Final Report

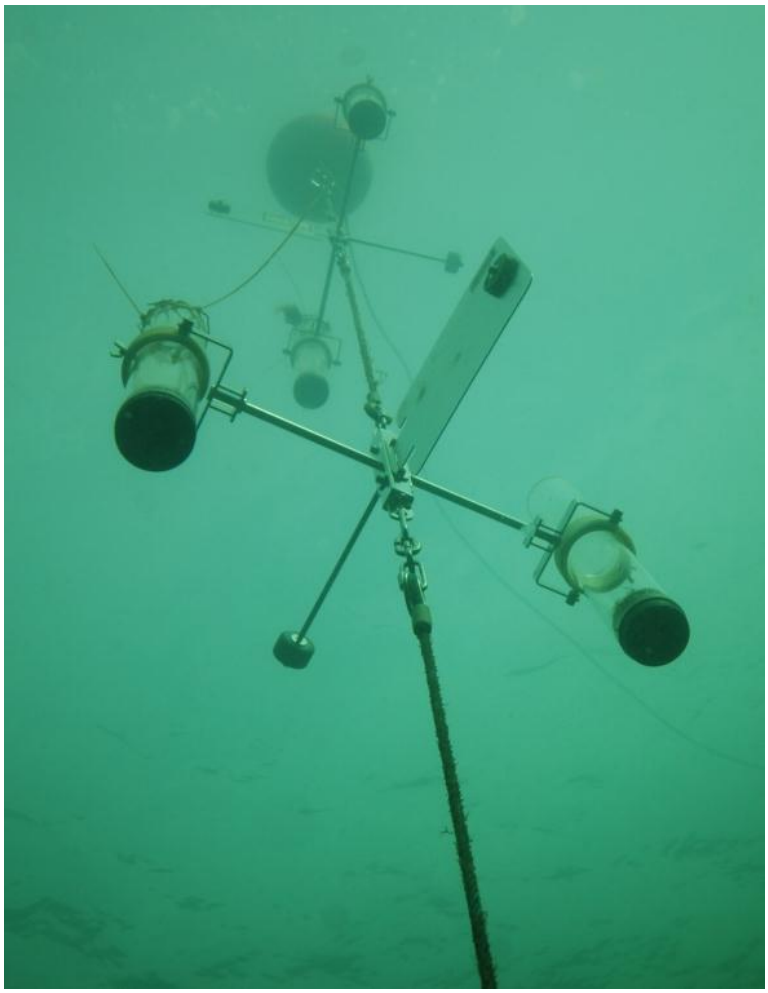
FEHMARNBELT FIXED LINK
HYDROGRAPHIC SERVICES (FEHY)

Marine Water - Baseline

Suspended Sediment

E1TR0057 Volume III

APPENDICES C-D-I-J-K-M-N



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May 2013

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Maps:
Unless otherwise stated:
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Geodatastyrelsen (formerly Kort- og Matrikelstyrelsen), Kort10 and 25 Matrikelkort
GEUS (De Nationale Geologiske Undersøgelser for Danmark og Grønland)
HELCOM (Helsinki Commission – Baltic Marine Environment Protection Commission)
Landesamt für Vermessung und Geoinformation Schleswig-Holstein (formerly Landes-vermessungsamt Schleswig-Holstein) GeoBasis-DE/LVermGeo SH
Model software geographic plots: Also data from Farvandsvæsenet and Bundesamt für Seeschifffahrt und Hydrographie

Photos:
Photos taken by consortium members unless otherwise stated

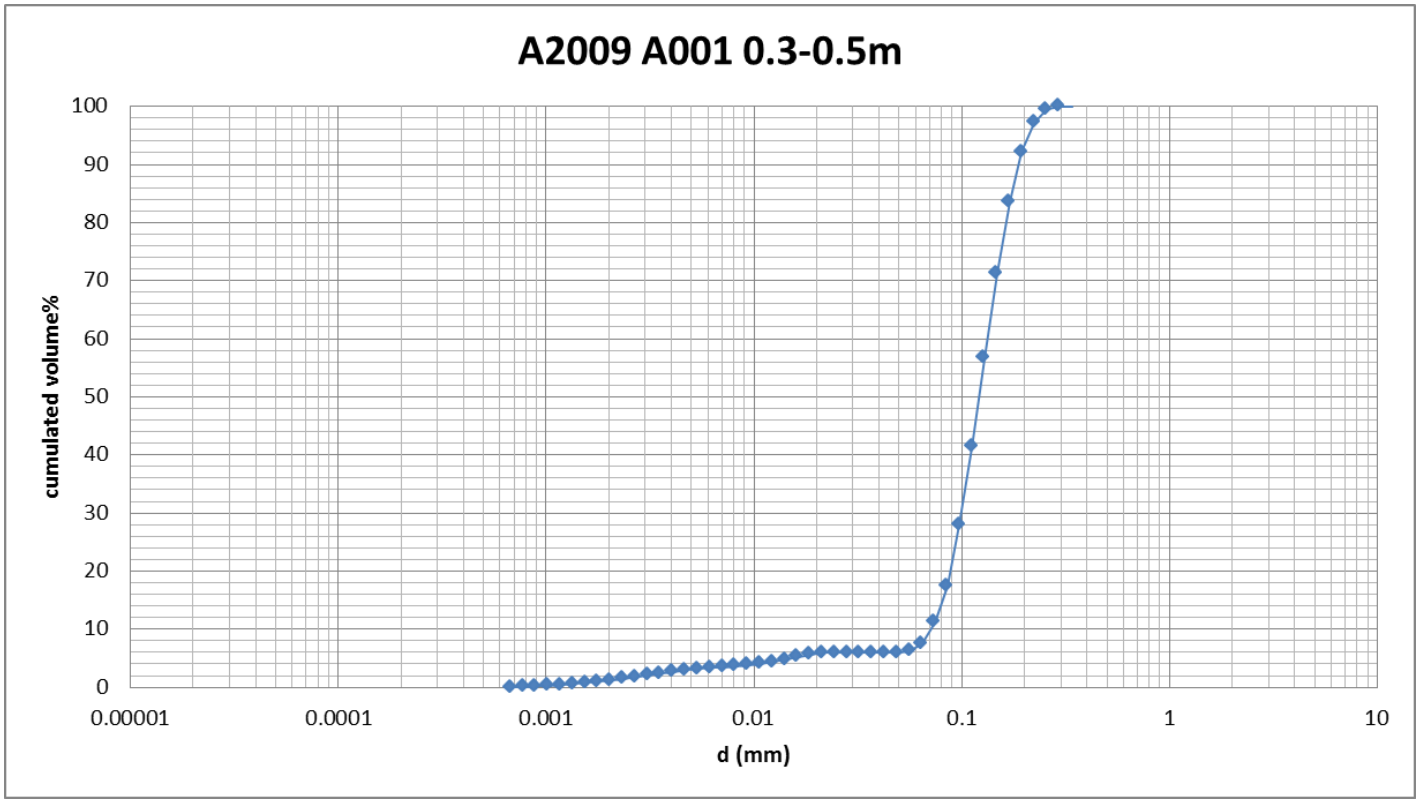
Co-financed by the European Union
Trans-European Transport Network (TEN-T)

Note to the reader:
In this report the time for start of construction is artificially set to 1 October 2014 for the tunnel and 1 January 2015 for the bridge alternative. In the Danish EIA (VVM) and the German EIA (UVS/LBP) absolute year references are not used. Instead the time references are relative to start of construction works. In the VVM the same time reference is used for tunnel and bridge, i.e. year 0 corresponds to 2014/start of tunnel construction; year 1 corresponds to 2015/start of bridge construction etc. In the UVS/LBP individual time references are used for tunnel and bridge, i.e. for tunnel construction year 1 is equivalent to 2014 (construction starts 1 October in year 1) and for bridge construction year 1 is equivalent to 2015 (construction starts 1st January).

Co-financed by the European Union
Trans-European Transport Network (TEN-T)

A P P E N D I X C

Grain Size Distributions for all Samples in Figure 5-9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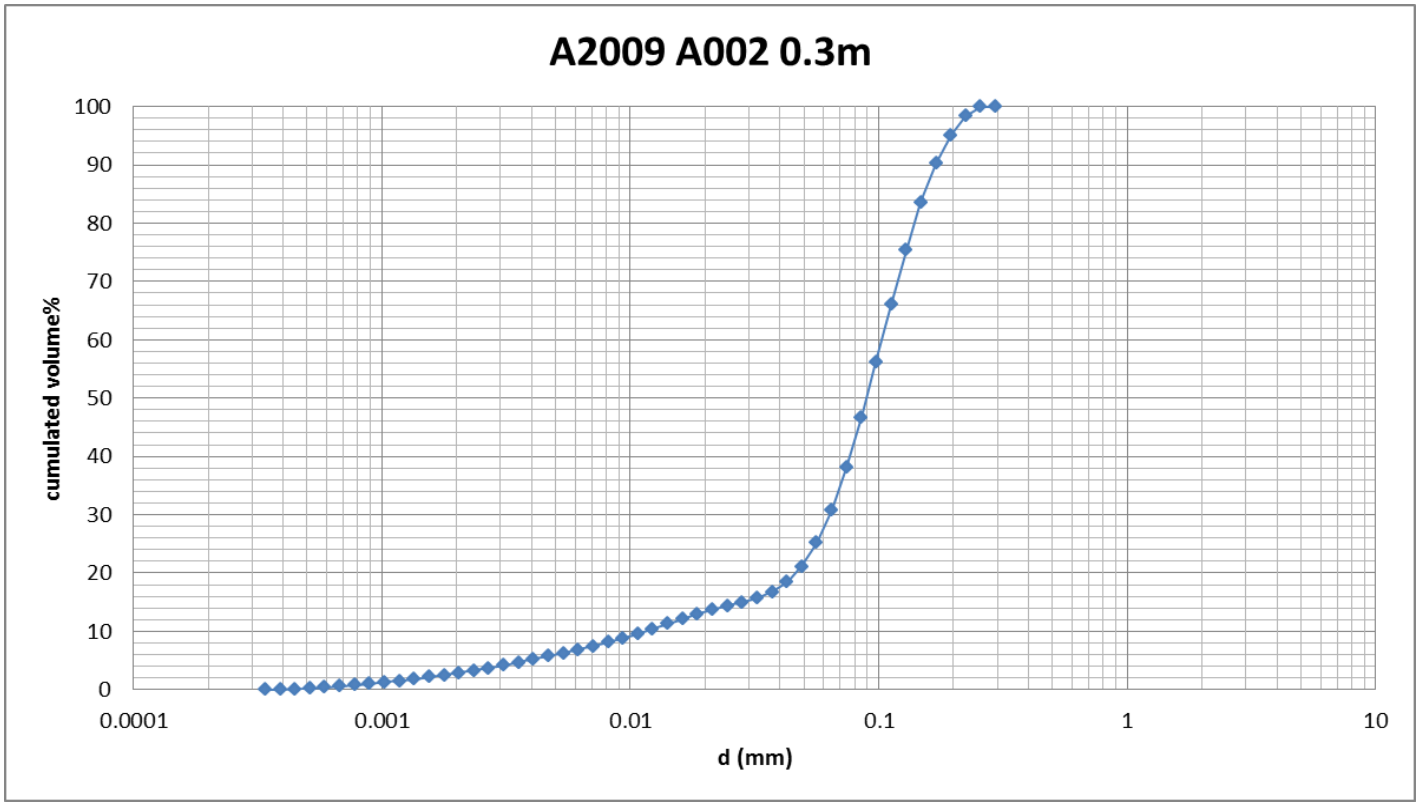
cumulated volume%
100
90
80
70
60
50
40
30
20
10
0
0.00001
0.0001
0.001
0.01
0.1
1
10
d (mm)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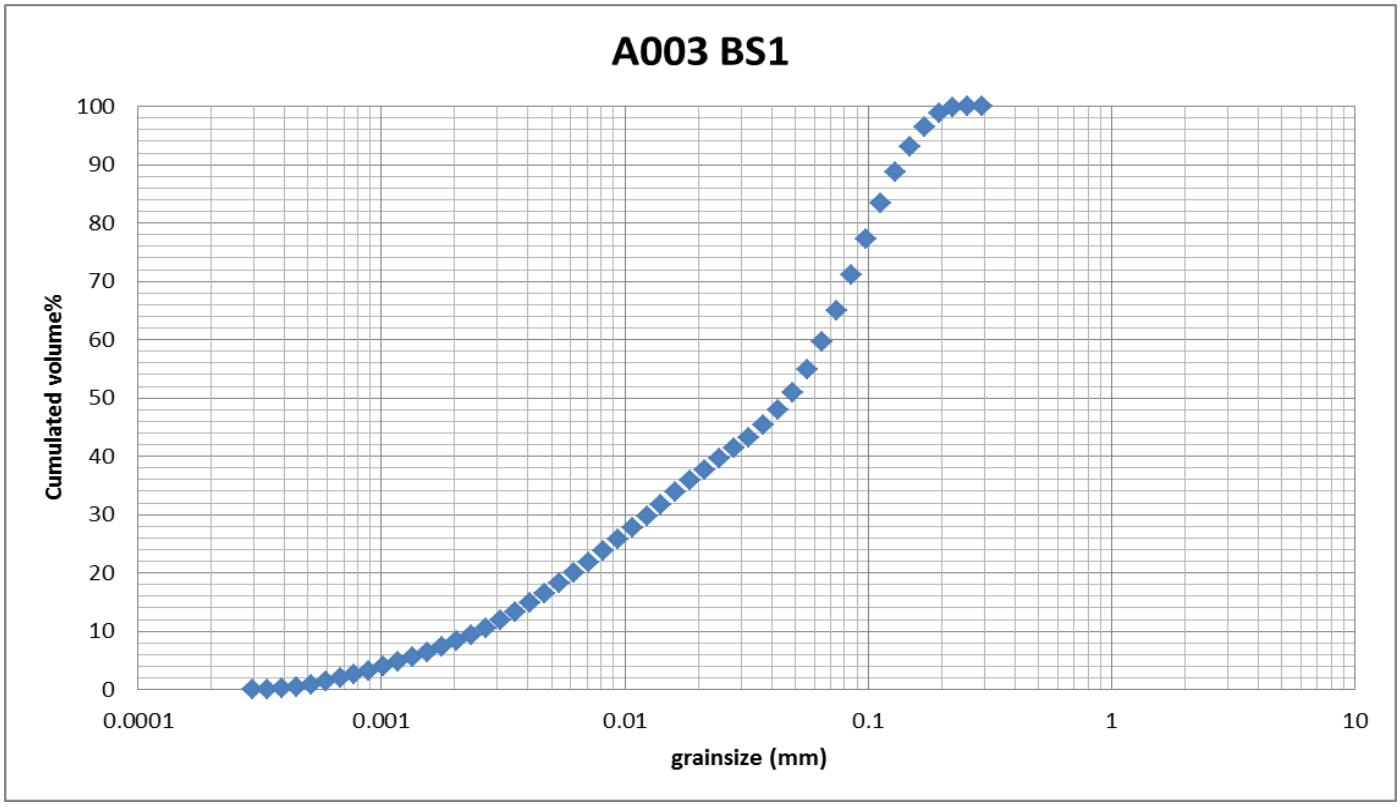
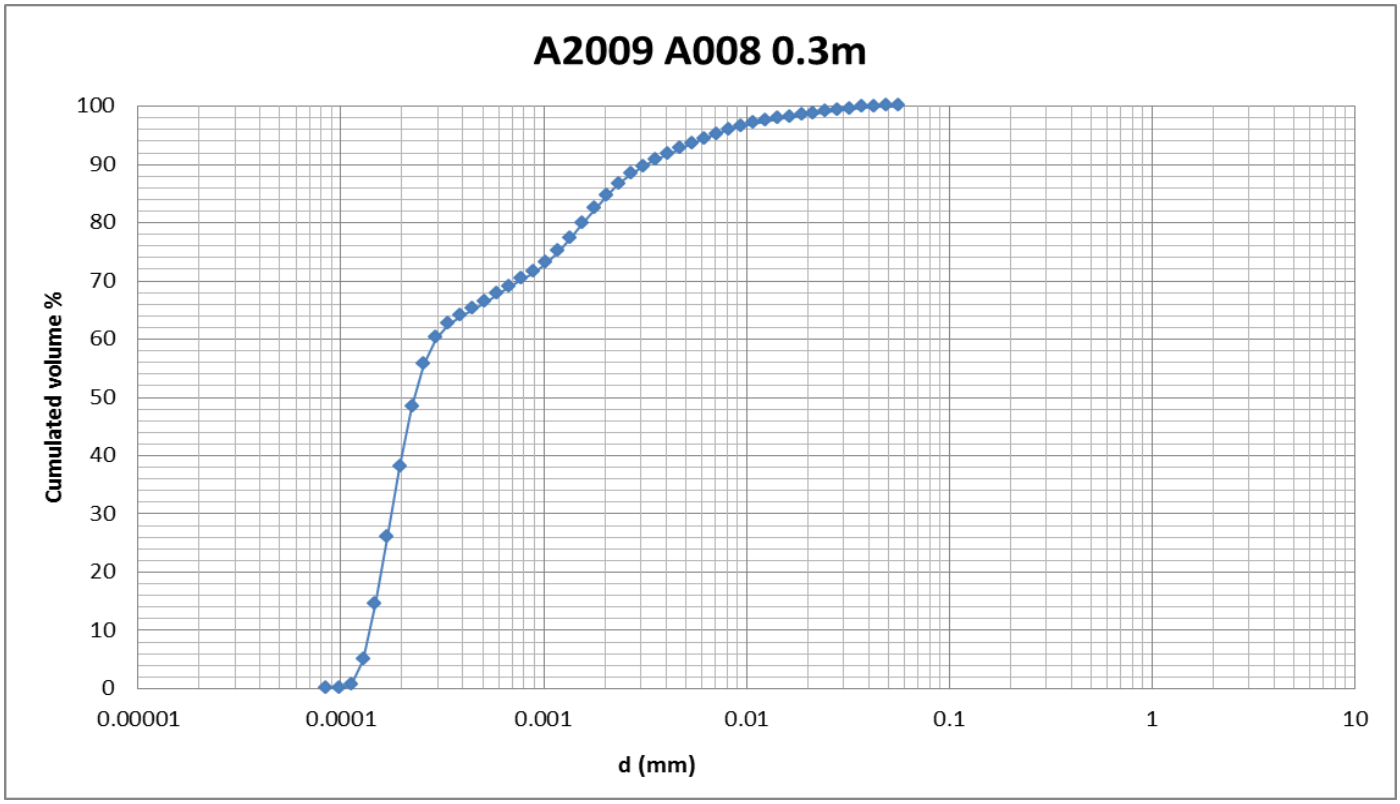
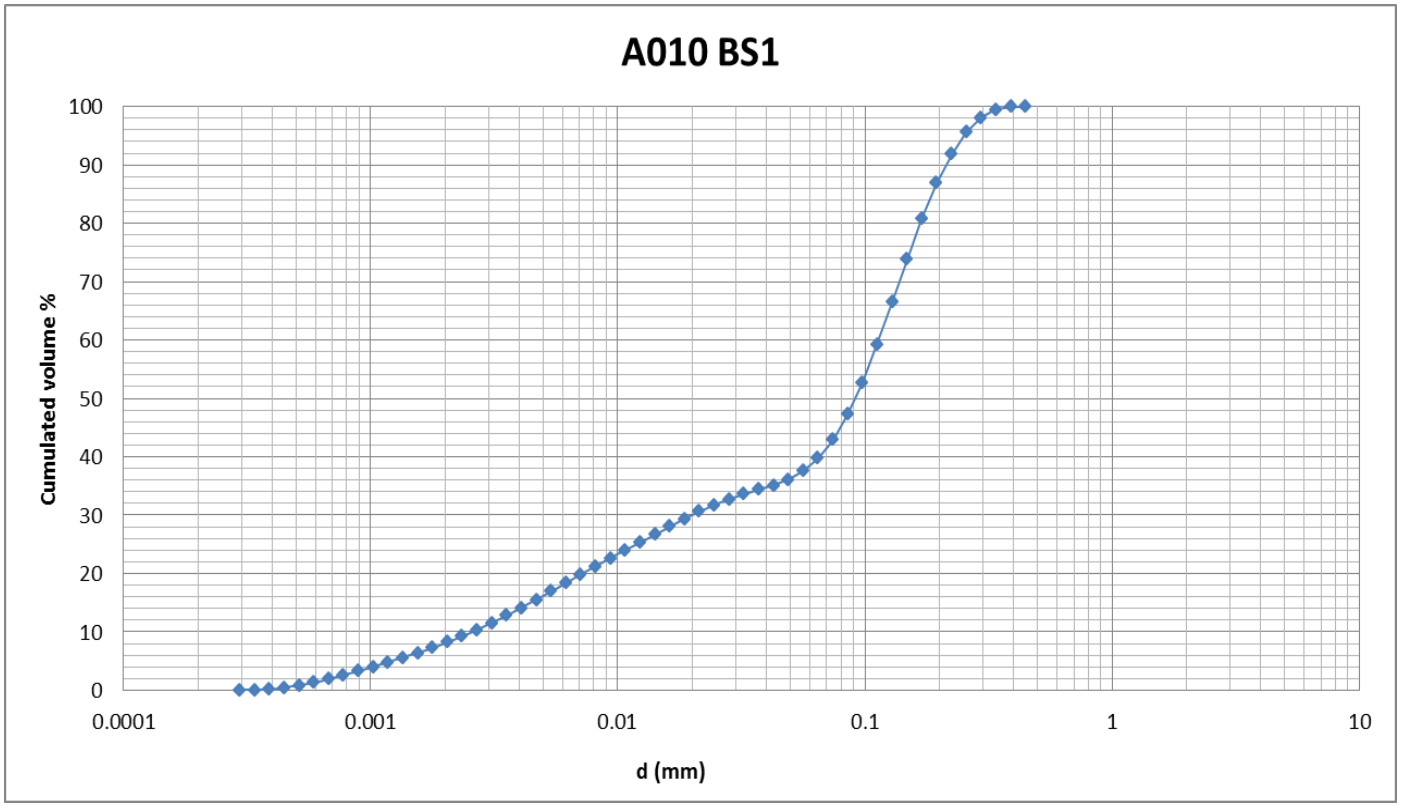
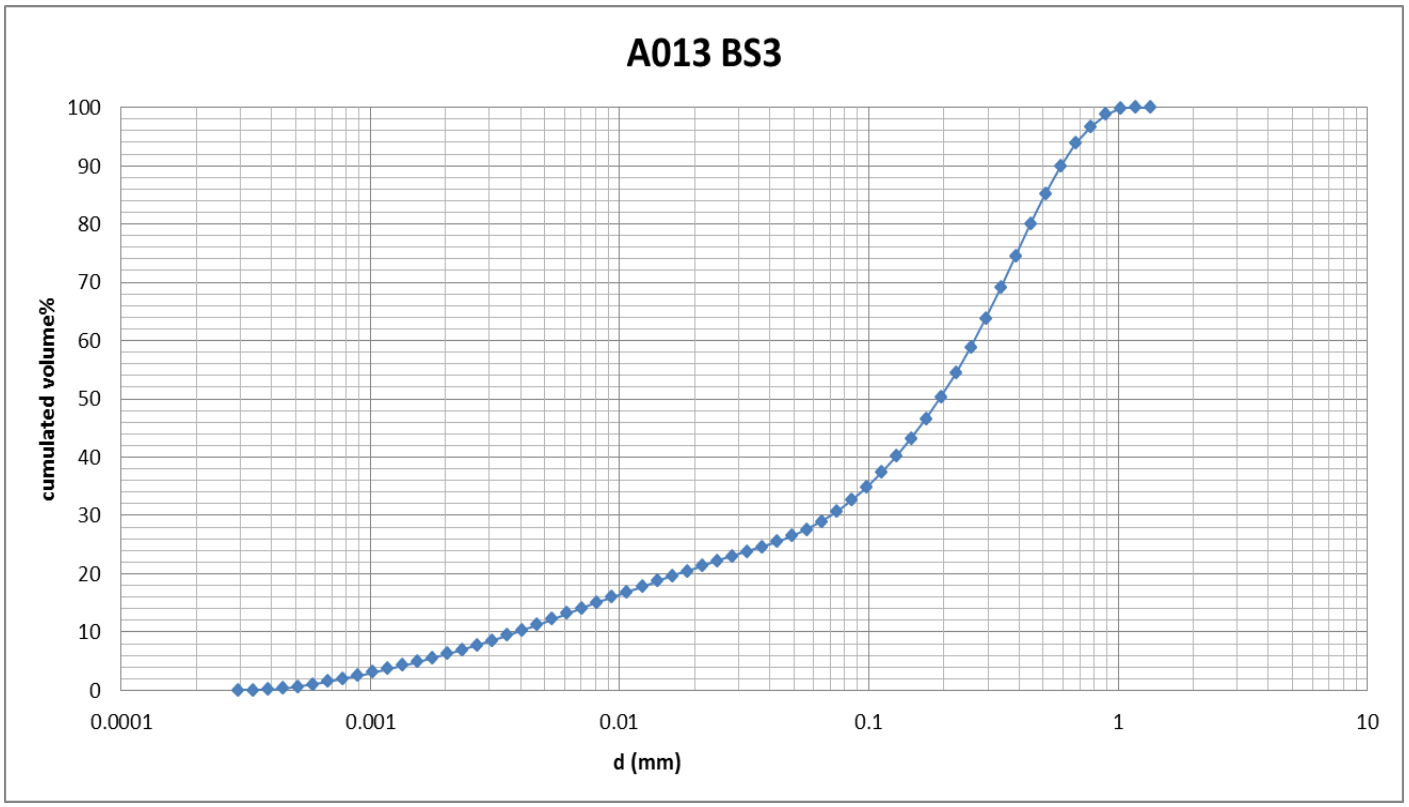
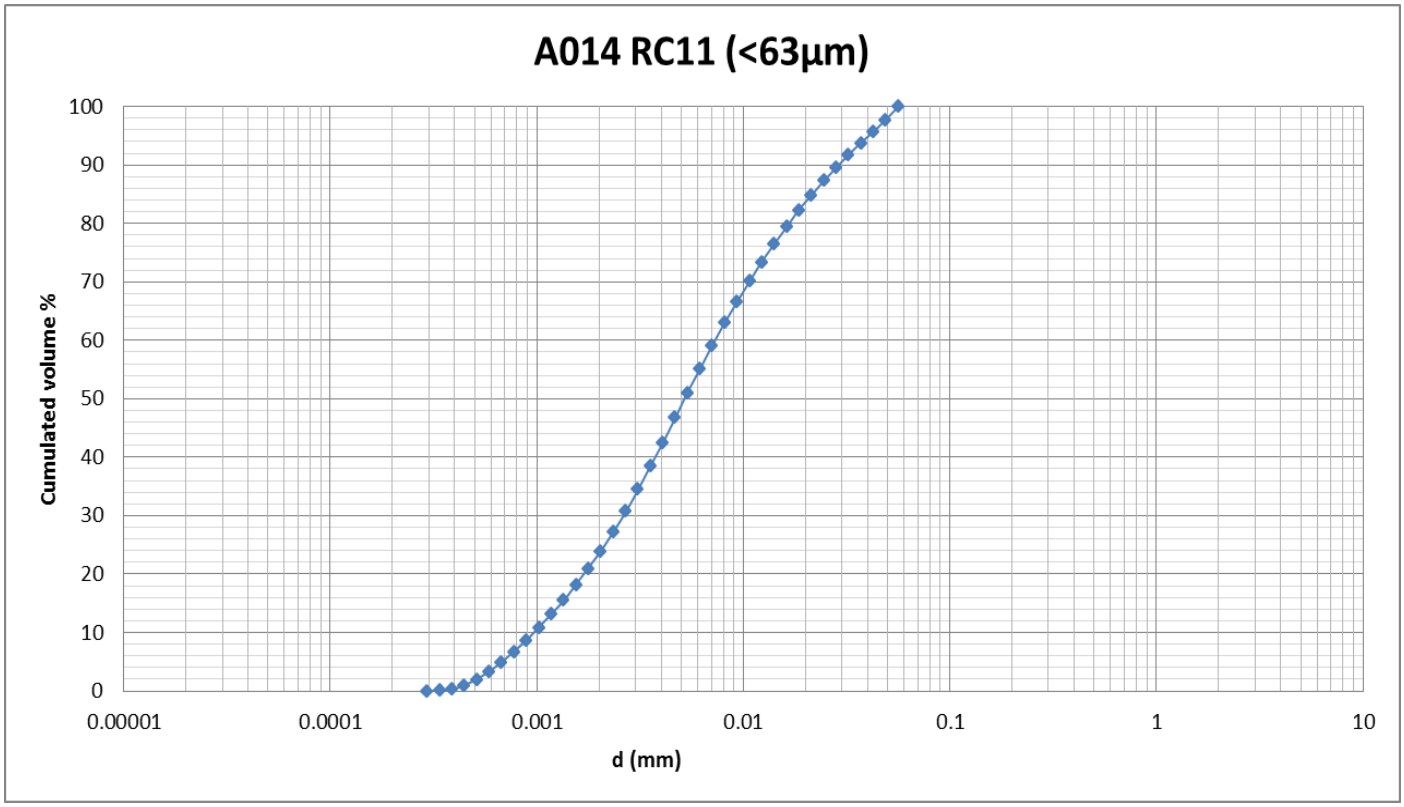
cumulated volume%
100
90
80
70
60
50
40
30
20
10
0
0.0001
0.001
0.01
0.1
1
10
d (mm)

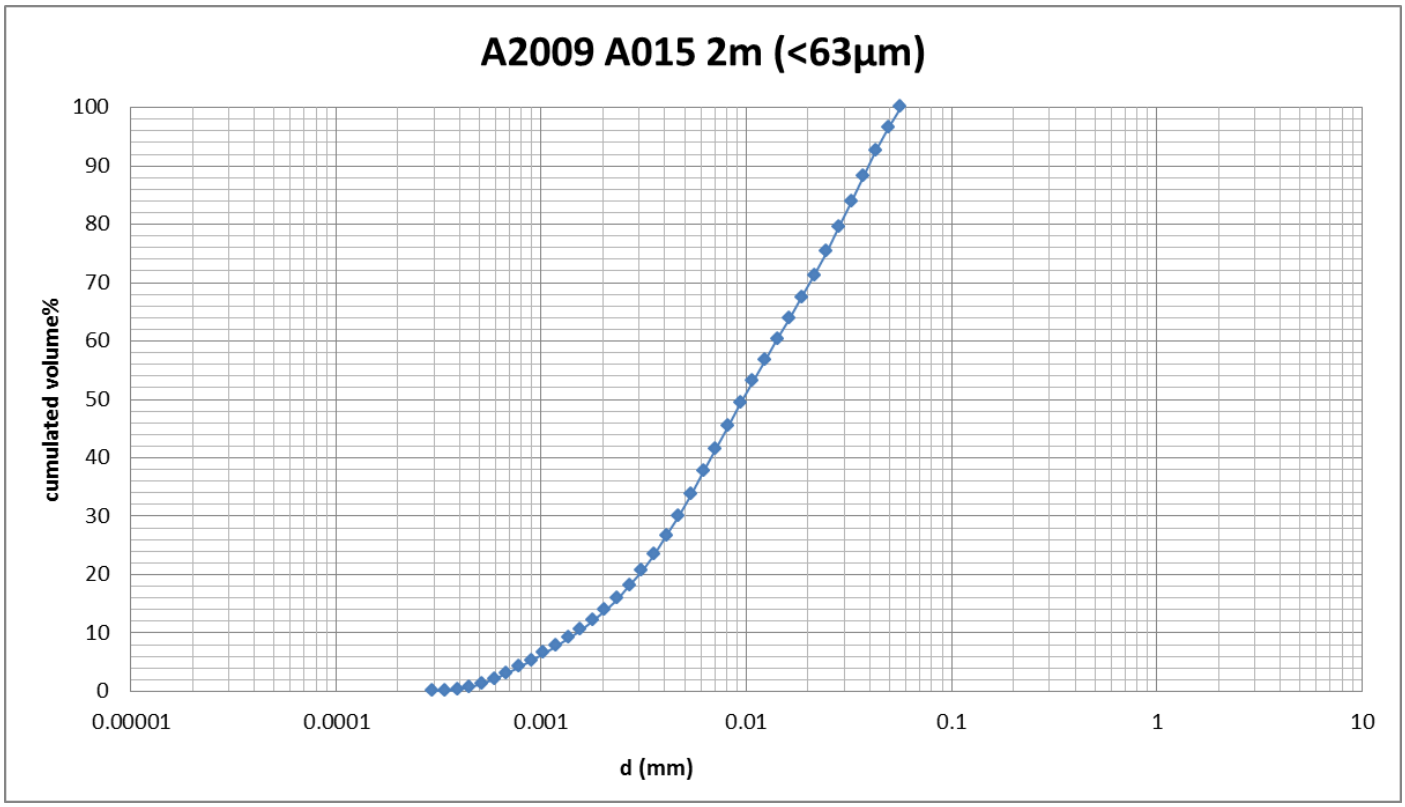

A003 BS1
Cumulated volume%
100
90
80
70
60
50
40
30
20
10
0
0.0001
0.001
0.01
0.1
1
10
grainsize (mm)


A2009 A008 0.3m
Cumulated volume %
100
90
80
70
60
50
40
30
20
10
0
0.00001
0.0001
0.001
0.01
0.1
1
10
d (mm)


A010 BS1
Cumulated volume %
100
90
80
70
60
50
40
30
20
10
0
0.0001
0.001
0.01
0.1
1
10
d (mm)


A013 BS3
cumulated volume%
100
90
80
70
60
50
40
30
20
10
0
0.0001
0.001
0.01
0.1
1
10
d (mm)


A014 RC11 (<63µm)
Cumulated volume %
100
90
80
70
60
50
40
30
20
10
0
0.00001
0.0001
0.001
0.01
0.1
1
10
d (mm)

