REPORT

Flemish Government - Department of Mobility and Public Works

Maritime Access Division

Evaluation of the external effects on the siltation in Deurganckdok (2012 - 2014)

Report 1.12: Boundary conditions survey year 8: April 2013 - March 2014

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Table of Contents

Annexes

List of Tables

List of Figures

0. SUMMARY

This report presents the measurement data of long-term stationary measurements in the Lower Sea Scheldt for survey year 8, or between 01/04/2013 and 31/03/2014. Furthermore, important human activities, like navigation and dredging activities in the vicinity of Deurganckdok are also presented.

These natural and human conditions aim to provide as much insight as possible into yearly evolution in water discharge, current velocities, temperature, salinity and suspended sediment concentrations close to Deurganckdok on the Lower Sea Scheldt.

1. INTRODUCTION

1.1 THE ASSIGNMENT

This report is part of a set of reports concerning the project 'Evaluation of the external effects on the siltation in Deurganckdok (2012 - 2014)'. The terms of reference were prepared by 'Department of Mobility and Public Works of the Flemish Government, Maritime Access Division (16EF/2011/28). Part 1 of the study was awarded to International Marine and Dredging Consultants NV in association with Deltares on February 3rd 2012.

This study is a follow-up study on the study 'Evaluation of the external effects on the siltation in Deurganckdok' (2009 - 2012) and the study 'Siltation Deurganckdok (2006 -2009)'.

The data and information that are used in this project are carried out or collected by Flanders Hydraulics Research, Maritime Access Division and the Agency for Maritime Services and Coast. Flanders Hydraulics Research provided data on discharge, tide, salinity and turbidity along the river Scheldt. Maritime Access Division provided maintenance dredging data. Agency for Maritime Services and Coast – Coast Division provided depth sounding and density profile measurements.

1.2 AIM OF THE STUDY

The purpose of this study entails evaluating the external effects on the siltation in the Deurganckdok (DGD). External effects are those effects caused by recent or near-future human operations near Deurganckdok:

- The deepening and widening of the navigational channel in the Lower Sea Scheldt between the entrance of the Deurganckdok and the access channels to the locks of Zandvliet-Berendrecht (2008 - 2010);
- The deepening of the entrance to the Deurganckdok by removing the sill at the entrance (2009 - 2010);
- The construction of the Current Deflecting Wall downstream of the entrance of the Deurganckdok (2010 - 2011);
- The change in maintenance depth or strategy;
- Construction of the second Waaslandlock at the landward end of DGD (started in 2011).

1.3 OVERVIEW OF THE STUDY

This study constitutes of 2 parts:

- Reporting and analysis of existing documents and delivered measurement data.
- Execution of specific measurement campaign to determine the siltation and salinity rates at the entrance of DGD.

Reports of the project 'Evaluation of the external effects on the siltation in the Deurganckdok (2012 -2014)' are summarized in Table 1-1. The numbering of the reports is based on the previous project that ran between 2009 and 2012.

This report establishes the boundary conditions in the river Scheldt between April 2012 and March 2013, and is a sequel to the set of Boundary condition reports.

Table 1-1: Overview of the project 'Evaluation of the external effects on the siltation in Deurganckdok (2012 - 2014)'

Report	Description
I.	**Analysis and Reporting**
I.1 Annual Sediment Balance: Bathymetry surveys, Density measurements, Maintenance and construction dredging activities	
1.09	Annual Sediment Balance in survey year 7: 01/04/2012-31/03/2013 (I/RA/11406/13.143/JCA)
1.10	Annual Sediment Balance in survey year 8: 01/04/2013-31/03/2014 (I/RA/11406/13.144/JCA)
I.2 Boundary Conditions: Upriver Discharge, Salt concentration Scheldt, Bathymetric evolution in access channels, dredging activities in Lower Sea Scheldt and access channels	
1.11	Boundary Conditions in survey year 7: 01/04/2012 – 31/03/2013 (I/RA/11406/13.145/JCA)
1.12	***Boundary Conditions in survey year 8: 01/04/2013 – 31/03/2014 (I/RA/11406/13.146/JCA)***
I.3 Analysis of the boundary conditions	
1.13	Analysis of the boundary conditions in survey years 3 and 4: 01/04/2008 – 31/03/201 (I/RA/11406/13.054/MGO)
1.14	Analysis of the boundary conditions in survey years 5 and 6: 01/04/2010 - 31/03/2012 (I/RA/11406/13.062/MGO)
1.15	Analysis of the boundary conditions in survey years 7 and 8: 01/04/2012 – 31/03/2014 (I/RA/11406/13.147/JCA)
I.4 Analysis: evaluation of external effects on siltation in Deurganckdok	
1.16	Analysis of external effects on siltation processes and factors (I/RA/11406/13.147/JCA)
II.	**Longterm salinity and turbidity measurement campaign at the entrance Deurganckdok**
II.1 Salinity Siltation Distribution at the entrance of Deurganckdok	
2.14	Salinity-Siltation distribution Deurganckdok in survey year 7: 01/04/2012 - 31/03/2013
2.15	Salinity-Siltation distribution Deurganckdok in survey year 8: 01/04/2013 – 31/03/2014
II.5 Quality Control instruments	
2.16	Calibration stationary equipment 2012
2.17	Calibration stationary equipment 2013

