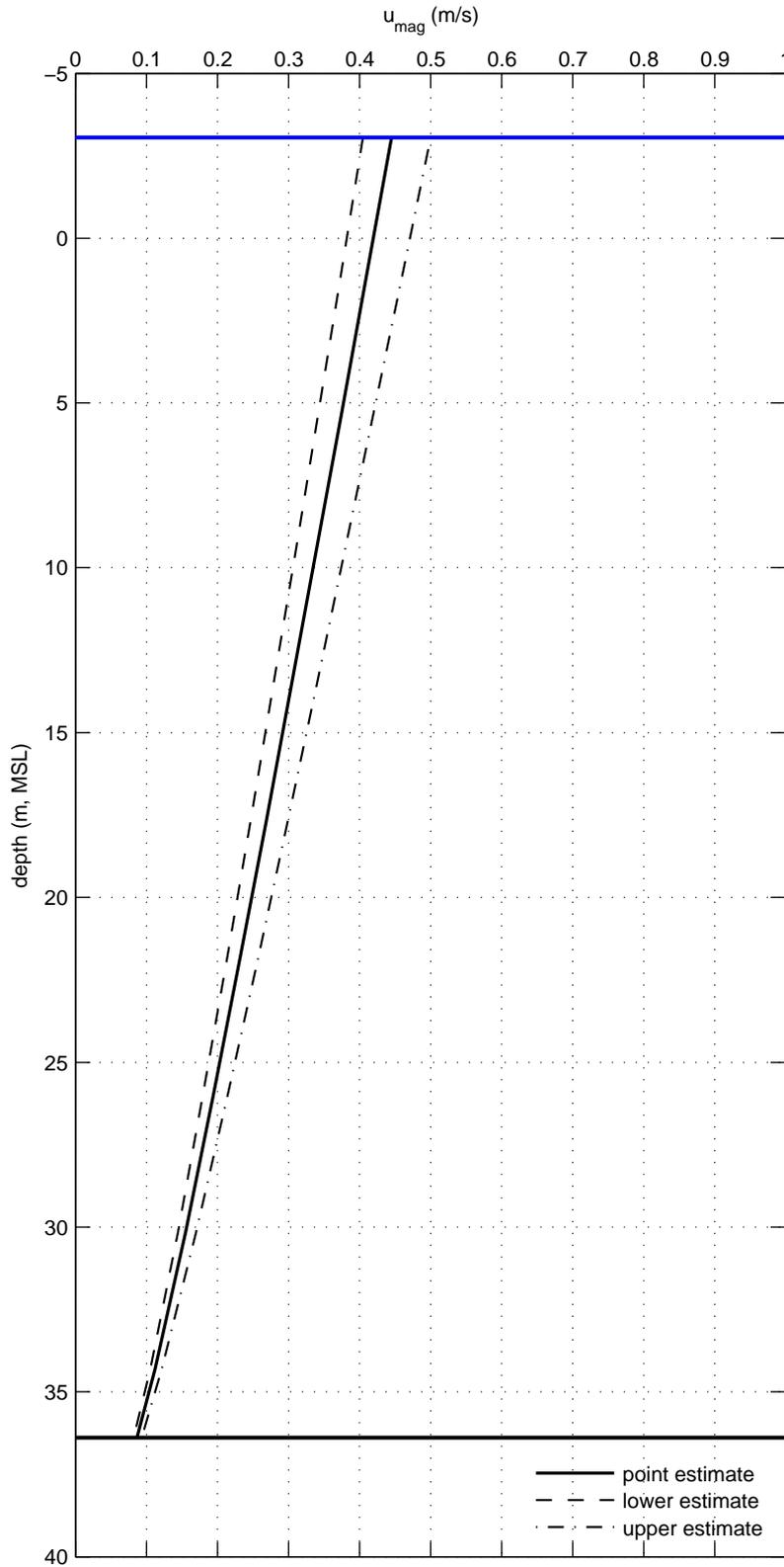
U10 = 20.8 m/s

Deltares

App. C.3.049

RP = 50 yr (U10 = 20.8 m/s)

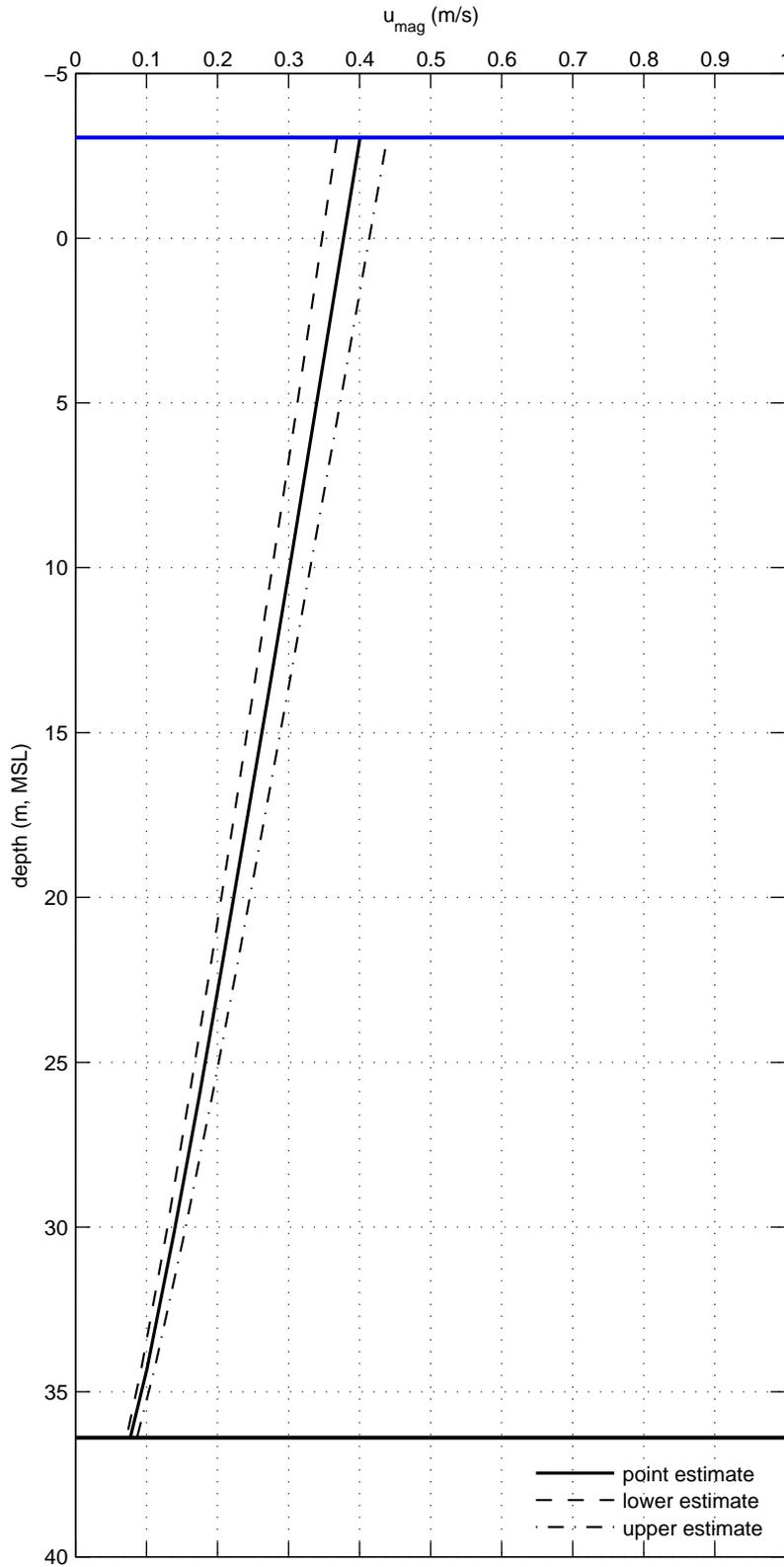
Dir sector NNE



Current profile for directional sector NNE	RP = 50 yr	U10 = 20.8 m/s
<b>Deltares</b>		App. C.3.050

RP = 50 yr (U10 = 18.8 m/s)

Dir sector ENE



Current profile for directional sector ENE

RP = 50 yr

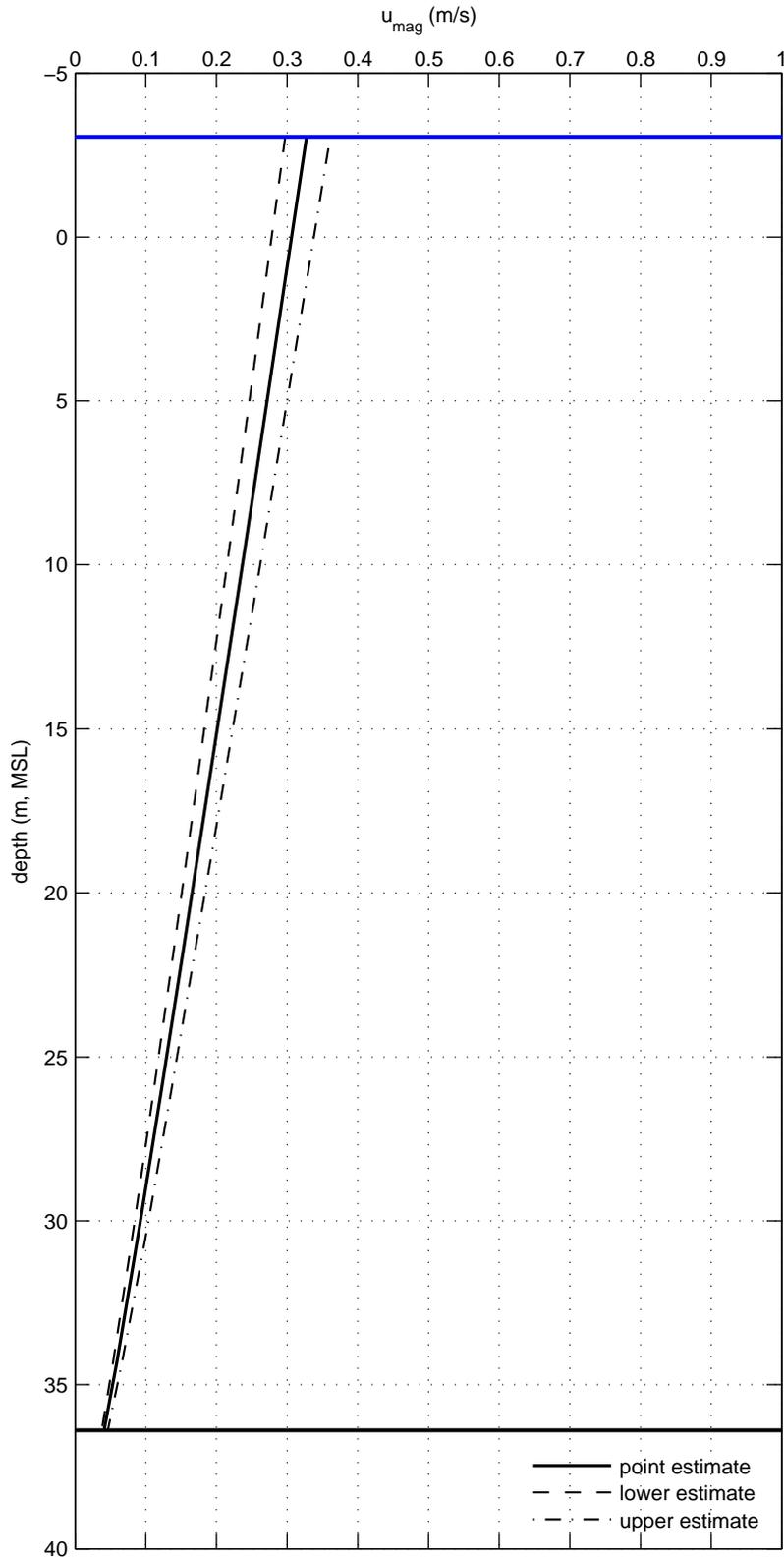
U10 = 18.8 m/s

Deltares

App. C.3.051

RP = 50 yr (U10 = 17.6 m/s)

Dir sector E



Current profile for directional sector E

RP = 50 yr

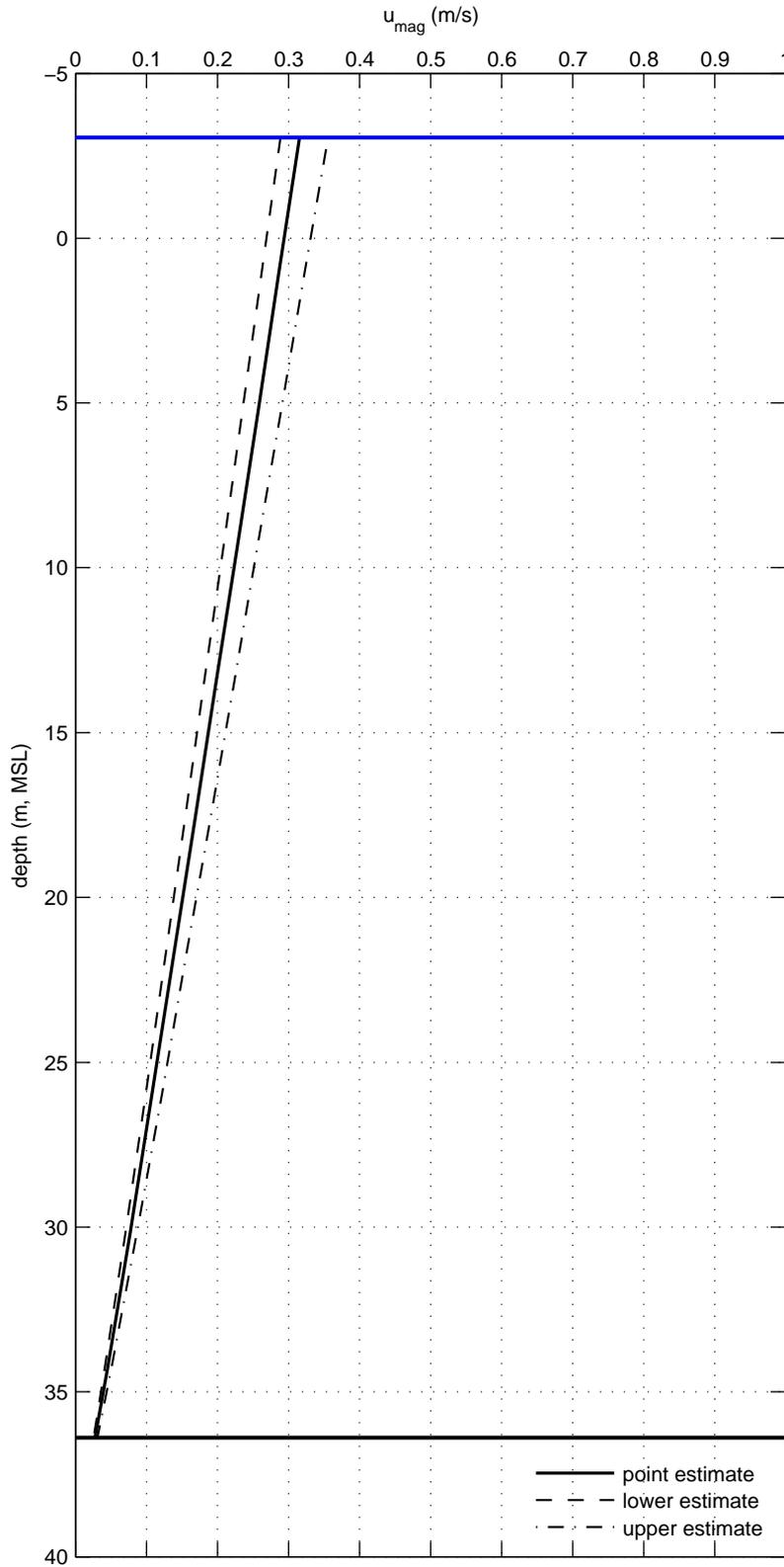
U10 = 17.6 m/s

**Deltares**

App. C.3.052

RP = 50 yr (U10 = 18.2 m/s)