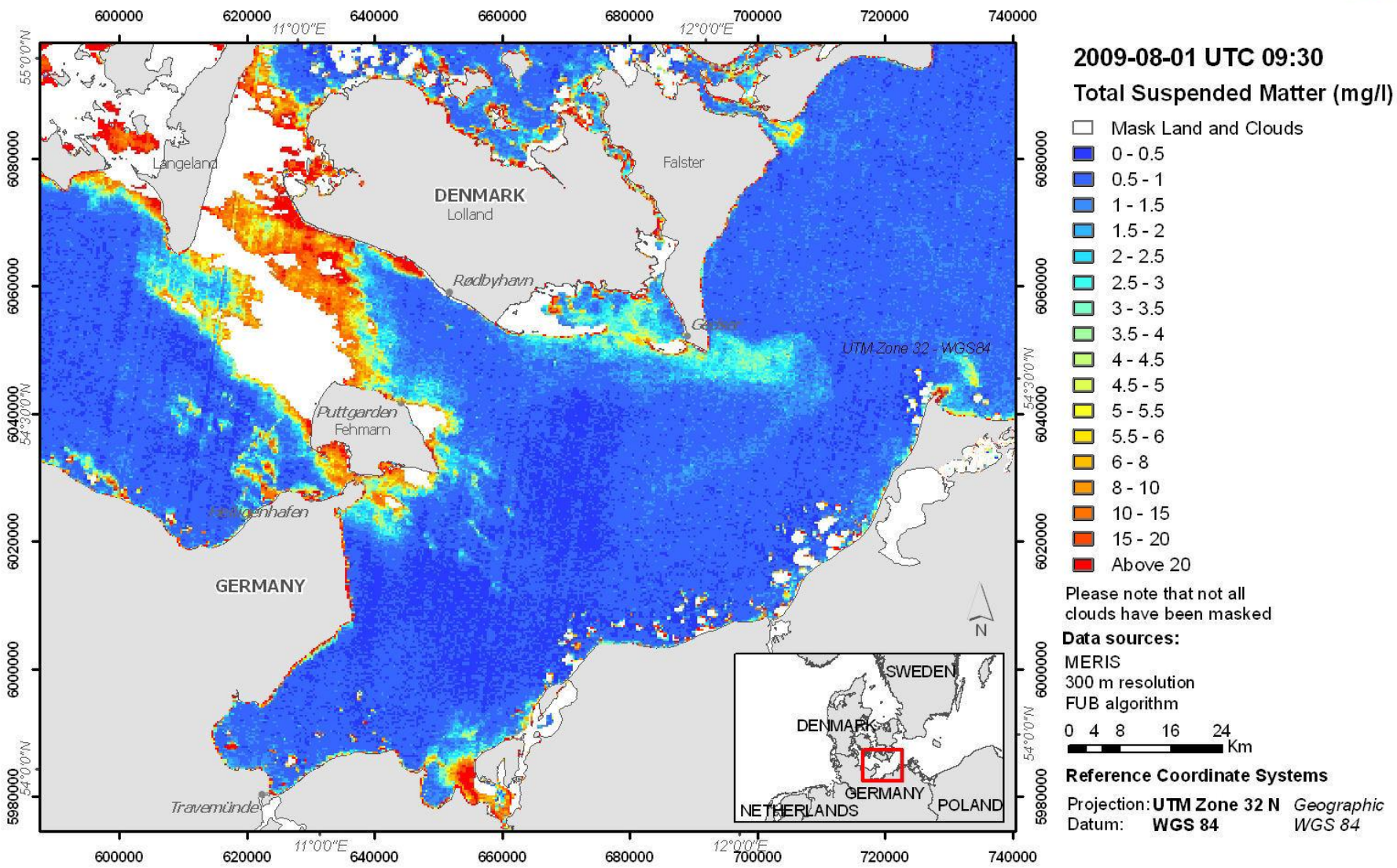

A2009 A015 2m (<63µm)
cumulated volume%
100
90
80
70
60
50
40
30
20
10
0
0.00001
0.0001
0.001
0.01
0.1
1
10
d (mm)

A P P E N D I X D

MERIS Maps of Total Suspended Sediment

Turbidity

MERIS 300 m resolution



2009-08-01 UTC 09:30

Total Suspended Matter (mg/l)

- Mask Land and Clouds
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- 1.5 - 2
- 2 - 2.5
- 2.5 - 3
- 3 - 3.5
- 3.5 - 4
- 4 - 4.5
- 4.5 - 5
- 5 - 5.5
- 5.5 - 6
- 6 - 8
- 8 - 10
- 10 - 15
- 15 - 20
- Above 20

Please note that not all clouds have been masked

Data sources:

MERIS
300 m resolution
FUB algorithm

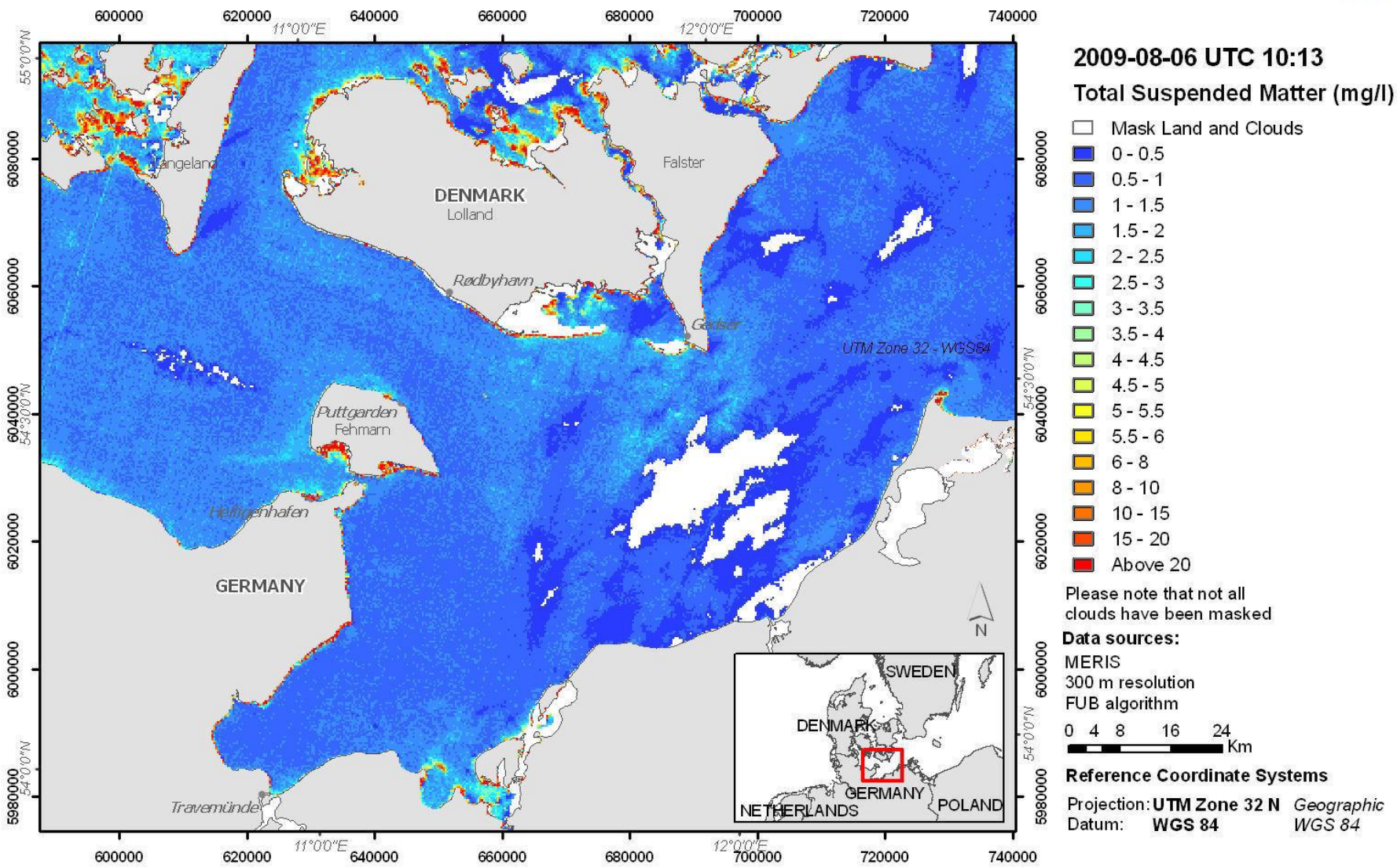
0 4 8 16 24 Km

Reference Coordinate Systems

Projection: **UTM Zone 32 N** *Geographic*
Datum: **WGS 84** *WGS 84*

Turbidity

MERIS 300 m resolution



2009-08-06 UTC 10:13

Total Suspended Matter (mg/l)

- Mask Land and Clouds
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- 1.5 - 2
- 2 - 2.5
- 2.5 - 3
- 3 - 3.5
- 3.5 - 4
- 4 - 4.5
- 4.5 - 5
- 5 - 5.5
- 5.5 - 6
- 6 - 8
- 8 - 10
- 10 - 15
- 15 - 20
- Above 20

Please note that not all clouds have been masked

Data sources:

MERIS
300 m resolution
FUB algorithm

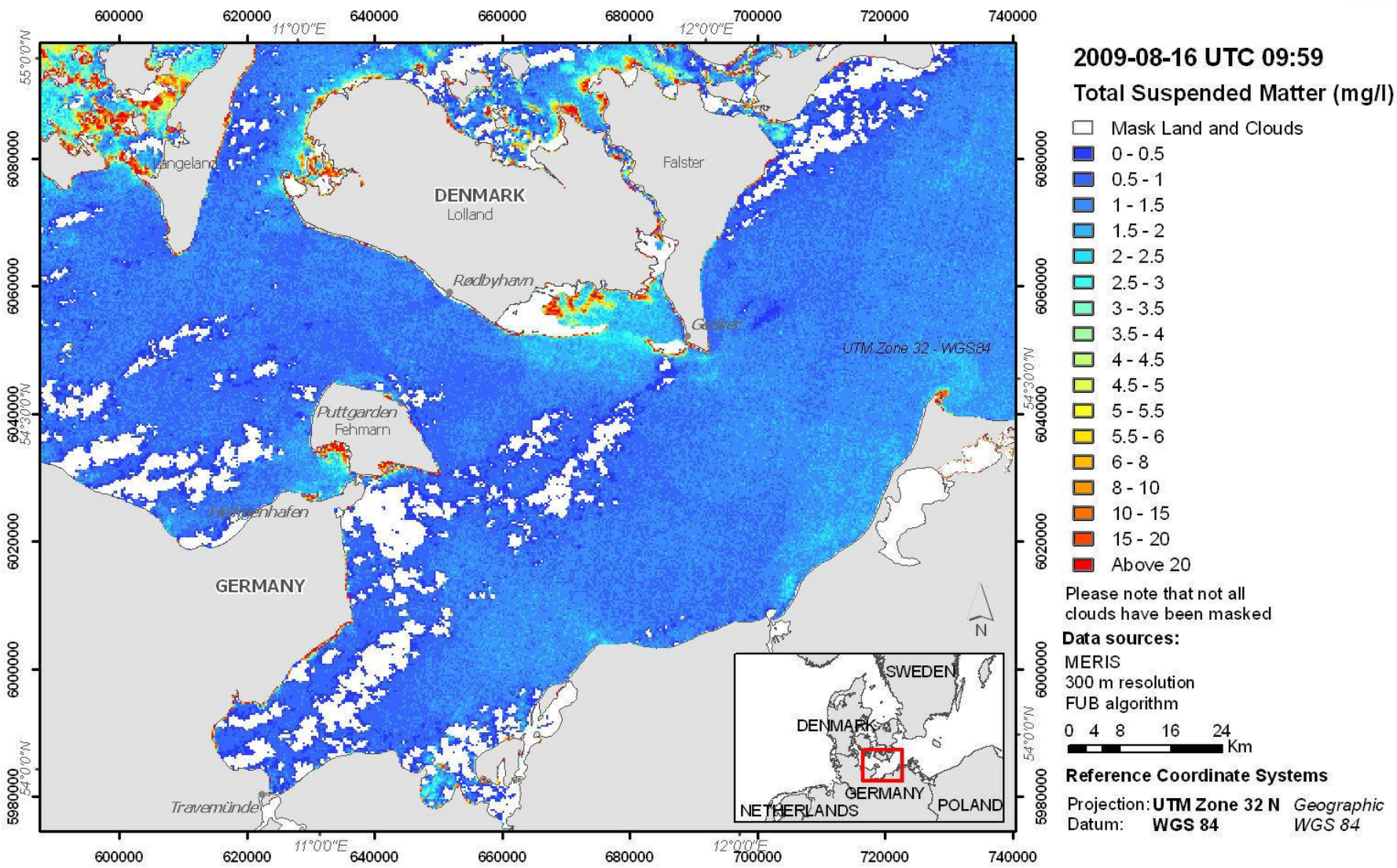
0 4 8 16 24 Km

Reference Coordinate Systems

Projection: **UTM Zone 32 N** *Geographic*
Datum: **WGS 84** *WGS 84*

Turbidity

MERIS 300 m resolution



2009-08-16 UTC 09:59

Total Suspended Matter (mg/l)

- Mask Land and Clouds
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- 1.5 - 2
- 2 - 2.5
- 2.5 - 3
- 3 - 3.5
- 3.5 - 4
- 4 - 4.5
- 4.5 - 5
- 5 - 5.5
- 5.5 - 6
- 6 - 8
- 8 - 10
- 10 - 15
- 15 - 20
- Above 20

Please note that not all clouds have been masked

Data sources:

MERIS
300 m resolution
FUB algorithm

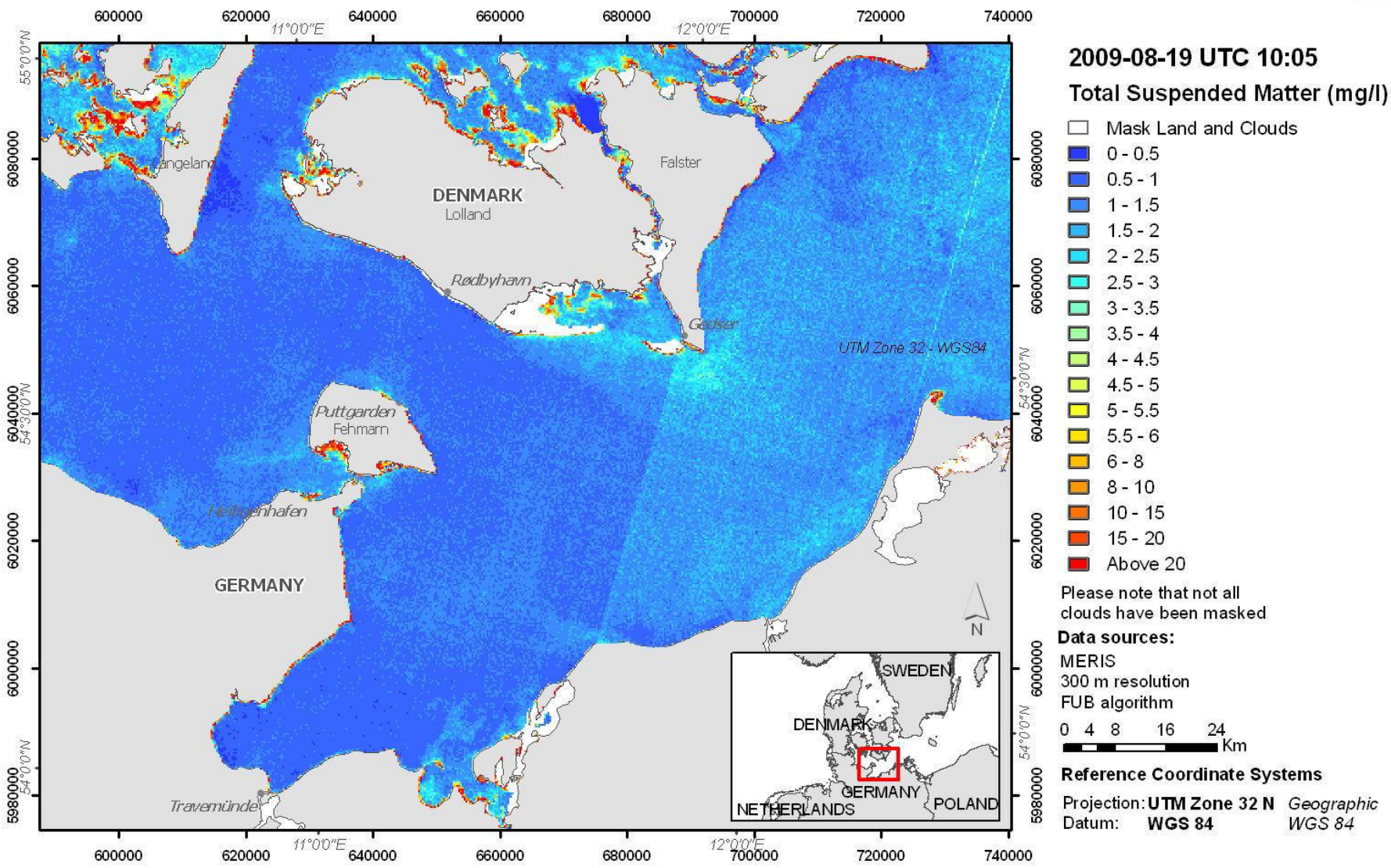
0 4 8 16 24 Km

Reference Coordinate Systems

Projection: **UTM Zone 32 N** *Geographic*
Datum: **WGS 84** *WGS 84*

Turbidity

MERIS 300 m resolution



2009-08-19 UTC 10:05

Total Suspended Matter (mg/l)

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- 1 - 1.5
- 1.5 - 2
- 2 - 2.5
- 2.5 - 3
- 3 - 3.5
- 3.5 - 4
- 4 - 4.5
- 4.5 - 5
- 5 - 5.5
- 5.5 - 6
- 6 - 8
- 8 - 10
- 10 - 15
- 15 - 20
- Above 20

Please note that not all clouds have been masked

Data sources:

MERIS
300 m resolution
FUB algorithm

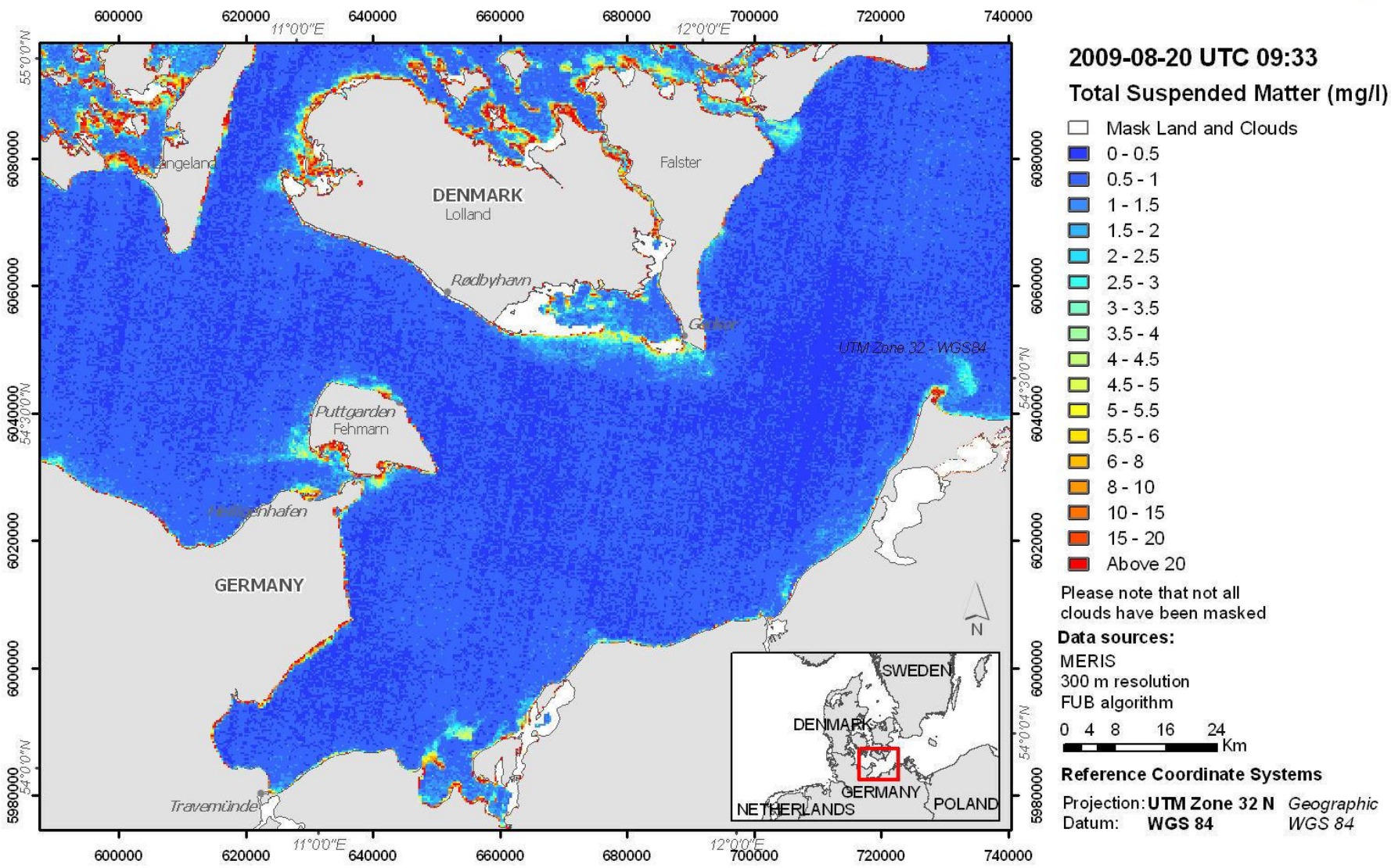
0 4 8 16 24 Km

Reference Coordinate Systems

Projection:	**UTM Zone 32 N**	*Geographic*
Datum:	**WGS 84**	*WGS 84*

Turbidity

MERIS 300 m resolution



2009-08-20 UTC 09:33

Total Suspended Matter (mg/l)

- Mask Land and Clouds
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- 1.5 - 2
- 2 - 2.5
- 2.5 - 3
- 3 - 3.5
- 3.5 - 4
- 4 - 4.5
- 4.5 - 5
- 5 - 5.5
- 5.5 - 6
- 6 - 8
- 8 - 10
- 10 - 15
- 15 - 20
- Above 20

Please note that not all clouds have been masked

Data sources:

MERIS
300 m resolution
FUB algorithm

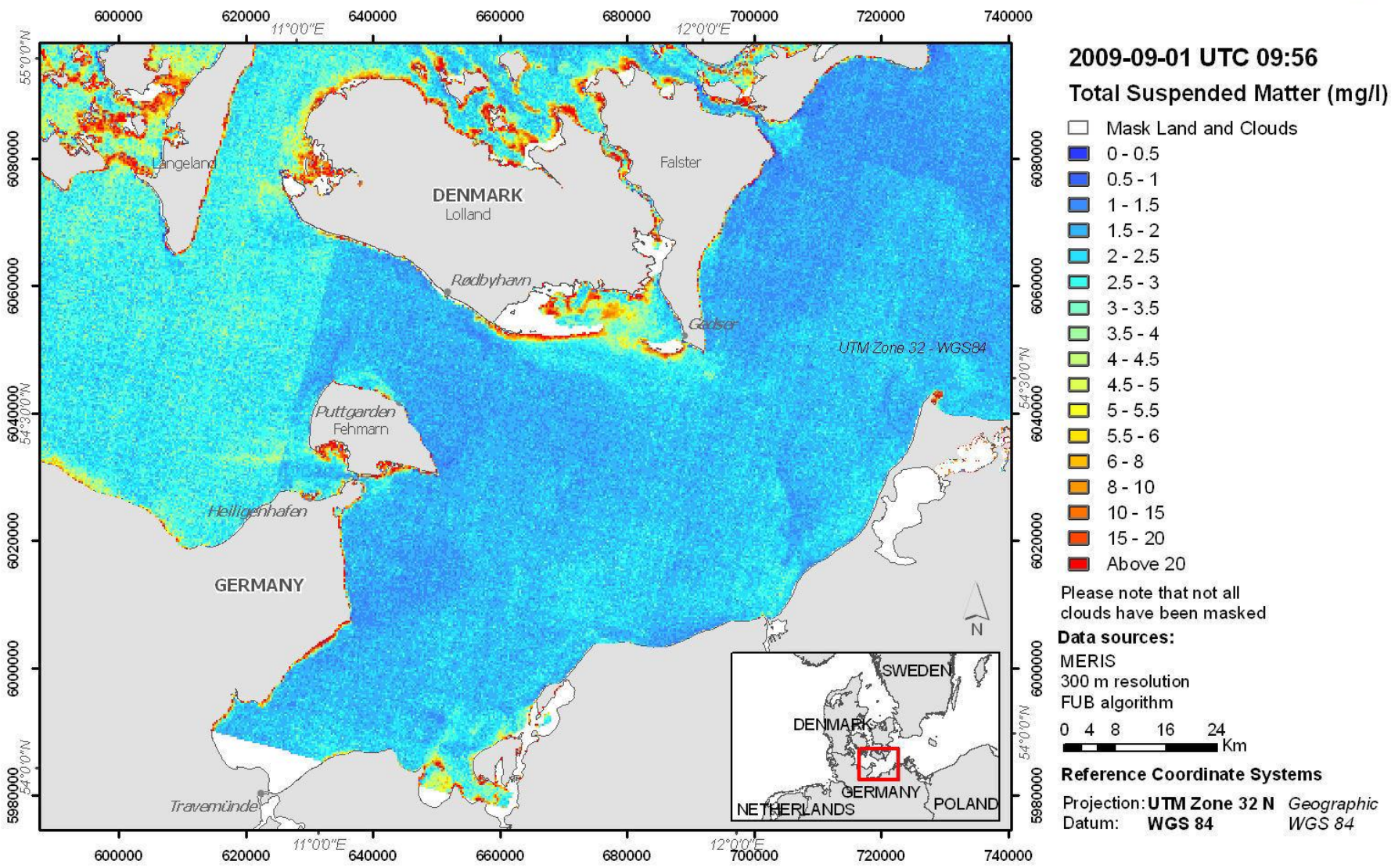
0 4 8 16 24 Km

Reference Coordinate Systems

Projection:	**UTM Zone 32 N**	*Geographic*
Datum:	**WGS 84**	*WGS 84*

Turbidity

MERIS 300 m resolution



2009-09-01 UTC 09:56

Total Suspended Matter (mg/l)

- Mask Land and Clouds
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- 1.5 - 2
- 2 - 2.5
- 2.5 - 3
- 3 - 3.5
- 3.5 - 4
- 4 - 4.5
- 4.5 - 5
- 5 - 5.5
- 5.5 - 6
- 6 - 8
- 8 - 10
- 10 - 15
- 15 - 20
- Above 20

Please note that not all clouds have been masked

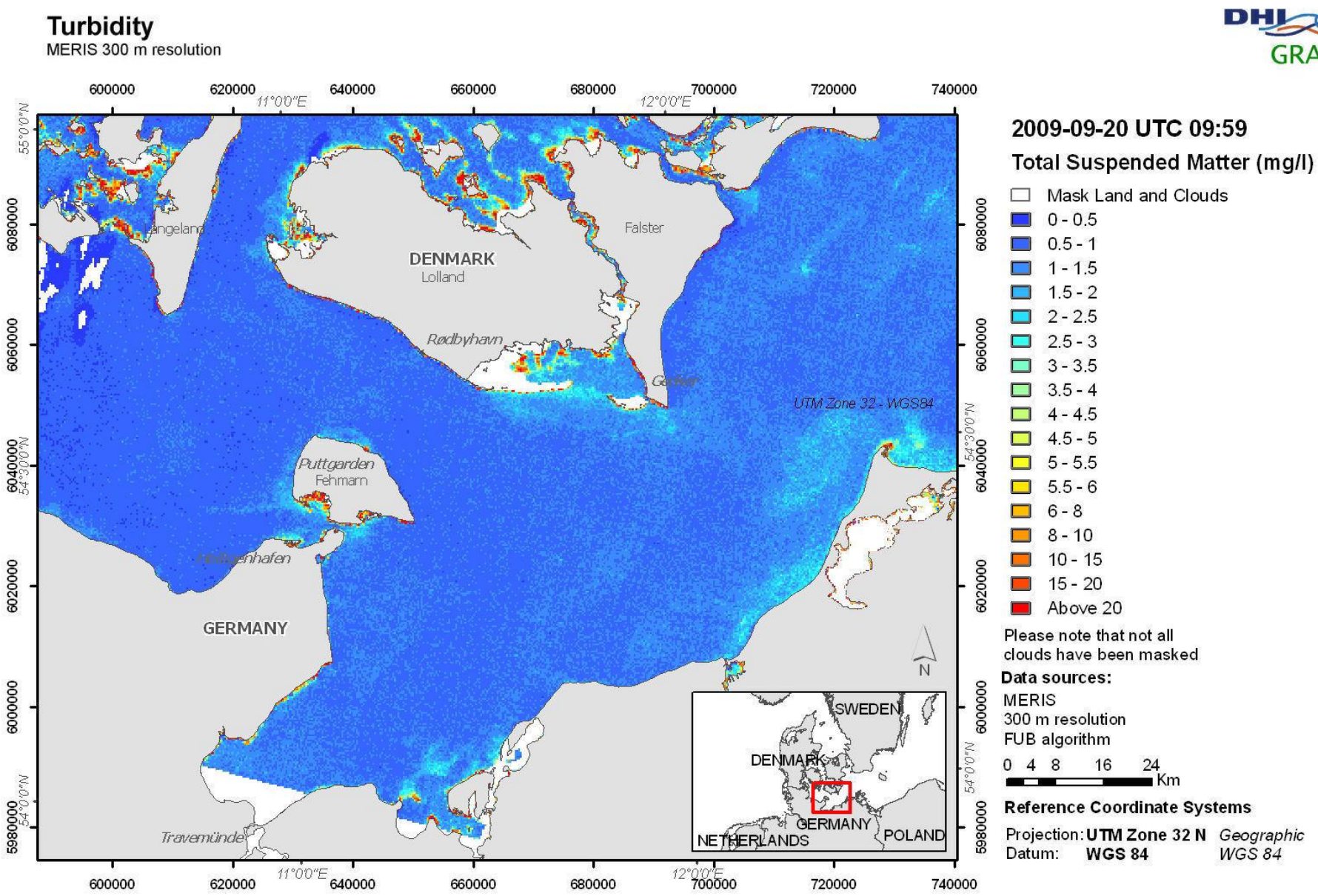
Data sources:

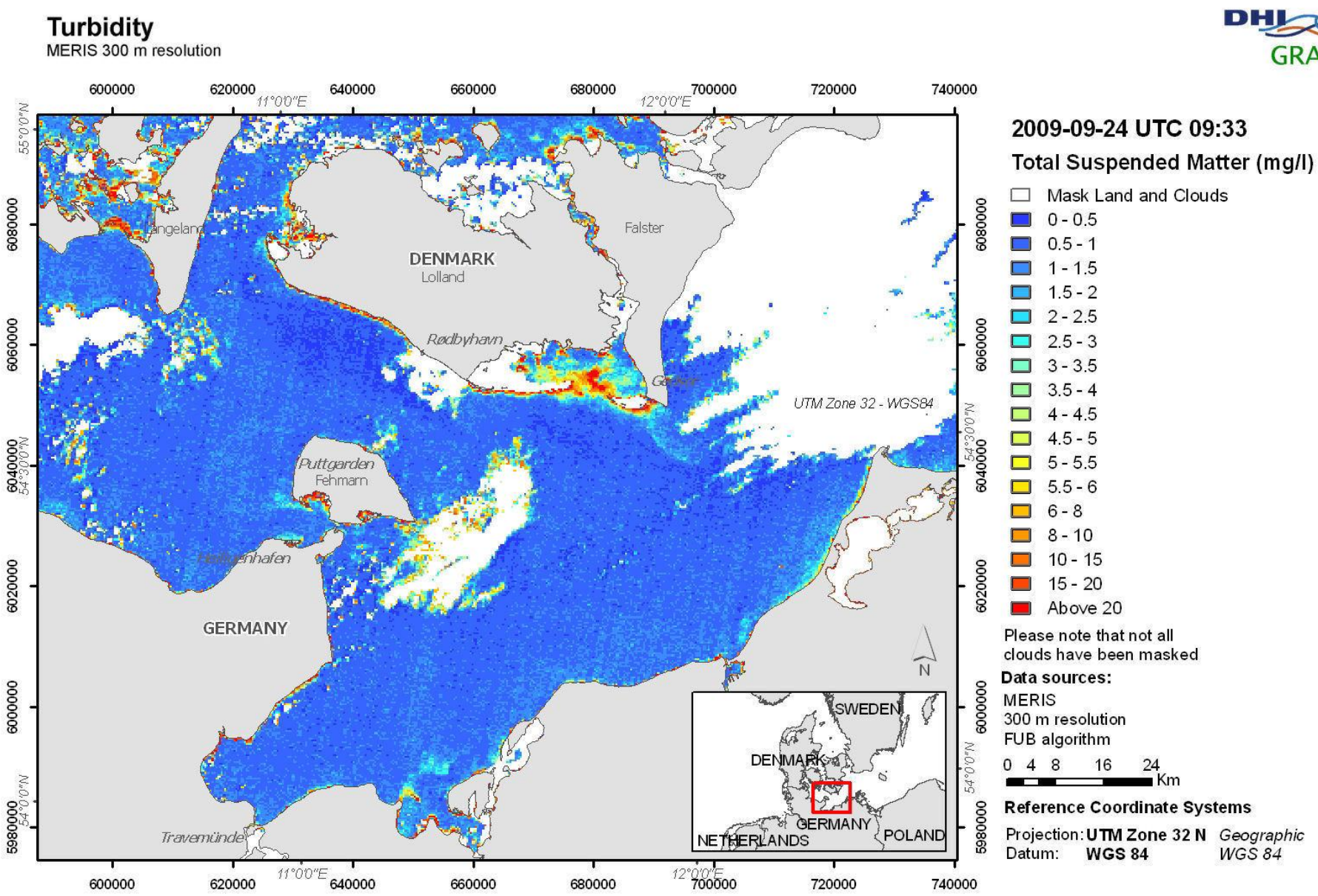
MERIS
300 m resolution
FUB algorithm

0 4 8 16 24 Km

Reference Coordinate Systems

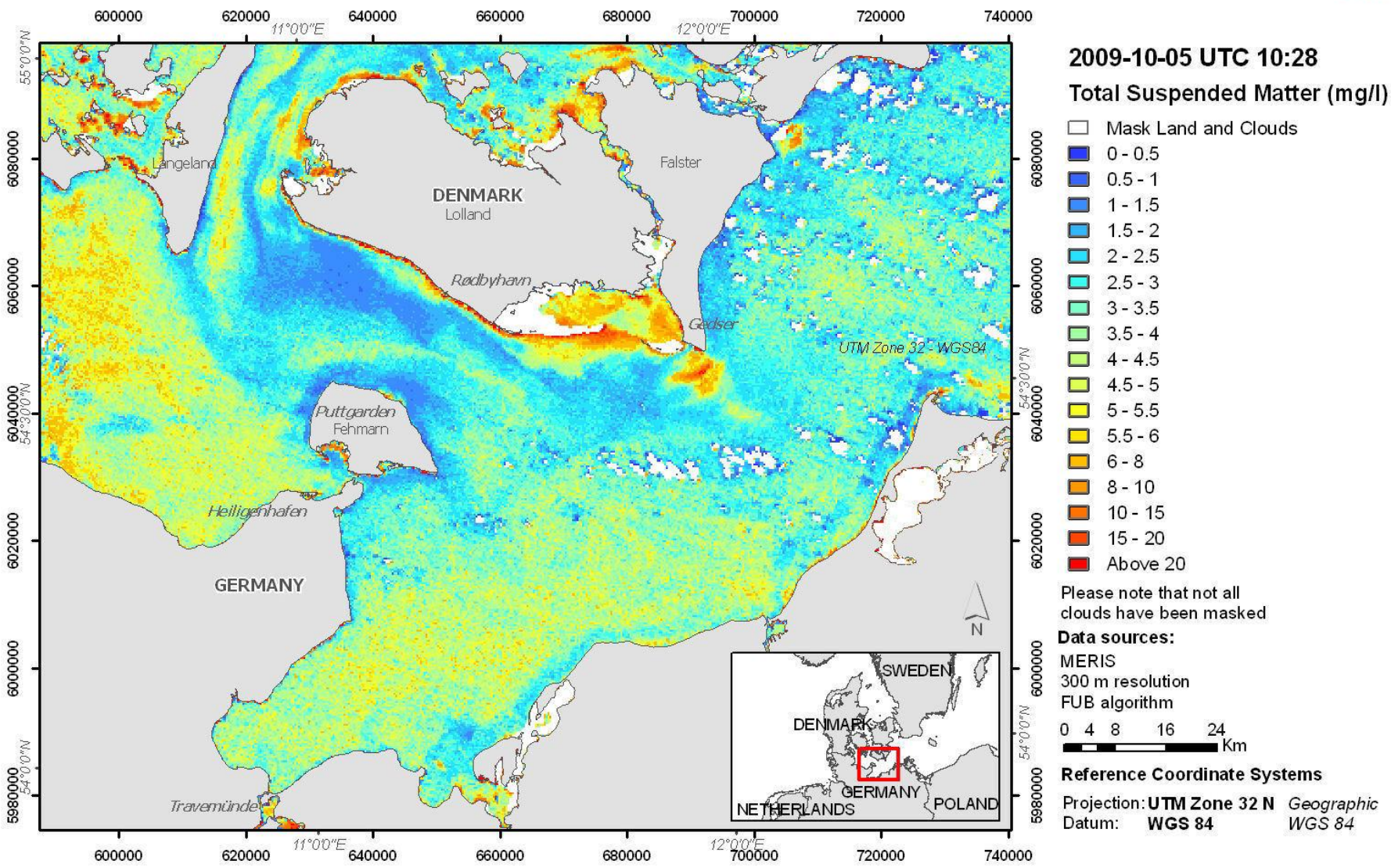
Projection:	**UTM Zone 32 N**	*Geographic*
Datum:	**WGS 84**	*WGS 84*