1.4 STRUCTURE OF THE REPORT

This report is the factual data report for two measurement actions during the period between April 2013 and March 2014:

- Monitoring salinity and sediment concentration in the Lower Sea Scheldt taken from permanent data acquisition sites at Oosterweel, Prosperpolder and downstream (Buoy 84) of Deurganckdok.
- Monitoring dredging and disposal activities in the Lower Sea Scheldt.
- Beside these actions, navigation and meteorological conditions are also reported.

The first chapter comprises an introduction. The second chapter describes the project. Chapter 3 summarizes the measurement campaigns, while the ambient conditions are discussed in Chapter 4.

2. SEDIMENTATION IN DEURGANCKDOK

2.1 PROJECT AREA: DEURGANCKDOK

Deurganckdok is a tidal dock situated at the left bank in the Lower Sea Scheldt, between Liefkenshoek and Doel. Deurganckdok has the following characteristics:

1. the dock has a total length of 2750 m and is 450 m wide at the Scheldt end and 400 m wide at the inward end of the dock
2. The bottom of Deurganckdok is provided at a depth of –17m TAW in the transition zones between the quay walls and the central trench and of –19m TAW in the central trench
3. the quay walls reach up to +9m TAW

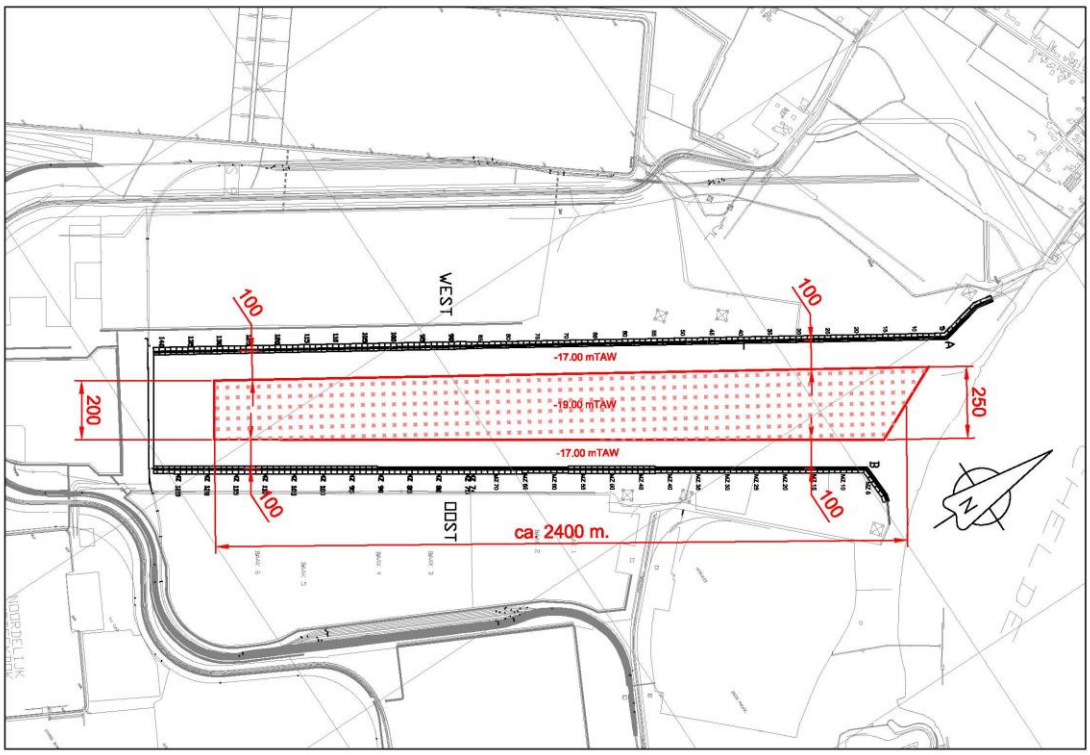

Figure 2-1: Overview of Deurganckdok

The dredging of the dock is performed in 3 phases between the start on February 2005 and finalization on February 2008. A Current Deflecting Wall (CDW) has been constructed at the entrance of Deurganckdok between 2010-2011 with the objective to reduce the yearly sedimentation in the dock. The CDW was completed in August 2011.

Other main construction works which occurred since the opening of Deurganckdok near the dock are summarized in Table 2-1.