Dir sector ESE



Current profile for directional sector ESE

RP = 50 yr

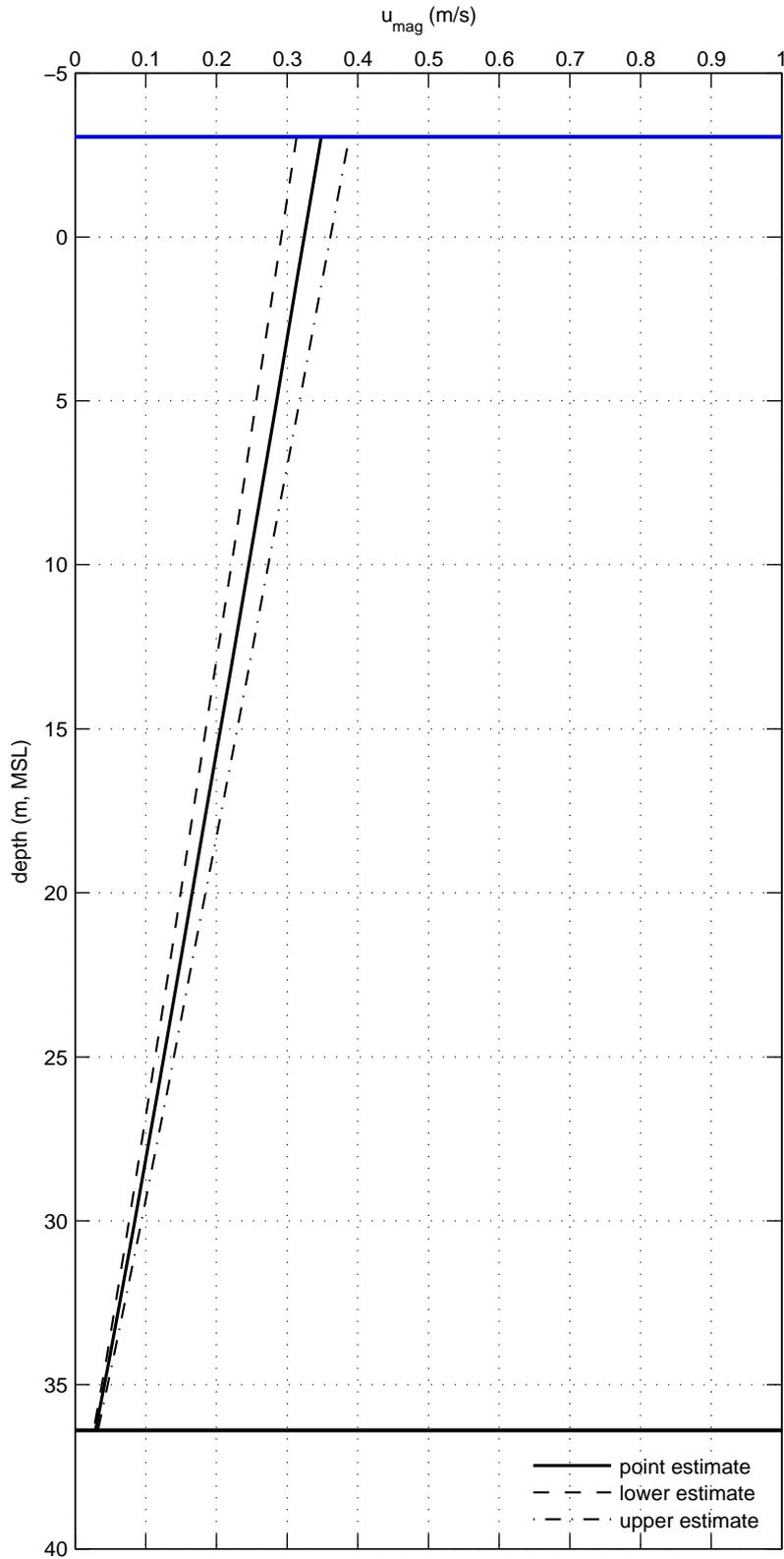
U10 = 18.2 m/s

Deltares

App. C.3.053

RP = 50 yr (U10 = 20.3 m/s)

Dir sector SSE



Current profile for directional sector SSE

RP = 50 yr

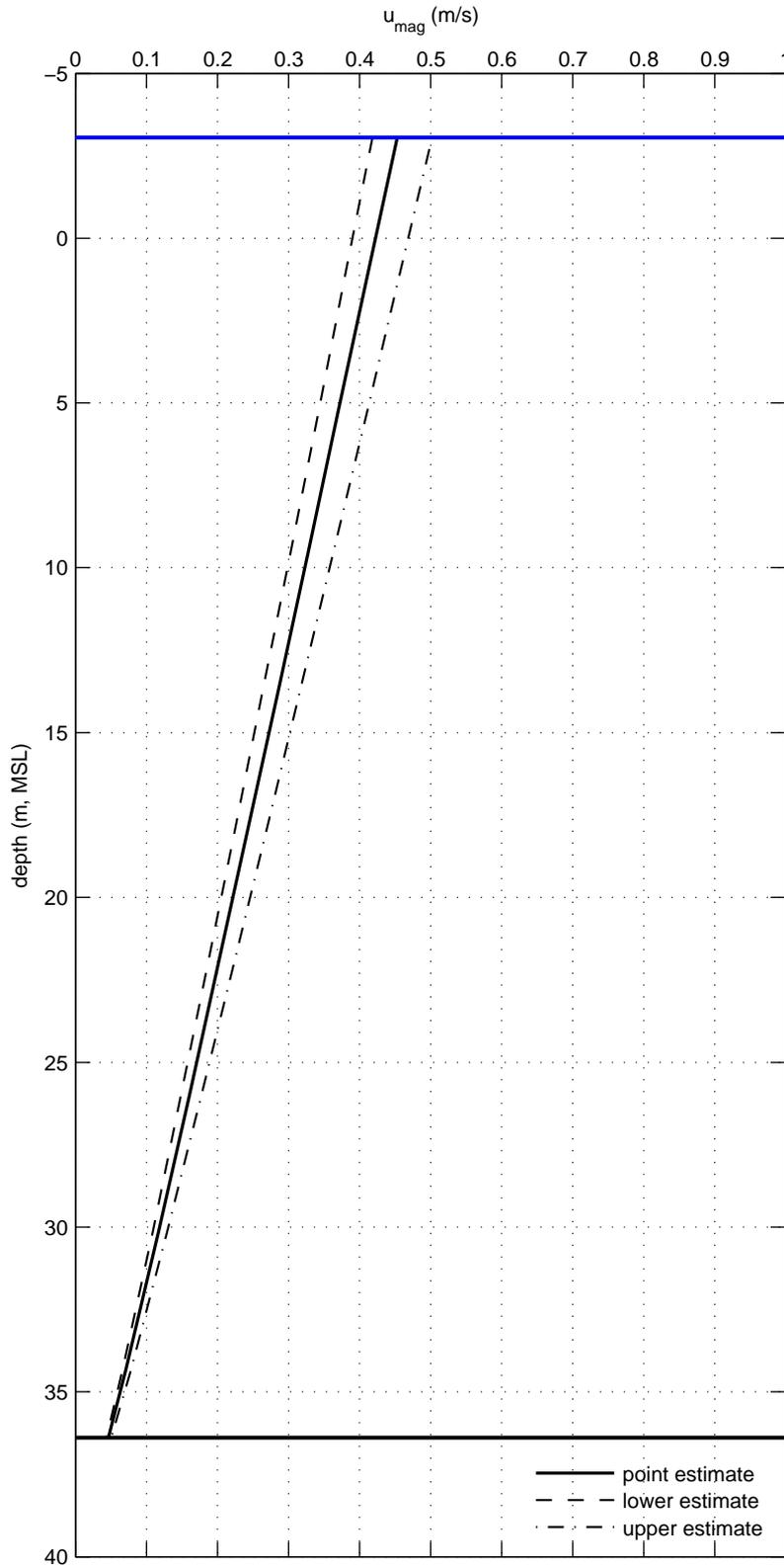
U10 = 20.3 m/s

Deltares

App. C.3.054

RP = 50 yr (U10 = 25.4 m/s)

Dir sector S



Current profile for directional sector S

RP = 50 yr

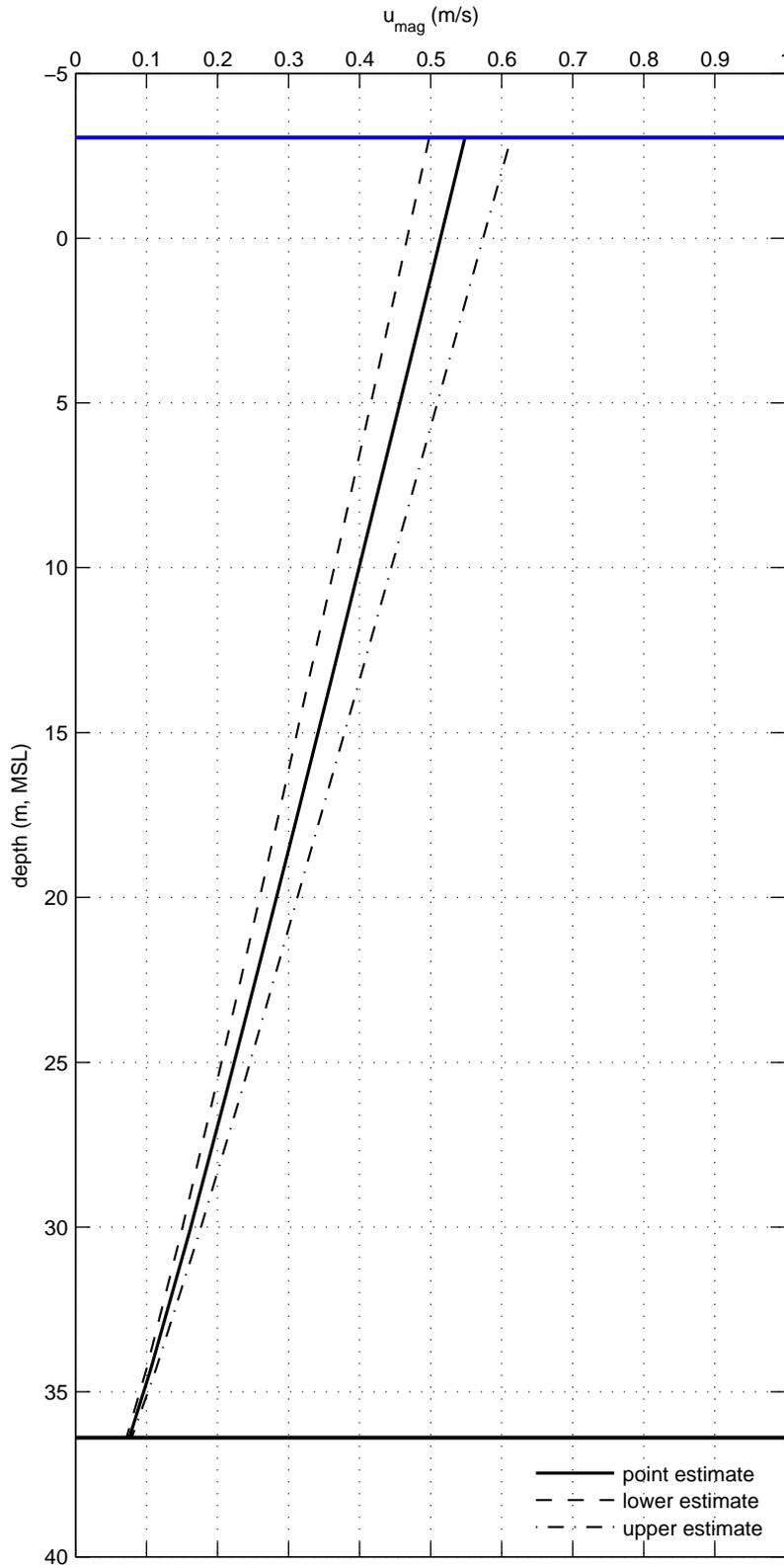
U10 = 25.4 m/s

Deltares

App. C.3.055

RP = 50 yr (U10 = 28.8 m/s)