Turbidity
MERIS 300 m resolution
DHI
GRAS
600000
620000
11°0'0"E
640000
660000
680000
12°0'0"E
700000
720000
740000
55°0'0"N
6080000
6060000
6040000
54°30'0"N
6020000
6000000
54°0'0"N
5980000
Langeland
DENMARK
Lolland
Falster
Rødbyhavn
Gedser
UTM Zone 32 - WGS84
Puttgarden
Fehmarn
Heiligenhafen
GERMANY
Travemünde
N
SWEDEN
DENMARK
GERMANY
NETHERLANDS
POLAND
2009-09-20 UTC 09:59
Total Suspended Matter (mg/l)
Mask Land and Clouds
0 - 0.5
0.5 - 1
1 - 1.5
1.5 - 2
2 - 2.5
2.5 - 3
3 - 3.5
3.5 - 4
4 - 4.5
4.5 - 5
5 - 5.5
5.5 - 6
6 - 8
8 - 10
10 - 15
15 - 20
Above 20
Please note that not all
clouds have been masked
Data sources:
MERIS
300 m resolution
FUB algorithm
0 4 8 16 24
Km
Reference Coordinate Systems
Projection: UTM Zone 32 N Geographic
Datum: WGS 84 WGS 84


Turbidity
MERIS 300 m resolution
DHI
GRAS
600000
620000
11°0'0"E
640000
660000
680000
12°0'0"E
700000
720000
740000
55°0'0"N
6080000
6060000
6040000
54°30'0"N
6020000
6000000
54°0'0"N
5980000
DENMARK
Lolland
Falster
Rødbyhavn
Puttgarden
Fehmarn
GERMANY
Travemünde
UTM Zone 32 - WGS84
N
SWEDEN
DENMARK
GERMANY
NETHERLANDS
POLAND
2009-09-24 UTC 09:33
Total Suspended Matter (mg/l)
Mask Land and Clouds
0 - 0.5
0.5 - 1
1 - 1.5
1.5 - 2
2 - 2.5
2.5 - 3
3 - 3.5
3.5 - 4
4 - 4.5
4.5 - 5
5 - 5.5
5.5 - 6
6 - 8
8 - 10
10 - 15
15 - 20
Above 20
Please note that not all
clouds have been masked
Data sources:
MERIS
300 m resolution
FUB algorithm
0 4 8 16 24
Km
Reference Coordinate Systems
Projection: UTM Zone 32 N
Datum: WGS 84
Geographic
WGS 84

Turbidity

MERIS 300 m resolution



2009-10-05 UTC 10:28

Total Suspended Matter (mg/l)

- Mask Land and Clouds
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- 1.5 - 2
- 2 - 2.5
- 2.5 - 3
- 3 - 3.5
- 3.5 - 4
- 4 - 4.5
- 4.5 - 5
- 5 - 5.5
- 5.5 - 6
- 6 - 8
- 8 - 10
- 10 - 15
- 15 - 20
- Above 20

Please note that not all clouds have been masked

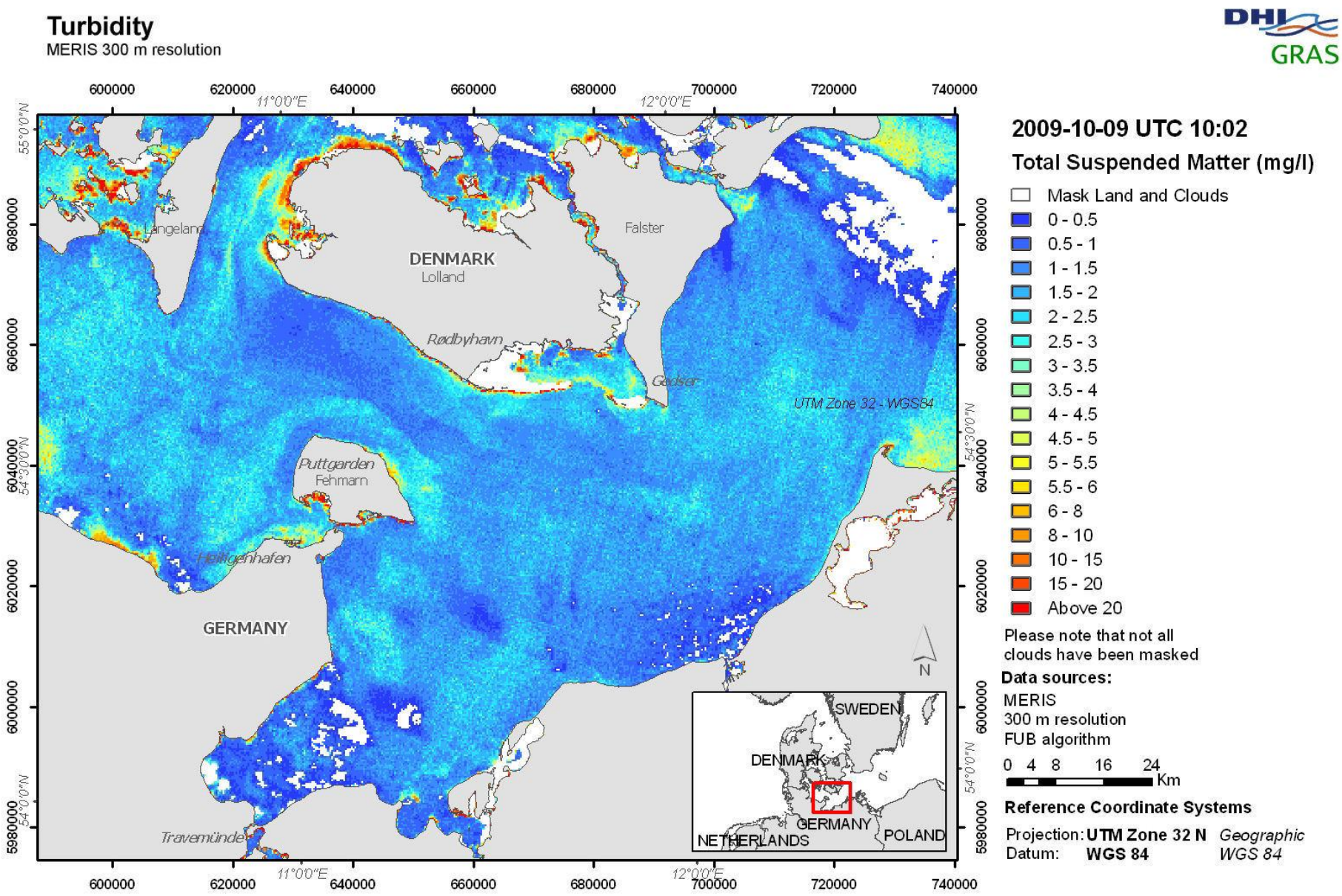
Data sources:

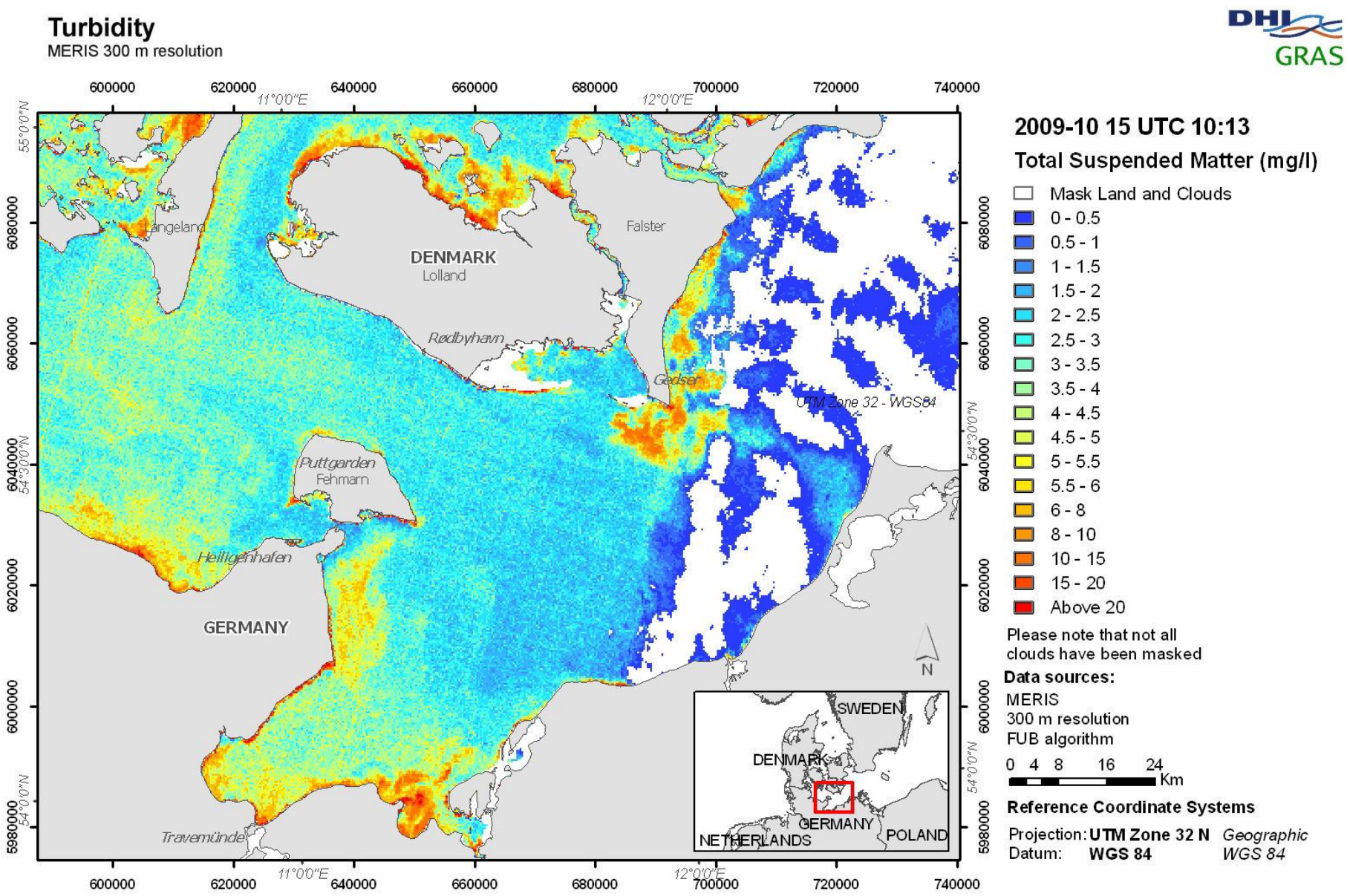
MERIS
300 m resolution
FUB algorithm

0 4 8 16 24 Km

Reference Coordinate Systems

Projection:	**UTM Zone 32 N**	*Geographic*
Datum:	**WGS 84**	*WGS 84*


Turbidity
MERIS 300 m resolution
DHI
GRAS
600000
620000
11°0'0"E
640000
660000
680000
12°0'0"E
700000
720000
740000
55°0'0"N
6080000
6060000
6040000
54°30'0"N
6020000
6000000
5980000
54°0'0"N
Langeland
DENMARK
Lolland
Falster
Rødbyhavn
Gedser
UTM Zone 32 - WGS84
Puttgarden
Fehmarn
Heiligenhafen
GERMANY
Travemünde
N
SWEDEN
DENMARK
GERMANY
NETHERLANDS
POLAND
2009-10-09 UTC 10:02
Total Suspended Matter (mg/l)
Mask Land and Clouds
0 - 0.5
0.5 - 1
1 - 1.5
1.5 - 2
2 - 2.5
2.5 - 3
3 - 3.5
3.5 - 4
4 - 4.5
4.5 - 5
5 - 5.5
5.5 - 6
6 - 8
8 - 10
10 - 15
15 - 20
Above 20
Please note that not all
clouds have been masked
Data sources:
MERIS
300 m resolution
FUB algorithm
0 4 8 16 24
Km
Reference Coordinate Systems
Projection: UTM Zone 32 N Geographic
Datum: WGS 84 WGS 84


Turbidity
MERIS 300 m resolution
DHI
GRAS
600000
620000
11°0'0"E
640000
660000
680000
12°0'0"E
700000
720000
740000
55°0'0"N
6080000
6060000
6040000
54°30'0"N
6020000
6000000
54°0'0"N
5980000
Langeland
DENMARK
Lolland
Falster
Rødbyhavn
Gedser
UTM Zone 32 - WGS84
Puttgarden
Fehmarn
Heiligenhafen
GERMANY
Travemünde
N
SWEDEN
DENMARK
GERMANY
NETHERLANDS
POLAND
2009-10 15 UTC 10:13
Total Suspended Matter (mg/l)
Mask Land and Clouds
0 - 0.5
0.5 - 1
1 - 1.5
1.5 - 2
2 - 2.5
2.5 - 3
3 - 3.5
3.5 - 4
4 - 4.5
4.5 - 5
5 - 5.5
5.5 - 6
6 - 8
8 - 10
10 - 15
15 - 20
Above 20
Please note that not all
clouds have been masked
Data sources:
MERIS
300 m resolution
FUB algorithm
0 4 8 16 24
Km
Reference Coordinate Systems
Projection: UTM Zone 32 N Geographic
Datum: WGS 84 WGS 84

A P P E N D I X I

Wind and Sediment Concentration Statistics from Nearshore Stations 1-10

Table NS01. Wind statistics 1/2-2009 – 24/11-2010 and Suspended Sediment Concentrations (mg/l) at NS01. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS01 exceeded 10 mg/l in 1.2% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.4%	0.6%	0.3%	0.0%	1.3%
30-60	0.5%	0.5%	0.5%	0.0%	1.4%
60-90	0.4%	0.4%	0.6%	0.1%	1.5%
90-120	0.3%	1.2%	0.9%	0.0%	2.3%
120-150	0.4%	0.9%	0.8%	0.0%	2.1%
150-180	0.2%	0.4%	0.0%	0.0%	0.6%
180-210	0.2%	0.8%	0.8%	0.1%	1.9%
210-240	0.2%	2.6%	2.5%	0.1%	5.4%
240-270	0.3%	2.4%	1.7%	0.1%	4.5%
270-300	0.3%	0.7%	0.8%	0.1%	1.9%
300-330	0.5%	0.9%	0.5%	0.0%	1.9%
330-360	0.2%	0.7%	0.1%	0.0%	1.0%
% > 3 mg/l	3.9%	12.1%	9.4%	0.4%	25.9%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.1%	0.4%	0.2%	0.0%	0.6%
30-60	0.1%	0.2%	0.3%	0.0%	0.7%
60-90	0.2%	0.1%	0.4%	0.1%	0.8%
90-120	0.1%	0.7%	0.2%	0.0%	0.9%
120-150	0.0%	0.4%	0.4%	0.0%	0.9%
150-180	0.0%	0.1%	0.0%	0.0%	0.2%
180-210	0.1%	0.2%	0.6%	0.1%	0.9%
210-240	0.1%	1.2%	1.6%	0.1%	3.0%
240-270	0.1%	1.1%	1.2%	0.1%	2.6%
270-300	0.2%	0.3%	0.3%	0.0%	0.8%
300-330	0.2%	0.4%	0.2%	0.0%	0.8%
330-360	0.1%	0.3%	0.0%	0.0%	0.4%
% > 10 mg/l	1.3%	5.4%	5.5%	0.4%	12.7%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.2%	0.0%	0.0%	0.3%
30-60	0.1%	0.0%	0.0%	0.0%	0.1%
60-90	0.1%	0.0%	0.1%	0.1%	0.4%
90-120	0.0%	0.1%	0.1%	0.0%	0.3%
120-150	0.0%	0.0%	0.1%	0.0%	0.1%
150-180	0.0%	0.0%	0.0%	0.0%	0.1%
180-210	0.0%	0.1%	0.3%	0.0%	0.4%
210-240	0.1%	0.6%	0.6%	0.0%	1.3%
240-270	0.1%	0.5%	0.6%	0.1%	1.3%
270-300	0.1%	0.1%	0.1%	0.0%	0.4%
300-330	0.1%	0.2%	0.1%	0.0%	0.4%
330-360	0.1%	0.1%	0.0%	0.0%	0.2%
% > 25 mg/l	0.7%	2.1%	2.1%	0.3%	5.2%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.0%	0.0%	0.0%
90-120	0.0%	0.0%	0.0%	0.0%	0.0%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.1%	0.0%	0.1%
210-240	0.0%	0.1%	0.1%	0.0%	0.2%
240-270	0.0%	0.1%	0.0%	0.0%	0.2%
270-300	0.0%	0.0%	0.0%	0.0%	0.0%
300-330	0.0%	0.1%	0.0%	0.0%	0.1%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.1%	0.4%	0.3%	0.0%	0.8%

Table NS01a. Wind statistics 24/11-2010 – 5/5-2011 and Suspended Sediment Concentrations (mg/l) at NS01a. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS01a exceeded 10 mg/l in 3.0% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.8%	0.8%	0.8%	0.0%	2.4%
30-60	0.6%	0.8%	1.1%	0.0%	2.5%
60-90	0.5%	2.4%	2.6%	0.3%	5.8%
90-120	0.6%	2.6%	1.5%	0.1%	4.7%
120-150	0.7%	1.2%	1.1%	0.0%	3.0%
150-180	0.9%	1.3%	0.4%	0.0%	2.6%
180-210	0.6%	2.7%	0.8%	0.0%	4.2%
210-240	0.7%	4.9%	1.6%	0.1%	7.3%
240-270	1.2%	7.3%	3.1%	0.8%	12.4%
270-300	0.9%	5.1%	2.1%	0.5%	8.6%
300-330	0.7%	3.0%	1.0%	0.1%	4.8%
330-360	0.8%	1.2%	0.2%	0.0%	2.2%
% > 3 mg/l	9.1%	33.2%	16.2%	1.9%	60.4%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.1%	0.4%	0.4%	0.0%	0.9%
30-60	0.1%	0.3%	0.7%	0.0%	1.1%
60-90	0.2%	0.4%	1.7%	0.3%	2.6%
90-120	0.1%	0.9%	1.5%	0.1%	2.6%
120-150	0.1%	0.4%	1.1%	0.0%	1.6%
150-180	0.2%	0.9%	0.4%	0.0%	1.4%
180-210	0.3%	2.0%	0.8%	0.0%	3.1%
210-240	0.5%	3.0%	1.4%	0.1%	5.0%
240-270	0.2%	4.7%	2.7%	0.8%	8.3%
270-300	0.2%	3.0%	1.6%	0.5%	5.3%
300-330	0.2%	1.4%	0.8%	0.1%	2.5%
330-360	0.2%	0.5%	0.1%	0.0%	0.8%
% > 10 mg/l	2.5%	17.9%	13.0%	1.9%	35.3%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.2%	0.1%	0.0%	0.3%
30-60	0.1%	0.0%	0.0%	0.0%	0.1%
60-90	0.1%	0.0%	0.4%	0.3%	0.8%
90-120	0.1%	0.4%	1.4%	0.1%	1.9%
120-150	0.0%	0.3%	0.8%	0.0%	1.1%
150-180	0.1%	0.2%	0.2%	0.0%	0.5%
180-210	0.2%	1.0%	0.6%	0.0%	1.8%
210-240	0.3%	1.9%	0.7%	0.1%	2.9%
240-270	0.1%	2.0%	1.1%	0.6%	3.9%
270-300	0.2%	1.3%	1.3%	0.5%	3.3%
300-330	0.2%	1.0%	0.5%	0.1%	1.8%
330-360	0.1%	0.3%	0.0%	0.0%	0.5%
% > 25 mg/l	1.4%	8.5%	7.1%	1.7%	18.8%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.0%	0.1%	0.1%
90-120	0.0%	0.1%	0.5%	0.0%	0.6%
120-150	0.0%	0.2%	0.6%	0.0%	0.8%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.3%	0.3%	0.0%	0.7%
210-240	0.1%	0.6%	0.2%	0.0%	0.9%
240-270	0.0%	0.9%	0.2%	0.2%	1.4%
270-300	0.1%	0.3%	0.3%	0.3%	1.1%
300-330	0.1%	0.3%	0.2%	0.0%	0.6%
330-360	0.0%	0.1%	0.0%	0.0%	0.1%
% > 75 mg/l	0.3%	2.9%	2.5%	0.7%	6.3%

Table NS02. Wind statistics 1/2-2009 – 24/11-2010 and Suspended Sediment Concentrations (mg/l) at NS02. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS02 exceeded 10 mg/l in 2.0% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.2%	0.8%	0.2%	0.0%	1.2%
30-60	0.3%	0.6%	0.6%	0.0%	1.5%
60-90	0.3%	0.4%	0.7%	0.1%	1.5%
90-120	0.3%	1.2%	0.9%	0.0%	2.5%
120-150	0.6%	1.2%	1.0%	0.0%	2.8%
150-180	0.5%	1.4%	0.2%	0.0%	2.1%
180-210	0.4%	1.8%	0.7%	0.0%	2.9%
210-240	0.3%	3.3%	2.2%	0.2%	6.0%
240-270	0.3%	3.7%	1.9%	0.1%	6.0%
270-300	0.4%	2.2%	1.9%	0.1%	4.6%
300-330	0.3%	1.0%	0.5%	0.0%	1.8%
330-360	0.2%	0.4%	0.0%	0.0%	0.6%
% > 3 mg/l	4.2%	17.9%	10.8%	0.5%	33.5%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.1%	0.0%	0.2%	0.0%	0.3%
30-60	0.1%	0.2%	0.4%	0.0%	0.7%
60-90	0.1%	0.2%	0.5%	0.1%	0.9%
90-120	0.1%	0.8%	0.3%	0.0%	1.3%
120-150	0.1%	0.5%	0.8%	0.0%	1.4%
150-180	0.1%	0.6%	0.2%	0.0%	0.9%
180-210	0.1%	0.8%	0.5%	0.0%	1.5%
210-240	0.1%	2.0%	1.9%	0.2%	4.2%
240-270	0.1%	1.8%	1.5%	0.1%	3.6%
270-300	0.1%	0.5%	1.0%	0.1%	1.8%
300-330	0.1%	0.3%	0.3%	0.0%	0.7%
330-360	0.1%	0.2%	0.0%	0.0%	0.3%
% > 10 mg/l	1.2%	8.1%	7.7%	0.5%	17.5%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.0%	0.1%	0.0%	0.2%
30-60	0.0%	0.1%	0.2%	0.0%	0.3%
60-90	0.0%	0.0%	0.3%	0.1%	0.5%
90-120	0.0%	0.4%	0.2%	0.0%	0.6%
120-150	0.0%	0.3%	0.2%	0.0%	0.6%
150-180	0.0%	0.3%	0.1%	0.0%	0.4%
180-210	0.0%	0.2%	0.3%	0.0%	0.6%
210-240	0.1%	1.1%	1.5%	0.1%	2.7%
240-270	0.0%	0.6%	0.9%	0.1%	1.7%
270-300	0.1%	0.1%	0.5%	0.1%	0.7%
300-330	0.1%	0.1%	0.1%	0.0%	0.3%
330-360	0.0%	0.1%	0.0%	0.0%	0.1%
% > 25 mg/l	0.4%	3.4%	4.4%	0.5%	8.7%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.0%	0.0%	0.1%
90-120	0.0%	0.1%	0.0%	0.0%	0.1%
120-150	0.0%	0.0%	0.1%	0.0%	0.1%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.2%	0.0%	0.2%
210-240	0.0%	0.1%	0.3%	0.0%	0.5%
240-270	0.0%	0.2%	0.2%	0.1%	0.5%
270-300	0.0%	0.0%	0.1%	0.0%	0.1%
300-330	0.0%	0.0%	0.1%	0.0%	0.1%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.1%	0.5%	1.0%	0.1%	1.7%

Table NS02a. Wind statistics 24/11-2010 – 5/5-2011 and Suspended Sediment Concentrations (mg/l) at NS02a. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS02a exceeded 10 mg/l in 4.6% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.5%	0.8%	0.8%	0.0%	2.0%
30-60	0.5%	0.5%	1.0%	0.0%	2.0%
60-90	0.4%	3.0%	2.8%	0.3%	6.4%
90-120	0.4%	2.7%	1.6%	0.1%	4.8%
120-150	0.6%	1.2%	1.1%	0.0%	2.9%
150-180	0.8%	1.2%	0.4%	0.0%	2.4%
180-210	0.9%	2.7%	0.8%	0.0%	4.4%
210-240	0.8%	5.8%	1.6%	0.1%	8.3%
240-270	1.3%	7.9%	3.4%	0.7%	13.2%
270-300	0.9%	4.9%	2.1%	0.6%	8.4%
300-330	0.8%	2.6%	0.9%	0.1%	4.4%
330-360	0.6%	0.9%	0.0%	0.0%	1.6%
% > 3 mg/l	8.3%	34.3%	16.4%	1.8%	60.8%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.0%	0.2%	0.6%	0.0%	0.8%
30-60	0.1%	0.2%	0.9%	0.0%	1.2%
60-90	0.2%	0.4%	2.0%	0.3%	2.9%
90-120	0.1%	0.8%	1.6%	0.1%	2.6%
120-150	0.1%	0.3%	1.1%	0.0%	1.4%
150-180	0.4%	0.9%	0.4%	0.0%	1.7%
180-210	0.5%	2.3%	0.8%	0.0%	3.6%
210-240	0.5%	4.6%	1.5%	0.1%	6.8%
240-270	0.4%	5.0%	3.0%	0.7%	9.1%
270-300	0.3%	2.6%	1.9%	0.6%	5.3%
300-330	0.2%	1.4%	0.9%	0.1%	2.6%
330-360	0.1%	0.6%	0.0%	0.0%	0.8%
% > 10 mg/l	2.9%	19.4%	14.7%	1.8%	38.8%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.2%	0.4%	0.0%	0.6%
30-60	0.1%	0.0%	0.7%	0.0%	0.7%
60-90	0.0%	0.0%	1.1%	0.3%	1.5%
90-120	0.1%	0.2%	1.4%	0.1%	1.7%
120-150	0.0%	0.2%	0.9%	0.0%	1.1%
150-180	0.1%	0.5%	0.4%	0.0%	1.0%
180-210	0.2%	1.3%	0.8%	0.0%	2.4%
210-240	0.3%	4.0%	1.4%	0.1%	5.8%
240-270	0.2%	3.4%	2.5%	0.7%	6.8%
270-300	0.2%	1.5%	1.2%	0.5%	3.4%
300-330	0.2%	0.9%	0.9%	0.1%	2.1%
330-360	0.1%	0.3%	0.0%	0.0%	0.5%
% > 25 mg/l	1.5%	12.5%	11.7%	1.7%	27.4%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.1%	0.0%	0.1%
60-90	0.0%	0.0%	0.2%	0.2%	0.4%
90-120	0.0%	0.0%	0.7%	0.1%	0.8%
120-150	0.0%	0.0%	0.6%	0.0%	0.7%
150-180	0.0%	0.0%	0.4%	0.0%	0.5%
180-210	0.1%	0.7%	0.7%	0.0%	1.4%
210-240	0.1%	1.1%	0.8%	0.1%	2.2%
240-270	0.0%	1.0%	1.2%	0.4%	2.6%
270-300	0.1%	0.6%	0.9%	0.2%	1.7%
300-330	0.0%	0.2%	0.7%	0.0%	0.9%
330-360	0.1%	0.1%	0.0%	0.0%	0.2%
% > 75 mg/l	0.4%	3.8%	6.3%	1.0%	11.5%

Table NS03. Wind statistics 1/2-2009 – 24/11-2010 and Suspended Sediment Concentrations (mg/l) at NS03. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS03 exceeded 10 mg/l in 1.9% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.6%	1.2%	0.3%	0.0%	2.1%
30-60	0.7%	1.4%	0.7%	0.0%	2.9%
60-90	0.6%	2.0%	1.3%	0.1%	4.0%
90-120	0.7%	2.6%	1.2%	0.0%	4.5%
120-150	0.9%	2.0%	1.0%	0.0%	3.9%
150-180	0.7%	1.4%	0.2%	0.0%	2.4%
180-210	0.6%	2.0%	0.5%	0.0%	3.2%
210-240	0.8%	3.3%	2.2%	0.2%	6.4%
240-270	0.7%	4.0%	1.7%	0.1%	6.5%
270-300	1.0%	3.1%	1.8%	0.1%	5.9%
300-330	0.7%	1.4%	0.7%	0.0%	2.7%
330-360	0.5%	0.8%	0.2%	0.0%	1.5%
% > 3 mg/l	8.5%	25.1%	11.9%	0.5%	45.9%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.3%	0.6%	0.3%	0.0%	1.2%
30-60	0.3%	0.6%	0.6%	0.0%	1.5%
60-90	0.2%	0.8%	1.0%	0.1%	2.1%
90-120	0.2%	1.4%	1.0%	0.0%	2.6%
120-150	0.4%	0.7%	0.7%	0.0%	1.8%
150-180	0.2%	0.5%	0.1%	0.0%	0.8%
180-210	0.3%	1.0%	0.3%	0.0%	1.5%
210-240	0.2%	1.9%	1.6%	0.2%	4.0%
240-270	0.2%	1.5%	1.1%	0.1%	2.9%
270-300	0.3%	0.8%	1.1%	0.1%	2.3%
300-330	0.3%	0.7%	0.3%	0.0%	1.3%
330-360	0.2%	0.5%	0.2%	0.0%	0.9%
% > 10 mg/l	3.2%	11.1%	8.2%	0.5%	23.0%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.1%	0.3%	0.2%	0.0%	0.6%
30-60	0.1%	0.3%	0.5%	0.0%	0.9%
60-90	0.1%	0.2%	0.6%	0.1%	1.1%
90-120	0.1%	0.8%	0.5%	0.0%	1.4%
120-150	0.1%	0.3%	0.3%	0.0%	0.8%
150-180	0.1%	0.2%	0.1%	0.0%	0.4%
180-210	0.1%	0.2%	0.1%	0.0%	0.4%
210-240	0.1%	0.8%	0.5%	0.0%	1.4%
240-270	0.1%	0.6%	0.4%	0.1%	1.3%
270-300	0.1%	0.4%	0.3%	0.1%	0.8%
300-330	0.1%	0.5%	0.1%	0.0%	0.7%
330-360	0.1%	0.3%	0.0%	0.0%	0.4%
% > 25 mg/l	1.0%	5.0%	3.6%	0.3%	10.0%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.1%	0.0%	0.2%
30-60	0.0%	0.1%	0.3%	0.0%	0.4%
60-90	0.0%	0.1%	0.4%	0.1%	0.6%
90-120	0.0%	0.3%	0.2%	0.0%	0.5%
120-150	0.0%	0.1%	0.1%	0.0%	0.3%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.1%
210-240	0.0%	0.3%	0.3%	0.0%	0.6%
240-270	0.0%	0.4%	0.2%	0.0%	0.6%
270-300	0.0%	0.1%	0.0%	0.0%	0.2%
300-330	0.0%	0.2%	0.1%	0.0%	0.3%
330-360	0.0%	0.1%	0.0%	0.0%	0.1%
% > 75 mg/l	0.2%	1.8%	1.8%	0.2%	3.9%