Table 2-1 : Overview of construction works since the opening of Deurganckdok

Date	Description
18th February 2005	Deurganckdok dike between the Scheldt and the dock was opened
18th Feb 2005 – 1st Aug 2005	Dredging Phase 2 (end)
Feb 2007 – Feb 2008	Dredging Phase 3, dock extended from 1500 to 2500m
Jul 2008 – Aug 2010	Deepening and widening of the Scheldt navigation channel in Belgium (spread over a long period, exact timing not known)
Nov 2009 – Jun 2010	Dredging of the entrance sill
Apr 2010 – Aug 2011	Construction of the Current Deflecting Wall (CDW)
> Mar 2011	Change of maintenance depth -15.9m / -17.5m / -15.2m in quays / trench / entrance (included in maintenance dredging)
> Nov 2011	Construction of the 2nd Waaslandlock at the landward end of DGD

2.2 OVERVIEW OF THE STUDIED PARAMETERS

The purpose of this study entails evaluating the external effects on the siltation in the Deurganckdok (DGD) and is based on analysis and reporting of measurement data. The analysis of the measurement data contains two main components: the derivation of a yearly mass balance of the dock, and the analysis of sediment exchange mechanisms including a conceptual sedimentation model, which uses results from the mass balance, boundary conditions and measurement data at the entrance of Deurganckdock. Analysis and reporting of the natural and human conditions in the Lower Sea Scheldt would gain more insight in the mechanisms causing the siltation in Deurganckdok.

The sediment balance comprises a number of sediment transport modes: deposition, influx from capital dredging works, internal replacement and removal of sediments due to maintenance dredging (Figure 2-2).

A net deposition can be calculated from a comparison with a chosen initial condition t0 (Figure 2-3). The mass of deposited sediment is determined from the integration of bed density profiles recorded at grid points covering the dock. Subtracting bed sediment mass at t0 leads to the change in mass of sediments present in the dock (mass growth). Adding cumulated dry matter mass of dredged material removed since t0 and subtracting any sediment influx due to capital dredging works leads to the total cumulated mass entered from the river Scheldt since t0.