Dir sector SSW



Current profile for directional sector SSW

RP = 50 yr

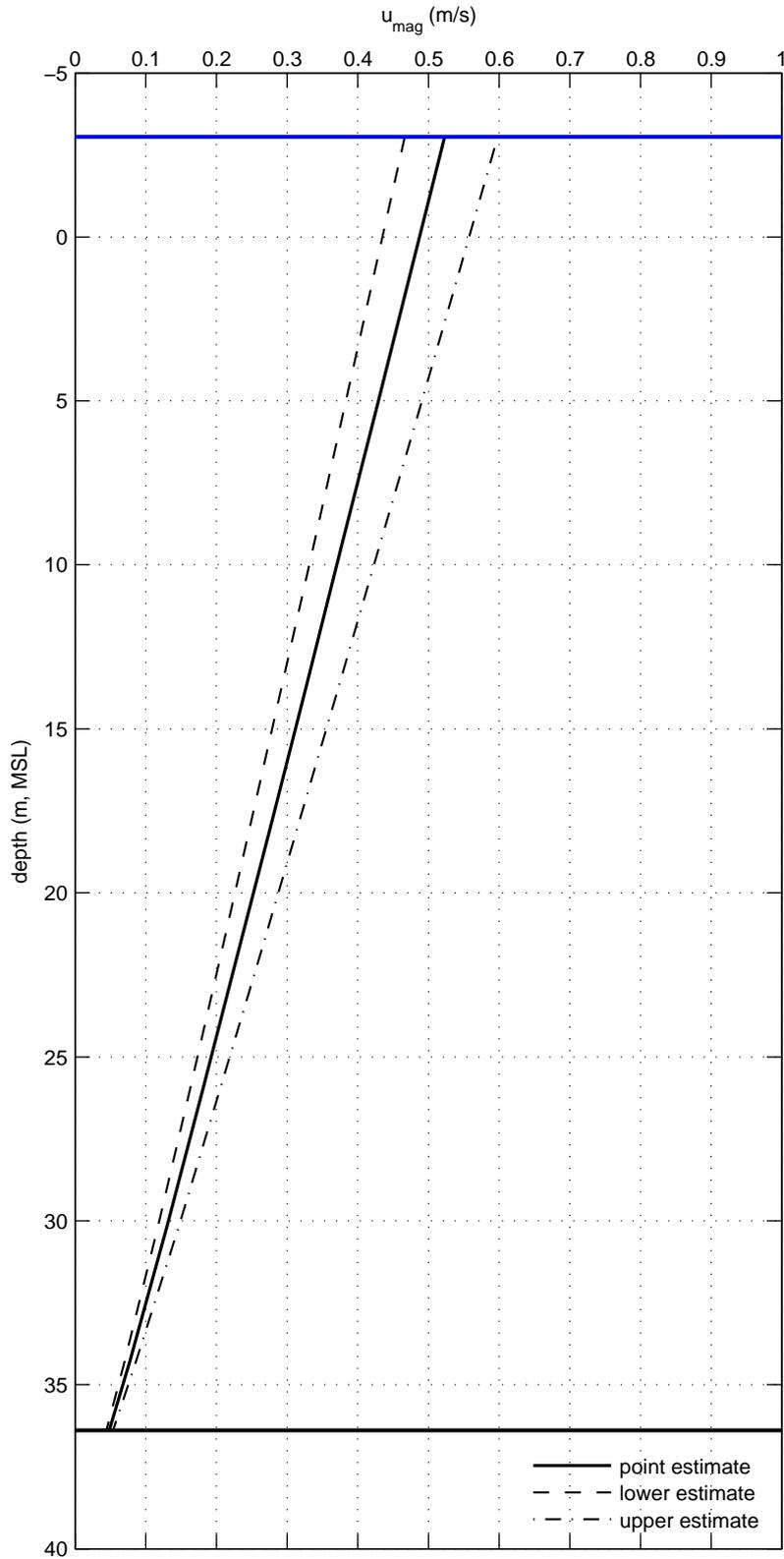
U10 = 28.8 m/s

Deltares

App. C.3.056

RP = 50 yr (U10 = 29.9 m/s)

Dir sector WSW



Current profile for directional sector WSW

RP = 50 yr

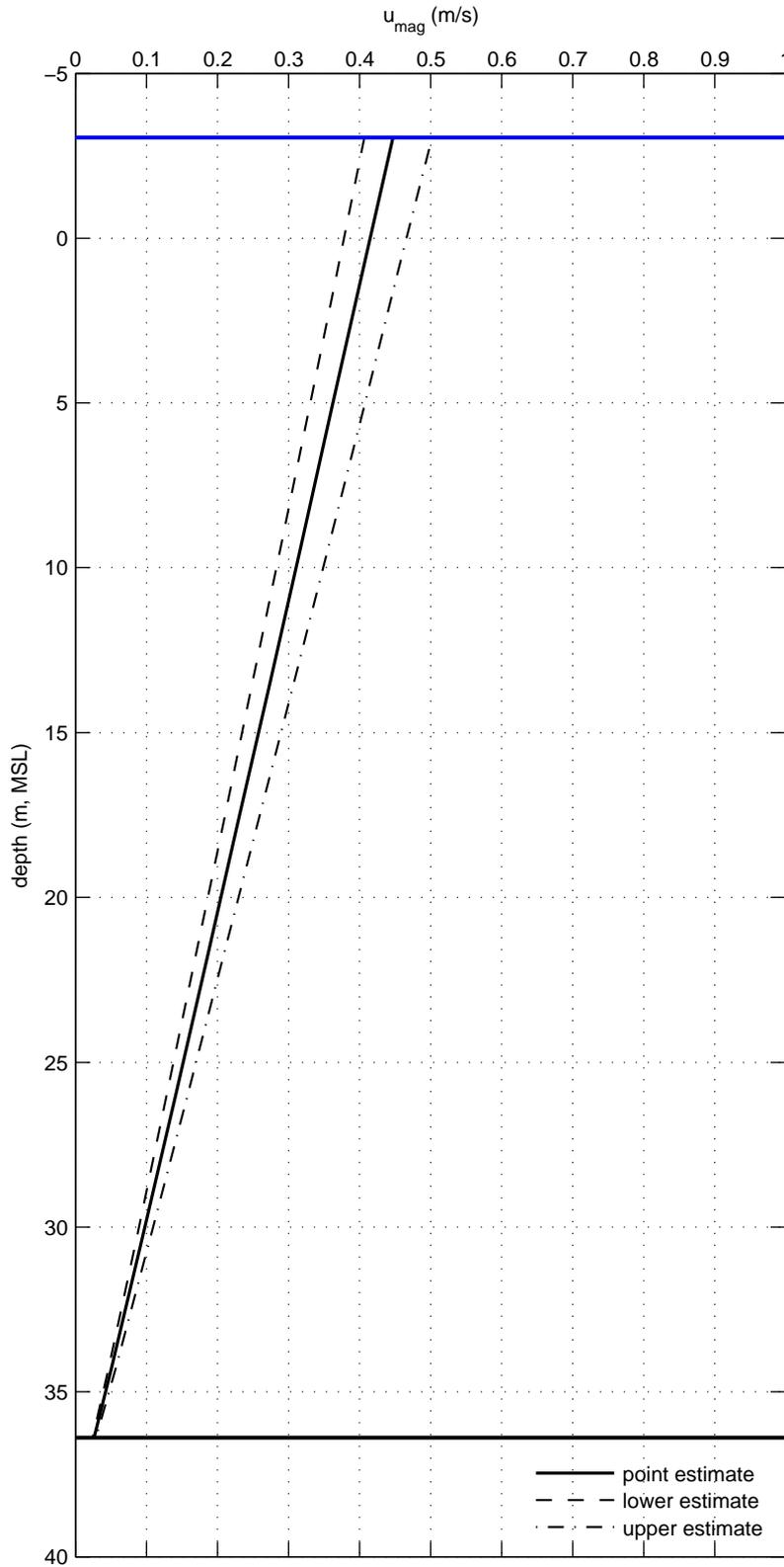
U10 = 29.9 m/s

Deltares

App. C.3.057

RP = 50 yr (U10 = 27.1 m/s)

Dir sector W



Current profile for directional sector W

RP = 50 yr

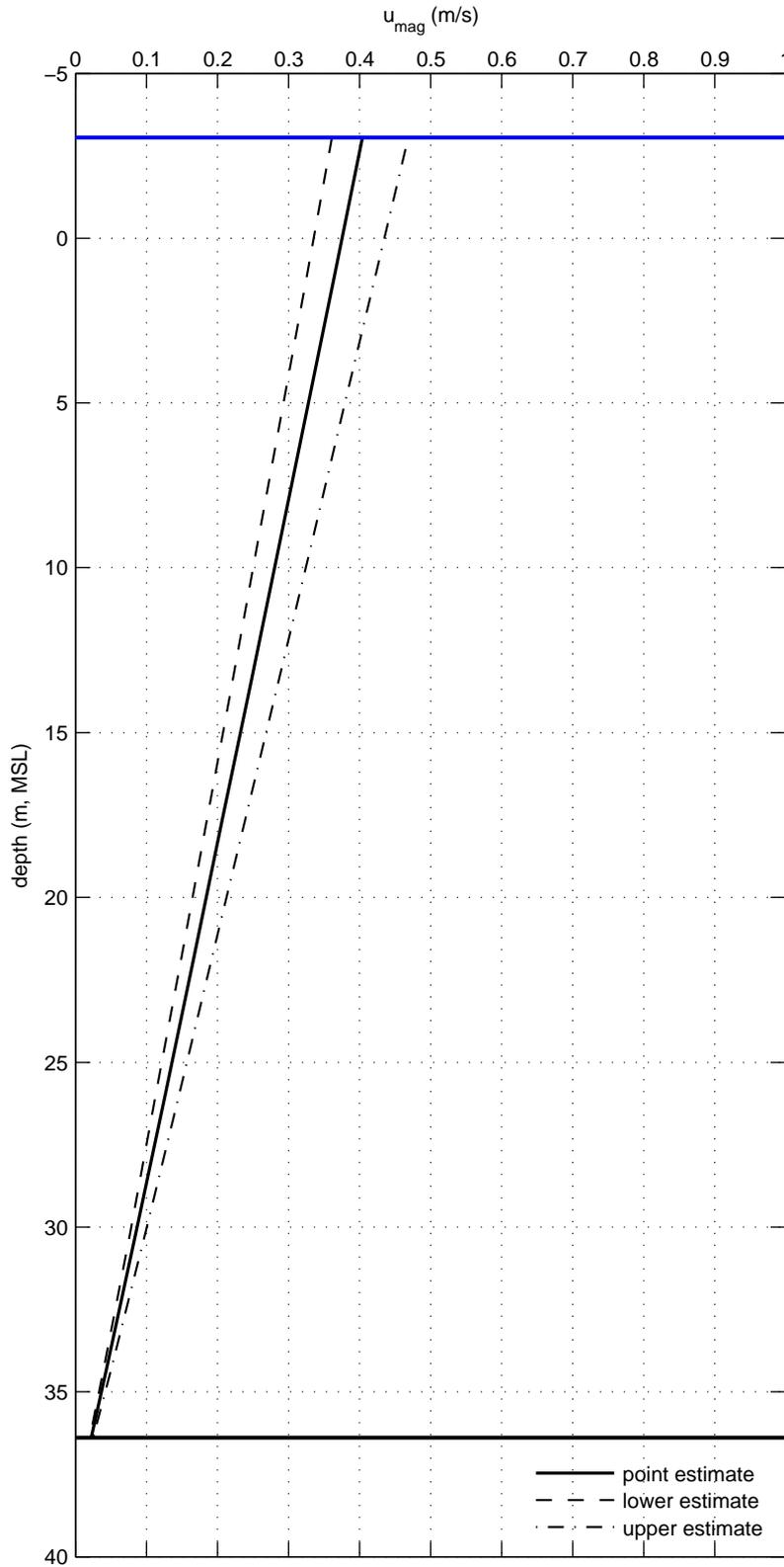
U10 = 27.1 m/s

Deltares

App. C.3.058

RP = 50 yr (U10 = 24.7 m/s)

Dir sector WNW



Current profile for directional sector WNW

RP = 50 yr

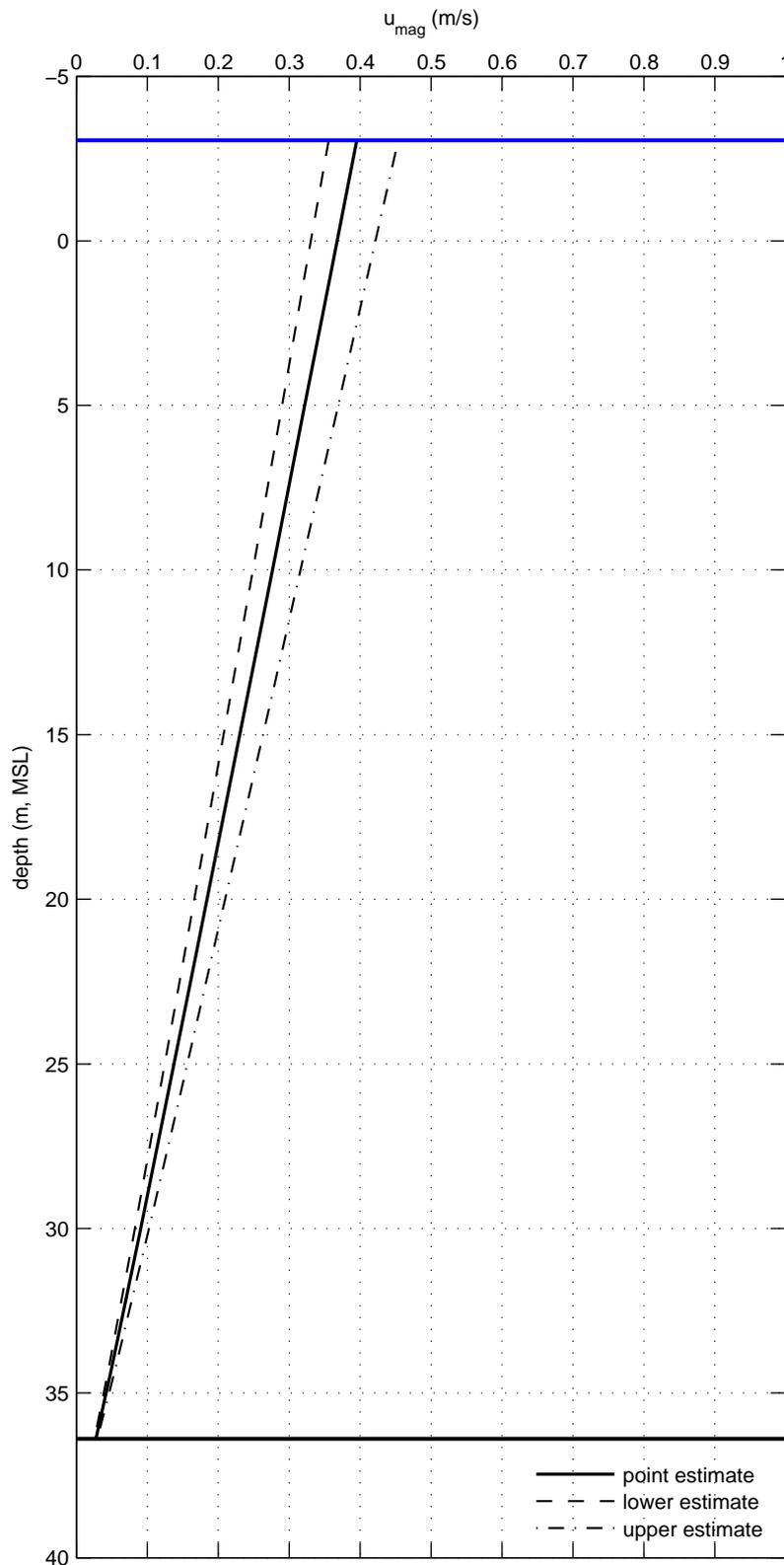
U10 = 24.7 m/s

**Deltares**

App. C.3.059

RP = 50 yr (U10 = 23.6 m/s)