Table NS03a. Wind statistics 24/11-2010 – 5/5-2011 and Suspended Sediment Concentrations (mg/l) at NS03a. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS03a exceeded 10 mg/l in 5.6% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	1.6%	2.5%	0.9%	0.0%	5.0%
30-60	1.2%	1.2%	1.1%	0.0%	3.5%
60-90	1.6%	4.9%	2.7%	0.2%	9.3%
90-120	1.3%	3.5%	1.5%	0.1%	6.3%
120-150	1.3%	1.3%	1.0%	0.0%	3.6%
150-180	1.4%	1.6%	0.4%	0.0%	3.4%
180-210	1.2%	3.7%	0.4%	0.0%	5.2%
210-240	1.4%	6.1%	1.4%	0.1%	9.1%
240-270	2.4%	8.3%	3.1%	0.6%	14.4%
270-300	2.6%	7.1%	1.7%	0.3%	11.6%
300-330	2.4%	3.7%	0.6%	0.1%	6.8%
330-360	1.9%	2.6%	0.2%	0.0%	4.7%
% > 3 mg/l	20.2%	46.4%	14.9%	1.3%	83.0%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.8%	1.8%	0.9%	0.0%	3.4%
30-60	0.7%	0.6%	1.1%	0.0%	2.4%
60-90	0.5%	3.0%	2.6%	0.2%	6.3%
90-120	0.5%	2.1%	1.5%	0.1%	4.2%
120-150	0.7%	0.9%	1.0%	0.0%	2.6%
150-180	0.8%	1.1%	0.4%	0.0%	2.3%
180-210	0.8%	2.5%	0.4%	0.0%	3.6%
210-240	0.9%	5.6%	1.4%	0.1%	8.1%
240-270	1.8%	7.5%	3.1%	0.6%	12.9%
270-300	1.4%	6.4%	1.7%	0.3%	9.8%
300-330	1.2%	3.1%	0.6%	0.1%	4.9%
330-360	1.0%	1.9%	0.2%	0.0%	3.1%
% > 10 mg/l	11.0%	36.4%	14.9%	1.3%	63.6%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.2%	1.1%	0.9%	0.0%	2.2%
30-60	0.3%	0.4%	1.1%	0.0%	1.8%
60-90	0.4%	1.2%	2.3%	0.2%	4.1%
90-120	0.2%	1.2%	1.5%	0.1%	3.0%
120-150	0.3%	0.4%	1.0%	0.0%	1.7%
150-180	0.3%	0.4%	0.4%	0.0%	1.1%
180-210	0.5%	1.8%	0.4%	0.0%	2.7%
210-240	0.6%	4.1%	1.4%	0.1%	6.3%
240-270	0.7%	5.8%	2.8%	0.6%	10.0%
270-300	0.9%	5.3%	1.7%	0.3%	8.1%
300-330	0.4%	2.6%	0.6%	0.1%	3.7%
330-360	0.4%	1.2%	0.1%	0.0%	1.7%
% > 25 mg/l	5.1%	25.7%	14.2%	1.3%	46.4%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.3%	0.6%	0.0%	0.9%
30-60	0.1%	0.1%	1.1%	0.0%	1.3%
60-90	0.1%	0.3%	1.7%	0.2%	2.3%
90-120	0.0%	0.3%	1.5%	0.1%	1.9%
120-150	0.0%	0.2%	1.0%	0.0%	1.2%
150-180	0.1%	0.1%	0.4%	0.0%	0.5%
180-210	0.2%	0.9%	0.2%	0.0%	1.3%
210-240	0.1%	1.7%	0.8%	0.1%	2.7%
240-270	0.1%	2.6%	1.7%	0.5%	4.9%
270-300	0.1%	2.0%	1.5%	0.3%	4.0%
300-330	0.1%	1.5%	0.5%	0.1%	2.3%
330-360	0.1%	0.4%	0.0%	0.0%	0.5%
% > 75 mg/l	1.1%	10.4%	11.1%	1.2%	23.8%

Table NS04. Wind statistics 1/2-2009 – 27/4-2011 and Suspended Sediment Concentrations (mg/l) at NS04. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS04 exceeded 10 mg/l in 1.0% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.5%	1.0%	0.1%	0.0%	1.6%
30-60	0.7%	1.4%	0.4%	0.0%	2.4%
60-90	0.4%	2.5%	1.1%	0.1%	4.1%
90-120	0.5%	2.5%	0.8%	0.0%	3.9%
120-150	0.7%	2.0%	0.9%	0.0%	3.5%
150-180	0.7%	1.5%	0.2%	0.0%	2.4%
180-210	0.6%	1.8%	0.6%	0.0%	3.1%
210-240	0.6%	2.7%	2.1%	0.2%	5.5%
240-270	0.8%	3.5%	1.7%	0.2%	6.2%
270-300	0.9%	2.9%	1.9%	0.2%	5.9%
300-330	0.8%	1.5%	0.7%	0.0%	3.0%
330-360	0.5%	1.0%	0.1%	0.0%	1.6%
% > 3 mg/l	7.8%	24.0%	10.6%	0.7%	43.1%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.0%	0.1%	0.0%	0.0%	0.2%
30-60	0.3%	0.8%	0.4%	0.0%	1.4%
60-90	0.1%	1.5%	1.0%	0.1%	2.6%
90-120	0.1%	1.1%	0.7%	0.0%	1.9%
120-150	0.1%	0.8%	0.7%	0.0%	1.6%
150-180	0.2%	0.3%	0.1%	0.0%	0.6%
180-210	0.1%	0.6%	0.4%	0.0%	1.1%
210-240	0.1%	1.0%	1.5%	0.2%	2.7%
240-270	0.1%	0.7%	1.1%	0.2%	2.1%
270-300	0.1%	0.7%	1.2%	0.2%	2.2%
300-330	0.1%	0.6%	0.4%	0.0%	1.1%
330-360	0.1%	0.2%	0.1%	0.0%	0.3%
% > 10 mg/l	1.3%	8.3%	7.6%	0.7%	17.9%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.1%
30-60	0.1%	0.3%	0.3%	0.0%	0.7%
60-90	0.0%	0.7%	0.5%	0.1%	1.3%
90-120	0.0%	0.3%	0.5%	0.0%	0.8%
120-150	0.0%	0.2%	0.2%	0.0%	0.4%
150-180	0.0%	0.0%	0.1%	0.0%	0.2%
180-210	0.0%	0.1%	0.2%	0.0%	0.3%
210-240	0.0%	0.2%	0.7%	0.1%	1.0%
240-270	0.0%	0.3%	0.7%	0.2%	1.2%
270-300	0.0%	0.1%	0.7%	0.2%	1.1%
300-330	0.0%	0.0%	0.2%	0.0%	0.3%
330-360	0.0%	0.0%	0.0%	0.0%	0.1%
% > 25 mg/l	0.4%	2.4%	4.1%	0.6%	7.4%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.1%	0.0%	0.1%
60-90	0.0%	0.1%	0.2%	0.1%	0.4%
90-120	0.0%	0.0%	0.0%	0.0%	0.1%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.1%	0.1%	0.2%
240-270	0.0%	0.0%	0.2%	0.2%	0.4%
270-300	0.0%	0.0%	0.2%	0.1%	0.3%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.0%	0.2%	0.9%	0.5%	1.7%

Table NS05. Wind statistics 1/2-2009 – 26/4-2011 and Suspended Sediment Concentrations (mg/l) at NS05. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS05 exceeded 10 mg/l in 3.5% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	1.0%	2.2%	0.3%	0.0%	3.4%
30-60	0.8%	1.9%	0.6%	0.0%	3.3%
60-90	0.9%	2.7%	1.3%	0.1%	4.9%
90-120	1.0%	2.9%	1.0%	0.0%	4.8%
120-150	1.3%	2.4%	1.1%	0.0%	4.8%
150-180	1.1%	2.4%	0.3%	0.0%	3.9%
180-210	1.2%	3.6%	0.7%	0.0%	5.5%
210-240	1.1%	5.0%	2.2%	0.2%	8.5%
240-270	1.6%	6.3%	2.3%	0.3%	10.5%
270-300	2.0%	5.7%	2.6%	0.2%	10.5%
300-330	1.7%	2.5%	0.8%	0.0%	5.0%
330-360	1.2%	1.4%	0.1%	0.0%	2.7%
% > 3 mg/l	14.8%	39.0%	13.2%	0.8%	67.8%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.2%	0.8%	0.3%	0.0%	1.3%
30-60	0.3%	1.0%	0.6%	0.0%	1.9%
60-90	0.2%	1.4%	1.2%	0.1%	2.9%
90-120	0.2%	1.5%	0.8%	0.0%	2.5%
120-150	0.4%	1.0%	0.9%	0.0%	2.3%
150-180	0.3%	1.2%	0.3%	0.0%	1.8%
180-210	0.5%	1.9%	0.6%	0.0%	3.0%
210-240	0.3%	3.5%	2.1%	0.2%	6.1%
240-270	0.3%	3.3%	1.9%	0.3%	5.7%
270-300	0.3%	2.2%	2.0%	0.2%	4.6%
300-330	0.3%	0.9%	0.7%	0.0%	1.9%
330-360	0.2%	0.4%	0.1%	0.0%	0.7%
% > 10 mg/l	3.4%	19.2%	11.4%	0.8%	34.7%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.1%	0.2%	0.0%	0.3%
30-60	0.1%	0.3%	0.5%	0.0%	0.9%
60-90	0.1%	0.4%	0.8%	0.1%	1.4%
90-120	0.1%	0.6%	0.5%	0.0%	1.1%
120-150	0.1%	0.3%	0.6%	0.0%	1.0%
150-180	0.0%	0.3%	0.2%	0.0%	0.6%
180-210	0.1%	0.7%	0.4%	0.0%	1.2%
210-240	0.1%	1.7%	1.7%	0.2%	3.6%
240-270	0.1%	1.4%	1.2%	0.3%	3.0%
270-300	0.0%	0.7%	1.3%	0.2%	2.1%
300-330	0.0%	0.1%	0.3%	0.0%	0.5%
330-360	0.0%	0.1%	0.0%	0.0%	0.1%
% > 25 mg/l	0.8%	6.8%	7.7%	0.7%	15.9%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.1%	0.2%	0.0%	0.3%
60-90	0.0%	0.0%	0.2%	0.0%	0.3%
90-120	0.0%	0.0%	0.1%	0.0%	0.1%
120-150	0.0%	0.0%	0.1%	0.0%	0.1%
150-180	0.0%	0.0%	0.1%	0.0%	0.1%
180-210	0.0%	0.1%	0.1%	0.0%	0.2%
210-240	0.0%	0.1%	0.2%	0.1%	0.4%
240-270	0.0%	0.1%	0.2%	0.2%	0.5%
270-300	0.0%	0.0%	0.2%	0.1%	0.2%
300-330	0.0%	0.0%	0.0%	0.0%	0.1%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.1%	0.5%	1.4%	0.4%	2.4%

Table NS06. Wind statistics 1/2-2009 – 12/01-2011 and Suspended Sediment Concentrations (mg/l) at NS06. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS06 exceeded 10 mg/l in 0.2% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.1%	0.7%	0.3%	0.0%	1.1%
30-60	0.2%	0.4%	0.5%	0.0%	1.1%
60-90	0.1%	0.4%	0.4%	0.1%	1.0%
90-120	0.1%	0.6%	0.6%	0.0%	1.3%
120-150	0.2%	0.3%	0.1%	0.0%	0.5%
150-180	0.1%	0.1%	0.0%	0.0%	0.2%
180-210	0.2%	0.3%	0.1%	0.0%	0.5%
210-240	0.1%	0.6%	0.8%	0.1%	1.5%
240-270	0.1%	0.4%	0.5%	0.1%	1.2%
270-300	0.1%	0.4%	0.4%	0.0%	0.9%
300-330	0.4%	0.4%	0.2%	0.0%	1.0%
330-360	0.2%	0.8%	0.1%	0.0%	1.0%
% > 3 mg/l	1.9%	5.3%	3.7%	0.4%	11.4%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.0%	0.1%	0.0%	0.0%	0.1%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.1%	0.0%	0.1%
90-120	0.0%	0.0%	0.1%	0.0%	0.1%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.1%
210-240	0.0%	0.2%	0.1%	0.0%	0.3%
240-270	0.0%	0.0%	0.1%	0.0%	0.2%
270-300	0.0%	0.0%	0.0%	0.0%	0.1%
300-330	0.0%	0.0%	0.1%	0.0%	0.2%
330-360	0.0%	0.1%	0.0%	0.0%	0.1%
% > 10 mg/l	0.1%	0.5%	0.6%	0.1%	1.3%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.0%	0.0%	0.0%
90-120	0.0%	0.0%	0.0%	0.0%	0.0%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.1%
240-270	0.0%	0.0%	0.1%	0.0%	0.1%
270-300	0.0%	0.0%	0.0%	0.0%	0.0%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 25 mg/l	0.0%	0.1%	0.1%	0.0%	0.1%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.0%	0.0%	0.0%
90-120	0.0%	0.0%	0.0%	0.0%	0.0%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.0%
240-270	0.0%	0.0%	0.0%	0.0%	0.0%
270-300	0.0%	0.0%	0.0%	0.0%	0.0%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.0%	0.0%	0.0%	0.0%	0.0%

Table NS06a. Wind statistics 13/1-2011 – 7/4-2011 and Suspended Sediment Concentrations (mg/l) at NS06a. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS06a exceeded 10 mg/l in 0.9% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.3%	0.1%	0.0%	0.0%	0.4%
30-60	0.3%	0.6%	0.0%	0.0%	0.9%
60-90	0.3%	3.9%	1.9%	0.0%	6.0%
90-120	0.2%	2.5%	2.0%	0.1%	4.8%
120-150	0.1%	1.5%	1.7%	0.0%	3.3%
150-180	0.0%	1.2%	0.1%	0.0%	1.3%
180-210	0.3%	0.7%	0.0%	0.0%	1.1%
210-240	0.7%	2.3%	1.5%	0.2%	4.7%
240-270	1.2%	7.0%	4.6%	1.1%	13.9%
270-300	0.3%	6.0%	1.6%	0.0%	7.9%
300-330	0.1%	1.4%	0.0%	0.0%	1.6%
330-360	0.6%	0.5%	0.0%	0.0%	1.1%
% > 3 mg/l	4.4%	27.7%	13.4%	1.4%	47.0%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.1%	0.1%	0.0%	0.0%	0.2%
30-60	0.2%	0.4%	0.0%	0.0%	0.5%
60-90	0.0%	1.5%	1.6%	0.0%	3.1%
90-120	0.0%	0.8%	1.9%	0.1%	2.9%
120-150	0.0%	0.4%	1.7%	0.0%	2.0%
150-180	0.0%	0.1%	0.0%	0.0%	0.1%
180-210	0.1%	0.1%	0.0%	0.0%	0.2%
210-240	0.0%	0.9%	0.9%	0.1%	1.8%
240-270	0.3%	1.8%	2.9%	1.1%	6.1%
270-300	0.1%	3.1%	1.2%	0.0%	4.4%
300-330	0.0%	0.5%	0.0%	0.0%	0.5%
330-360	0.1%	0.3%	0.0%	0.0%	0.4%
% > 10 mg/l	0.9%	9.9%	10.1%	1.3%	22.2%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.1%	0.0%	0.0%	0.0%	0.1%
30-60	0.0%	0.1%	0.0%	0.0%	0.1%
60-90	0.0%	0.5%	1.3%	0.0%	1.9%
90-120	0.0%	0.2%	1.9%	0.1%	2.2%
120-150	0.0%	0.2%	1.3%	0.0%	1.5%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.4%	0.5%	0.0%	0.9%
240-270	0.0%	0.6%	1.7%	1.0%	3.2%
270-300	0.0%	1.0%	1.0%	0.0%	2.1%
300-330	0.0%	0.3%	0.0%	0.0%	0.3%
330-360	0.0%	0.1%	0.0%	0.0%	0.1%
% > 25 mg/l	0.1%	3.3%	7.7%	1.2%	12.3%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.1%	0.0%	0.0%	0.0%	0.1%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.2%	0.8%	0.0%	1.0%
90-120	0.0%	0.0%	1.2%	0.1%	1.3%
120-150	0.0%	0.0%	0.1%	0.0%	0.1%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.2%	0.0%	0.2%
240-270	0.0%	0.0%	0.1%	0.3%	0.5%
270-300	0.0%	0.3%	0.6%	0.0%	0.9%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.1%	0.5%	2.9%	0.5%	4.1%

Table NS07. Wind statistics 1/2-2009 – 12/01-2011 and Suspended Sediment Concentrations (mg/l) at NS07. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS07 exceeded 10 mg/l in 0.2% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.2%	1.2%	0.5%	0.0%	1.9%
30-60	0.4%	1.0%	0.6%	0.0%	2.0%
60-90	0.2%	0.9%	0.7%	0.1%	2.0%
90-120	0.2%	1.2%	0.8%	0.0%	2.1%
120-150	0.4%	0.7%	0.8%	0.0%	1.8%
150-180	0.3%	0.4%	0.2%	0.0%	0.9%
180-210	0.2%	0.6%	0.4%	0.0%	1.3%
210-240	0.2%	0.8%	1.0%	0.1%	2.2%
240-270	0.2%	0.8%	1.1%	0.2%	2.2%
270-300	0.3%	0.8%	1.0%	0.1%	2.2%
300-330	0.4%	0.9%	0.5%	0.0%	1.8%
330-360	0.3%	1.1%	0.1%	0.0%	1.5%
% > 3 mg/l	3.3%	10.4%	7.5%	0.7%	21.9%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.0%	0.2%	0.1%	0.0%	0.4%
30-60	0.0%	0.1%	0.3%	0.0%	0.5%
60-90	0.0%	0.1%	0.4%	0.1%	0.6%
90-120	0.1%	0.2%	0.1%	0.0%	0.3%
120-150	0.0%	0.1%	0.1%	0.0%	0.3%
150-180	0.0%	0.1%	0.1%	0.0%	0.1%
180-210	0.0%	0.0%	0.0%	0.0%	0.1%
210-240	0.0%	0.2%	0.3%	0.0%	0.5%
240-270	0.0%	0.3%	0.4%	0.1%	0.8%
270-300	0.0%	0.1%	0.3%	0.1%	0.5%
300-330	0.0%	0.1%	0.1%	0.0%	0.2%
330-360	0.1%	0.2%	0.0%	0.0%	0.2%
% > 10 mg/l	0.5%	1.5%	2.2%	0.3%	4.5%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.1%	0.1%	0.2%
90-120	0.0%	0.0%	0.0%	0.0%	0.0%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.1%	0.1%	0.0%	0.1%
240-270	0.0%	0.1%	0.1%	0.0%	0.1%
270-300	0.0%	0.0%	0.0%	0.0%	0.0%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 25 mg/l	0.1%	0.2%	0.3%	0.1%	0.7%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.0%	0.0%	0.0%
90-120	0.0%	0.0%	0.0%	0.0%	0.0%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.0%
240-270	0.0%	0.0%	0.0%	0.0%	0.0%
270-300	0.0%	0.0%	0.0%	0.0%	0.0%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.0%	0.0%	0.0%	0.0%	0.0%

Table NS07a. Wind statistics 5/1-2011 – 7/4-2011 and Suspended Sediment Concentrations (mg/l) at NS07a. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS07a exceeded 10 mg/l in 0.5% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.2%	0.1%	0.0%	0.0%	0.4%
30-60	0.1%	0.5%	0.0%	0.0%	0.7%
60-90	0.2%	3.2%	2.0%	0.0%	5.5%
90-120	0.1%	2.9%	1.9%	0.1%	5.0%
120-150	0.1%	0.8%	1.7%	0.0%	2.6%
150-180	0.3%	1.3%	0.3%	0.0%	1.9%
180-210	0.5%	1.5%	0.2%	0.0%	2.3%
210-240	0.6%	1.2%	1.1%	0.2%	3.0%
240-270	0.2%	4.3%	3.8%	1.0%	9.3%
270-300	0.1%	3.9%	1.6%	0.0%	5.6%
300-330	0.1%	1.0%	0.0%	0.0%	1.1%
330-360	0.9%	0.7%	0.0%	0.0%	1.5%
% > 3 mg/l	3.4%	21.5%	12.6%	1.4%	38.8%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.2%	0.1%	0.0%	0.0%	0.3%
30-60	0.1%	0.3%	0.0%	0.0%	0.4%
60-90	0.1%	0.8%	2.0%	0.0%	3.0%
90-120	0.0%	0.8%	1.9%	0.1%	2.9%
120-150	0.0%	0.4%	1.6%	0.0%	2.0%
150-180	0.0%	0.1%	0.0%	0.0%	0.1%
180-210	0.1%	0.0%	0.0%	0.0%	0.1%
210-240	0.0%	0.5%	0.4%	0.0%	0.9%
240-270	0.0%	1.4%	2.1%	1.0%	4.6%
270-300	0.0%	1.5%	1.2%	0.0%	2.7%
300-330	0.0%	0.2%	0.0%	0.0%	0.3%
330-360	0.2%	0.5%	0.0%	0.0%	0.7%
% > 10 mg/l	0.9%	6.8%	9.4%	1.2%	18.2%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.1%	0.0%	0.0%	0.1%
30-60	0.0%	0.3%	0.0%	0.0%	0.3%
60-90	0.0%	0.2%	1.0%	0.0%	1.2%
90-120	0.0%	0.2%	1.9%	0.1%	2.2%
120-150	0.0%	0.2%	1.2%	0.0%	1.4%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.2%	0.0%	0.2%
240-270	0.0%	0.5%	1.5%	1.0%	3.0%
270-300	0.0%	0.5%	0.8%	0.0%	1.3%
300-330	0.0%	0.2%	0.0%	0.0%	0.2%
330-360	0.0%	0.1%	0.0%	0.0%	0.1%
% > 25 mg/l	0.1%	2.2%	6.5%	1.1%	9.9%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.1%	0.0%	0.1%
90-120	0.0%	0.1%	0.3%	0.0%	0.4%
120-150	0.0%	0.0%	0.4%	0.0%	0.5%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.0%
240-270	0.0%	0.0%	0.3%	0.0%	0.3%
270-300	0.0%	0.1%	0.0%	0.0%	0.1%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.0%	0.3%	1.1%	0.0%	1.4%

Table NS08. Wind statistics 1/2-2009 – 12/01-2011 and Suspended Sediment Concentrations (mg/l) at NS08. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS08 exceeded 10 mg/l in 0.1% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.3%	0.6%	0.4%	0.0%	1.3%
30-60	0.2%	0.8%	0.4%	0.0%	1.4%
60-90	0.1%	0.8%	0.4%	0.1%	1.5%
90-120	0.1%	0.7%	0.6%	0.0%	1.4%
120-150	0.1%	0.7%	0.3%	0.0%	1.2%
150-180	0.3%	0.5%	0.1%	0.0%	0.9%
180-210	0.2%	0.4%	0.4%	0.0%	1.0%
210-240	0.1%	0.9%	0.5%	0.1%	1.6%
240-270	0.2%	1.0%	0.6%	0.1%	1.9%
270-300	0.5%	1.5%	1.1%	0.1%	3.1%
300-330	0.5%	1.0%	0.4%	0.0%	1.9%
330-360	0.3%	0.8%	0.1%	0.0%	1.1%
% > 3 mg/l	2.9%	9.7%	5.3%	0.4%	18.3%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.1%	0.1%	0.0%	0.0%	0.1%
30-60	0.0%	0.2%	0.2%	0.0%	0.5%
60-90	0.0%	0.1%	0.3%	0.1%	0.5%
90-120	0.0%	0.2%	0.4%	0.0%	0.6%
120-150	0.0%	0.2%	0.1%	0.0%	0.3%
150-180	0.0%	0.0%	0.0%	0.0%	0.1%
180-210	0.0%	0.0%	0.0%	0.0%	0.1%
210-240	0.0%	0.1%	0.1%	0.0%	0.2%
240-270	0.0%	0.1%	0.0%	0.1%	0.2%
270-300	0.1%	0.1%	0.3%	0.1%	0.5%
300-330	0.1%	0.2%	0.2%	0.0%	0.5%
330-360	0.0%	0.2%	0.0%	0.0%	0.2%
% > 10 mg/l	0.5%	1.3%	1.7%	0.2%	3.7%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.1%	0.0%	0.1%
60-90	0.0%	0.0%	0.1%	0.1%	0.2%
90-120	0.0%	0.1%	0.3%	0.0%	0.4%
120-150	0.0%	0.1%	0.0%	0.0%	0.1%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.0%
240-270	0.0%	0.0%	0.0%	0.0%	0.0%
270-300	0.0%	0.0%	0.0%	0.0%	0.1%
300-330	0.0%	0.0%	0.0%	0.0%	0.1%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 25 mg/l	0.1%	0.3%	0.5%	0.1%	1.0%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.0%	0.0%	0.0%
90-120	0.0%	0.1%	0.2%	0.0%	0.2%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.0%
240-270	0.0%	0.0%	0.0%	0.0%	0.0%
270-300	0.0%	0.0%	0.0%	0.0%	0.0%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.0%	0.1%	0.2%	0.0%	0.3%

Table NS08a. Wind statistics 5/1-2011 – 7/4-2011 and Suspended Sediment Concentrations (mg/l) at NS08a. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS08a exceeded 10 mg/l in 0.2% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.1%	0.2%	0.0%	0.0%	0.3%
30-60	0.2%	1.1%	0.0%	0.0%	1.3%
60-90	0.2%	2.2%	1.9%	0.0%	4.3%
90-120	0.2%	2.9%	2.0%	0.1%	5.3%
120-150	0.1%	0.8%	1.7%	0.0%	2.6%
150-180	0.1%	0.3%	0.5%	0.0%	0.8%
180-210	0.3%	1.2%	0.2%	0.0%	1.7%
210-240	0.3%	0.7%	0.1%	0.0%	1.1%
240-270	0.2%	1.3%	1.4%	0.8%	3.7%
270-300	0.1%	1.3%	1.0%	0.0%	2.5%
300-330	0.0%	0.0%	0.0%	0.0%	0.1%
330-360	0.0%	0.1%	0.0%	0.0%	0.2%
% > 3 mg/l	1.9%	12.1%	8.9%	1.0%	23.8%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.0%	0.1%	0.0%	0.0%	0.1%
30-60	0.1%	0.5%	0.0%	0.0%	0.6%
60-90	0.1%	0.2%	1.3%	0.0%	1.6%
90-120	0.1%	0.5%	1.9%	0.1%	2.6%
120-150	0.1%	0.4%	1.7%	0.0%	2.2%
150-180	0.0%	0.0%	0.2%	0.0%	0.2%
180-210	0.0%	0.1%	0.2%	0.0%	0.3%
210-240	0.0%	0.2%	0.0%	0.0%	0.2%
240-270	0.0%	0.2%	0.3%	0.5%	1.0%
270-300	0.0%	0.3%	0.6%	0.0%	1.0%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.1%	0.0%	0.0%	0.1%
% > 10 mg/l	0.4%	2.5%	6.2%	0.7%	9.8%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.1%	0.3%	0.0%	0.0%	0.4%
60-90	0.1%	0.0%	1.2%	0.0%	1.3%
90-120	0.1%	0.1%	1.8%	0.1%	2.1%
120-150	0.1%	0.1%	0.8%	0.0%	0.9%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.0%
240-270	0.0%	0.0%	0.0%	0.1%	0.1%
270-300	0.0%	0.0%	0.5%	0.0%	0.5%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 25 mg/l	0.4%	0.5%	4.3%	0.2%	5.4%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.0%	0.0%	0.0%
90-120	0.0%	0.0%	0.8%	0.1%	1.0%
120-150	0.0%	0.0%	0.6%	0.0%	0.6%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.0%
240-270	0.0%	0.0%	0.0%	0.0%	0.0%
270-300	0.0%	0.0%	0.0%	0.0%	0.0%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.0%	0.1%	1.4%	0.1%	1.6%

Table NS09. Wind statistics 1/2-2009 – 7/4-2011 and Suspended Sediment Concentrations (mg/l) at NS09. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS09 exceeded 10 mg/l in 0.1% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.2%	0.2%	0.2%	0.0%	0.6%
30-60	0.1%	0.4%	0.4%	0.0%	1.0%
60-90	0.1%	0.6%	0.7%	0.1%	1.4%
90-120	0.0%	0.6%	0.9%	0.0%	1.6%
120-150	0.1%	0.5%	0.4%	0.0%	0.9%
150-180	0.1%	0.4%	0.2%	0.0%	0.7%
180-210	0.2%	0.5%	0.4%	0.0%	1.1%
210-240	0.1%	0.7%	1.0%	0.1%	1.9%
240-270	0.2%	0.9%	0.8%	0.3%	2.3%
270-300	0.2%	1.0%	0.8%	0.1%	2.1%
300-330	0.2%	0.6%	0.1%	0.0%	1.0%
330-360	0.1%	0.2%	0.0%	0.0%	0.4%
% > 3 mg/l	1.8%	6.6%	5.9%	0.6%	14.9%

SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.0%	0.0%	0.1%	0.0%	0.1%
30-60	0.0%	0.0%	0.1%	0.0%	0.2%
60-90	0.0%	0.0%	0.2%	0.1%	0.3%
90-120	0.0%	0.0%	0.2%	0.0%	0.2%
120-150	0.0%	0.0%	0.2%	0.0%	0.2%
150-180	0.0%	0.0%	0.2%	0.0%	0.2%
180-210	0.0%	0.2%	0.2%	0.0%	0.4%
210-240	0.0%	0.1%	0.3%	0.1%	0.5%
240-270	0.0%	0.1%	0.2%	0.2%	0.5%
270-300	0.0%	0.0%	0.2%	0.0%	0.2%
300-330	0.0%	0.0%	0.0%	0.0%	0.1%
330-360	0.0%	0.1%	0.0%	0.0%	0.1%
% > 10 mg/l	0.1%	0.6%	1.9%	0.4%	3.0%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.0%	0.0%	0.1%
90-120	0.0%	0.0%	0.0%	0.0%	0.0%
120-150	0.0%	0.0%	0.1%	0.0%	0.1%
150-180	0.0%	0.0%	0.1%	0.0%	0.2%
180-210	0.0%	0.1%	0.1%	0.0%	0.2%
210-240	0.0%	0.0%	0.0%	0.0%	0.1%
240-270	0.0%	0.0%	0.0%	0.0%	0.1%
270-300	0.0%	0.0%	0.0%	0.0%	0.0%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 25 mg/l	0.0%	0.2%	0.5%	0.1%	0.8%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.0%	0.0%	0.0%
90-120	0.0%	0.0%	0.0%	0.0%	0.0%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.0%
240-270	0.0%	0.0%	0.0%	0.0%	0.0%
270-300	0.0%	0.0%	0.0%	0.0%	0.0%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.0%	0.0%	0.0%	0.0%	0.0%

Table NS10. Wind statistics 1/2-2009 – 7/4-2011 and Suspended Sediment Concentrations (mg/l) at NS10. Wind speed (m/s), wind direction (degrees). Wind statistics: StormGeo, WRF. Example: The SSC levels at NS10 exceeded 10 mg/l in 0.0% of the time in conditions when wind speeds were between 5-10 m/s and wind directions were between 210-240 degrees.