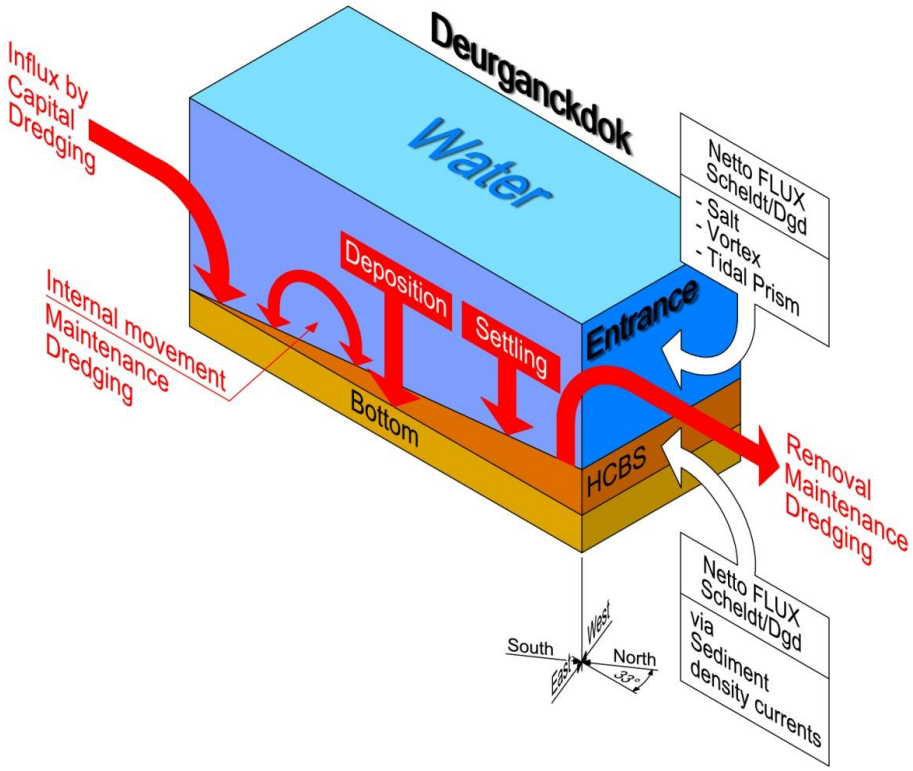

Figure 2-2: Elements of the sediment balance and transport mechanisms

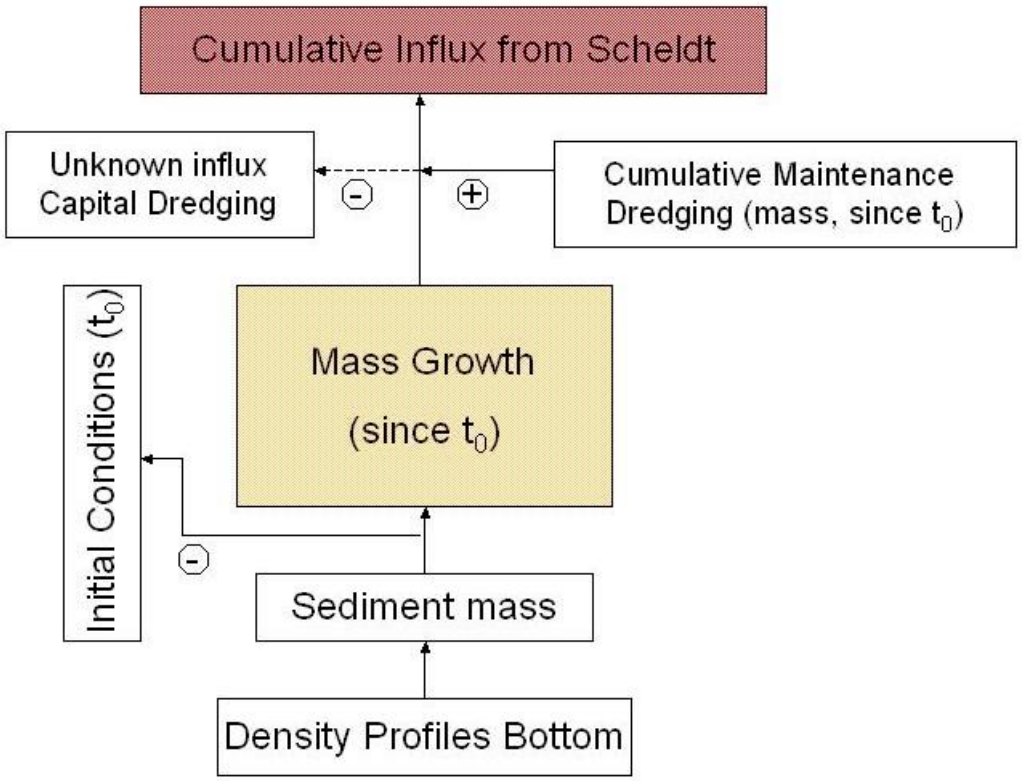

Figure 2-3: Determining a sediment balance

Concerning the sediment exchange, the following mechanisms will be aimed in this study:

- Tidal prism, i.e. the extra volume in a water body due to high tide
- Vortex patterns due to passing tidal current
- Density currents due to salinity gradient between the Scheldt river and the dock
- Density currents due to highly concentrated benthic suspensions

These aspects of hydrodynamics and sediment transport have been landmark in determining the parameters to be measured during the project. Measurements have focused on three types of timescales: one tidal cycle, one neap-spring cycle and seasonal variation within one year.

Following data have been collected to understand these mechanisms:

- Monitoring upstream discharge in the river Scheldt.
- Monitoring salinity and sediment concentration in the Lower Sea Scheldt at permanent measurement locations at Oosterweel, up- and downstream of the Deurganckdok.
- Long-term measurements of salinity and suspended sediment distribution at the entrance of Deurganckdok.
- Monitoring dredging activities at entrance channels towards the Kallo, Zandvliet and Berendrecht locks as well as dredging and disposal activities in the Lower Sea Scheldt.
- In situ calibrations were conducted on several dates to calibrate all turbidity and conductivity sensors.

2.3 SPECIFIC OBJECTIVES OF THIS REPORT

The natural ambient conditions in the Scheldt estuary change from the mouth near Vlissingen to the upstream boundaries near Ghent and the tributaries. Furthermore navigation and dredging activities are important human activities in the Lower Sea Scheldt.

These natural and human conditions can help to gain insight in the mechanisms causing siltation in Deurganckdok. For this reason this report summarises the following data for the period between April 2013 and March 2014:

- Ambient characteristics in the Lower Sea Scheldt:
  - Tide
  - Current
  - Salinity
  - Temperature
  - Turbidity/Suspended sediment concentration
- Fresh water inflow from the tributaries
- Meteorological conditions
- Human activities
  - Dredging/disposal
  - Navigation

3. OVERVIEW OF THE MEASUREMENT CAMPAIGNS

In the scope of earlier siltation projects at Deurganckdok and this project, several measurements campaigns have been organized in the vicinity of Deurganckdok: at the entrance, down- and upstream of Deurganckdok, and in the dock itself. The measurements were performed during several tidal cycles (neap, average and spring tide) and on long-term time scale.

Table 3-1 till Table 3-3 give a global overview of all executed measurement campaigns in vincinity of Deurganckdok from the first siltation project (HCBS, 2005) till this project. Figure 3-1 shows the sailed measurement tracks and stationary measurement locations in the Deurganckdok and Figure 4-1 shows the Lower Sea Scheldt with the several stationary measurement locations and transect close to the dock.