Dir sector NNW



Current profile for directional sector NNW

RP = 50 yr

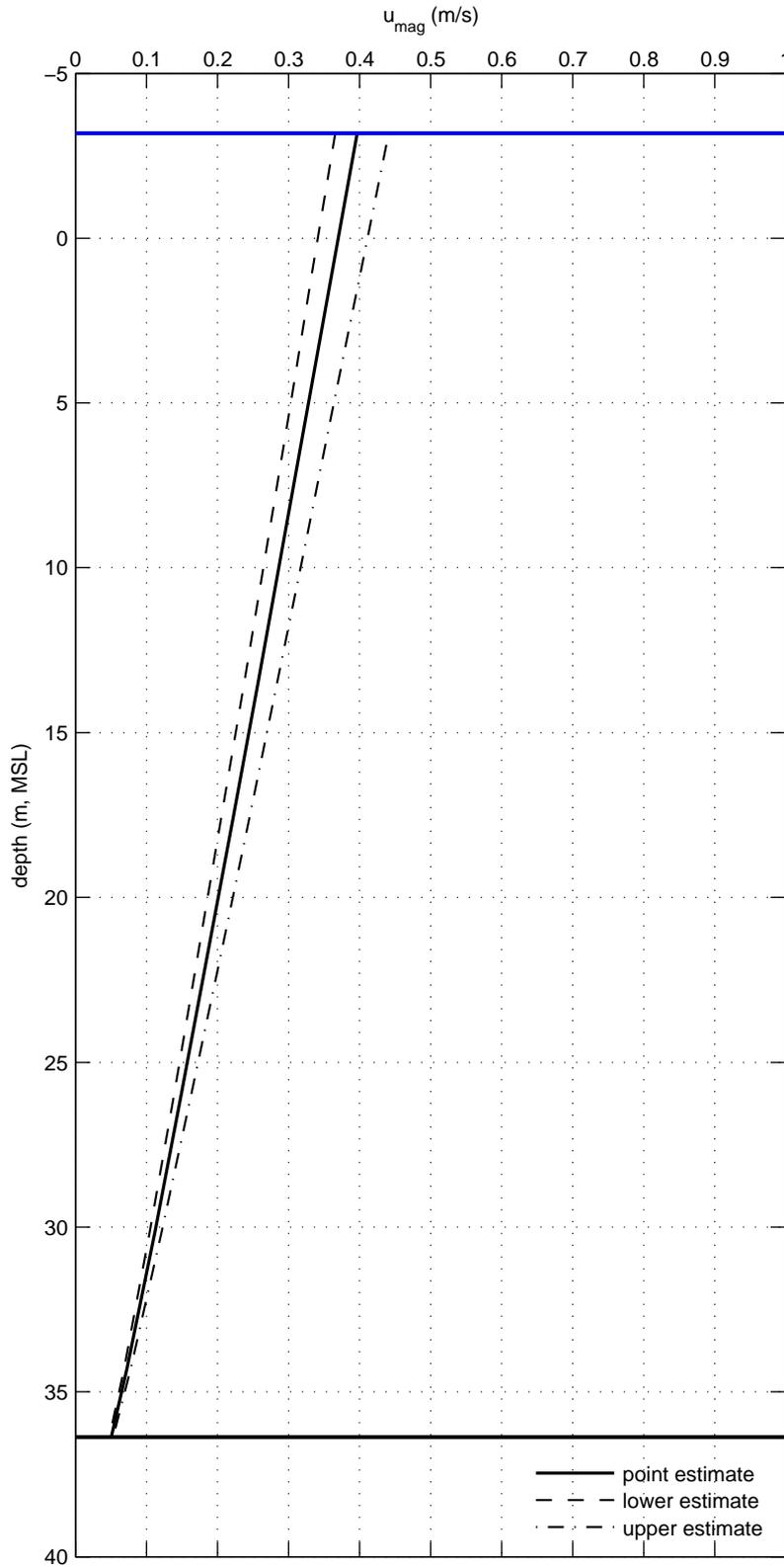
U10 = 23.6 m/s

**Deltares**

App. C.3.060

RP = 100 yr (U10 = 21.3 m/s)

Dir sector N



Current profile for directional sector N

RP = 100 yr

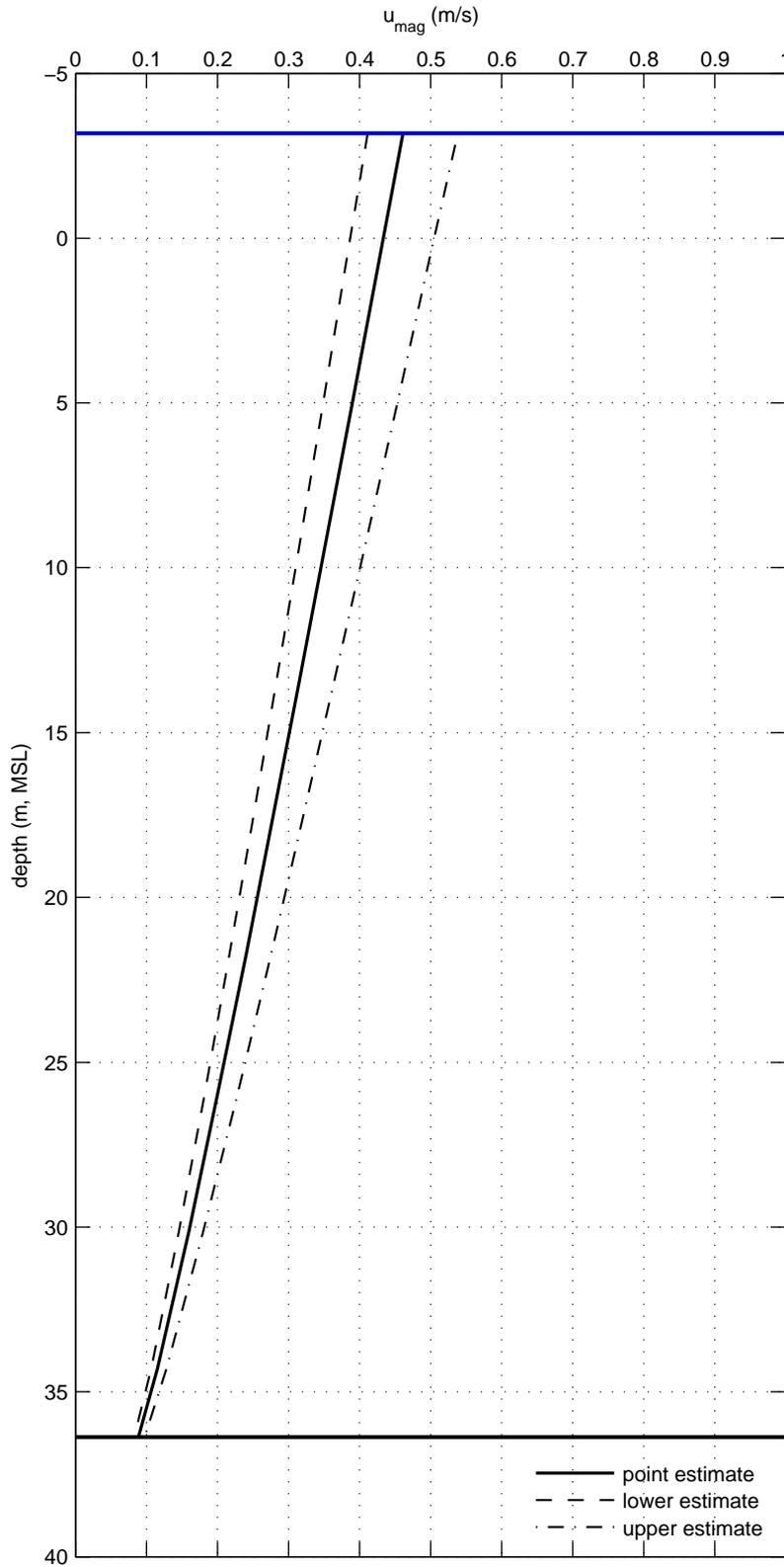
U10 = 21.3 m/s

Deltares

App. C.3.061

RP = 100 yr (U10 = 21.7 m/s)

Dir sector NNE



Current profile for directional sector NNE

RP = 100 yr

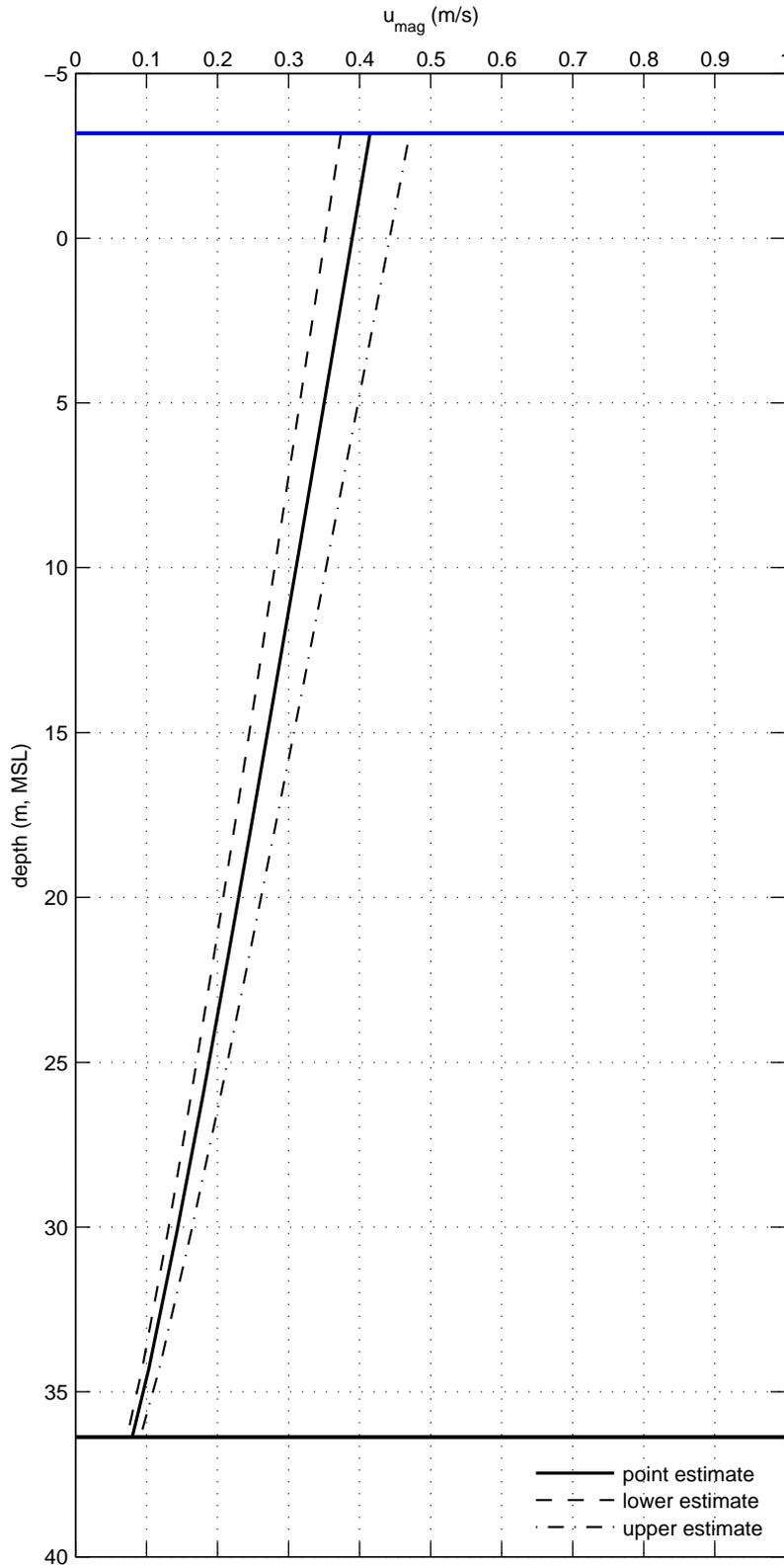
U10 = 21.7 m/s

Deltares

App. C.3.062

RP = 100 yr (U10 = 19.5 m/s)

Dir sector ENE



Current profile for directional sector ENE

RP = 100 yr

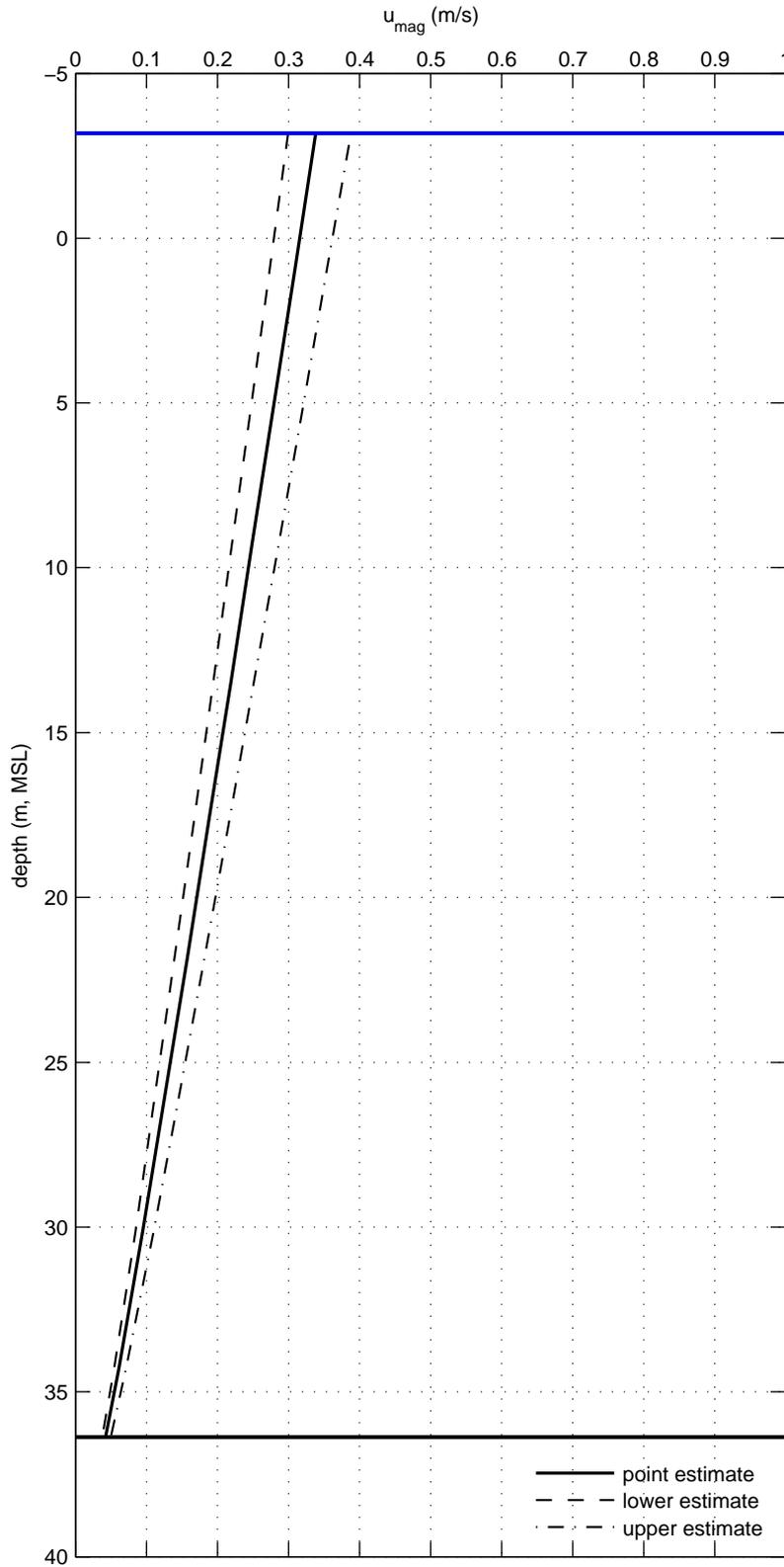
U10 = 19.5 m/s

Deltares

App. C.3.063

RP = 100 yr (U10 = 18.2 m/s)