SSC >3 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 3 mg/l
0-30	0.3%	1.1%	0.3%	0.0%	1.7%
30-60	0.2%	0.7%	0.4%	0.0%	1.3%
60-90	0.2%	0.6%	0.3%	0.1%	1.2%
90-120	0.1%	0.4%	0.3%	0.0%	0.9%
120-150	0.3%	0.2%	0.3%	0.0%	0.8%
150-180	0.1%	0.2%	0.0%	0.0%	0.3%
180-210	0.1%	0.3%	0.2%	0.0%	0.7%
210-240	0.2%	0.7%	0.6%	0.0%	1.5%
240-270	0.2%	0.9%	1.0%	0.2%	2.3%
270-300	0.3%	1.0%	0.9%	0.1%	2.4%
300-330	0.4%	1.0%	0.3%	0.0%	1.7%
330-360	0.2%	0.6%	0.1%	0.0%	0.9%
% > 3 mg/l	2.7%	7.7%	4.7%	0.4%	15.4%

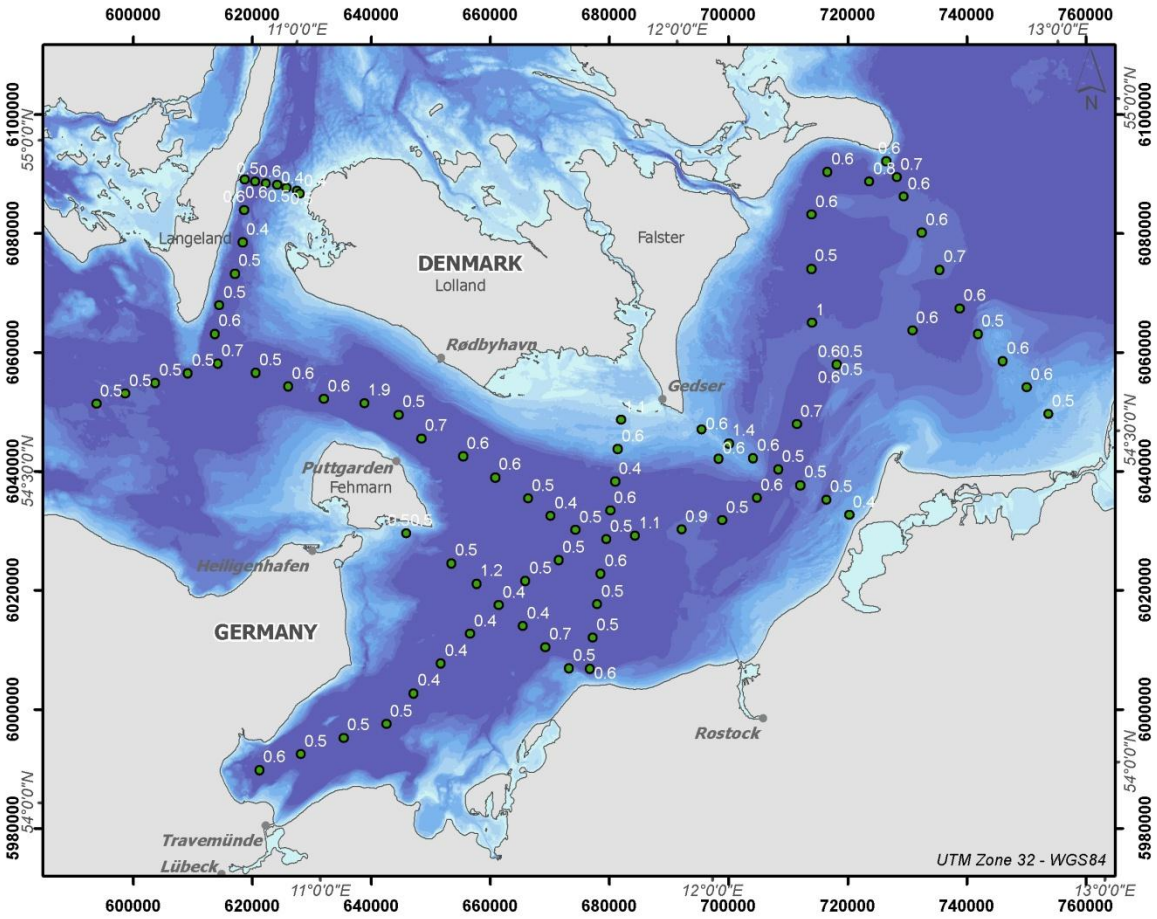
SSC >10 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% > 10 mg/l
0-30	0.0%	0.2%	0.1%	0.0%	0.3%
30-60	0.0%	0.1%	0.2%	0.0%	0.3%
60-90	0.0%	0.0%	0.1%	0.0%	0.1%
90-120	0.0%	0.0%	0.0%	0.0%	0.0%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.1%
240-270	0.0%	0.1%	0.2%	0.1%	0.5%
270-300	0.0%	0.1%	0.2%	0.0%	0.3%
300-330	0.0%	0.2%	0.1%	0.0%	0.3%
330-360	0.0%	0.2%	0.0%	0.0%	0.2%
% > 10 mg/l	0.1%	0.8%	1.0%	0.2%	2.2%

SSC >25 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >25 mg/l
0-30	0.0%	0.0%	0.1%	0.0%	0.1%
30-60	0.0%	0.0%	0.1%	0.0%	0.1%
60-90	0.0%	0.0%	0.0%	0.0%	0.0%
90-120	0.0%	0.0%	0.0%	0.0%	0.0%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.0%
240-270	0.0%	0.0%	0.0%	0.0%	0.0%
270-300	0.0%	0.0%	0.0%	0.0%	0.0%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.1%
% > 25 mg/l	0.0%	0.1%	0.2%	0.0%	0.3%

SSC >75 mg/l					
Wind dir/Wind speed	0-5	5-10	10-15	15-20	% >75 mg/l
0-30	0.0%	0.0%	0.0%	0.0%	0.0%
30-60	0.0%	0.0%	0.0%	0.0%	0.0%
60-90	0.0%	0.0%	0.0%	0.0%	0.0%
90-120	0.0%	0.0%	0.0%	0.0%	0.0%
120-150	0.0%	0.0%	0.0%	0.0%	0.0%
150-180	0.0%	0.0%	0.0%	0.0%	0.0%
180-210	0.0%	0.0%	0.0%	0.0%	0.0%
210-240	0.0%	0.0%	0.0%	0.0%	0.0%
240-270	0.0%	0.0%	0.0%	0.0%	0.0%
270-300	0.0%	0.0%	0.0%	0.0%	0.0%
300-330	0.0%	0.0%	0.0%	0.0%	0.0%
330-360	0.0%	0.0%	0.0%	0.0%	0.0%
% > 75 mg/l	0.0%	0.0%	0.0%	0.0%	0.0%

A P P E N D I X J

Spatial Distribution of SSC Based on Profile Measurements



27 July - 2 August 2009 Upper 5 metres (26JL0905)

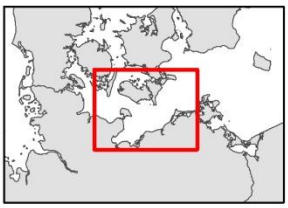
0 5 10 20 Km

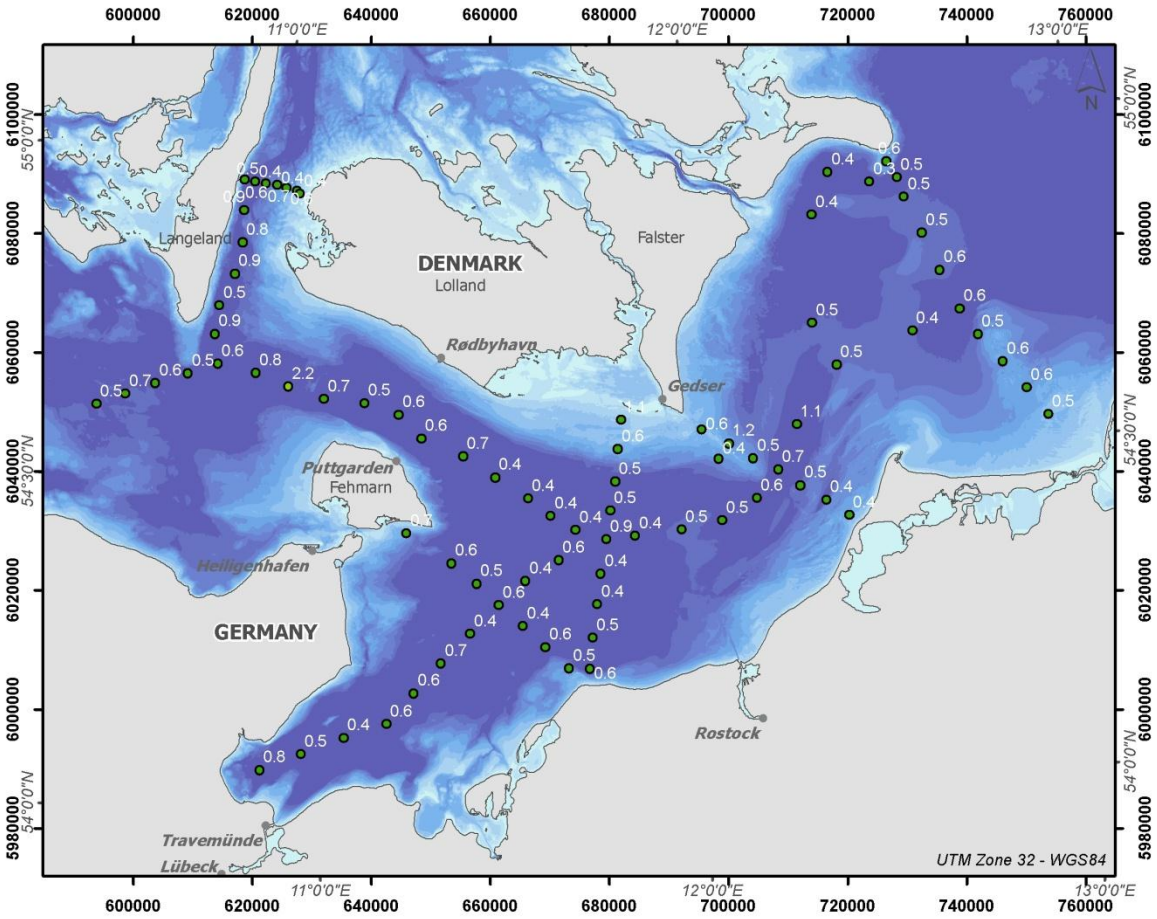
SSC [mg/l]

- 0.4 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)

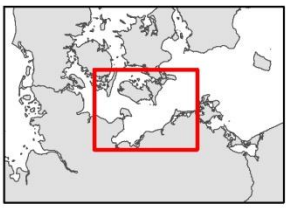
0-2 2-4 4-6 6-8 8-10 10-12 12-14 14-16 16-18 >18





27 July - 2 August 2009 Lower 5 metres (26JL0905)

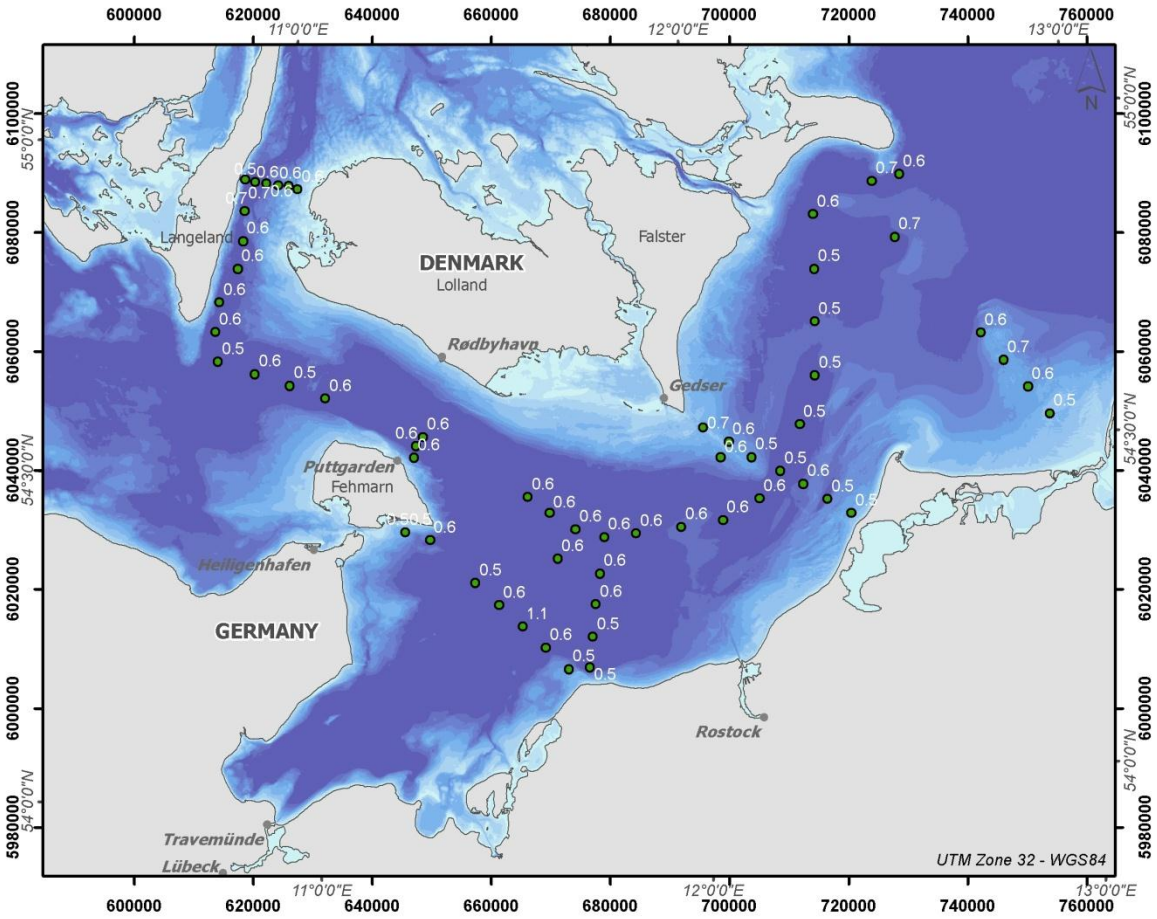
0 5 10 20 Km



SSC [mg/l]

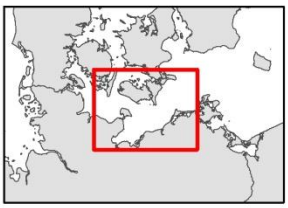
- 0.3 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)



24 - 29 August Upper 5 metres (26JL0906)

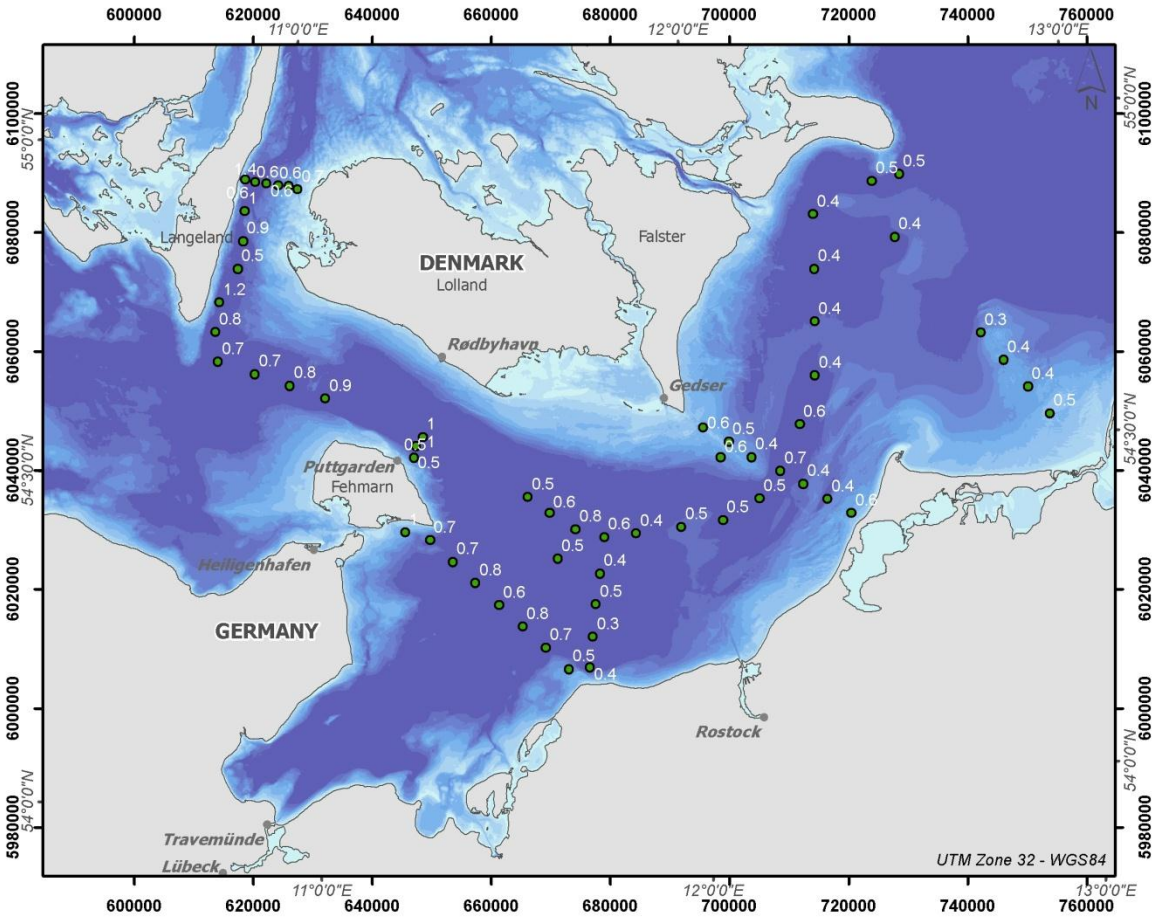
0 5 10 20 Km



SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)



24 - 29 August 2009 Lower 5 metres (26JL0906)

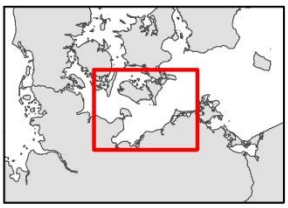
0 5 10 20 Km

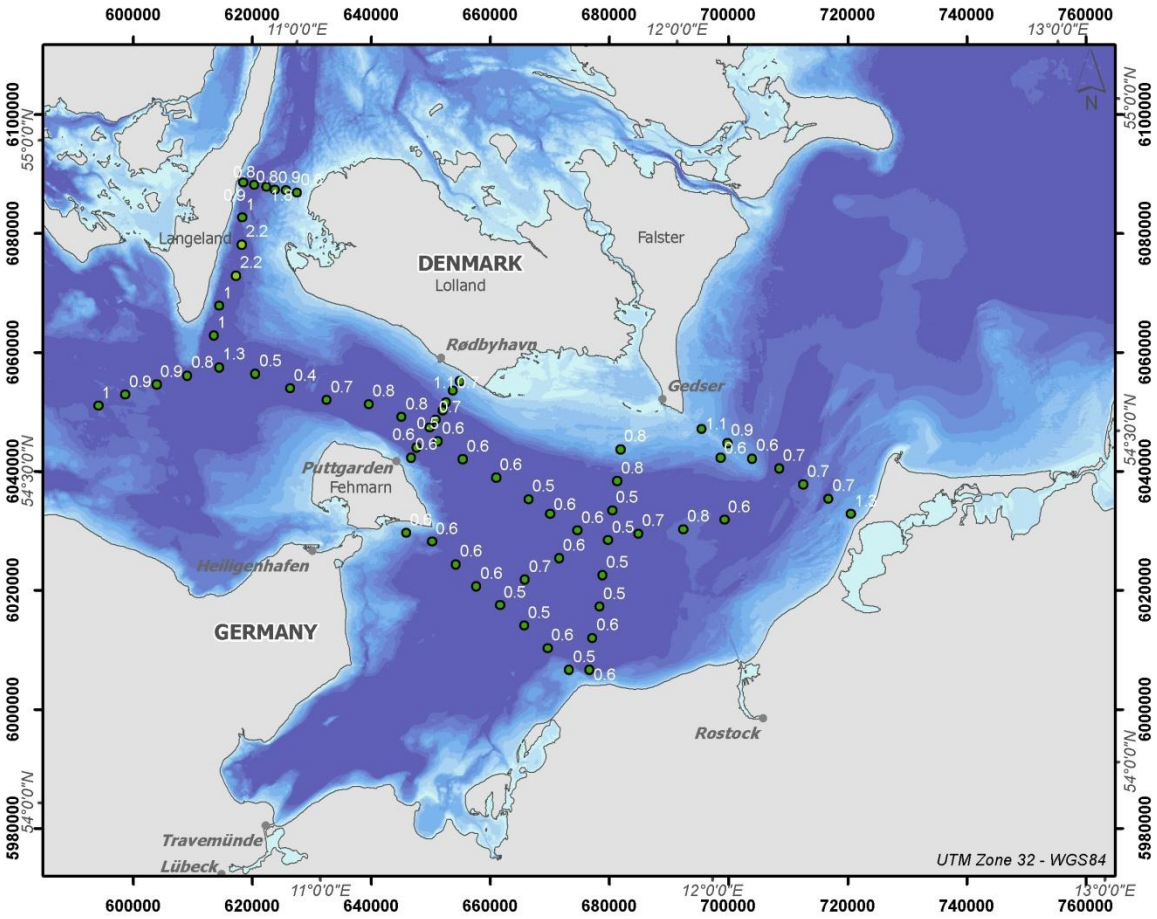
SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)

0-2 2-4 4-6 6-8 8-10 10-12 12-14 14-16 16-18 >18



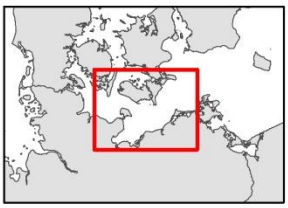


28 September - 5 October 2009 Upper 5 metres (26JL0907)

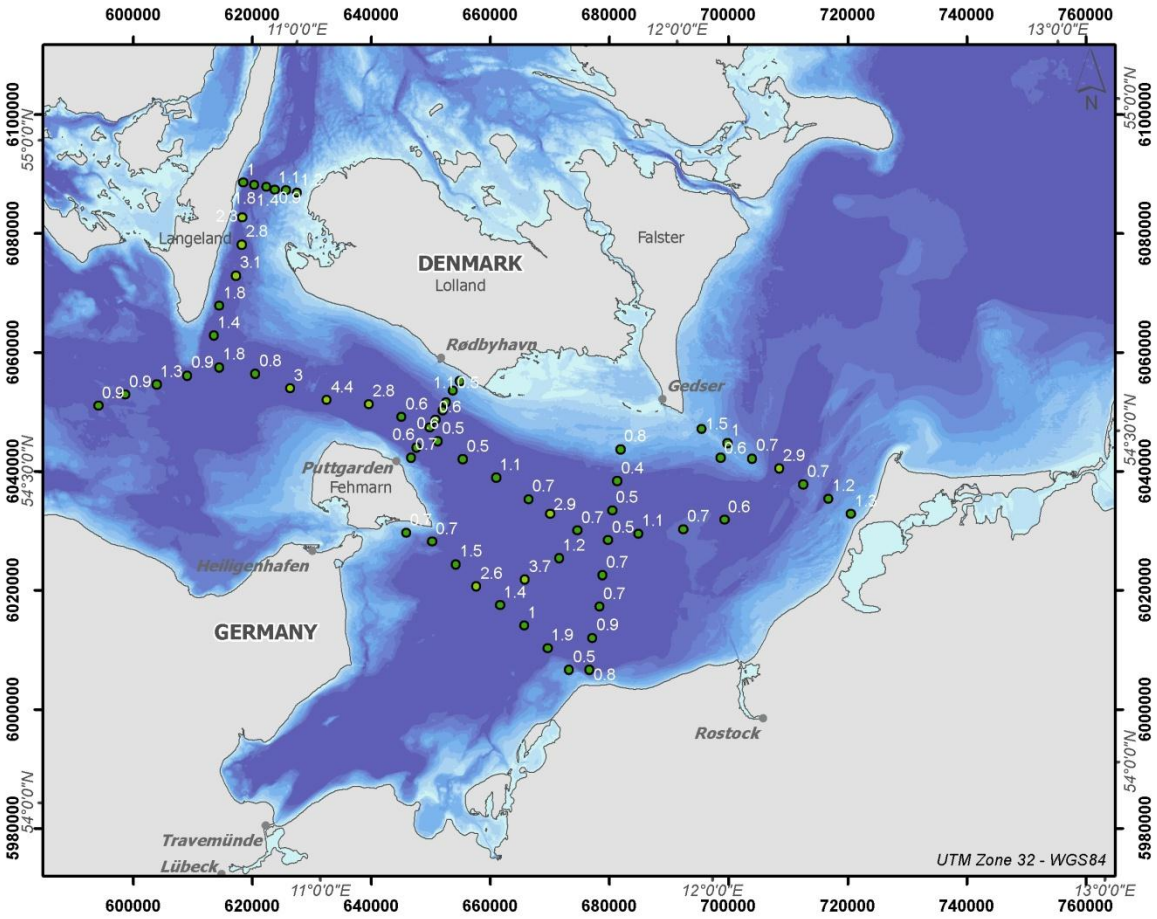
0 5 10 20 Km

SSC [mg/l]

- 0.4 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

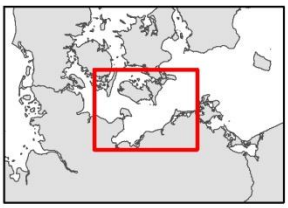


Depth (m)



28 September - 5 October 2009 Lower 5 metres (26JL0907)

0 5 10 20 Km

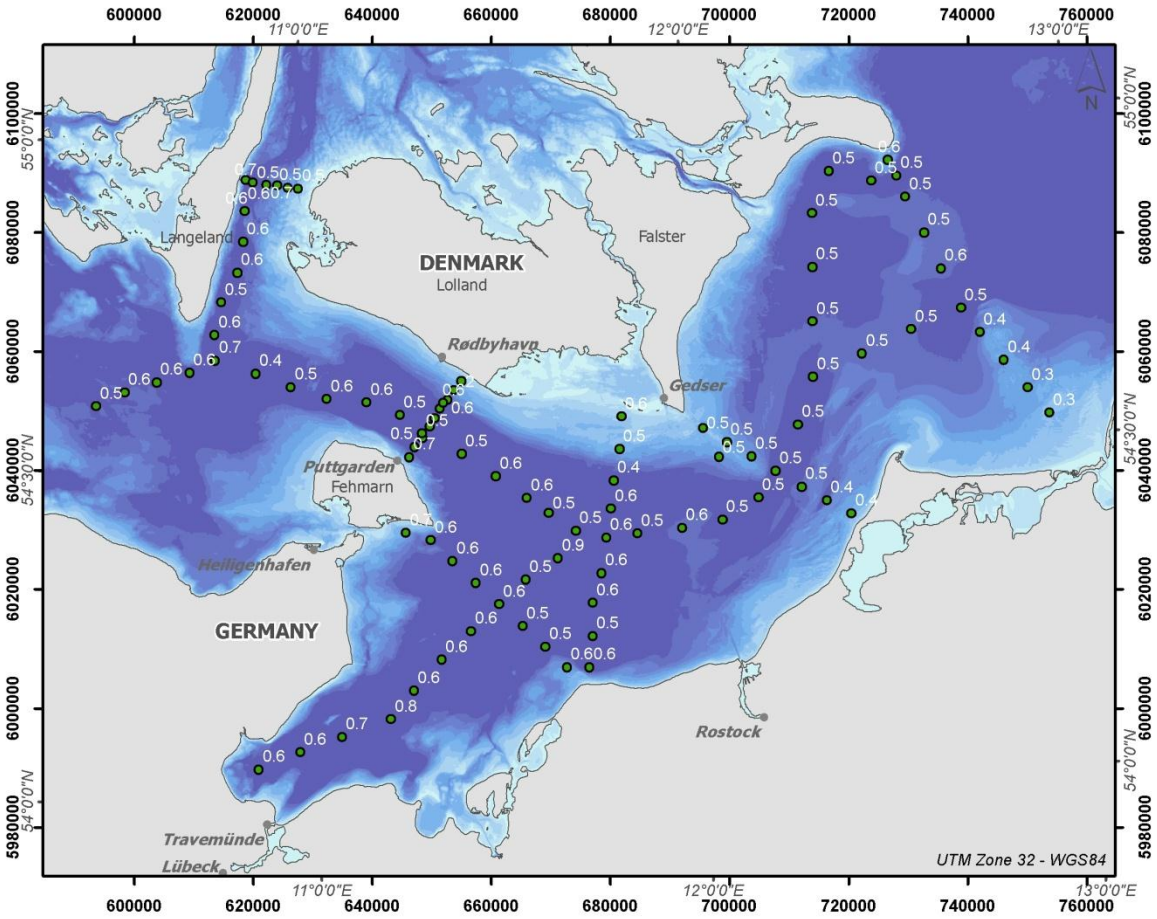


SSC [mg/l]

- 0.4 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Bathymetry model 50m

Depth (m)



27 October - 3 November 2009 Upper 5 metres (26JL0908)

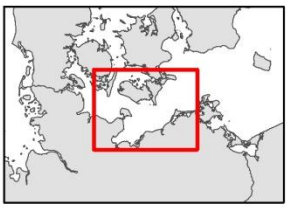
0 5 10 20 Km

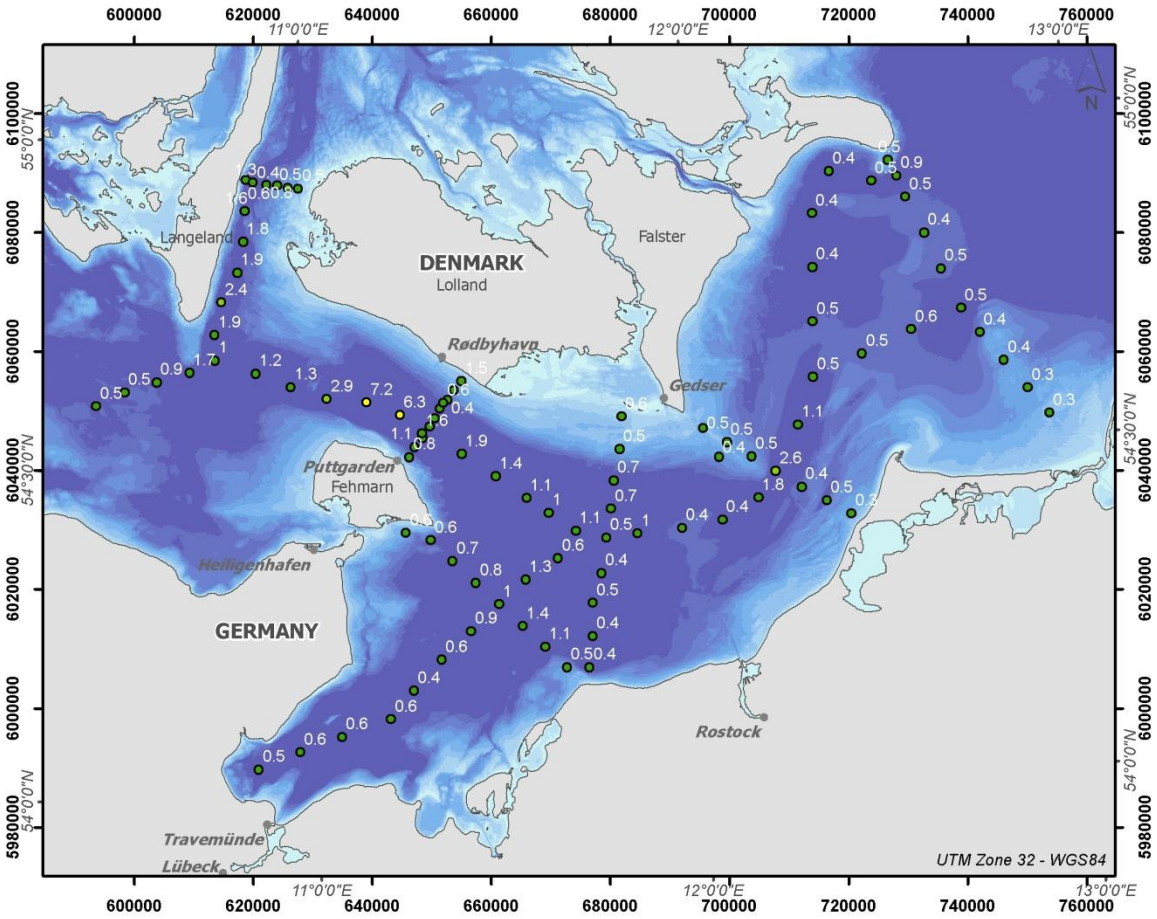
SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)

0-2 2-4 4-6 6-8 8-10 10-12 12-14 14-16 16-18 >18





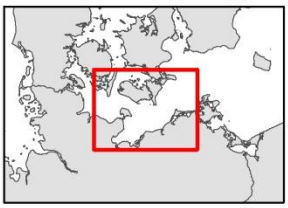
27 October - 3 November 2009 Lower 5 metres (26JL0908)

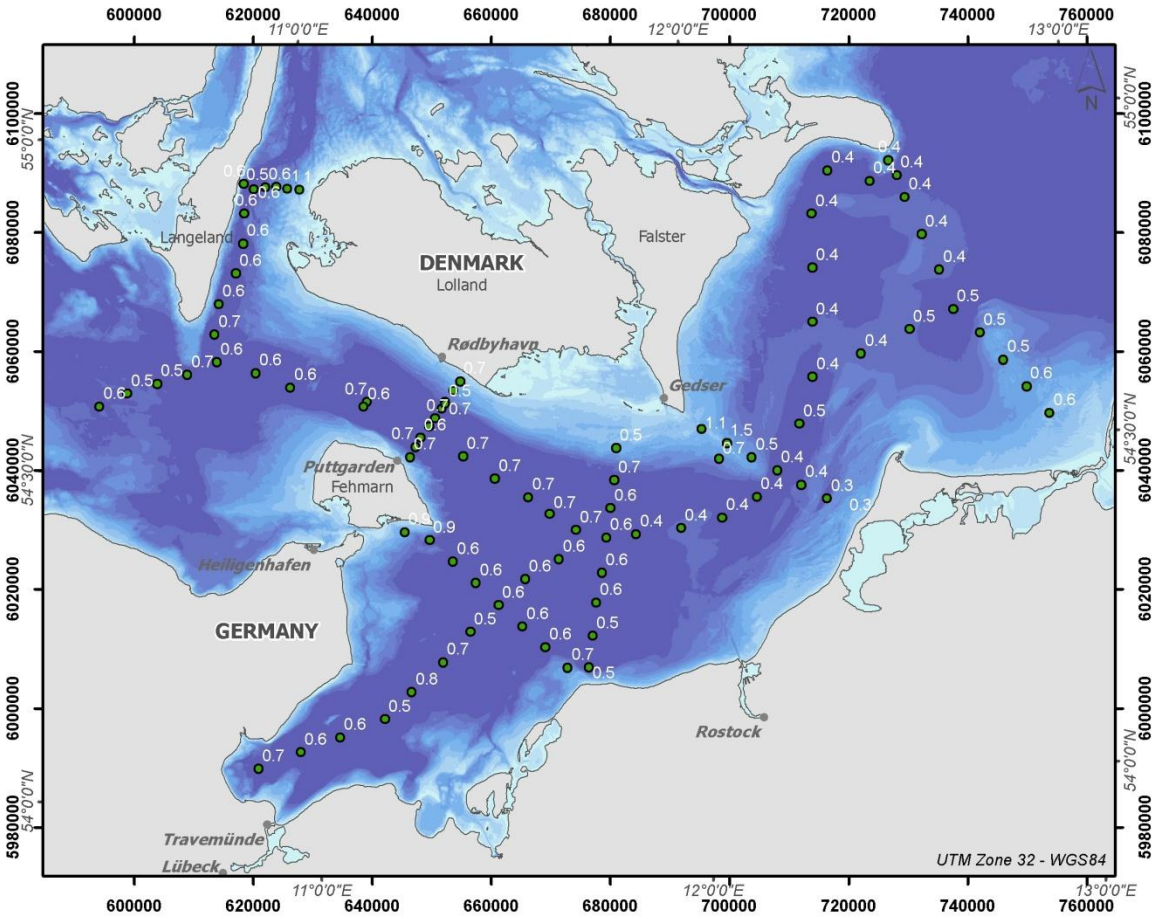
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)