Table 3-1: An overview of the through tide measurements on the River Scheldt in the environment of Deurganckdok since project HCBS (2005)

Through tide measurements			
Type (Location)	Description	Date(s)	Report(s)
SiltProfiler	Sediment and salinity measurements on 15 fixed gauging points at the entrance of DGD using the very fast IMDC vertical SiltProfiler.	21/03/2006 26/09/2006 23/10/2007 12/03/2008 29/09/2008 13/03/2009 27/09/2011 09/03/2012	IMDC (2006h) IMDC (2007n) IMDC (2008g) IMDC (2008l) IMDC (2009b) IMDC (2009j) IMDC (2012d) IMDC (2012l)
Longitudinal salinity measurements (Transect Y)	Measuring the longitudinal salinity distribution in Deurganckdok on several depths.	21/03/2006 26/09/2006 12/03/2008 11/03/2009	IMDC (2006b) IMDC (2007h) IMDC (2008h) IMDC (2009k)
Eddy measurements ([1]Transect X, Y, Z [2]Transect 1-4)	Measuring the spatial flow pattern and magnitudes of eddy currents at the entrance of Deurganckdok by using an ADCP	01/10/2008[1] 02/03/2010[2] 29/09/2011[2] 12/03/2012[2]	IMDC (2008y) IMDC (2010a) IMDC (2012c) IMDC (2012k)
Transect measurements at Deurganckdok (Transect DGD)	Measuring the spatial current and sediment distribution, water flux and sediment flux at the entrance of Deurganckdok by	16/02/2005* 22/03/2006 27/09/2006 24/10/2007 11/03/2008 19-26/06/2008 24/09-30/09/2008	IMDC (2005f) IMDC (2006i) IMDC (2007o) IMDC (2008a) IMDC (2008k) IMDC (2008u,v) IMDC (2008x,2009a)

Through tide measurements			
	using ADCP and SEDIVIEW procedure (*incl. SiltProfiles)	2-10/12/2009 6-12/03/2009 6-13/10/2011 8-16/03/2012	IMDC (2009e,f) IMDC (2009i,n) IMDC (2012a,b) IMDC (2012g,h)
Transect measurements at Waarde (Transect W)	Measuring the spatial current and sediment distribution, water flux and sediment flux at several locations on the River Scheldt by using ADCP and SEDIVIEW procedure (*incl. SiltProfiles)	23/03/2006 28/09/2006	IMDC (2006g) IMDC (2007f)
Transect measurements at Zandvliet		17/02/2005	IMDC(2005c)
Transect measurements at downstream Deurganckdok (Transect K)		17/02/2005 22-23/03/2006 27-28*/09/2006 11/03/2008	IMDC (2005b) IMDC (2006c,f) IMDC (2007d,e) IMDC (2008j)
Transect measurements at Liefkenshoek (Transect I)		17/02/2005* 22/03/2006* 27/09/2006* 11/03/2008	IMDC (2005d) IMDC (2006d) IMDC (2007c) IMDC (2008i)
Transect measurements at Kallo		18/02/2005*	IMDC (2005g)
Transect measurements at Schelle (Transect S)		17/02/2005 23/03/2006 28/09/2006	IMDC (2005e) IMDC (2006e) IMDC (2007g)

Table 3-2: An overview of in-situ settling velocity and calibration campaigns on the River Scheldt in the environment of Deurganckdok since project HCBS (2005)

Settling velocity/ calibration campaigns			
Type	**Description**	**Date(s)**	**Report(s)**
Settling velocity	Measuring the in-situ settling velocity of a sediment particle in Deurganckdok (CDW/SILL/Western qua) based on the INSSEV-protocol	17-19/02/2005 05-07/09/2006	IMDC (2005i) IMDC (2006o)
Calibration campaign	An in-situ calibration of the instruments in the environment of Deurganckdok with focus on turbidity conversion to sediment concentration (based on water samples)	15/03+14/04/2006 23/06+18/09/2006 10/09/2007 2-4/02/2008 27-28/10/2008 16/03/2011 01/06/2012 05/2012	IMDC (2006a) IMDC (2007a) IMDC (2008f) IMDC (2008o) IMDC (2009c) IMDC (2012e) IMDC (2012o) Antea Group (2013a).

Table 3-3: An overview of the long-term measurements on the River Scheldt in the environment of Deurganckdok since project HCBS (2005)