Dir sector E



Current profile for directional sector E

RP = 100 yr

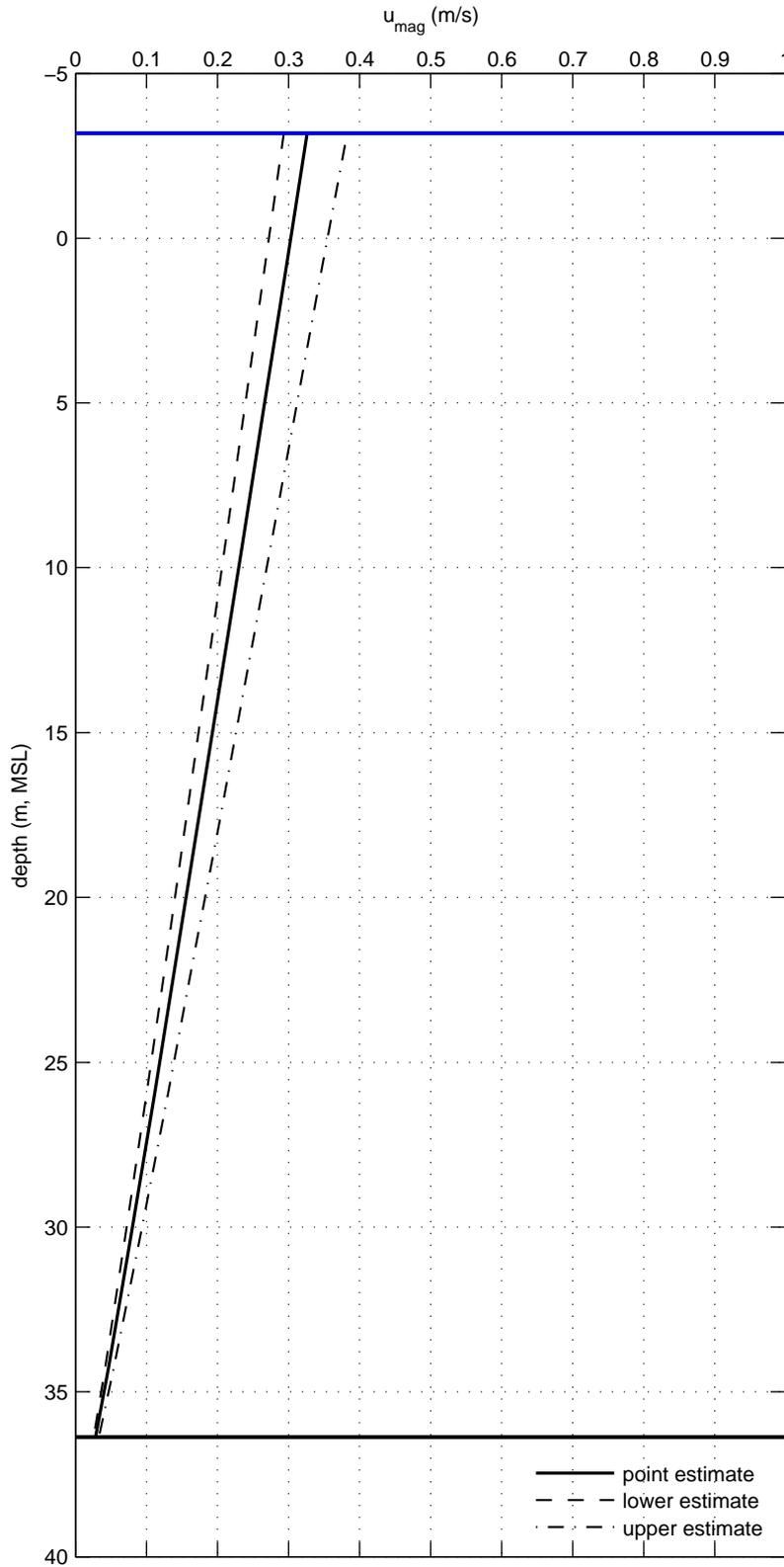
U10 = 18.2 m/s

Deltares

App. C.3.064

RP = 100 yr (U10 = 18.8 m/s)

Dir sector ESE



Current profile for directional sector ESE

RP = 100 yr

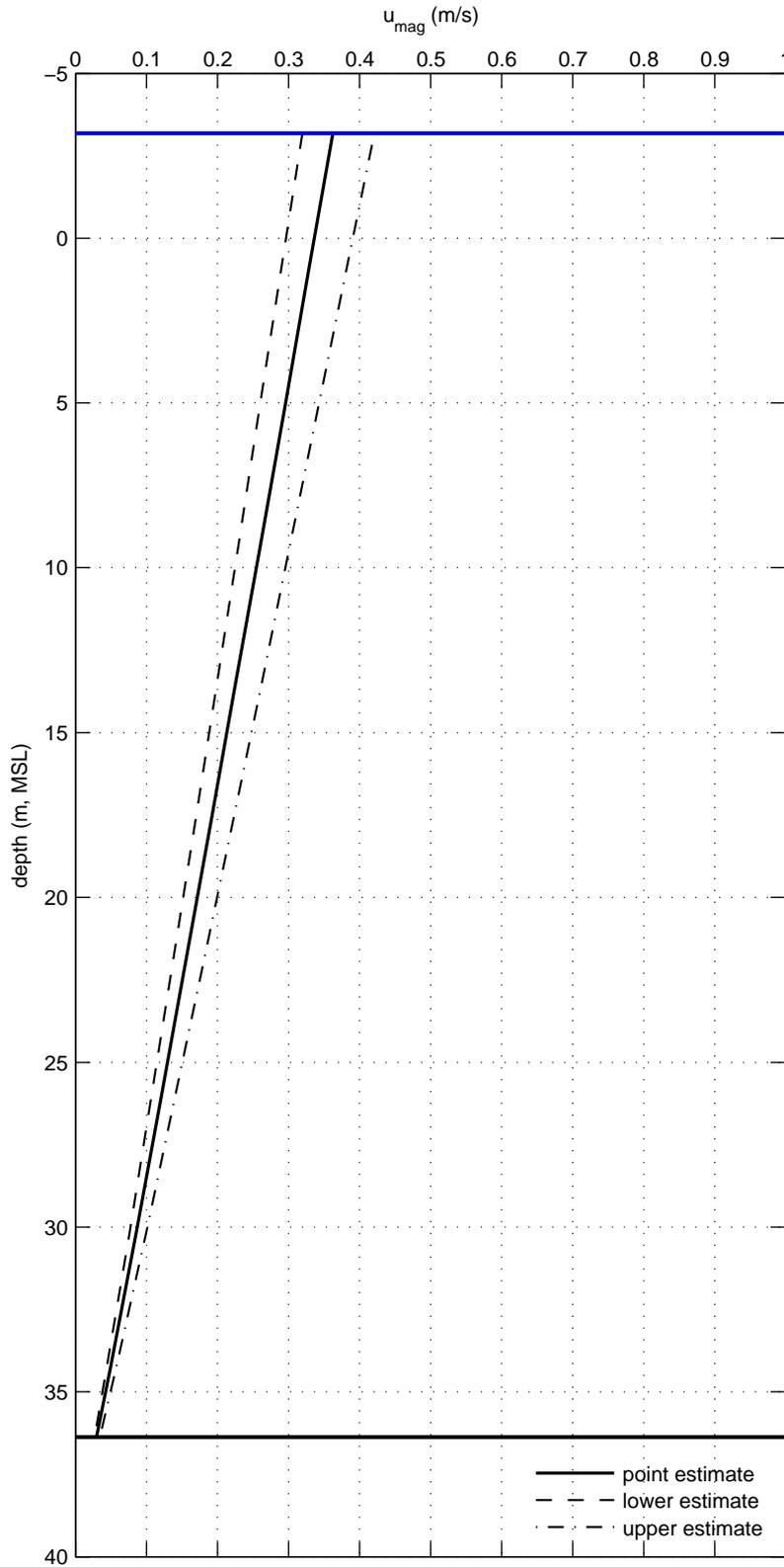
U10 = 18.8 m/s

Deltares

App. C.3.065

RP = 100 yr (U10 = 21.2 m/s)

Dir sector SSE



Current profile for directional sector SSE

RP = 100 yr

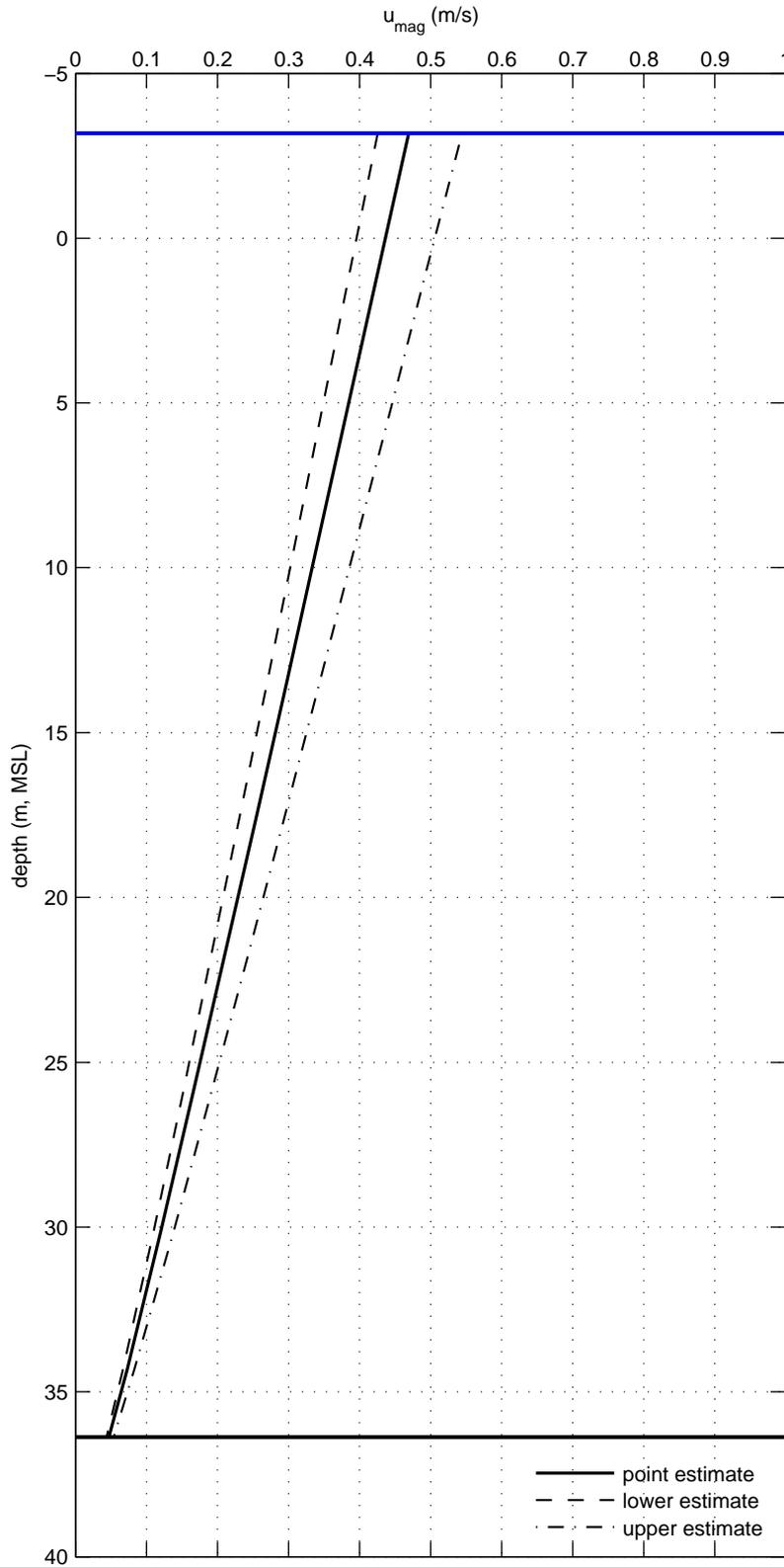
U10 = 21.2 m/s

Deltares

App. C.3.066

RP = 100 yr (U10 = 26.5 m/s)