30 November - 6 December 2009 Upper 5 metres (26JL0909)

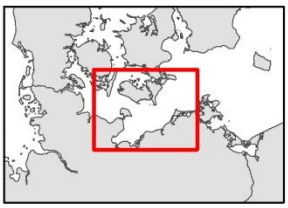
0 5 10 20 Km

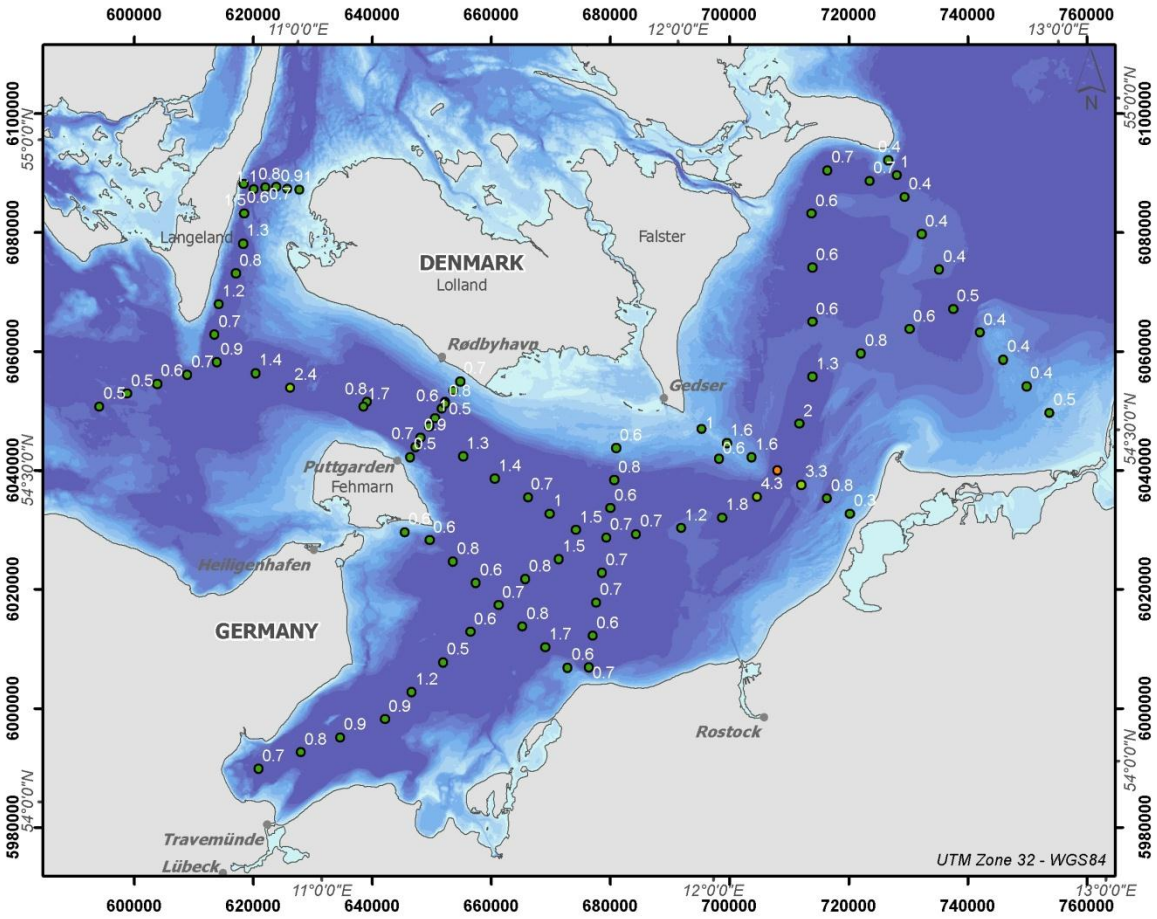
SSC [mg/l]

- 0.3 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)

0-2 2-4 4-6 6-8 8-10 10-12 12-14 14-16 16-18 >18



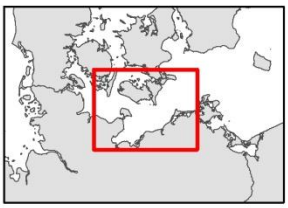


30 November - 6 December 2009 Lower 5 metres (26JL0909)

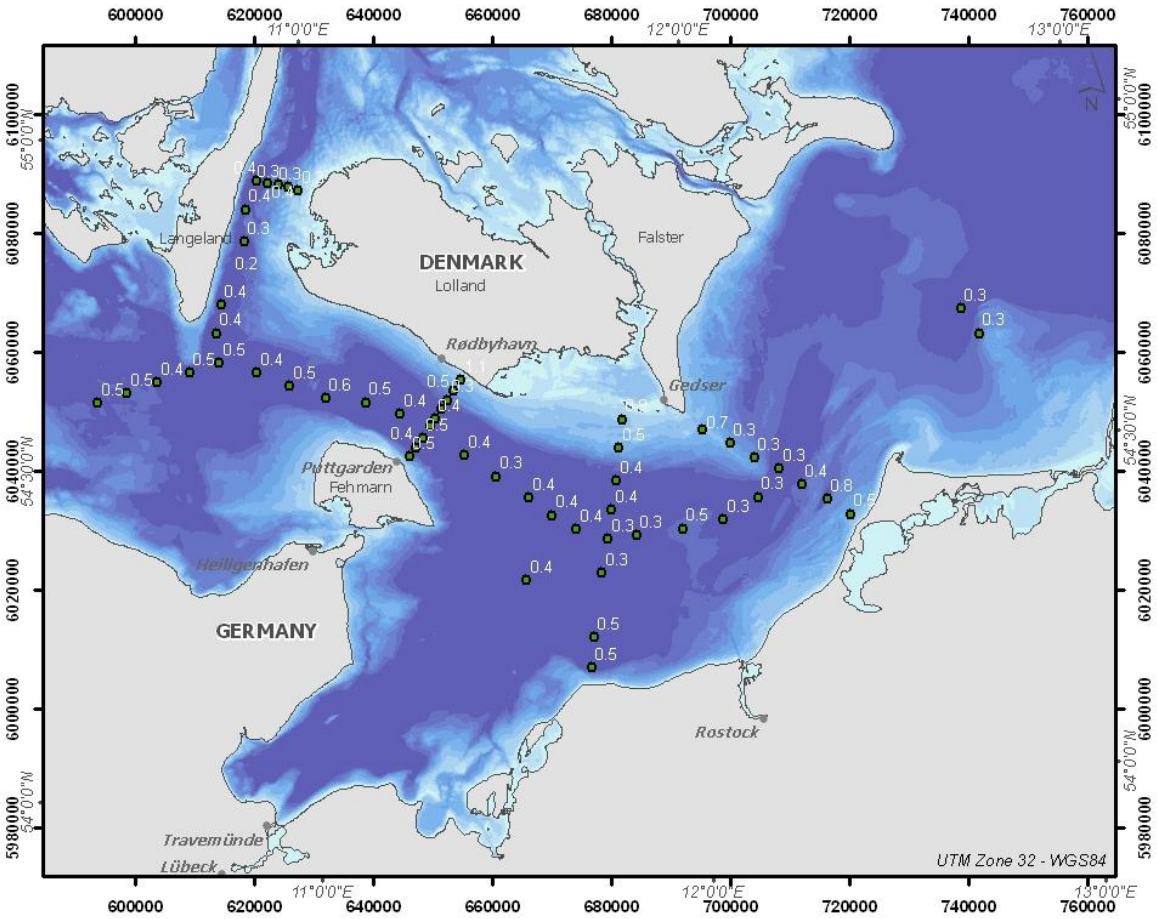
0 5 10 20 Km

SSC [mg/l]

- 0.3 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0



Depth (m)



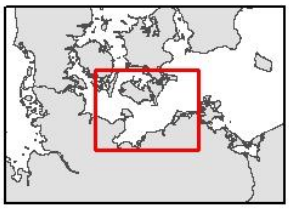
12-16 April 2010 Upper 5 metres (26JL1004)

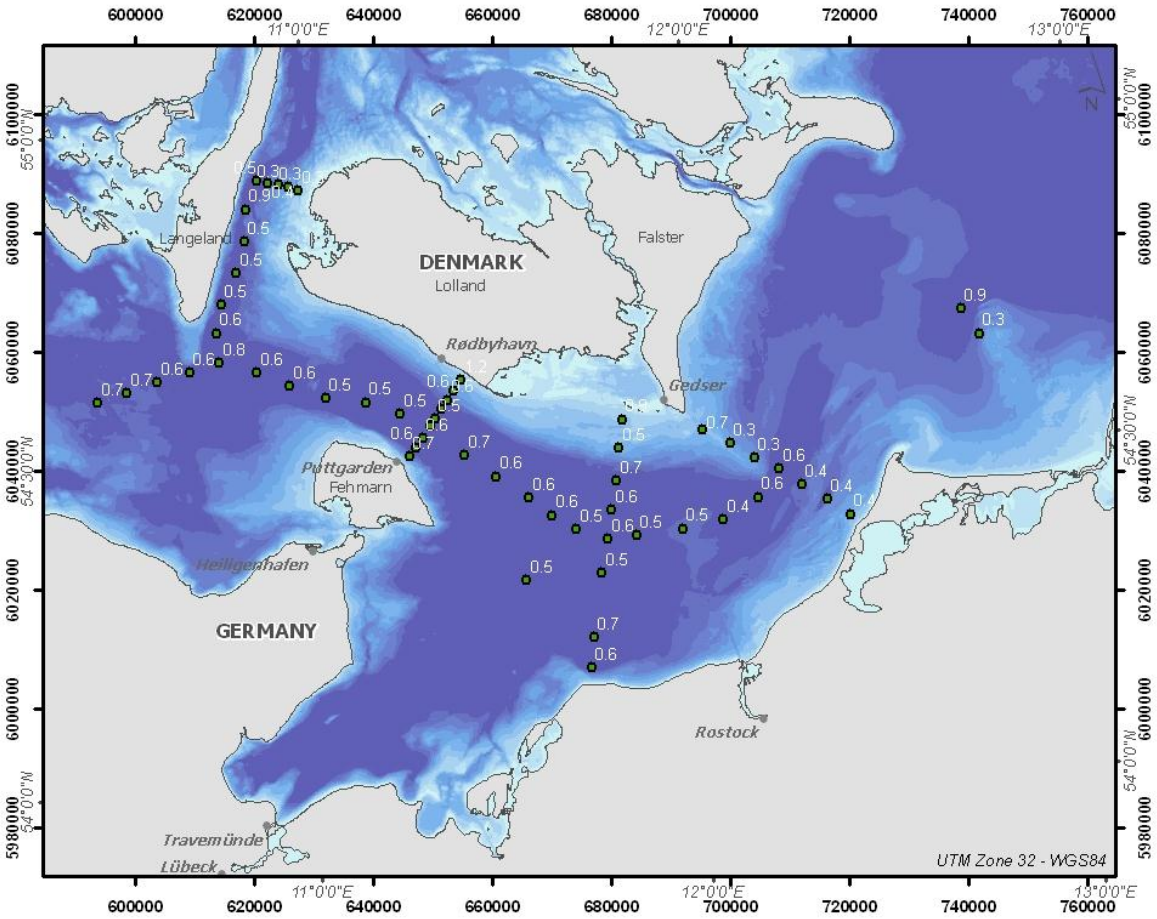
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

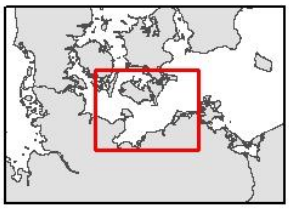
Depth (m)





12-16 April 2010 Lower 5 metres (26JL1004)

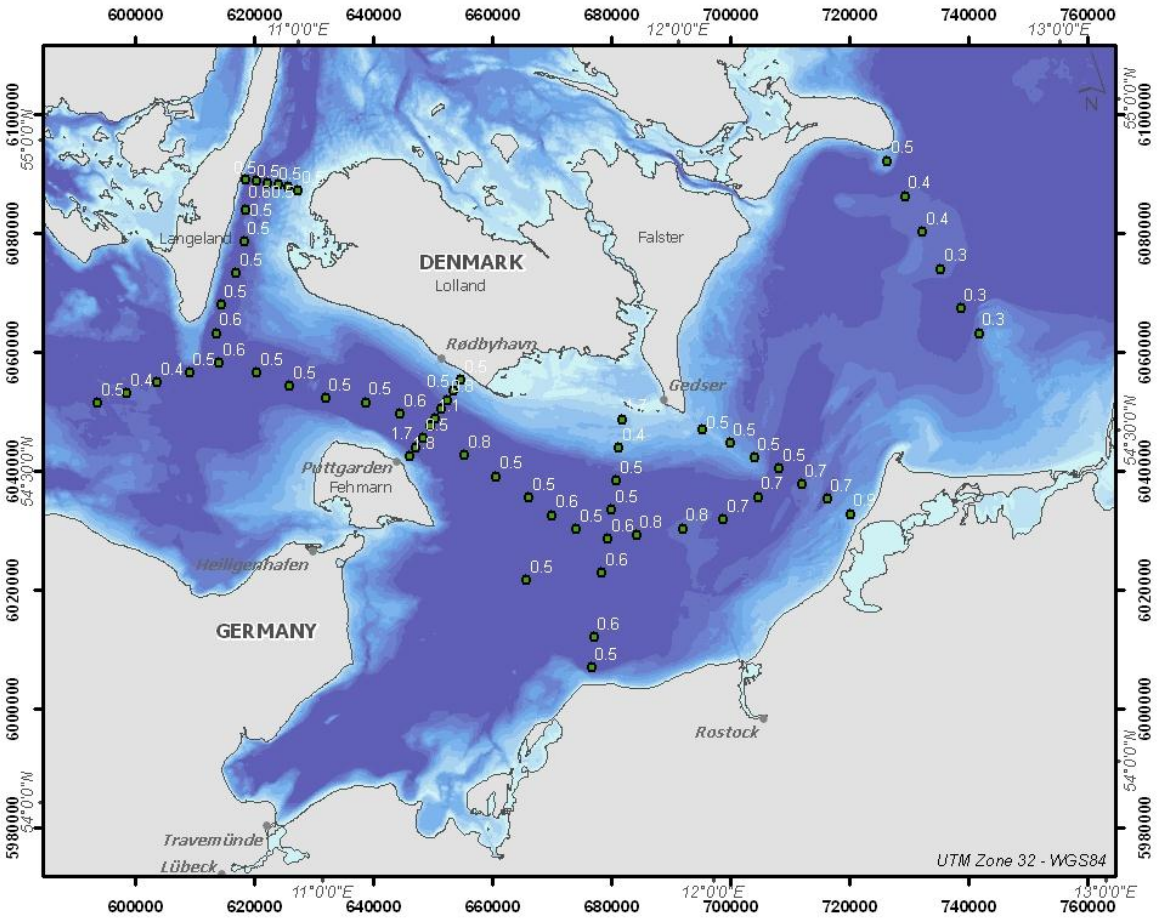
0 5 10 20 Km



SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)



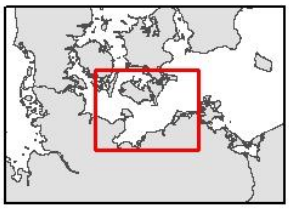
17-21 May 2010 Upper 5 metres (26JL1005)

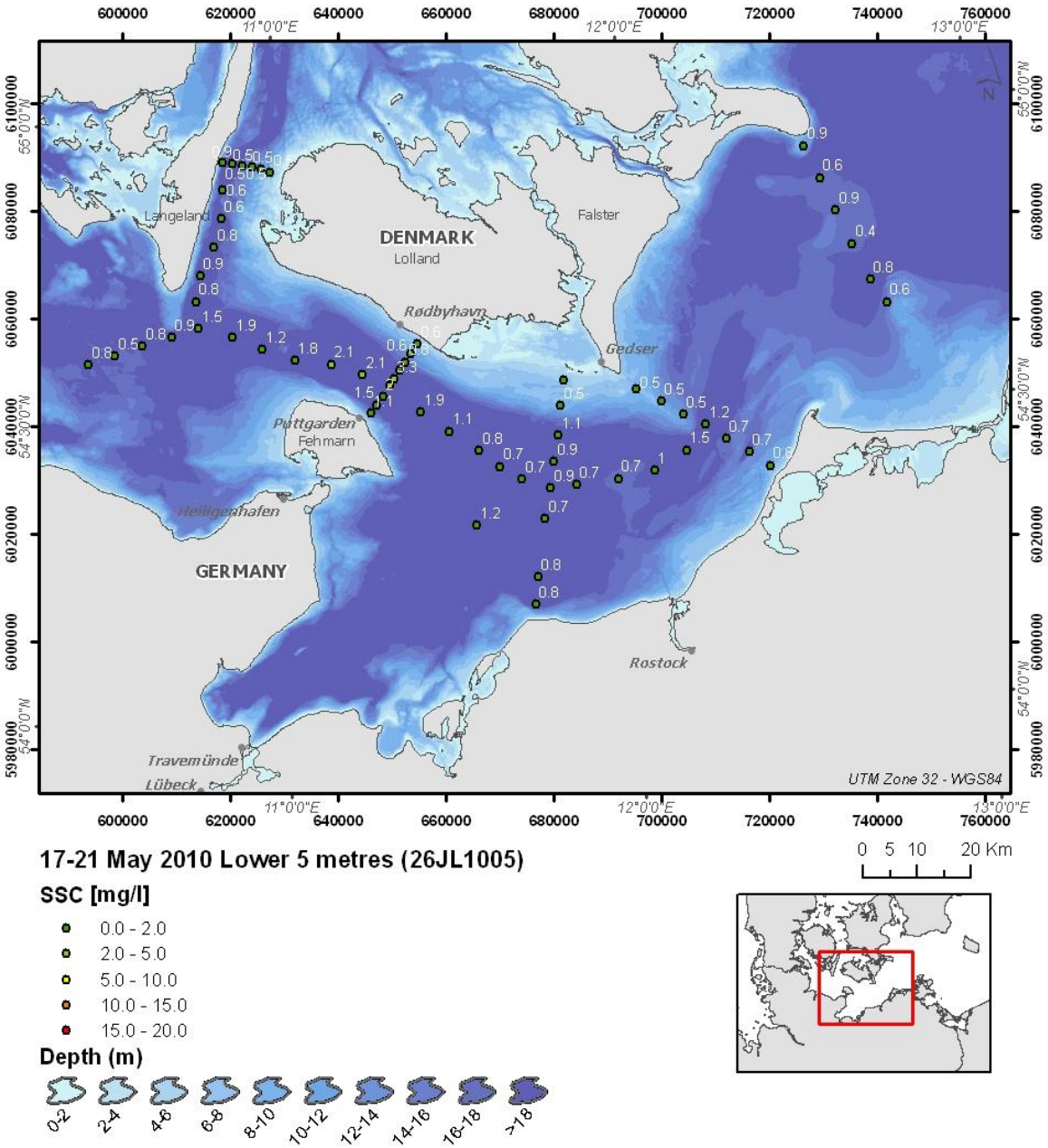
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)





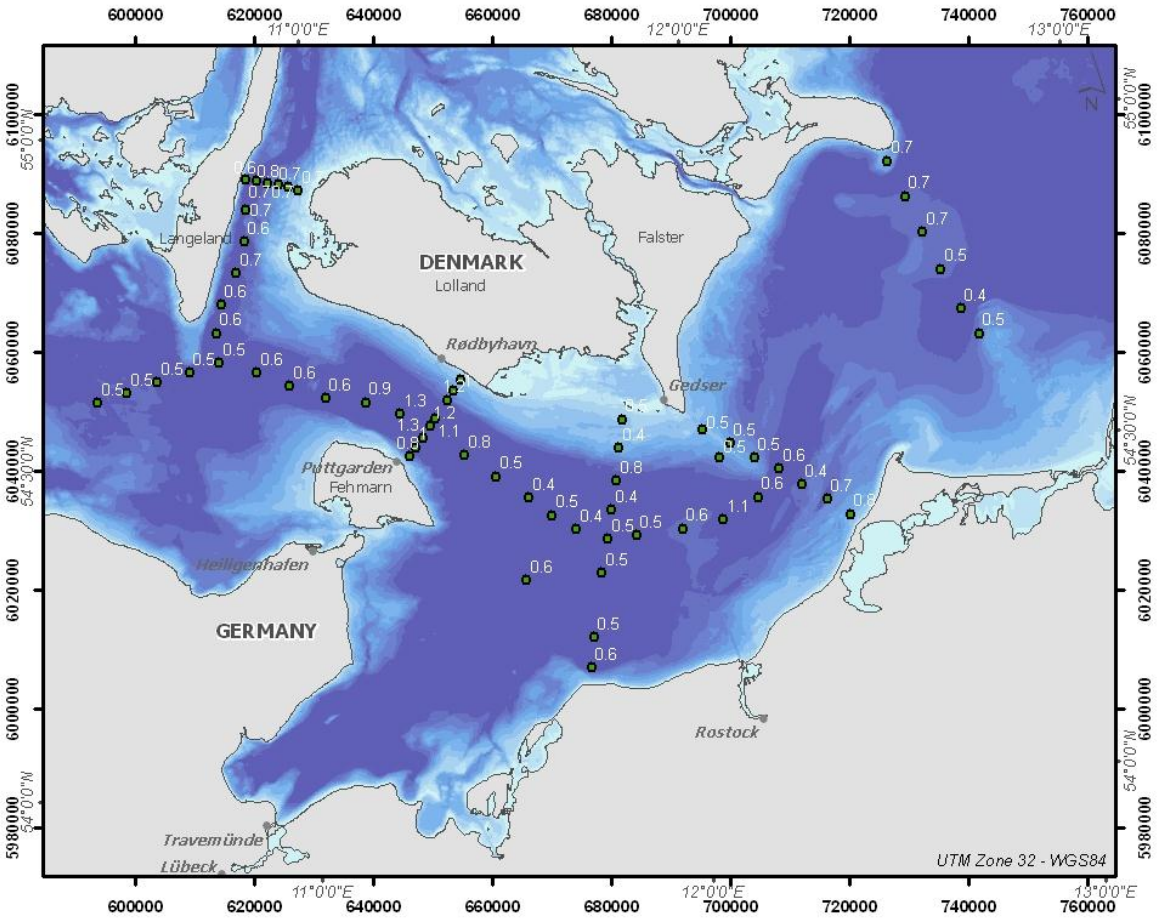
17-21 May 2010 Lower 5 metres (26JL1005)

0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)



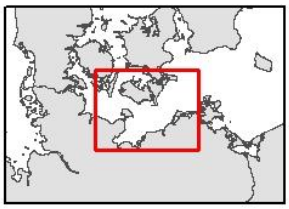
14-18 June 2010 Upper 5 metres (26JL1006)

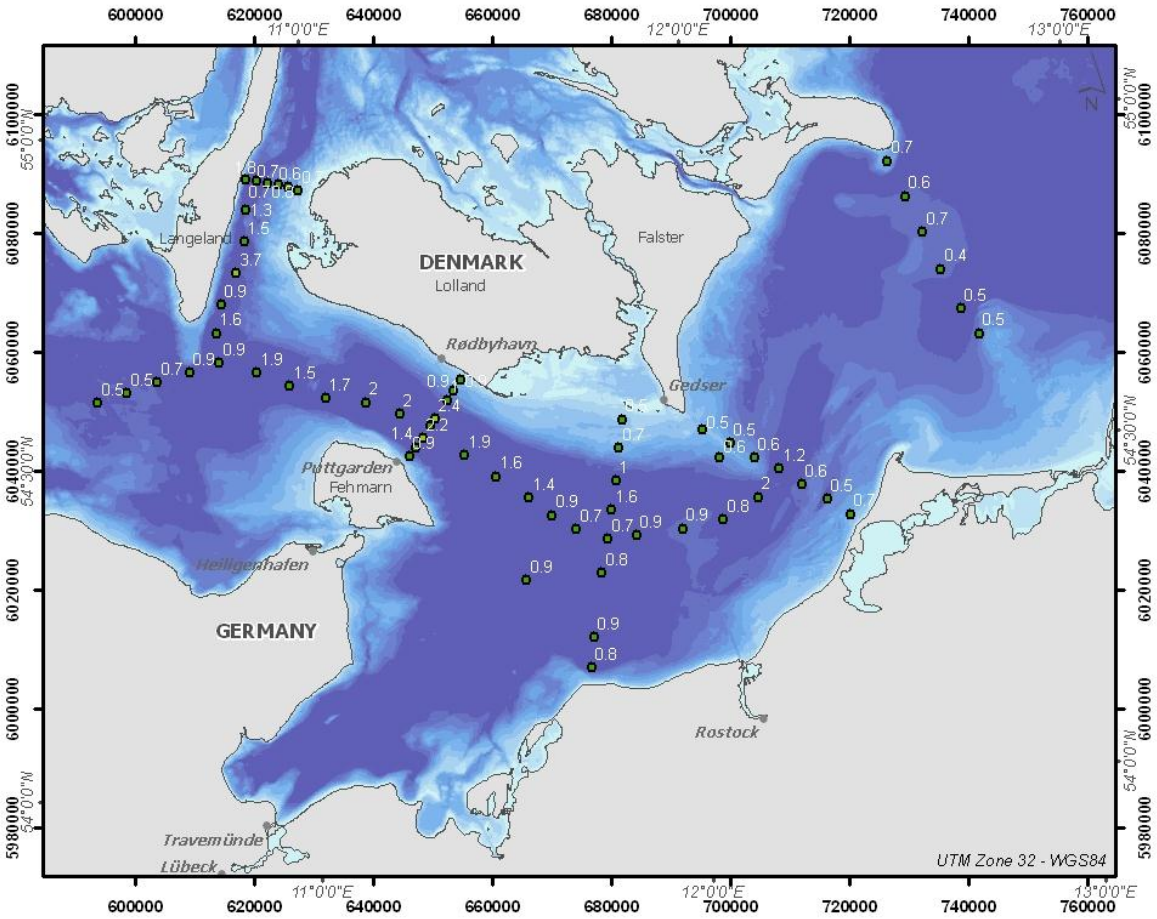
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)





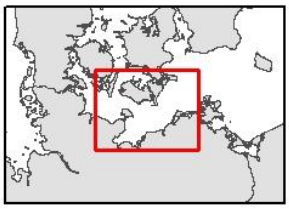
14-18 June 2010 Lower 5 metres (26JL1006)

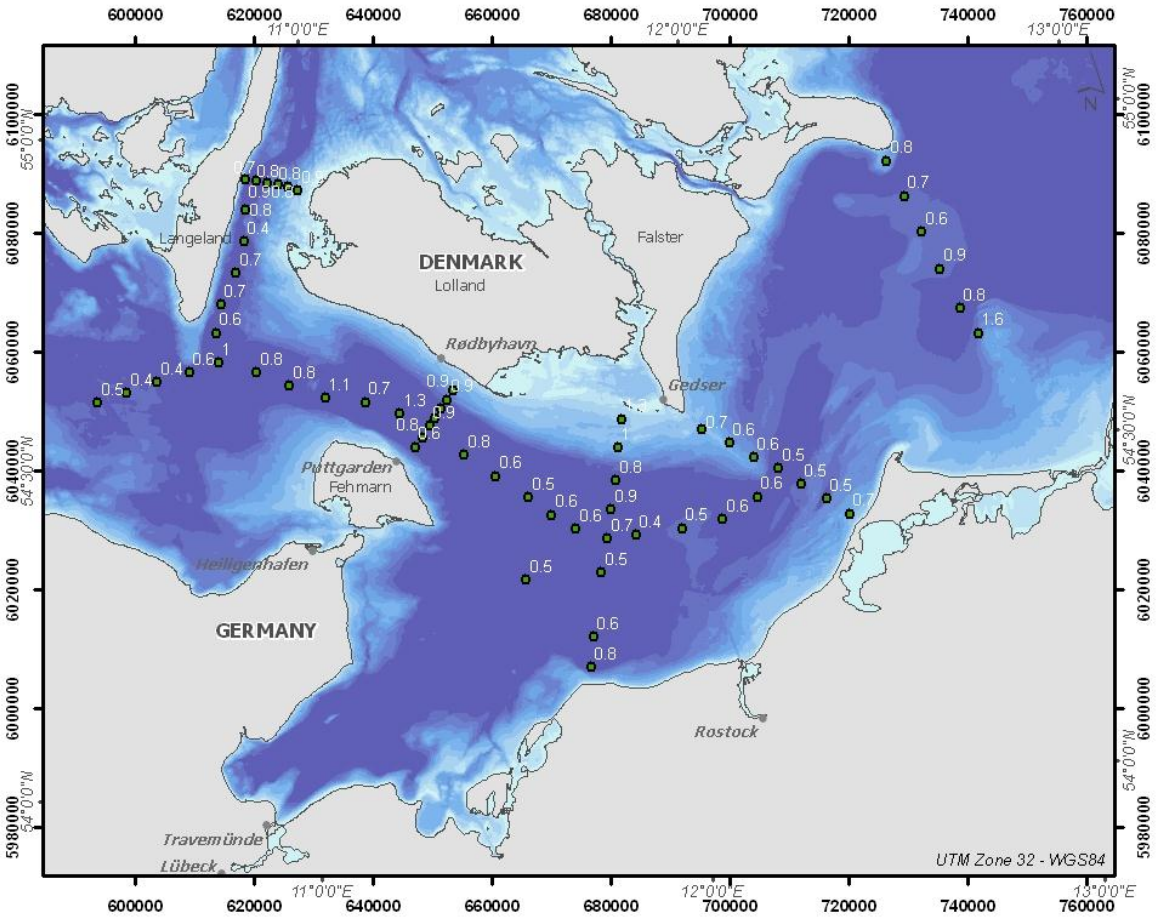
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)





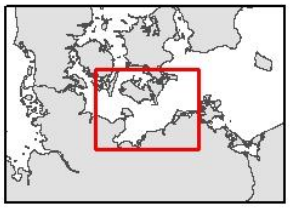
19-23 July 2010 Upper 5 metres (26JL1007)

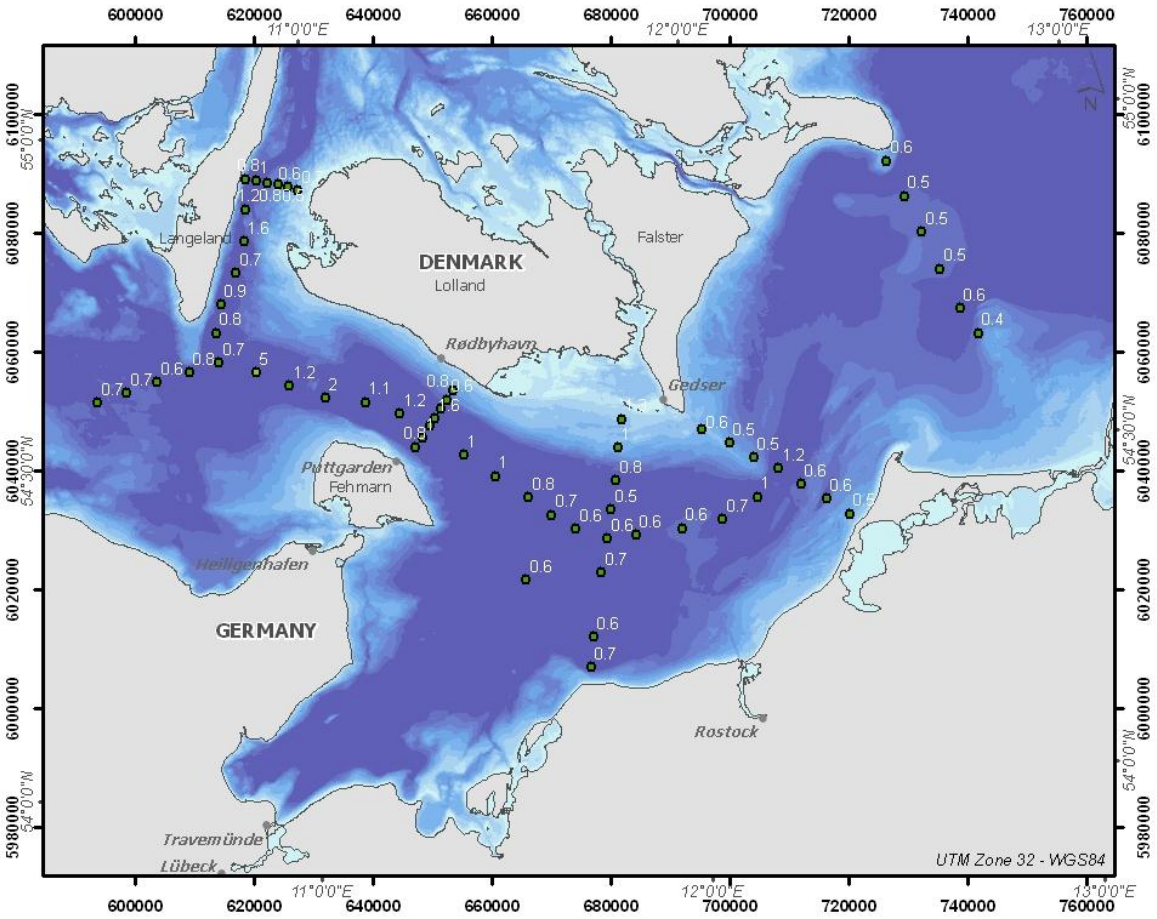
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)





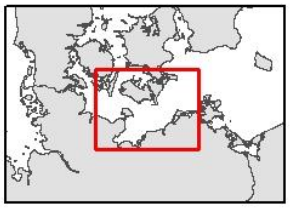
19-23 July 2010 Lower 5 metres (26JL1007)