Long-term measurements				
Type	**Description**	**Location**	**Period(s)**	**Report(s)**
Near bed continuous monitoring	Measuring the tidal variation in current velocity, sediment concentration, salinity and bottom elevation near the bottom at the entrance of Deurganckdok by using an special designed frame	DGDdown, DGDup	02/2005	IMDC (2005h)
		CDW (North side)	03-04/2006	IMDC (2006j)
		CDW (North side) & SILL (South side)	04-05/2006 07-10/2006 03-04/2007 09-12/2007 02-04/2008	IMDC (2006k) IMDC (2007n) IMDC (2007q) IMDC (2008m) IMDC (2008n)
	Analogously to a near bed monitoring but extended with an ADCP to measure current and sediment pattern in the water column after the building of CDW	CDWdown (downstream CDW) CDWop (upstream CDW) SILL (South side)	09-10/2011 02-03/2012	IMDC (2012d) IMDC (2012l)
Salinity and siltation monitoring in Deurganckdok	Measuring the salinity and sediment variation on long-term scale in Deurganckdok at 2 fixed depths	PSA, P&O1 and P&O2	03-04/2006 07-10/2006 02-04/2007 06-07/2007 09-12/2007	IMDC (2006k) IMDC (2007n) IMDC (2007q) IMDC (2007v) IMDC (2008m)
		N entrance S entrance S middle S back	02-03/2008 04-09/2008 10/2008-3/2009	IMDC (2008n) IMDC (2008z) IMDC (2009l)
		N entrance S entrance	04/2009-05/2010 05/2011-05/2012 05/2012-03/2013 04/2013-03/2014	IMDC (2010b) IMDC (2012n) Antea Group (2013b) Antea Group (2014)
Ambient condition monitoring	Measuring the ambient conditions nearby Deurganckdok: currents, salinity and sediment concentration	Lillo Oosterweel Hoboken Boerenschans	01-06/2005 07-12/2005	IMDC (2005k) IMDC (2005l)
		Prosperpolder Buoy84 Buoy97 Oosterweel	01-06/2006 07-12/2006 01-03/2007 04-06/2007 07-09/2007 10-12/2007 01-03/2008 04-09/2008	IMDC (2006l) IMDC (2007b) IMDC (2007r) IMDC (2007w) IMDC (2007u) IMDC (2008p) IMDC (2008q) IMDC (2008aa)
		Prosperpolder Buoy84 Oosterweel	10/2008-03/2009 04/2009-03/2010 04/2010-03/2011 04/2011-03/2012	IMDC (2009d,m) IMDC (2011c) IMDC (2012f) IMDC (2012p)
		Prosperpolder Buoy84 Liefkenshoek Oosterweel	04/2012-03/2013 **04/2013-03/2014**	IMDC (2014a) **This report**