Dir sector S



Current profile for directional sector S

RP = 100 yr

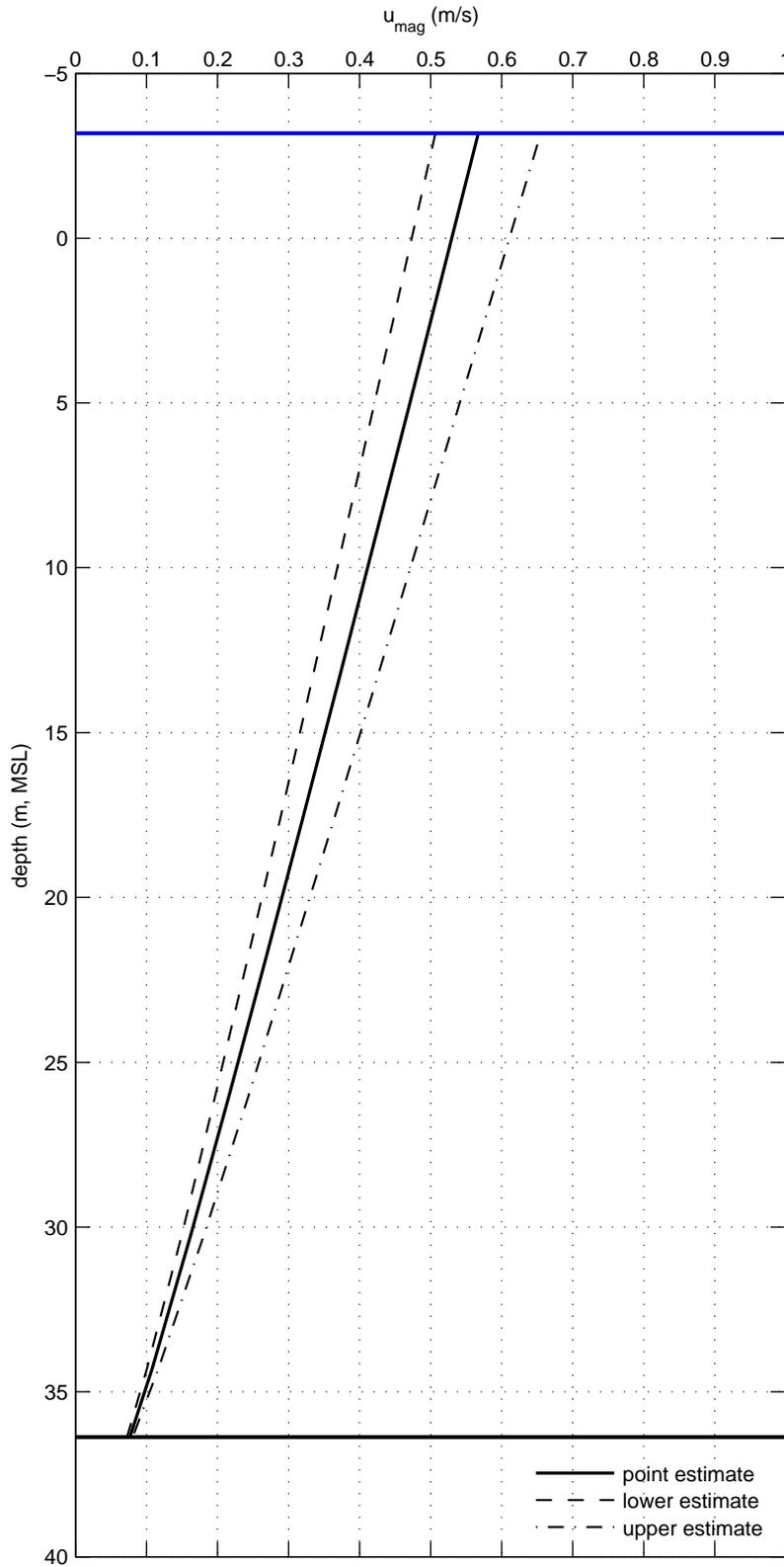
U10 = 26.5 m/s

Deltares

App. C.3.067

RP = 100 yr (U10 = 30.0 m/s)

Dir sector SSW



Current profile for directional sector SSW

RP = 100 yr

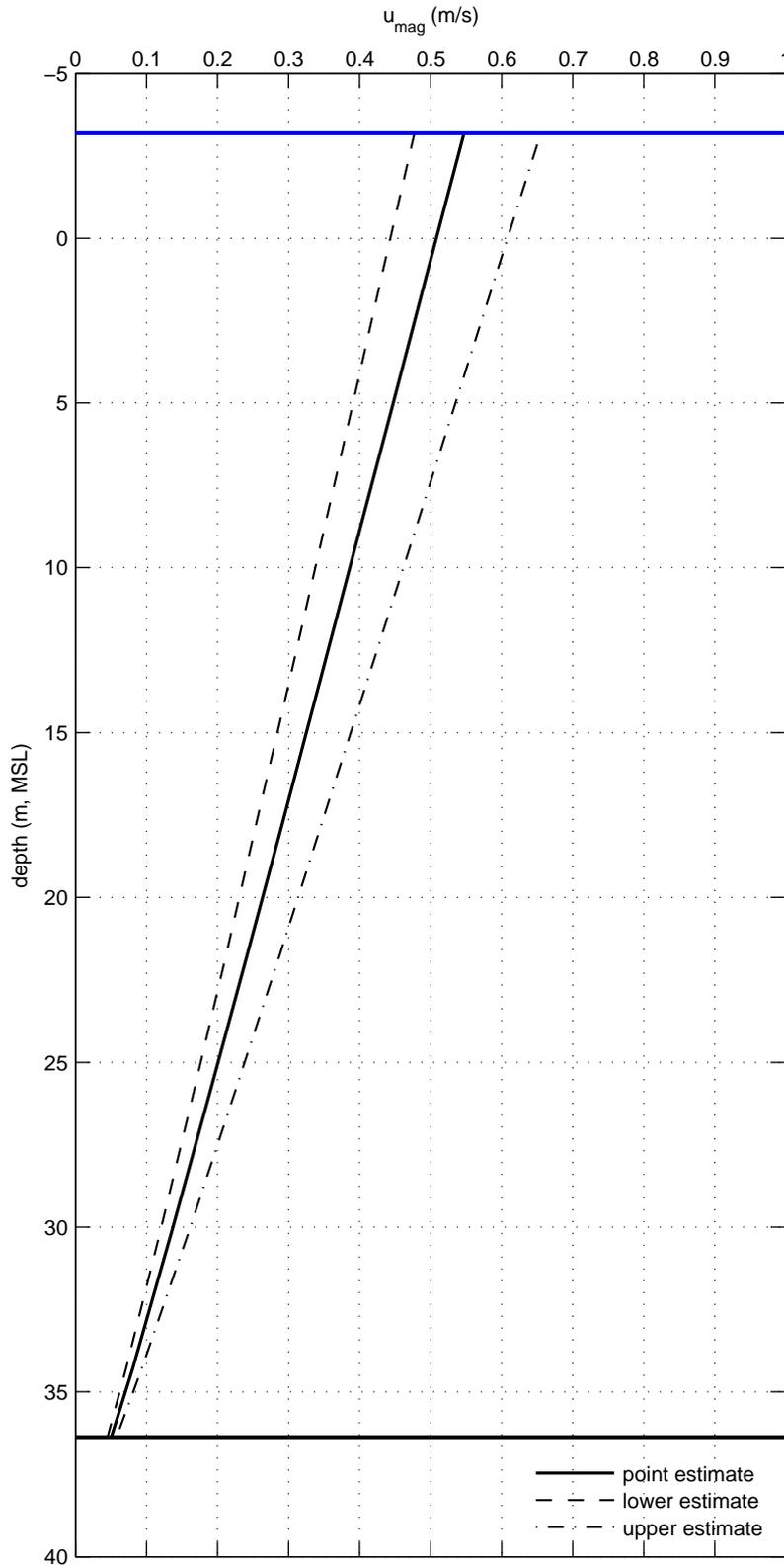
U10 = 30.0 m/s

Deltares

App. C.3.068

RP = 100 yr (U10 = 31.3 m/s)

Dir sector WSW



Current profile for directional sector WSW

RP = 100 yr

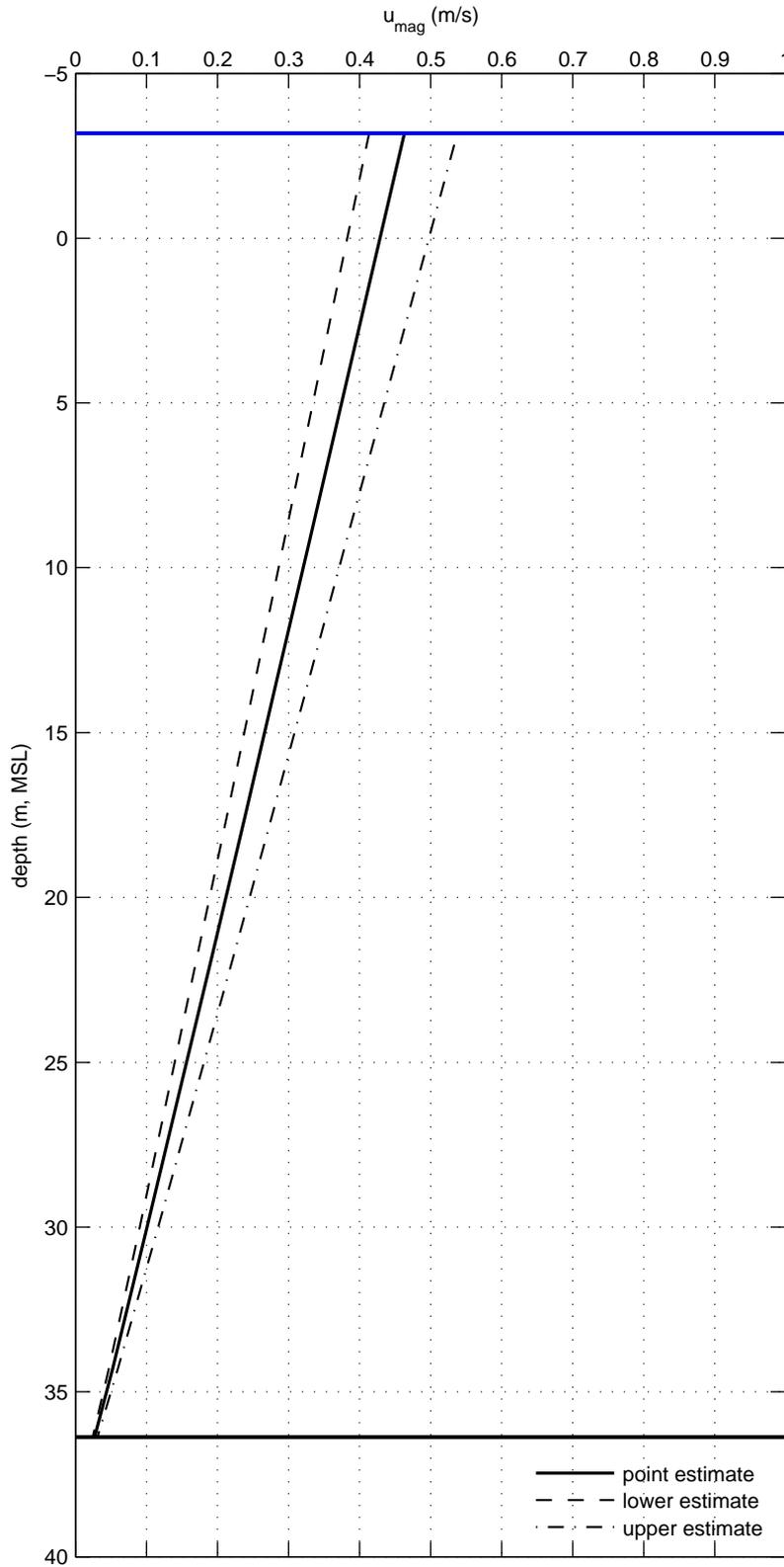
U10 = 31.3 m/s

Deltares

App. C.3.069

RP = 100 yr (U10 = 28.1 m/s)

Dir sector W



Current profile for directional sector W

RP = 100 yr

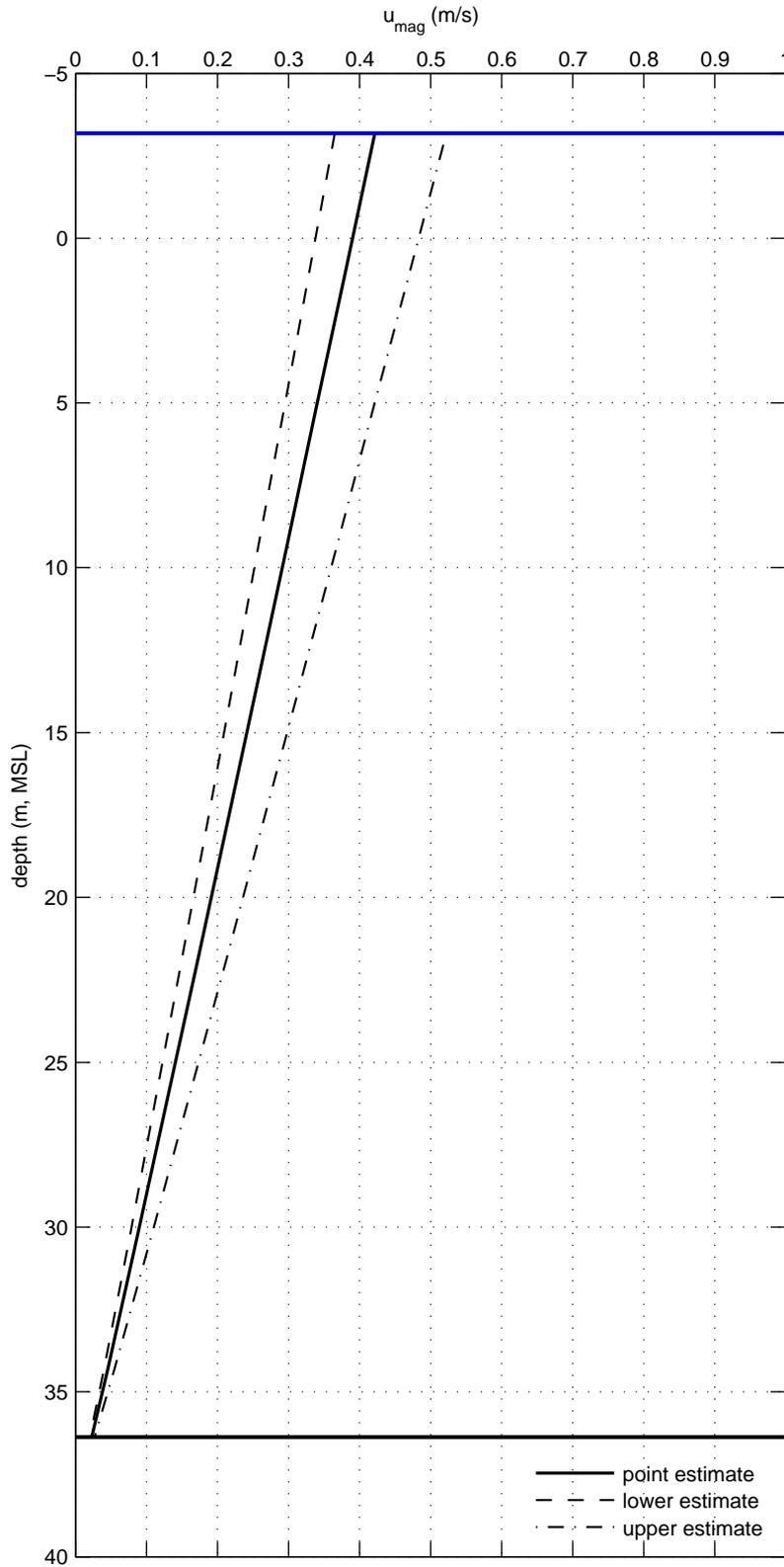
U10 = 28.1 m/s

Deltares

App. C.3.070

RP = 100 yr (U10 = 25.8 m/s)