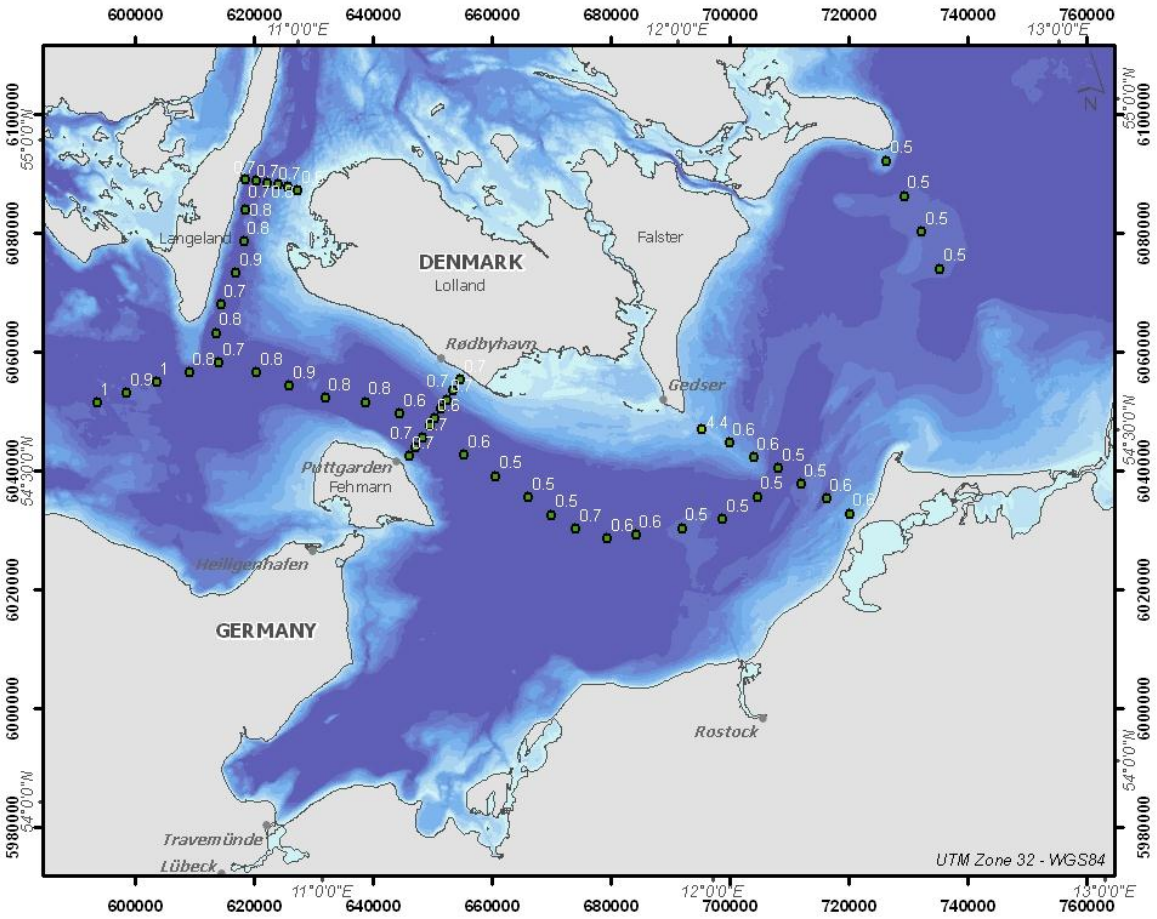
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)





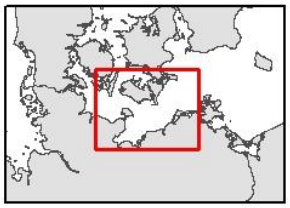
16-20 Aug 2010 Upper 5 metres (26JL1008)

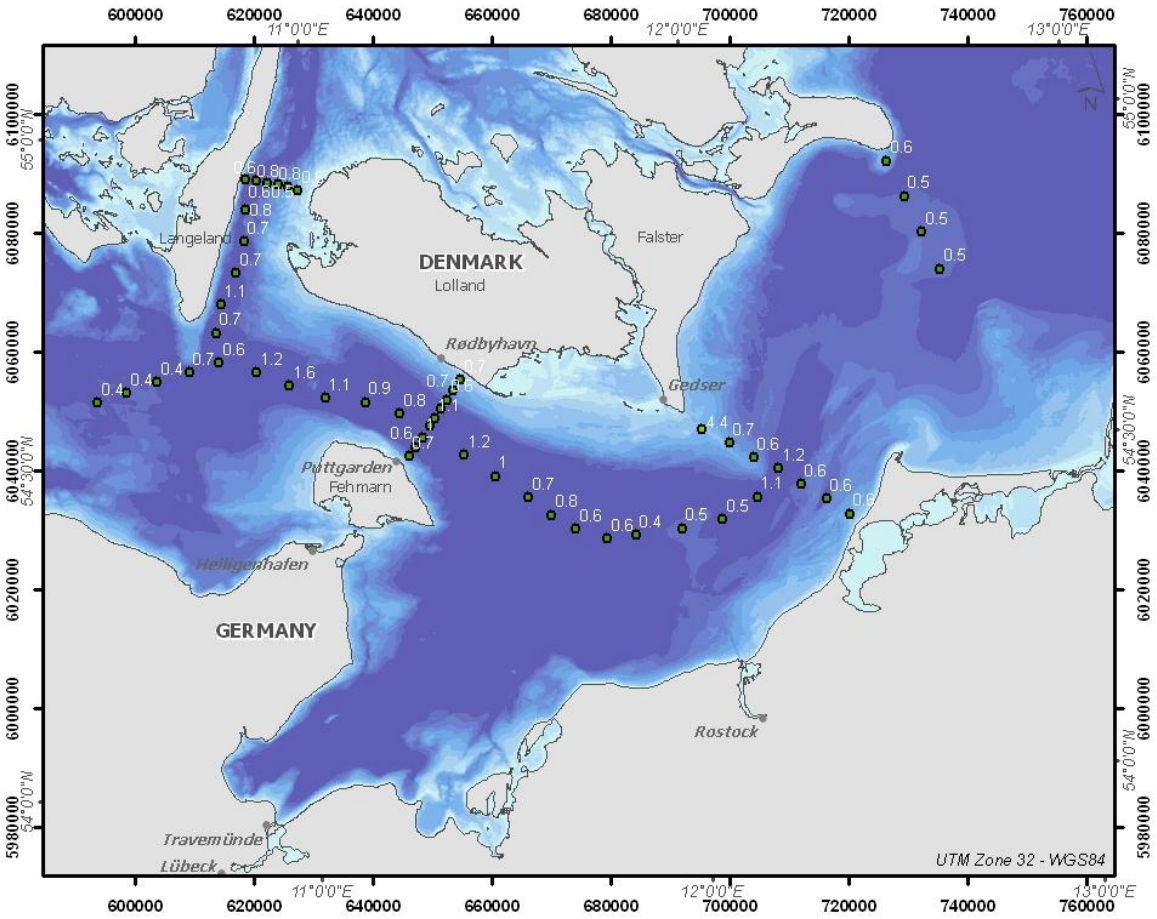
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)



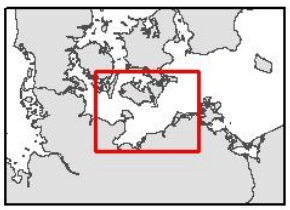


16-20 Aug 2010 Lower 5 metres (26JL1008)

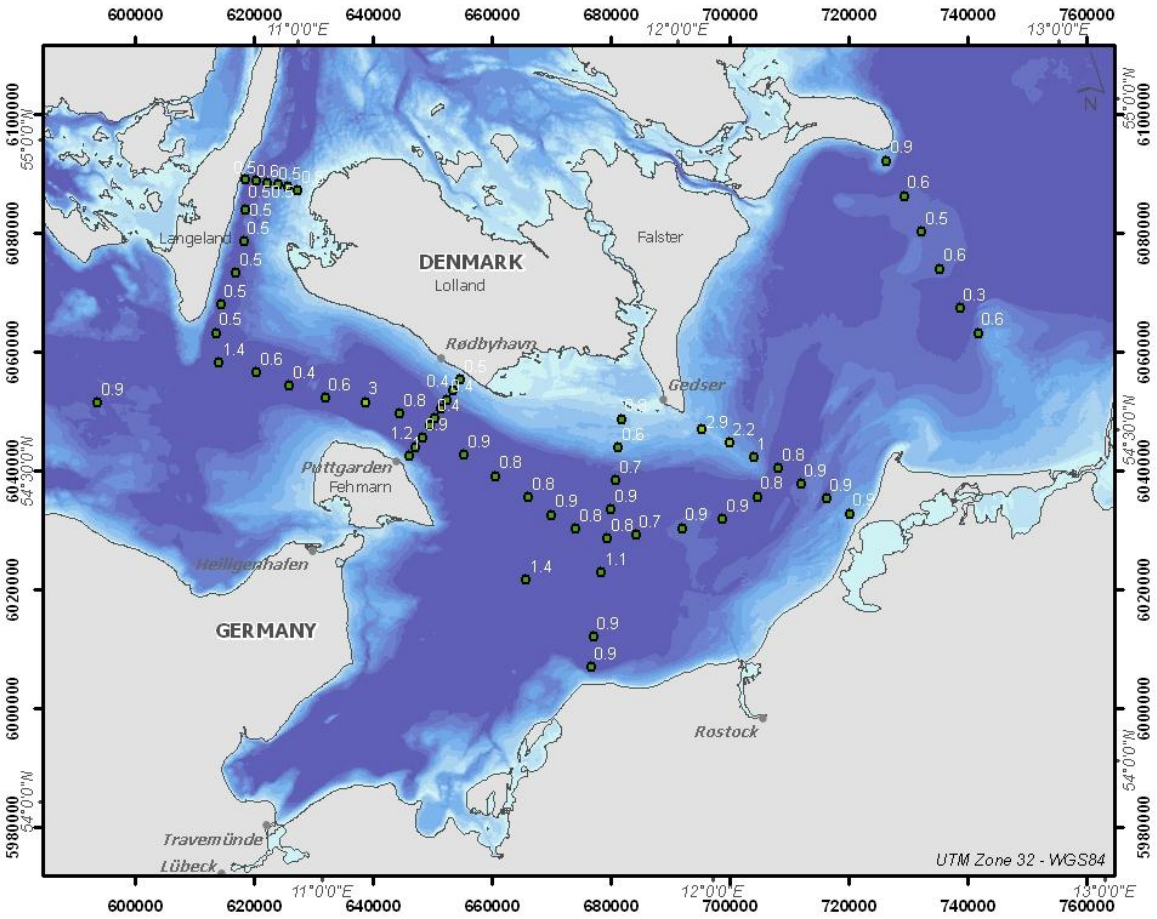
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0



Depth (m)

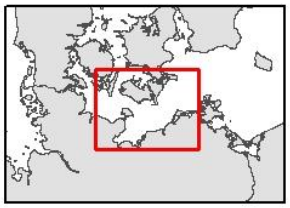


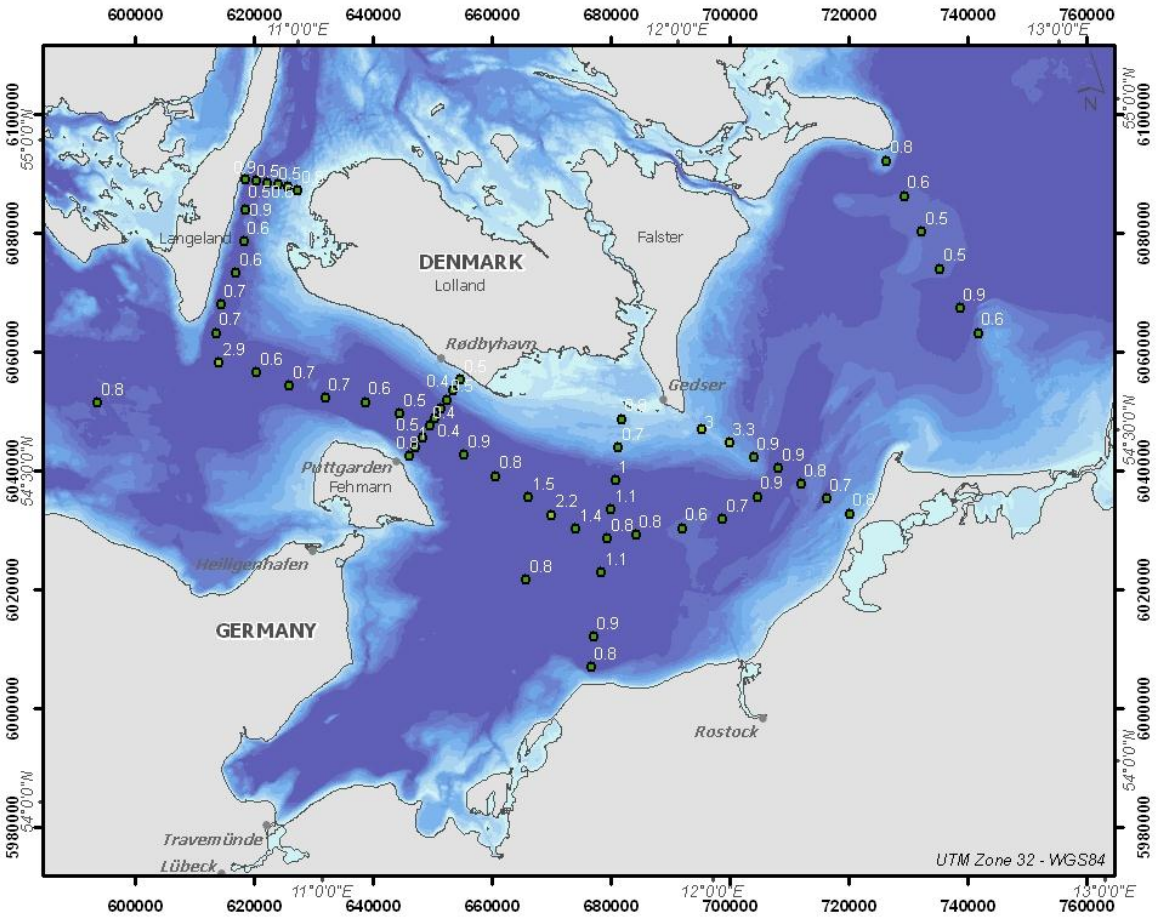
13-23 Sep 2010 Upper 5 metres (26JL1009)

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)





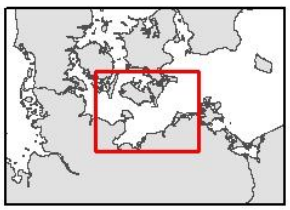
13-23 Sep 2010 Lower 5 metres (26JL1009)

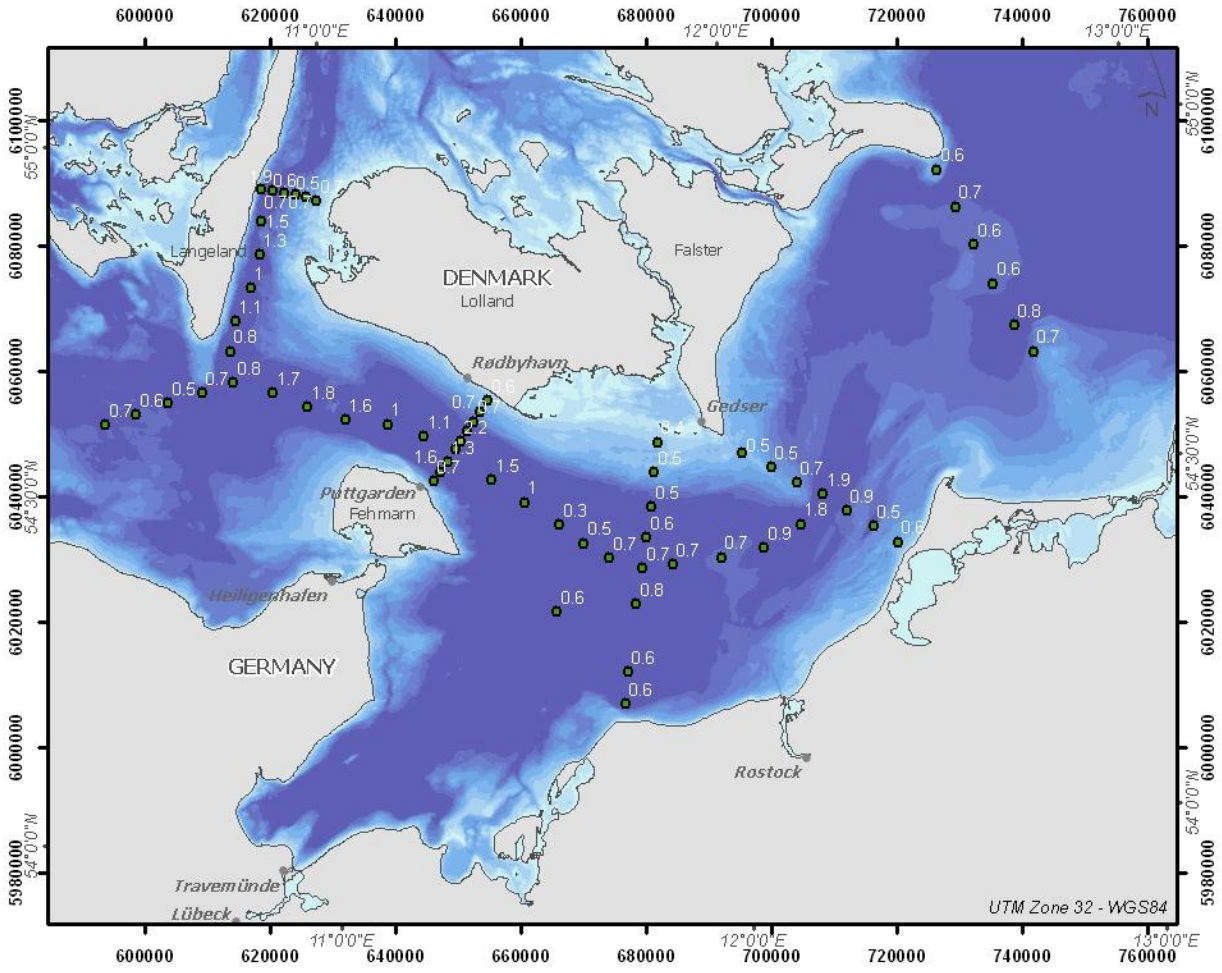
SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)

0-2 2-4 4-6 6-8 8-10 10-12 12-14 14-16 16-18 >18



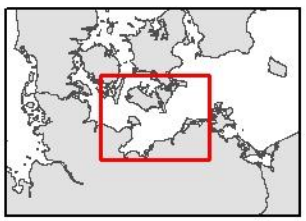


11-14 Oct 2010 Lower 5 metres (26JL1010)

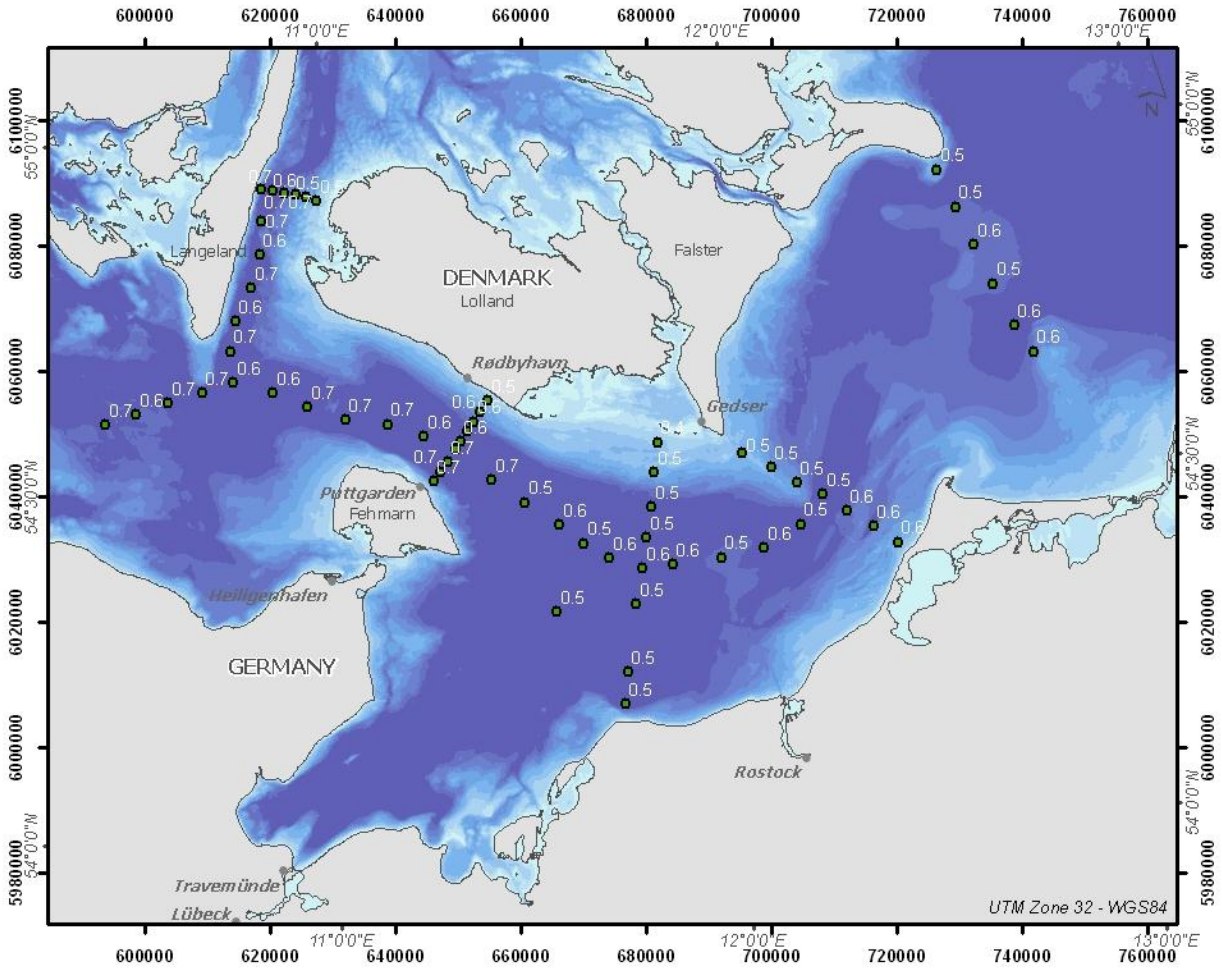
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0



Depth (m)

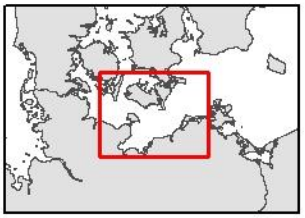


11-14 Oct 2010 Upper 5 metres (26JL1010)

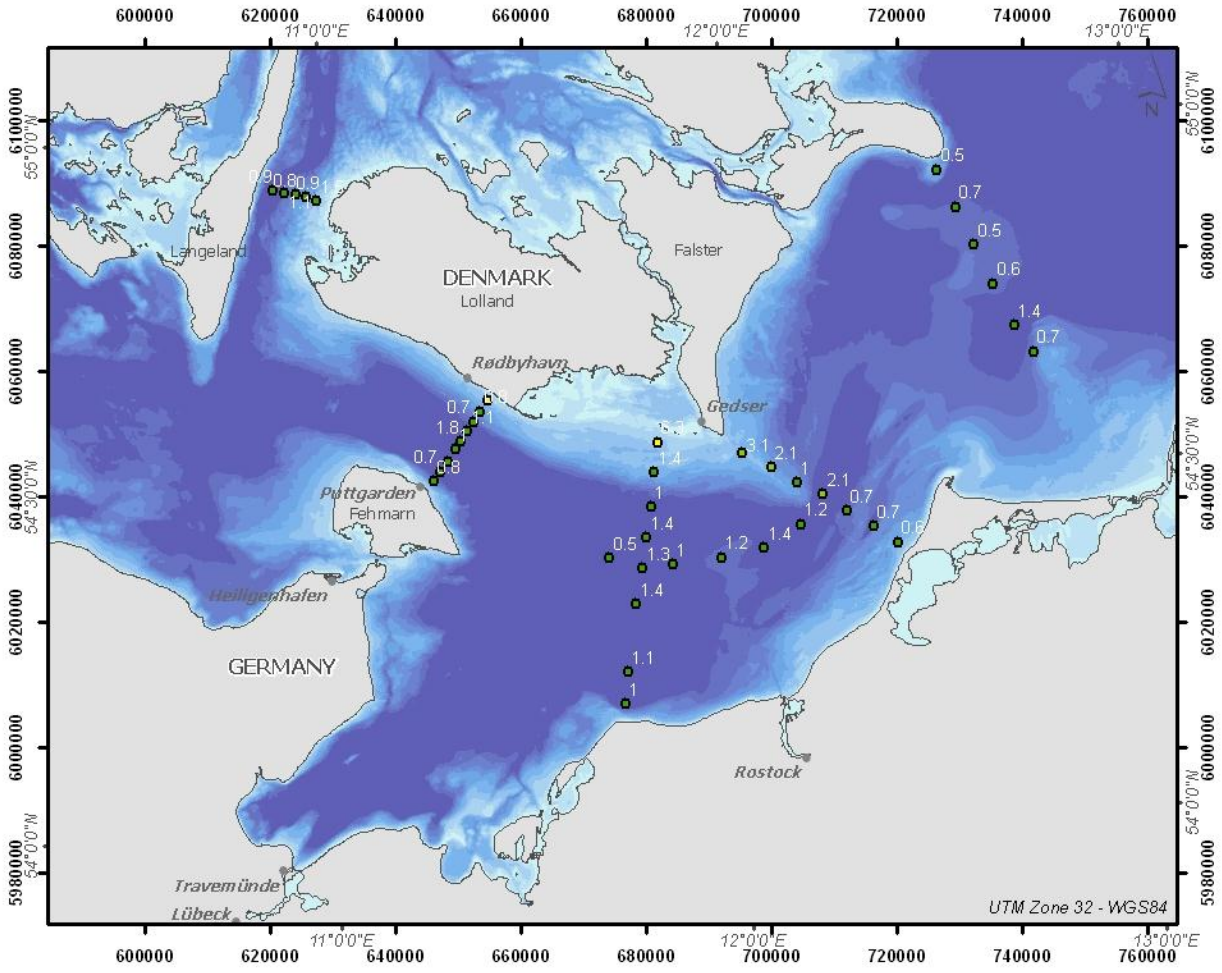
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0



Depth (m)

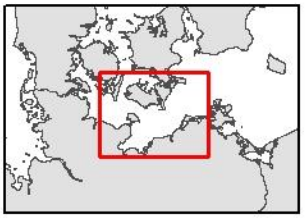


15-19 Nov 2010 Lower 5 metres (26JL10011)

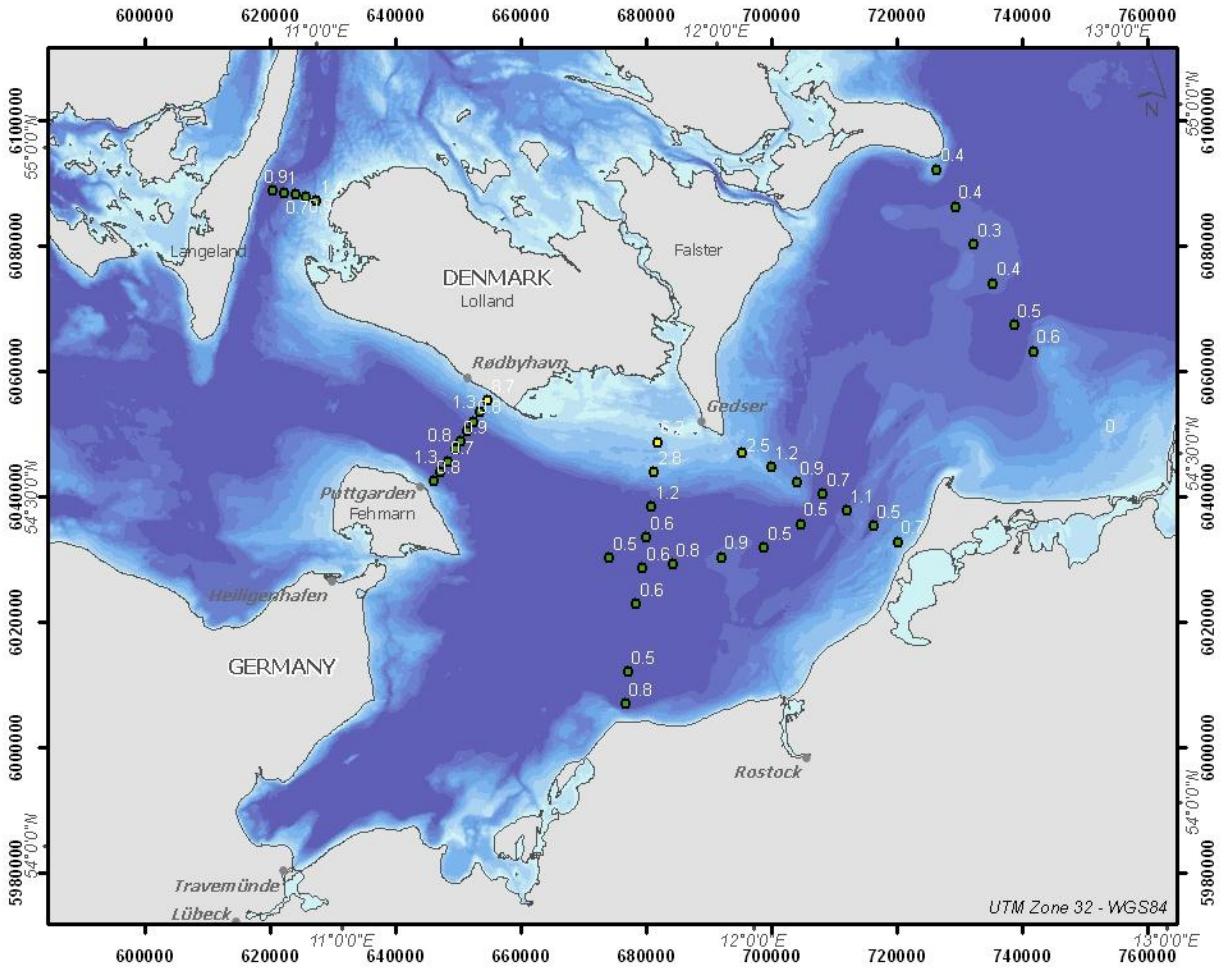
0 5 10 20 Km

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0



Depth (m)



15-19 Nov 2010 Upper 5 metres (26JL10011)

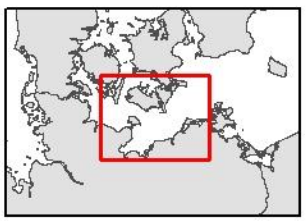
0 5 10 20 Km

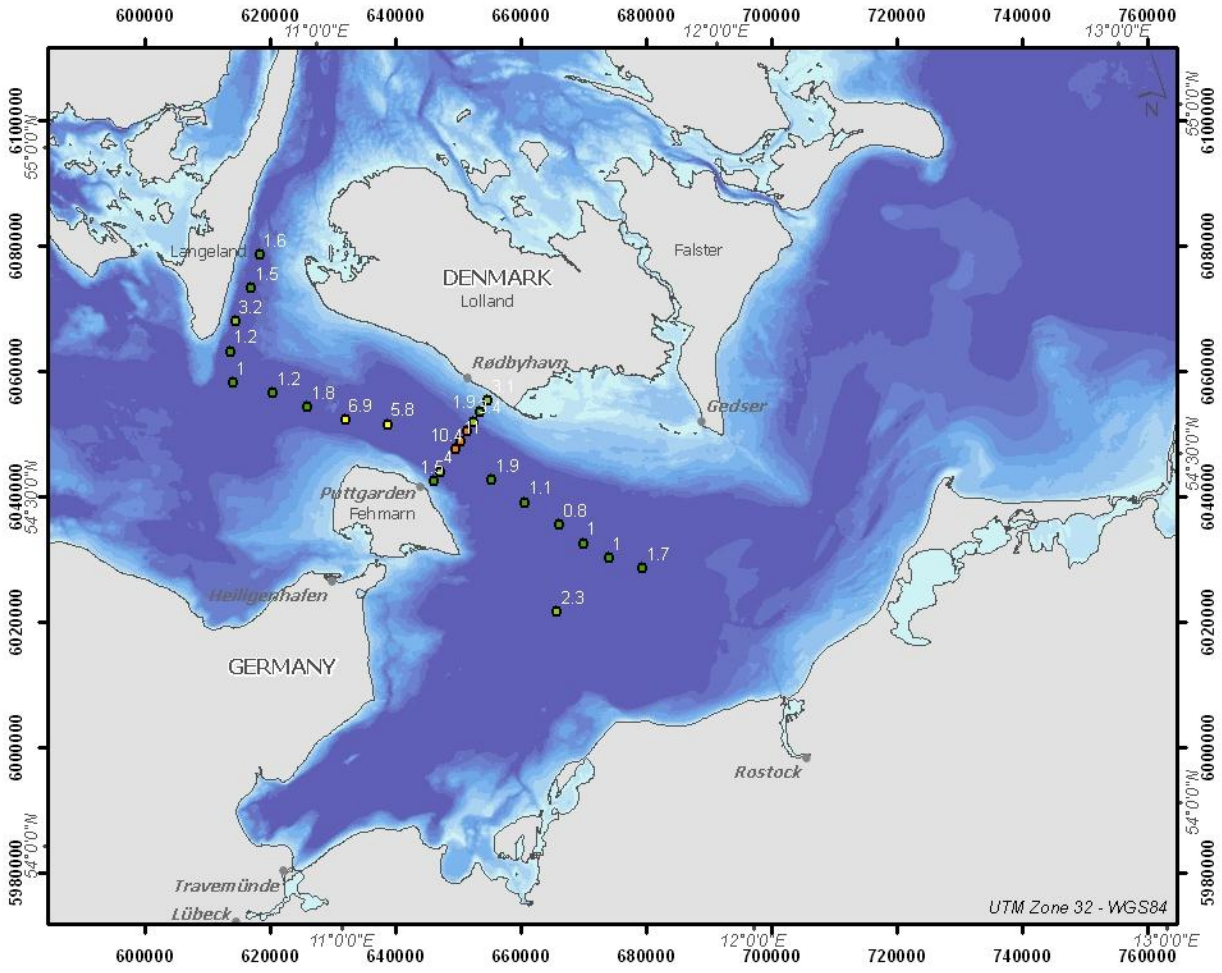
SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)

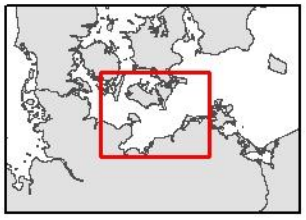
0-2 2-4 4-6 6-8 8-10 10-12 12-14 14-16 16-18 >18





13-17 Dec 2010 Lower 5 metres (26JL10012)