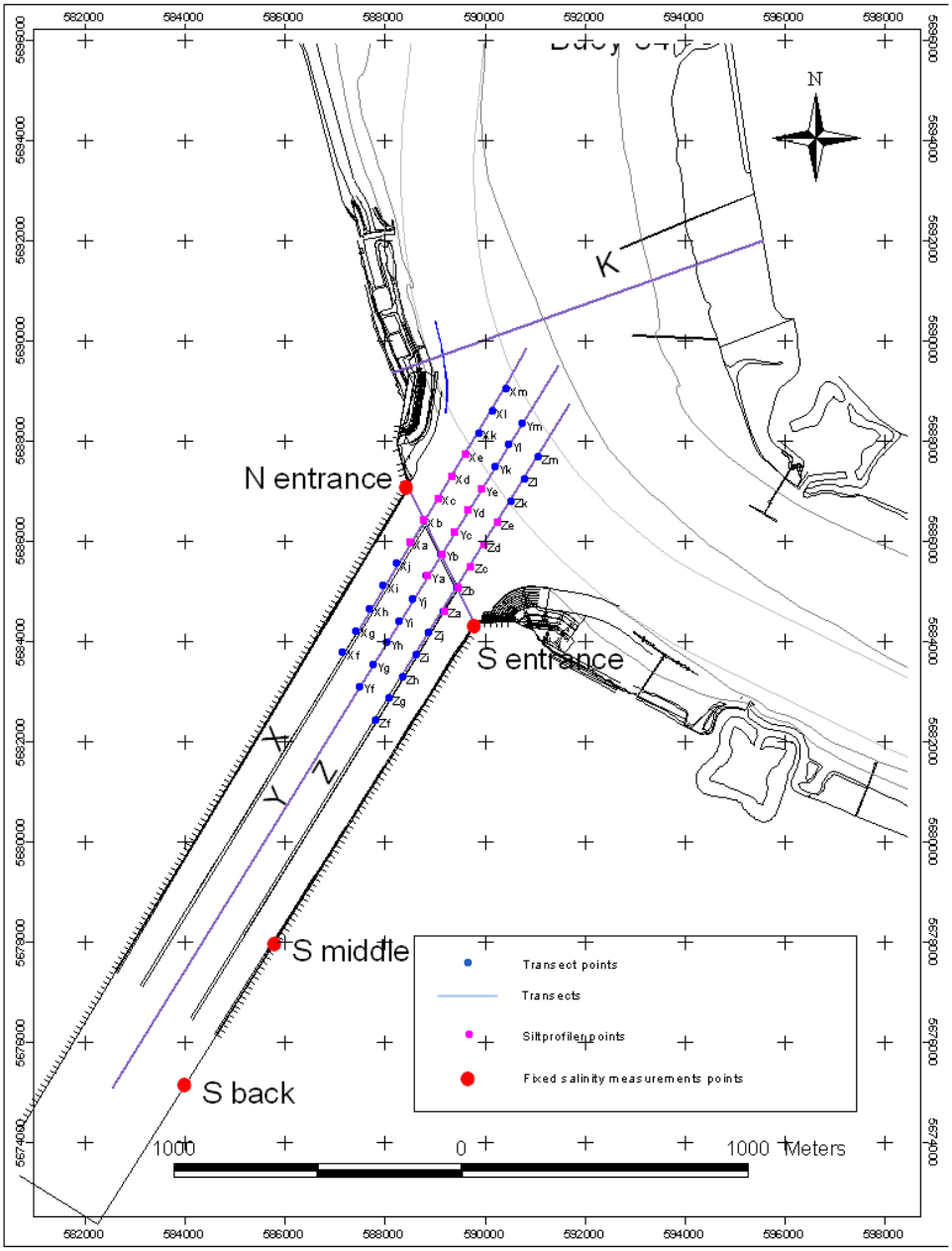

Figure 3-1: Location of measurement equipment and sailed tracks at Deurganckdok

4. AMBIENT CONDITIONS

4.1 ENVIRONMENTAL CHARACTERISTICS IN THE LOWER SEA SCHELDT

4.1.1 Long-term turbidity, salinity and current measurements

Continuous long-term measurements were executed in the Lower Sea Scheldt on fixed locations at Oosterweel (left bank), Liefkenshoek, Buoy 84 and Prosperpolder (Figure 4-1). In the past other locations were maintained at Boerenschans, Buoy 97 and Lillo (Table 3-3). Boerenschans and Lillo are respectively removed in 2005 and Buoy 97 in 2008.

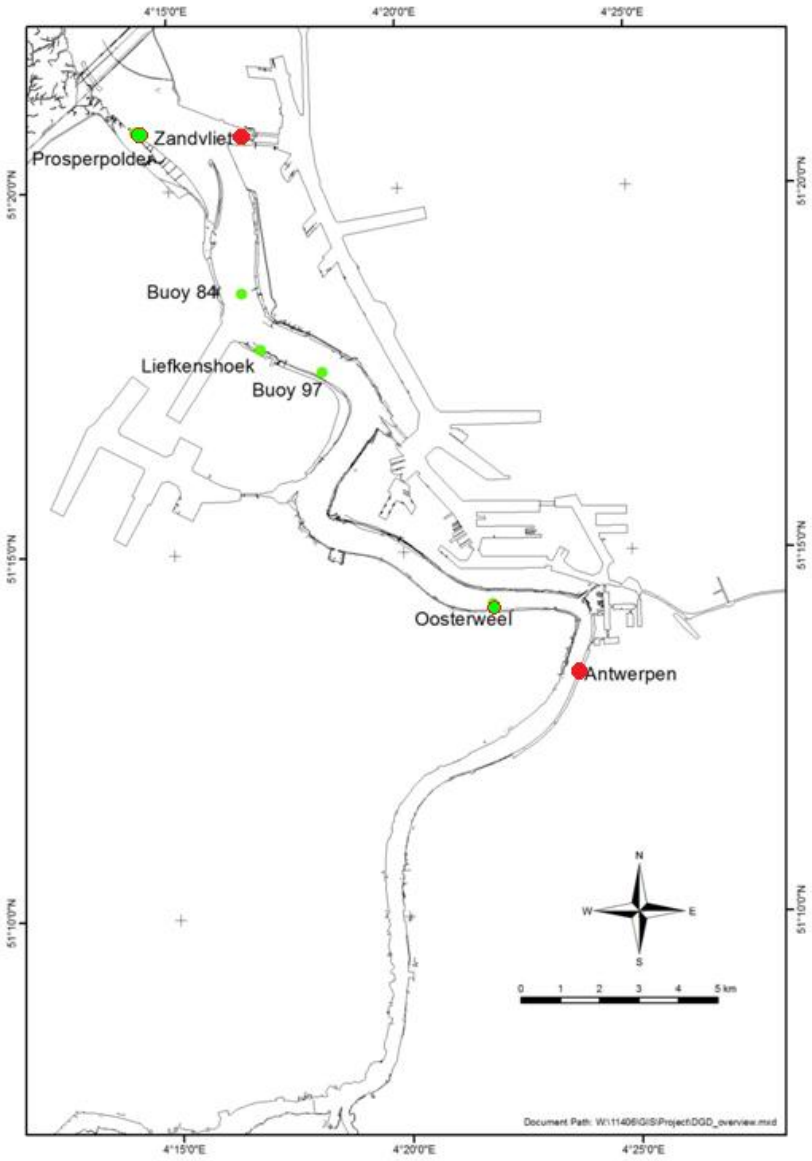

Figure 4-1: Continuous long-term measurement locations (green dots) on the Lower Sea Scheldt since 2006

On the river Scheldt nearby Oosterweel and Buoy 84, measurements were conducted by 2 AADI instruments per location measuring current velocity, current direction, temperature, pressure, conductivity and turbidity. At Oosterweel location, both instruments were suspended from a mooring at fixed heights above the bottom (Table 4-1). The set-up at Buoy 84 (and previously Buoy 97) was devised by IMDC where a steel frame was placed on the river bed. On the steel frame 2 AADI instruments were suspended and held upright by subsurface buoys. The lower AADI was placed at 0.80m above the bottom, while the upper one was placed at a distance of 2.5m above the lower one.