Dir sector WNW



Current profile for directional sector WNW

RP = 100 yr

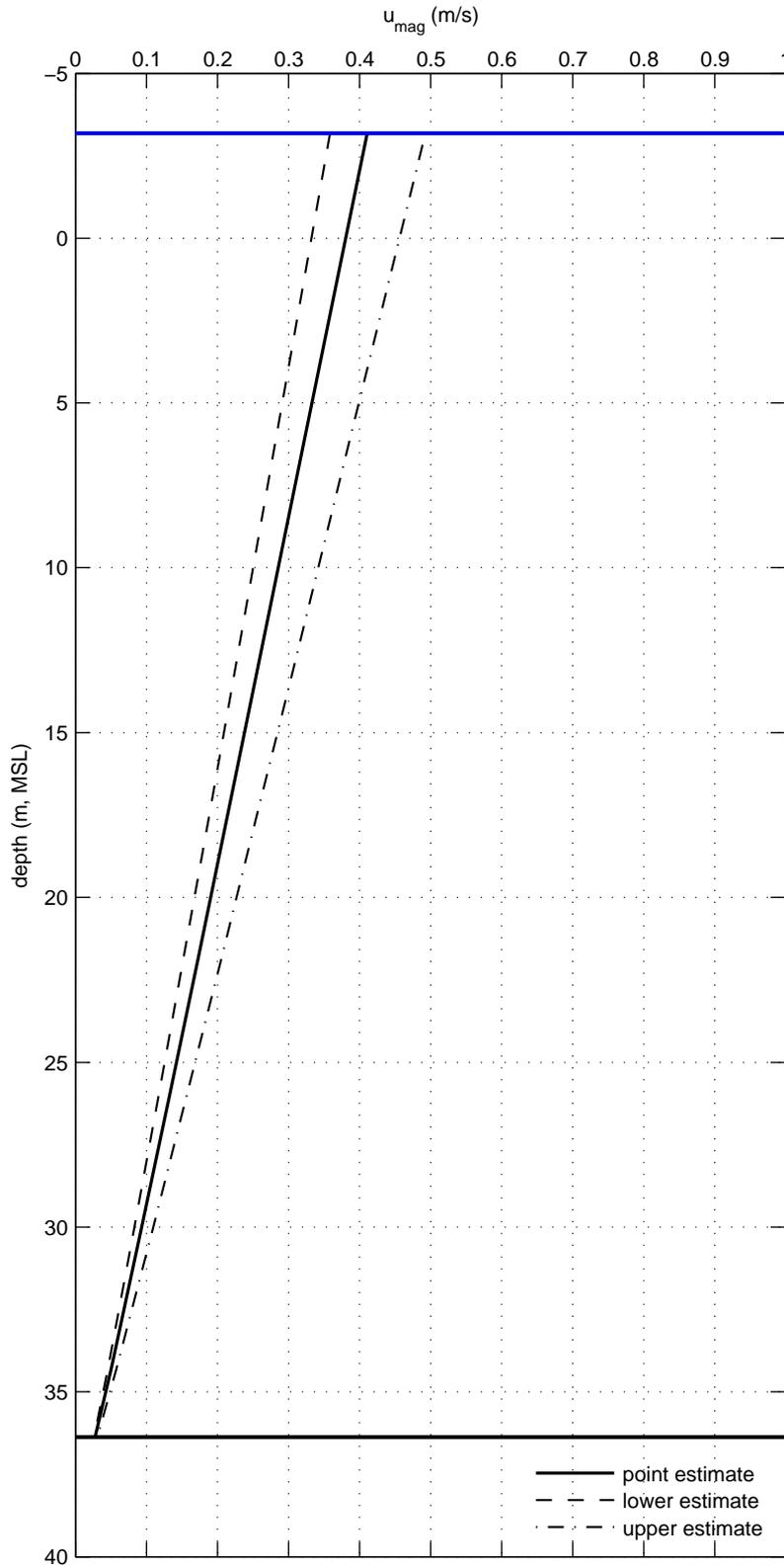
U10 = 25.8 m/s

**Deltares**

App. C.3.071

RP = 100 yr (U10 = 24.5 m/s)

Dir sector NNW



Current profile for directional sector NNW

RP = 100 yr

U10 = 24.5 m/s

**Deltares**

App. C.3.072

$H_s$ (m)	$U_c$ (m/s)												
	0.00-0.10	0.10-0.20	0.20-0.30	0.30-0.40	0.40-0.50	0.50-0.60	0.60-0.70	0.70-0.80	0.80-0.90	0.90-1.00	1.00-1.10	>1.10	
>7.0													
6.5-7.0				0.00		0.00	0.00	0.00					0.00
6.0-6.5		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.01
5.5-6.0	0.00	0.01	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00			0.04
5.0-5.5	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.07
4.5-5.0	0.00	0.02	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.01	0.00	0.00	0.22
4.0-4.5	0.01	0.04	0.08	0.07	0.07	0.06	0.07	0.06	0.05	0.02	0.01		0.53
3.5-4.0	0.03	0.09	0.16	0.14	0.16	0.17	0.16	0.13	0.09	0.03	0.00		1.17
3.0-3.5	0.05	0.19	0.35	0.32	0.31	0.35	0.34	0.27	0.18	0.06	0.01	0.00	2.44
2.5-3.0	0.07	0.30	0.58	0.54	0.56	0.60	0.63	0.52	0.30	0.09	0.01		4.21
2.0-2.5	0.08	0.59	1.12	1.03	1.11	1.16	1.13	0.96	0.57	0.13	0.00		7.88
1.5-2.0	0.06	1.02	1.92	1.70	1.83	2.00	1.97	1.69	0.99	0.15	0.00		13.33
1.0-1.5	0.05	1.85	3.59	3.13	3.43	3.74	3.78	3.28	1.77	0.20	0.00		24.80
0.5-1.0	0.03	2.57	4.86	4.29	4.64	5.19	5.00	4.37	2.25	0.27			33.47
0.0-0.5	0.00	0.85	1.66	1.49	1.60	1.79	1.84	1.58	0.88	0.12			11.80
	0.39	7.54	14.37	12.74	13.76	15.11	14.96	12.89	7.09	1.10	0.04	0.00	100.00
	All year											Total	

Joint Occurrence table of wave height vs. current velocity

**Deltares**

App. D.1.001

$H_s$ (m)	residual current velocity (m/s)											
	0.00-0.10	0.10-0.20	0.20-0.30	0.30-0.40	0.40-0.50	0.50-0.60	0.60-0.70	0.70-0.80	0.80-0.90	0.90-1.00	1.00-1.10	>1.10
>7.0												
6.5-7.0		0.00		0.00			0.00	0.00				0.00
6.0-6.5	0.00	0.01	0.00	0.00			0.00					0.01
5.5-6.0	0.01	0.01	0.01	0.01	0.00	0.00	0.00					0.04
5.0-5.5	0.01	0.02	0.03	0.01	0.00	0.01	0.00	0.00				0.07
4.5-5.0	0.03	0.07	0.07	0.03	0.01	0.01	0.00					0.22
4.0-4.5	0.14	0.18	0.13	0.05	0.03	0.01	0.00					0.53
3.5-4.0	0.32	0.45	0.25	0.11	0.04	0.01	0.00					1.17
3.0-3.5	0.82	0.99	0.46	0.14	0.03	0.00						2.44
2.5-3.0	1.99	1.65	0.48	0.09	0.00	0.00						4.21
2.0-2.5	4.84	2.57	0.41	0.05	0.00	0.00						7.88
1.5-2.0	10.49	2.61	0.21	0.01	0.00							13.33
1.0-1.5	23.01	1.72	0.07	0.00								24.80
0.5-1.0	33.01	0.45	0.01									33.47
0.0-0.5	11.78	0.03										11.80
	86.45	10.74	2.13	0.51	0.13	0.04	0.01	0.00				100.00
	All year											Total

Joint Occurrence table of wave height vs. residual current velocity



		surge height (m)																			
		-2.00→-1.75	-1.75→-1.50	-1.50→-1.25	-1.25→-1.00	-1.00→-0.75	-0.75→-0.50	-0.50→-0.25	-0.25→0.00	0.00→0.25	0.25→0.50	0.50→0.75	0.75→1.00	1.00→1.25	1.25→1.50	1.50→1.75	1.75→2.00	>2.00			
H <sub>s</sub> (m)	>7.0																				
	6.5–7.0									0.00											0.00
	6.0–6.5								0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	5.5–6.0								0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.04
	5.0–5.5						0.00	0.01	0.01	0.00	0.01	0.02	0.01	0.01	0.01	0.00					0.07
	4.5–5.0					0.01	0.02	0.04	0.03	0.05	0.05	0.03	0.01	0.00							0.22
	4.0–4.5				0.00	0.01	0.01	0.05	0.06	0.07	0.15	0.12	0.05	0.00	0.00						0.53
	3.5–4.0				0.00	0.02	0.07	0.14	0.23	0.25	0.30	0.14	0.02	0.00	0.00						1.17
	3.0–3.5			0.00	0.01	0.05	0.14	0.38	0.57	0.69	0.48	0.11	0.01	0.01	0.00						2.44
	2.5–3.0			0.00	0.01	0.06	0.30	0.80	1.32	1.19	0.45	0.07	0.02	0.00							4.21
	2.0–2.5			0.00	0.01	0.06	0.58	2.09	3.03	1.73	0.33	0.04	0.01								7.88
	1.5–2.0			0.00	0.01	0.09	0.97	4.42	6.08	1.58	0.16	0.02	0.01								13.33
	1.0–1.5				0.00	0.05	1.35	11.87	10.30	1.15	0.06	0.01	0.00								24.80
	0.5–1.0					0.03	1.10	21.97	10.11	0.26	0.01	0.00									33.47
0.0–0.5						0.10	8.83	2.84	0.03											11.80	
							0.01	0.04	0.37	4.63	50.57	34.59	6.98	2.00	0.59	0.17	0.04	0.01	0.01	0.00	100.00
		All year																		Total	

Joint Occurrence table of wave height vs. residual water level (surge height)		
	Omnidirectional	
<b>Deltares</b>		App. D.1.004

		surge height (m)																							
		2.00-1.75	1.75-1.50	1.50-1.25	1.25-1.00	1.00-0.75	0.75-0.50	0.50-0.25	0.25-0.00	0.00-0.25	0.25-0.50	0.50-0.75	0.75-1.00	1.00-1.25	1.25-1.50	1.50-1.75	1.75-2.00	>2.00							
$H_s$ (m)	>7.0																								
	6.5-7.0																								
	6.0-6.5																								
	5.5-6.0											0.00	0.02								0.02				
	5.0-5.5											0.03									0.03				
	4.5-5.0										0.03	0.07	0.03	0.01							0.14				
	4.0-4.5										0.15	0.14	0.06	0.03							0.37				
	3.5-4.0								0.00	0.08	0.32	0.14	0.05								0.60				
	3.0-3.5								0.03	0.32	0.69	0.24	0.05								1.32				
	2.5-3.0							0.01	0.17	1.23	0.94	0.09	0.00								2.45				
	2.0-2.5							0.06	0.95	2.83	0.86	0.04									4.74				
	1.5-2.0							0.13	4.08	6.15	0.54	0.02									10.91				
	1.0-1.5							0.48	15.62	9.23	0.25	0.02	0.00								25.59				
	0.5-1.0							0.48	30.94	9.61	0.09	0.00									41.11				
0.0-0.5							0.04	9.95	2.71											12.70					
																1.18	61.75	32.15	3.88	0.79	0.21	0.03	100.00		

sector N: 345°N : 15°N

Total

Joint Occurrence table of wave height vs. residual water level (surge height) Nautical convention: coming from, clockwise from North		
	sector N: 345°N : 15°N	
<b>Deltares</b>		App. D.1.005

		surge height (m)																				
		-2.00—-1.75	-1.75—-1.50	-1.50—-1.25	-1.25—-1.00	-1.00—-0.75	-0.75—-0.50	-0.50—-0.25	-0.25—0.00	0.00—0.25	0.25—0.50	0.50—0.75	0.75—1.00	1.00—1.25	1.25—1.50	1.50—1.75	1.75—2.00	>2.00				
H <sub>s</sub> (m)	>7.0																					
	6.5—7.0																					
	6.0—6.5																					
	5.5—6.0																					
	5.0—5.5									0.04											0.04	
	4.5—5.0								0.04	0.04	0.01											0.09
	4.0—4.5								0.01	0.01	0.01											0.03
	3.5—4.0								0.04	0.17	0.07	0.01										0.30
	3.0—3.5						0.03	0.27	0.32	0.10												0.72
	2.5—3.0						0.02	0.76	0.72	0.08												1.58
	2.0—2.5						0.19	3.09	1.74	0.07												5.09
	1.5—2.0						0.34	6.87	2.71	0.13												10.05
	1.0—1.5						0.69	18.15	5.74	0.13												24.72
	0.5—1.0						1.05	32.90	7.40	0.04												41.38
0.0—0.5							13.59	2.42	0.01												16.01	
										2.33	75.71	21.31	0.64	0.01						100.00		
		sector NNE: 15°N : 45°N																		Total		

Joint Occurrence table of wave height vs. residual water level (surge height)  
 Nautical convention: coming from, clockwise from North

sector NNE: 15°N : 45°N

**Deltares**

App. D.1.006

		surge height (m)																		
		2.00-1.75	1.75-1.50	1.50-1.25	1.25-1.00	1.00-0.75	0.75-0.50	0.50-0.25	0.25-0.00	0.00-0.25	0.25-0.50	0.50-0.75	0.75-1.00	1.00-1.25	1.25-1.50	1.50-1.75	1.75-2.00	>2.00		
H <sub>s</sub> (m)	>7.0																			
	6.5-7.0																			
	6.0-6.5																			
	5.5-6.0																			
	5.0-5.5																			
	4.5-5.0																			
	4.0-4.5																			
	3.5-4.0							0.01	0.10										0.11	
	3.0-3.5							0.18	0.40										0.57	
	2.5-3.0							0.62	1.24	0.09									1.95	
	2.0-2.5							1.05	3.19	0.34									4.58	
	1.5-2.0							1.54	6.46	1.03									9.03	
	1.0-1.5							1.96	18.16	3.23	0.03								23.38	
0.5-1.0							1.79	35.03	5.63	0.07								42.53		
0.0-0.5							0.27	15.07	2.50	0.01								17.85		
									7.41	79.64	12.83	0.11								99.99

sector NEE: 45°N : 75°N

Total

Joint Occurrence table of wave height vs. residual water level (surge height) Nautical convention: coming from, clockwise from North		
	sector NEE: 45°N : 75°N	
<b>Deltares</b>		App. D.1.007