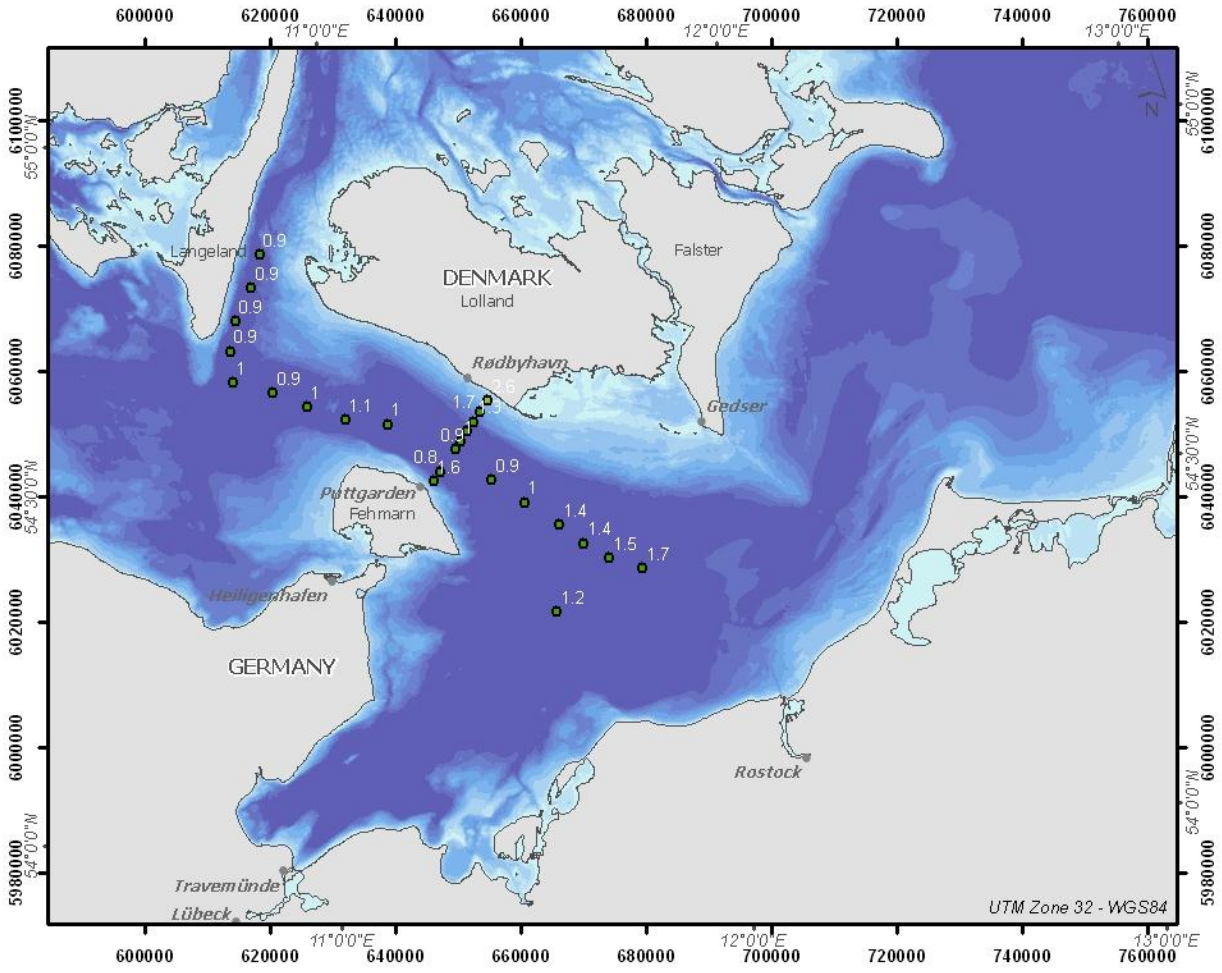
0 5 10 20 Km



SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)



13-17 Dec 2010 Upper 5 metres (26JL10012)

SSC [mg/l]

- 0.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- 10.0 - 15.0
- 15.0 - 20.0

Depth (m)

0-2 2-4 4-6 6-8 8-10 10-12 12-14 14-16 16-18 >18

A P P E N D I X K

Images of Bed Sediments from NS01-NS03

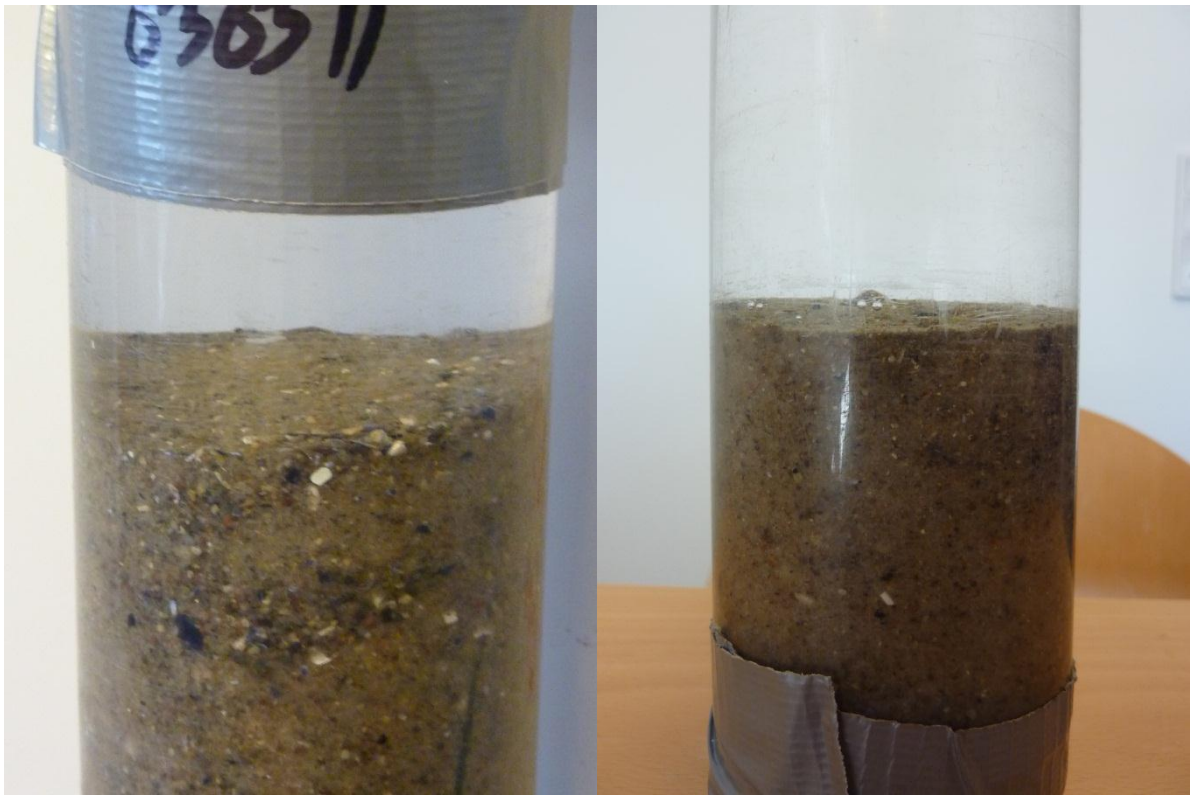


Figure 1 *Tubes from NS01. Water depth 6 m*

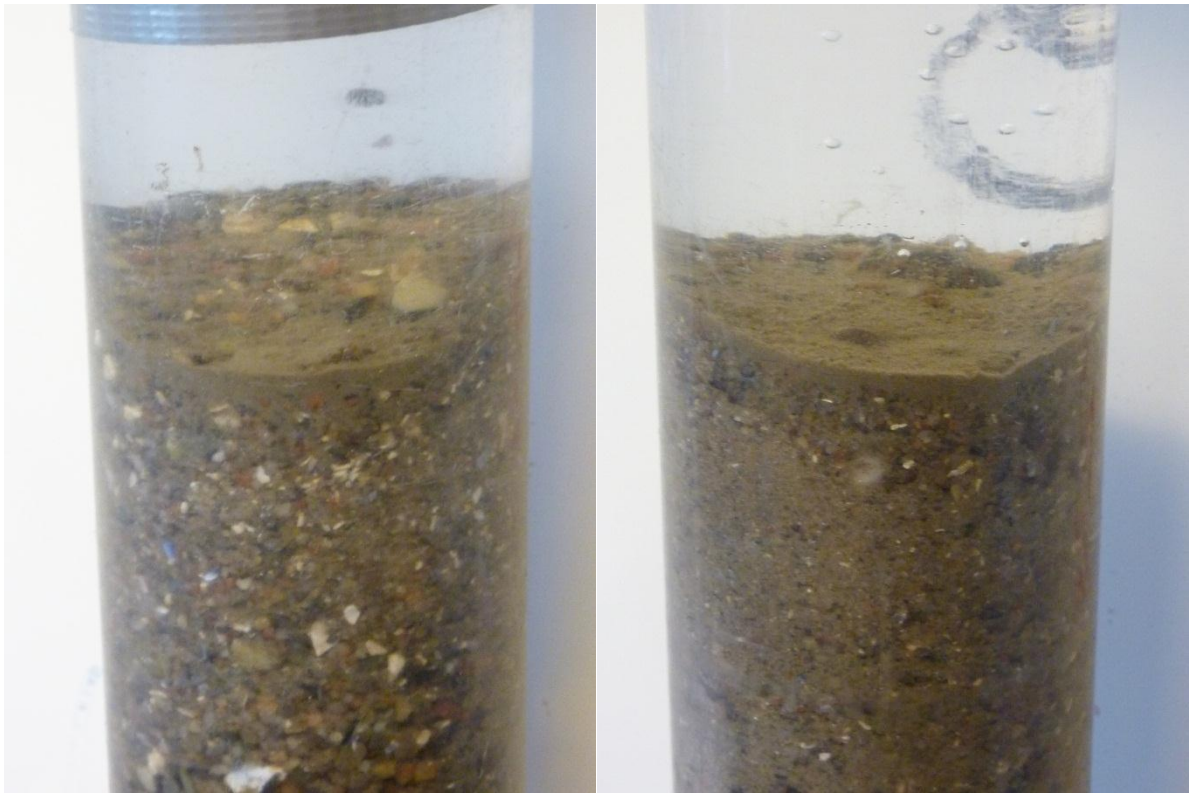


Figure 2 *Tubes from NS02. Water depth 5 m*

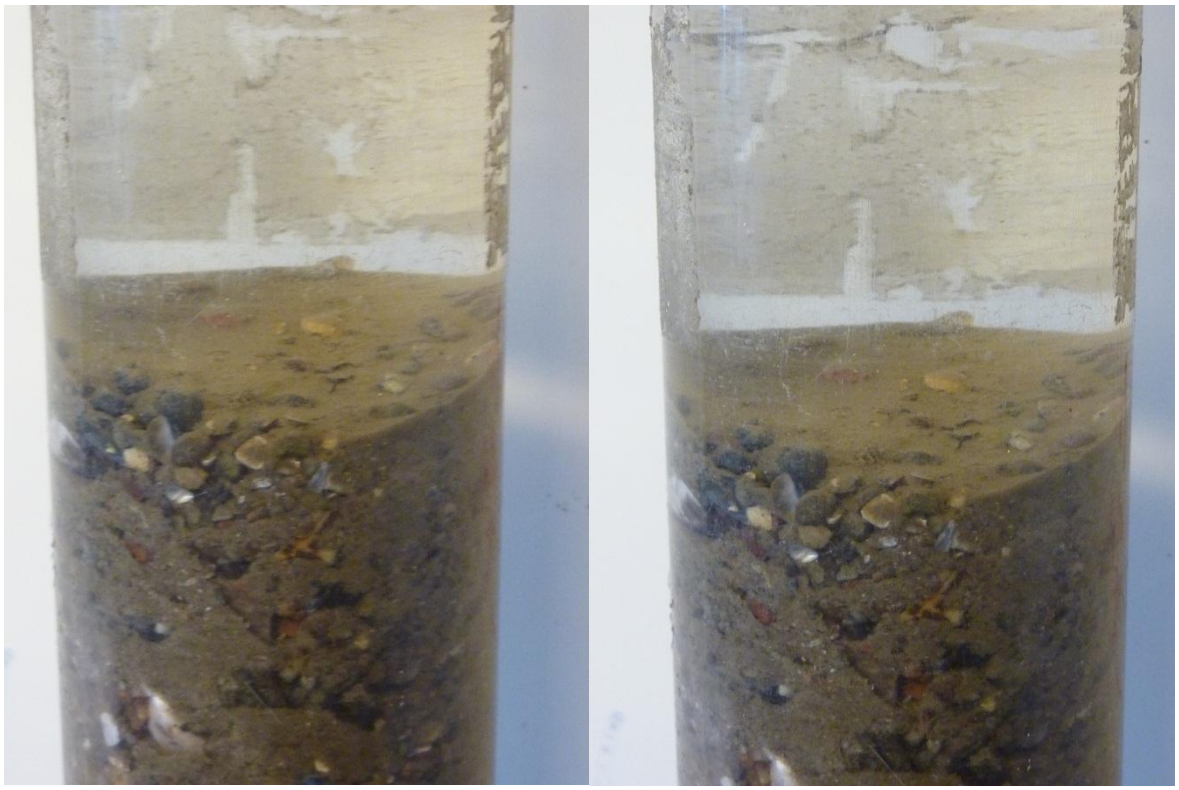


Figure 3 Tubes from NS03. Water depth 5 m

Figure 4 Tube from NS01a. Water depth 3 m

Figure 5 Tube from NS02a. Water depth 3 m

Figure 6 Tube from NS03a. Water depth 3 m

A P P E N D I X M

Rough Weather Measurements

Date and time	Concentration based on water samples [mg/l]	Loss on ignition [%]	NTU []	Mud content [%]	Silt content [%]	Sand content [%]
08/04/2011 00:00	567.3		29.97	3.35	52.77	43.89
08/04/2011 01:00	162.5	10.8	41.54			
08/04/2011 02:00	146.9		47.19	5.19	61.58	33.23
08/04/2011 03:00	181.3	15.7	45.02			
08/04/2011 04:00	151.0		33.24	5.61	71.1	23.29
08/04/2011 05:00	218.7	15.5	32.35			
08/04/2011 06:00	117.2		29.74	6	68.68	25.32
08/04/2011 07:00	70.7	15.9	16.58			
08/04/2011 08:00	62.6		19.03	5.85	67.79	26.35
08/04/2011 09:00	43.7	17.8	22.18			
08/04/2011 10:00	32.1		52.48	5.26	68.11	26.63
08/04/2011 11:00	37.7	18.5				
08/04/2011 12:00	101.6			5.72	68.38	25.9
08/04/2011 13:00	259.3	14.6				
08/04/2011 14:00	664.6			4.76	67.66	27.58
08/04/2011 15:00	917.3	12.4	72.76			
08/04/2011 16:00	999.7		73.02	5.34	55.18	39.48
08/04/2011 17:00	703.1	7.1	74.31			
08/04/2011 18:00	525.6		73.05	5.29	58.73	35.98
08/04/2011 19:00	633.5	0.7	76.07			
08/04/2011 20:00	824.4		64.90	6.93	65.68	27.39
08/04/2011 21:00	495.9	11.7	65.06			
08/04/2011 22:00	372.1		26.57	6.68	67.31	26.01
08/04/2011 23:00	341.9	12.7	25.00			

12/04/2011 09:00	204.5	14.7	39.81			
12/04/2011 10:00	93.3		40.45	5.41	76.23	18.36
12/04/2011 11:00	157.1	13.1	66.44			
12/04/2011 12:00	119.1		67.00	7.08	69.43	23.48
12/04/2011 13:00	320.6	11.4	65.50			
12/04/2011 14:00	394.1		65.86	3.8	63.18	33.02
12/04/2011 15:00	495.7	9.6	66.98			
12/04/2011 16:00	386.1		74.18	7.55	64.52	27.93
12/04/2011 17:00	426.0	7.9	67.61			
12/04/2011 18:00	548.6		72.38	6.31	66.02	27.67
12/04/2011 19:00	610.1	5.7	72.88			
12/04/2011 20:00	438.6		68.64	5.85	58.16	35.99
12/04/2011 21:00	473.7	5.6	59.27			
12/04/2011 22:00	408.2		63.13	6.52	59.59	33.89
12/04/2011 23:00	358.3	6.5	46.06			
13/04/2011 00:00	268.8		49.79	5.76	56.11	38.14
13/04/2011 01:00	227.4	10.7	40.07			
13/04/2011 02:00	264.2		52.90	6.63	64.43	28.94
28/04/2011 12:00	155.2		5.18			
28/04/2011 16:00	20.6		9.76	6.56	67.08	26.36
28/04/2011 20:00	27.0		6.03			
29/04/2011 00:00	18.5		7.23	7.19	82.21	10.6
29/04/2011 04:00	17.2		6.64			
29/04/2011 08:00	13.7		5.79	6.66	68.76	24.57
29/04/2011 12:00	15.1		11.53			
29/04/2011 16:00	16.4		15.17	7.36	75.42	17.23

29/04/2011 20:00	27.4		6.31			
30/04/2011 00:00	22.2		5.10	7.21	78.92	13.87
30/04/2011 04:00	17.7		4.10			
30/04/2011 08:00	10.8		2.49	3.71	50.65	45.64
30/04/2011 12:00	7.1		3.34			
30/04/2011 16:00	7.0		2.68	6	66.65	27.35
30/04/2011 20:00	8.0		3.17			
01/05/2011 00:00	5.2		2.08	2.45	60.09	37.45
01/05/2011 04:00	4.9		2.02			
01/05/2011 08:00	5.2		2.85	3.9	96.1	0
01/05/2011 12:00	6.0		1.62			
01/05/2011 16:00	5.9		1.66	3.25	69.89	26.86
01/05/2011 20:00	4.1		2.00			
02/05/2011 00:00	4.3		2.63	3.72	93.43	2.85
02/05/2011 04:00	5.0		5.54			
02/05/2011 08:00	3.8		2.99	2.57	85.22	12.21

A P P E N D I X N

Data Filtering and QA

1 METHOD FOR ELIMINATING NOISY DATA

Different methods will be discussed to eliminate the signals that are not due to suspended sediment and a methodology is outlined. All time series are presented in Appendix B where grey lines illustrate the NTU data before filtering.

Some periods are very noisy. Most of the noise appears at the end of April or early May and persists until July or early August where it disappears. The noise in this period is strong enough to make the measurement device show maximum NTU values for long periods of time. The possible causes of this noise are discussed in Section 2.

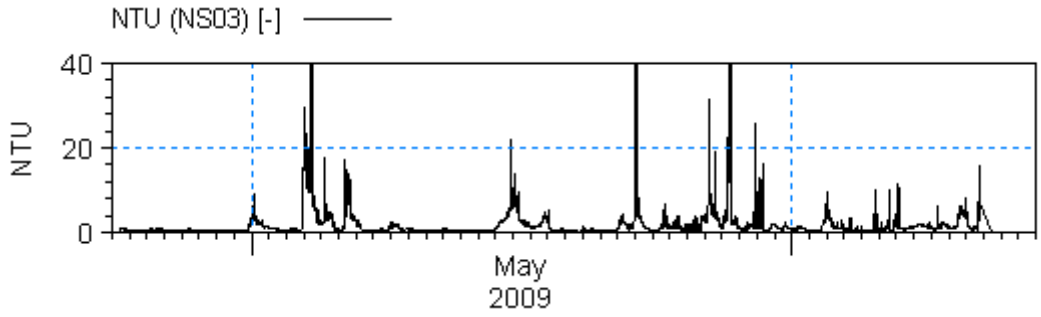
The instruments make a back scatter count every 2 second for 16 seconds every 10 minute. These counts are translated into NTU using the below formula:

$$NTU = (COUNTS - dark\ counts) \times factor$$

The "*dark counts*" and "*factor"* are instrument constants and subject to calibration in the suppliers laboratory. The data are converted with the instrument specific values after each downloading. "dark counts" vary from 50 to 82 and the factor is 0.0077 for all instruments used for the Fehmarnbelt project.

The eight calculated NTU values are averaged to provide the finally reported NTU-value per 10 min.

Histograms were made for the raw data counts to see if data had an abnormal distribution of data counts. An example of such an evaluation from a time series with few spikes is given in Figure 1-1 where in the lower panel the raw counts are clustered and presented in a histogram. In periods with few spikes the clear majority of data must be in the column with values below 500 counts and a steep decay towards clusters with higher values. On the contrary, an example of an analysis of a time series with many spikes is given in Figure 1-2. Here there is a large amount of data in the <500 column and also a fast decay. But in this case there is also a large amount of data in the clusters with the largest value. This indicates that there are periods where the instrument is disturbed in some way.



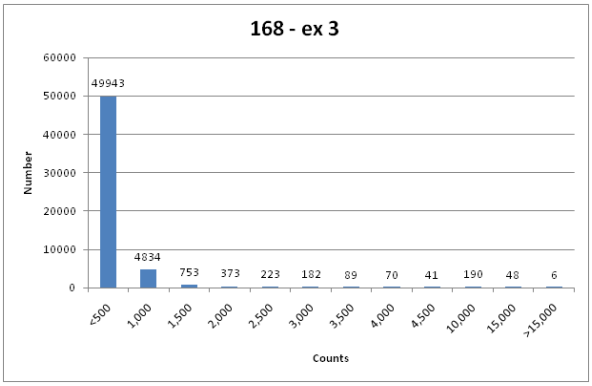


Figure 1-1 NS03 23/4-2009 – 15/6-2009. Only few spikes are present

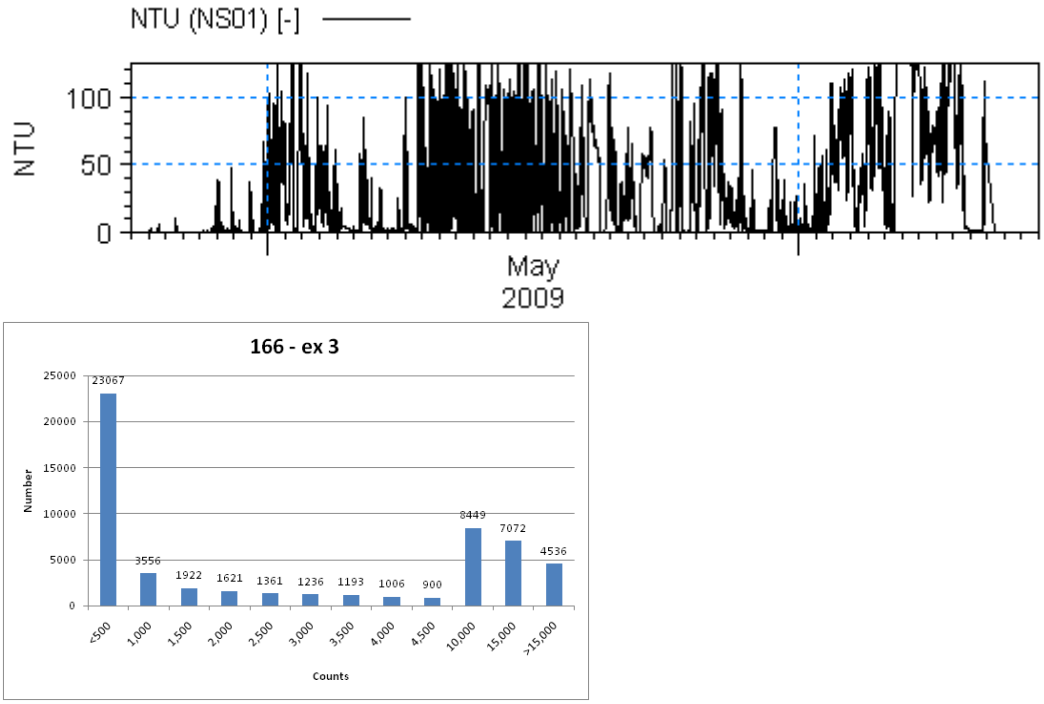


Figure 1-2 23/4-2009 – 15/6-2009. The large number of high counts seen in the last three columns shows that the signal is disturbed

Figure 1-1 represents a typical good quality time series of NTU measurements by the "Wetlabs NTUsb" instrument. This time series only has a few spikes that have to be removed from the dataset. From the histogram it appears that most of the raw data counts are below 1000.

Figure 1-2 represents a typical erroneous time series where there is a lot of noise in the raw data resulting in abnormal and unusable NTU data. During the period data counts up to 16079 are present as illustrated in the histogram.

Based on plots of the raw data it has been possible to point out the periods in the data set where the WET Labs NTUsb instruments have been collecting unstable data to an extent where it was necessary to remove large part of the data in the quality control process.

Following this procedure the goal was to remove single non sediment events. An automatic filter has been introduced which removes peaks with unrealistic gradients, and peaks with unrealistic heights and values that repeat themselves over a period of time. Furthermore, a manual filtering process was applied. The full procedure is presented in the following.

Automatic post processing and filtering

- Remove all raw data counts with value higher than 9999 (~78 NTU)
- Calculate NTU from raw data [(Raw Data - Dark Counts) * Factor]
  - Dark Counts vary with instrument
  - Factor = 0.0077

- Remove data where the NTU value:
  - < 0
  - repeats exact same NTU value 5 times or more
    - increases more than 25 NTU in 10 min
  - decreases more than 25 NTU in 10 min

Manual filtering and quality assurance

The manual evaluation of all NTU time series for both near-shore and main stations are performed using the Data Handling Centre management console developed for QA of data collected for the Fehmarnbelt study. The system is online and one time series is manually filtered at a time by setting quality flags. In this way periods with unreliable data not already flagged during the automatic filter are flagged as erroneous data and not included in the final quality assured data set. The following criteria have been used in the manual QA process:

- Remove single spikes below 2-3 hours
- Remove events that are assessed as not being caused by suspended sediment

Spikes that are part of an event are not removed and spikes below 2-3 NTU are not removed. An example of an NTU time series before and after manual QA has been applied is shown in Figure 1-3. The filtered NTU time series can be seen in Appendix B.

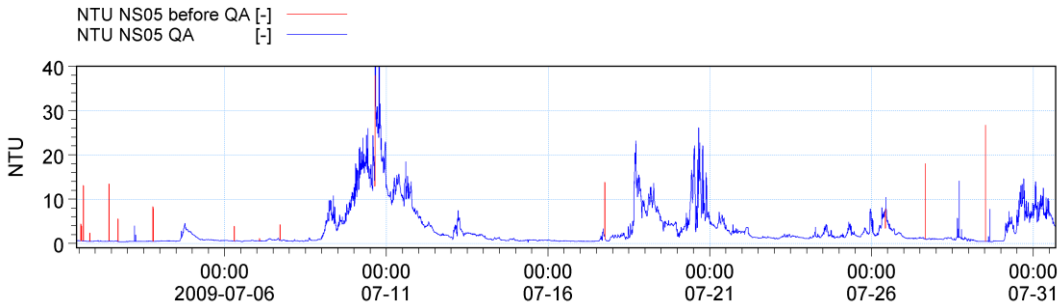


Figure 1-3 Example of a time series before and after manual filtering has been applied

The small spikes surrounding the main signal are a result of the measuring technique. The NTU device measures eight times with 2-second intervals. The result shown in the time series is the average of these eight measurements. If one of these measurements fluctuates a spike will appear. A low pass filter with a filter width of 2.5

hours is applied to the data to eliminate such smaller spikes. The use of low pass filters is a common way of removing small spikes from noisy data (Downing, J. 2006).

2 POSSIBLE CAUSES OF NOISY DATA IN SPRING/SUMMER

As stated above it was discovered that the measurements from the near-shore stations occasionally gave confusing results during spring and summertime. Example from NS07 is presented in Figure 2-1. The signal appeared spiky and during periods of varying length the meter showed maximum values only. In the end of July 2009 and beginning of August the problem stopped and after that, only a minor appearance of spikes was found.

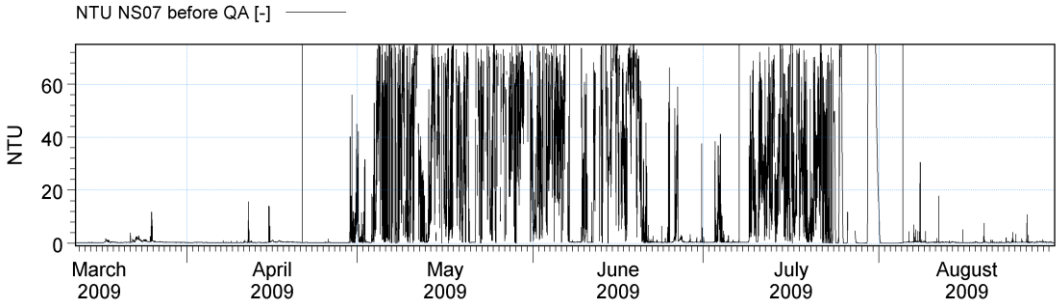


Figure 2-1 Example of unreliable data from NS07

Table 2-1 Possible causes for noisy data

Possible cause for spiky and saturated results	Comment
Periodically very high sediment concentrations	This is hardly the case. Surveyors have after field work during more than a year not collected a single water sample with a concentration higher than 22 mg l^{-1} offshore. Furthermore, the spiky signal does not behave like sediment in suspension
Instrument malfunctioning	This was clearly rejected after a series of laboratory tests. The instrument was able to clearly detect a change in suspended sediment concentration of only 0.3 mg $l^{-.1}$. This was shown on five different instruments
Ropes and mooring poorly designed	This has been rejected after a thorough investigation. Instruments might during storms periodically see the ropes but not during calm weather. Further, the instrument may vibrate due to turbulence around the wire and instrument. One test was made with an instrument mounted on a frame next to the wire mounted instrument. Identical NTU's were measured with the two instruments (see Figure 2-2)
Air bubbles	It is well known that air bubbles will disturb the instrument. This was also seen in laboratory tests. Air bubbles might be present in the water

Possible cause for spiky and saturated results	Comment
	column due to oxygen release from plants and gas from the bottom but the intensity of errors indicate that air bubbles are not the only reason
Fish larvae in the water	This might be the case but in such abundance during more than three months is unlikely
Macro algae in the water blocking the probe	Seaweed was caught on the shutter of the instruments a few times during spring 2009. Seaweed and or algae will saturate the probe. Surveyors have not seen extreme abundance of seaweed during cruises. However, service visits in spring 2010 seem to confirm that algae are the main reason for the problems

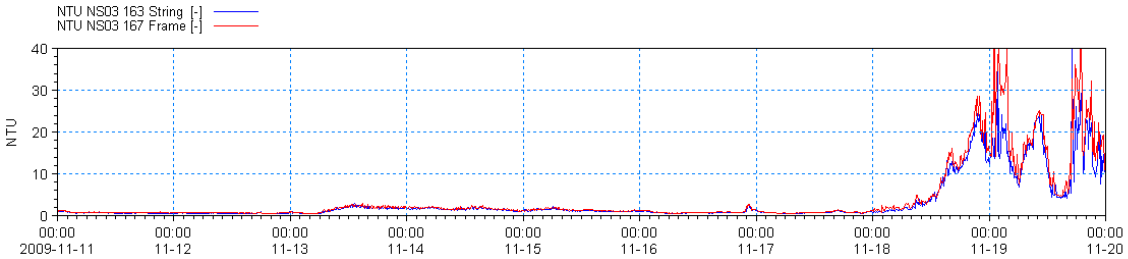


Figure 2-2 Test of the design of instrument setup. At NS03 an instrument was mounted on a frame next to the instrument mounted on the wire. The test period shows very identical signal for turbidity for the two instruments

In April and May 2010 additional measurements have been undertaken with a transmissiometer as an independent instrument on NS01. This type of instrument showed same results as the NTUs. At recovery of instruments in May considerable amounts of brown algae were found on the instruments. Even though brown algae were not observed to the same extend as in 2009 it is believed that algae on the instruments are the reason for the misreading. An underwater picture of an NTU covered with brown algae is given in Figure 2-3.

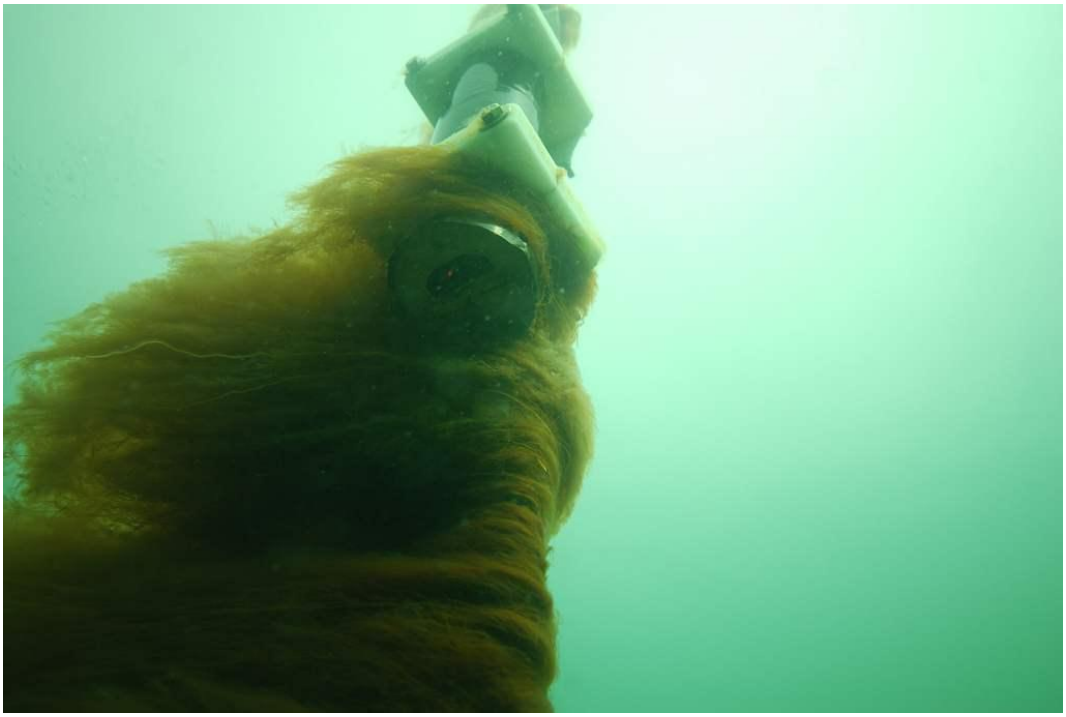


Figure 2-3 Example of brown algae found on NTU