$H_s$ (m)	surge height (m)																	
	-2.00-1.75	-1.75-1.50	-1.50-1.25	-1.25-1.00	-1.00-0.75	-0.75-0.50	-0.50-0.25	-0.25-0.00	0.00-0.25	0.25-0.50	0.50-0.75	0.75-1.00	1.00-1.25	1.25-1.50	1.50-1.75	1.75-2.00		>2.00
>7.0																		
6.5-7.0																		
6.0-6.5																		
5.5-6.0																		
5.0-5.5																		
4.5-5.0																		
4.0-4.5																		
3.5-4.0						0.05												0.05
3.0-3.5						0.52	0.06											0.58
2.5-3.0						0.17	1.07	0.23										1.47
2.0-2.5						0.29	3.61	1.50										5.41
1.5-2.0						0.12	5.77	4.30	0.25	0.02								10.46
1.0-1.5						0.08	7.81	9.97	1.15	0.02								19.02
0.5-1.0							5.18	34.54	3.65	0.03								43.39
0.0-0.5							0.26	16.97	2.39									19.62
							1.23	23.77	67.51	7.43	0.06							100.00

sector E: 75°N : 105°N

Total

Joint Occurrence table of wave height vs. residual water level (surge height) Nautical convention: coming from, clockwise from North		
	sector E: 75°N : 105°N	
<b>Deltares</b>		App. D.1.008

		surge height (m)																			
		2.00-1.75	1.75-1.50	1.50-1.25	1.25-1.00	1.00-0.75	0.75-0.50	0.50-0.25	0.25-0.00	0.00-0.25	0.25-0.50	0.50-0.75	0.75-1.00	1.00-1.25	1.25-1.50	1.50-1.75	1.75-2.00	>2.00			
H <sub>s</sub> (m)	>7.0																				
	6.5-7.0																				
	6.0-6.5																				
	5.5-6.0																				
	5.0-5.5																				
	4.5-5.0																				
	4.0-4.5																				
	3.5-4.0																				
	3.0-3.5						0.05														0.05
	2.5-3.0						0.10	0.15	0.19												0.44
2.0-2.5						0.29	0.36	0.32	0.02											1.00	
1.5-2.0						0.53	3.52	2.06	0.15											6.26	
1.0-1.5					0.15	0.73	7.55	8.30	1.77	0.05										18.55	
0.5-1.0						0.34	7.28	33.84	6.09	0.07										47.63	
0.0-0.5							0.95	21.02	4.10											26.07	
		0.15 2.04 19.81 65.74 12.14 0.12														100.00					
sector SEE: 105°N : 135°N		Total																			

Joint Occurrence table of wave height vs. residual water level (surge height)  
 Nautical convention: coming from, clockwise from North

sector SEE: 105°N : 135°N

**Deltares**

App. D.1.009

		surge height (m)																				
		2.00-1.75	1.75-1.50	1.50-1.25	1.25-1.00	1.00-0.75	0.75-0.50	0.50-0.25	0.25-0.00	0.00-0.25	0.25-0.50	0.50-0.75	0.75-1.00	1.00-1.25	1.25-1.50	1.50-1.75	1.75-2.00	>2.00				
H <sub>s</sub> (m)	>7.0																					
	6.5-7.0																					
	6.0-6.5																					
	5.5-6.0																					
	5.0-5.5																					
	4.5-5.0																					
	4.0-4.5																					
	3.5-4.0																					
	3.0-3.5				0.02	0.05	0.07	0.02	0.02													0.20
	2.5-3.0				0.07	0.05	0.12	0.42	0.27	0.05												0.98
2.0-2.5					0.02	0.07	0.90	0.54	0.20	0.02											1.76	
1.5-2.0					0.07	1.00	3.57	1.83	0.95	0.17											7.60	
1.0-1.5					0.02	0.42	6.18	8.57	2.34	0.46	0.10										18.10	
0.5-1.0						0.42	6.55	30.12	7.28	0.22											44.58	
0.0-0.5							0.64	18.86	7.30												26.80	
							0.10	0.22	2.10	18.27	60.21	18.12	0.88	0.10							100.00	
		sector SEE: 135°N : 165°N																		Total		

Joint Occurrence table of wave height vs. residual water level (surge height) Nautical convention: coming from, clockwise from North		
	sector SEE: 135°N : 165°N	
<b>Deltares</b>		App. D.1.010



		surge height (m)																		
		-2.00—-1.75	-1.75—-1.50	-1.50—-1.25	-1.25—-1.00	-1.00—-0.75	-0.75—-0.50	-0.50—-0.25	-0.25—0.00	0.00—0.25	0.25—0.50	0.50—0.75	0.75—1.00	1.00—1.25	1.25—1.50	1.50—1.75	1.75—2.00	>2.00		
H <sub>s</sub> (m)	>7.0																			
	6.5—7.0																			
	6.0—6.5																			
	5.5—6.0																			
	5.0—5.5							0.01	0.03	0.02	0.01								0.06	
	4.5—5.0							0.03	0.08	0.07	0.01	0.01								0.19
	4.0—4.5					0.07	0.06	0.16	0.14	0.04	0.02									0.49
	3.5—4.0				0.01	0.10	0.35	0.52	0.40	0.12	0.03	0.01								1.54
	3.0—3.5			0.01	0.02	0.18	0.77	1.24	0.87	0.33	0.03									3.46
	2.5—3.0			0.03	0.03	0.22	1.44	3.01	2.16	0.50	0.06	0.01								7.44
	2.0—2.5				0.02	0.21	1.92	5.93	4.48	0.71	0.08									13.35
	1.5—2.0					0.16	2.12	8.85	6.85	0.88	0.10	0.02								18.98
	1.0—1.5					0.01	1.26	11.76	8.47	0.72	0.01									22.23
	0.5—1.0					0.05	0.97	15.04	8.45	0.48	0.03	0.01								25.03
0.0—0.5						0.17	4.45	2.53	0.09										7.24	
						0.03	0.08	1.00	9.12	51.05	34.44	3.88	0.36	0.04					100.00	
		sector SSW: 195°N : 225°N																	Total	

Joint Occurrence table of wave height vs. residual water level (surge height) Nautical convention: coming from, clockwise from North		
	sector SSW: 195°N : 225°N	
<b>Deltares</b>		App. D.1.012

		surge height (m)																			
		-2.00→-1.75	-1.75→-1.50	-1.50→-1.25	-1.25→-1.00	-1.00→-0.75	-0.75→-0.50	-0.50→-0.25	-0.25→0.00	0.00→0.25	0.25→0.50	0.50→0.75	0.75→1.00	1.00→1.25	1.25→1.50	1.50→1.75	1.75→2.00	>2.00			
H <sub>s</sub> (m)	>7.0																				
	6.5–7.0									0.00											0.00
	6.0–6.5								0.01												0.01
	5.5–6.0								0.01	0.01	0.01										0.03
	5.0–5.5						0.01	0.02	0.01	0.01	0.03										0.09
	4.5–5.0						0.02	0.07	0.16	0.07	0.03	0.03	0.00								0.38
	4.0–4.5					0.01	0.04	0.21	0.25	0.20	0.11	0.02									0.84
	3.5–4.0					0.02	0.15	0.44	0.94	0.67	0.28	0.07									2.58
	3.0–3.5					0.01	0.13	1.15	2.12	1.23	0.34	0.07	0.00								5.03
	2.5–3.0					0.00	0.11	1.54	3.43	1.74	0.35	0.06	0.00	0.01							7.24
	2.0–2.5					0.00	0.21	3.16	5.95	1.92	0.27	0.04	0.00								11.56
	1.5–2.0					0.01	0.39	5.33	9.44	1.85	0.25	0.02	0.02								17.30
	1.0–1.5					0.02	0.46	10.70	11.80	1.69	0.14	0.02	0.00								24.84
	0.5–1.0						0.20	13.24	10.11	0.35	0.01	0.01									23.91
	0.0–0.5						0.02	3.89	2.27	0.01											6.19
							0.07	1.74	39.74	46.51	9.76	1.81	0.33	0.04	0.01					100.00	
		sector SWW: 225°N : 255°N																		Total	

Joint Occurrence table of wave height vs. residual water level (surge height) Nautical convention: coming from, clockwise from North		
	sector SWW: 225°N : 255°N	
<b>Deltares</b>		App. D.1.013

		surge height (m)																								
		2.00-1.75	1.75-1.50	1.50-1.25	1.25-1.00	1.00-0.75	0.75-0.50	0.50-0.25	0.25-0.00	0.00-0.25	0.25-0.50	0.50-0.75	0.75-1.00	1.00-1.25	1.25-1.50	1.50-1.75	1.75-2.00	>2.00								
H <sub>s</sub> (m)	>7.0																									
	6.5-7.0									0.02											0.02					
	6.0-6.5										0.01	0.01	0.01								0.02					
	5.5-6.0										0.03	0.02	0.01								0.07					
	5.0-5.5									0.01		0.01	0.02								0.03					
	4.5-5.0								0.01	0.09	0.09	0.06	0.05								0.30					
	4.0-4.5									0.06	0.21	0.14	0.11	0.02							0.54					
	3.5-4.0							0.02	0.07	0.33	0.63	0.20	0.10	0.03	0.01						1.39					
	3.0-3.5							0.10	0.41	1.16	1.16	0.29	0.02	0.02							3.17					
	2.5-3.0						0.06	0.22	1.01	2.68	1.23	0.21	0.10								5.50					
	2.0-2.5						0.09	0.81	3.80	3.97	1.01	0.21	0.02								9.91					
	1.5-2.0						0.16	1.77	8.28	3.91	0.66	0.07	0.03								14.88					
	1.0-1.5					0.01	0.37	6.66	16.23	3.27	0.23	0.03	0.01								26.82					
	0.5-1.0						0.15	12.92	14.57	0.51											28.15					
0.0-0.5							5.67	3.48	0.06											9.21						
																0.01	0.83	28.18	47.87	16.06	5.25	1.25	0.48	0.07	0.01	100.00

sector W: 255°N : 285°N

Total

Joint Occurrence table of wave height vs. residual water level (surge height) Nautical convention: coming from, clockwise from North		
	sector W: 255°N : 285°N	
<b>Deltares</b>		App. D.1.014

		surge height (m)																										
		2.00-1.75	1.75-1.50	1.50-1.25	1.25-1.00	1.00-0.75	0.75-0.50	0.50-0.25	0.25-0.00	0.00-0.25	0.25-0.50	0.50-0.75	0.75-1.00	1.00-1.25	1.25-1.50	1.50-1.75	1.75-2.00	>2.00										
H <sub>s</sub> (m)	>7.0																											
	6.5-7.0																											
	6.0-6.5																											
	5.5-6.0												0.01	0.03	0.03	0.03	0.01				0.09							
	5.0-5.5										0.02	0.06	0.05	0.03							0.16							
	4.5-5.0									0.01	0.08	0.09	0.04	0.04	0.01							0.28						
	4.0-4.5								0.06	0.03	0.30	0.56	0.18	0.02	0.01							1.17						
	3.5-4.0								0.06	0.22	0.66	0.49	0.06	0.01	0.03							1.51						
	3.0-3.5								0.10	0.83	1.06	0.37	0.06	0.04	0.02							2.47						
	2.5-3.0							0.02	0.66	2.14	1.27	0.30	0.06									4.44						
	2.0-2.5						0.05	0.38	2.32	3.99	1.01	0.16	0.04									7.94						
	1.5-2.0						0.06	1.42	7.09	4.28	0.42	0.04	0.03									13.35						
	1.0-1.5						0.29	6.29	17.88	3.03	0.12											27.62						
	0.5-1.0						0.11	13.57	16.69	0.52												30.90						
	0.0-0.5						0.03	7.02	2.97	0.06												10.08						
																	0.54	28.71	47.84	15.11	4.92	2.07	0.55	0.16	0.09	0.01	100.00	
																	sector NWW: 285°N : 315°N										Total	

Joint Occurrence table of wave height vs. residual water level (surge height)  
 Nautical convention: coming from, clockwise from North

sector NWW: 285°N : 315°N

**Deltares**

App. D.1.015

		surge height (m)																			
		-2.00→-1.75	-1.75→-1.50	-1.50→-1.25	-1.25→-1.00	-1.00→-0.75	-0.75→-0.50	-0.50→-0.25	-0.25→0.00	0.00→0.25	0.25→0.50	0.50→0.75	0.75→1.00	1.00→1.25	1.25→1.50	1.50→1.75	1.75→2.00	>2.00			
H <sub>s</sub> (m)	>7.0																				
	6.5–7.0																				
	6.0–6.5												0.00	0.03	0.03	0.01	0.01	0.00			0.09
	5.5–6.0												0.03	0.04	0.05	0.01	0.03	0.00			0.16
	5.0–5.5											0.03	0.09	0.05	0.04	0.00					0.21
	4.5–5.0											0.12	0.20	0.12	0.02						0.47
	4.0–4.5								0.00	0.05	0.46	0.37	0.14								1.02
	3.5–4.0								0.04	0.20	0.82	0.42	0.03	0.00							1.52
	3.0–3.5								0.17	1.25	1.32	0.24									2.98
	2.5–3.0							0.01	1.10	2.03	1.04	0.09	0.00								4.27
	2.0–2.5							0.56	3.43	3.55	0.59	0.01									8.14
	1.5–2.0						0.06	2.31	8.59	2.39	0.09										13.44
	1.0–1.5						0.25	10.32	14.95	1.14	0.01										26.67
	0.5–1.0						0.21	18.99	10.95	0.18											30.33
0.0–0.5						0.02	8.15	2.50	0.02											10.69	
							0.55	40.34	41.73	10.81	4.48	1.45	0.43	0.14	0.03	0.04	0.01			100.00	
		sector NNW: 315°N : 345°N																		Total	

Joint Occurrence table of wave height vs. residual water level (surge height) Nautical convention: coming from, clockwise from North		
	sector NNW: 315°N : 345°N	
<b>Deltares</b>		App. D.1.016