Table 4-1: Overview of the long-term measurement locations

Location	***Depth sensor***	***Easting (UTM ED50)***	***Northing (UTM ED50)***
Oosterweel (top)	4.5m above bottom (-2.3m TAW)	595 574	5 677 278
Oosterweel (bottom)	1m above bottom (-5.8m TAW)	595 574	5 677 278
Liefkenshoek	2m above bottom (-1.5m TAW)	589 731	5 683 787
Buoy 84 (top)	3.3m above bottom (-5.6m TAW)	588 884	5 685 934
Buoy 84 (bottom)	0.8m above bottom (-8.1m TAW)	588 884	5 685 934
Prosperpolder	2.5m above bottom (-1.5m TAW)	586 307	5 689 501

Between 2009 and 2012, the AADI RCM-9 were replaced by the new generation AADI instrument Seaguard RCM which has his influence on the turbidity data. Since installing the Seaguard RCM several times the maximum level of the turbidity sensor of 500 FTU was reached. If the sediment concentrations will be larger than saturation value the actual turbidity value will be unknown. Due to this reason the turbidity sensors of 500FTU were replaced by a turbidity sensors of 2500 FTU in 2012.

Valeport CTD –instruments were installed at the tidal gauges of Prosperpolder and Liefkenshoek (Table 4-1) to measure temperature, conductivity and pressure. Since 2005, an AADI instrument was used at Prosperpolder which was replaced on 15 December 2011. The measurements at Liefkenshoek was started up in July 2009 and is reported for the first time in the series of boundary conditions reports.

The instruments on these locations are set up to measure every 10 minutes. At Oosterweel and Buoy 84 were only interrupted during calibration campaigns (Table 3-2). More information of the instruments can be found in Annex A.

4.1.1.1 Methodology of Processing

The data of these measurements was provided by Flanders Hydraulics Research and processed by IMDC. The collected data was validated and outliers were removed. Erroneous measurements because of malfunction of sensors, growth on sensors, instrument failure were also removed from the dataset and are documented in Table 4-2.

Salinity was calculated using the temperature, conductivity and pressure in the PSS-78 formula (Unesco, 1991; see Annex G).

Turbidity values were converted to suspended sediment concentration (SSC) using calibration curves. The calibration conversion was set up by Flanders Hydraulics Research and were based on water samples collected during calibration and through-tide campaigns (FHR, 2014). The calibration curves of turbidity sensors of the Seaguard till 2500 FTU are adopted from the MONEOS report 2014 (FHR, 2014). Compared to the previous boundary condition report (IMDC, 2014a) and the MONEOS report the calibration curves are different. The different curves are presented in Annex H. Below the 1000 FTU the difference between the curves of MONEOS 2012 and 2013 are limited to less than 100 mg/l. During this measuring period the maximum observed turbidity value is approximately 1000 FTU.

The final results are presented in Annex B.

Table 4-2: Chronological overview of missing data for period 01/04/2013 - 31/03/2014 at measurement locations Oosterweel, Liefkenshoek, Buoy 84 and Prosperpolder

Oosterweel left bank – 4.5 m above bottom		
Period	***Instrument Type***	***Comment***
07/10/2013 – 10/10/2013	Seaguard 2500FTU	No velocity & salinity data available
30/01/2014 – 03/02/2014		No velocity, SSC & salinity data available
13/02/2014 – 06/03/2014		No velocity direction, SSC & salinity data available
Oosterweel left bank – 1.0 m above bottom		
Period	***Instrument Type***	***Comment***
07/10/2013 –10/10/2013	Seaguard 2500FTU	No velocity & salinity data available
03/01/2014 – 17/01/2014		No velocity, SSC & salinity data available
30/01/2014 – 13/02/2014		No velocity, SSC & salinity data available
Liefkenshoek – 2.0 m above bottom		
Period	***Instrument Type***	***Comment***
09/08/2013 – 20/08/2013	Valeport CTD	No salinity data available

Buoy 84 top – 3.3 m above bottom		
Period	***Instrument Type***	***Comment***
21/06/2013 - 26/06/2013	Seaguard 2500FTU	No velocity, SSC & salinity data available
30/06/2013 - 26/07/2013		No velocity data available
30/06/2013 – 18/09/2013		No salinity data available
18/09/2013 – 31/03/2014		No SSC data available
17/02/2014 – 19/02/2014		No velocity & salinity data available
Buoy 84 bottom – 0.8 m above bottom		
Period	***Instrument Type***	***Comment***
21/06/2013 - 26/06/2013	Seaguard 2500FTU	No velocity & salinity data available
30/06/2013 – 26/07/2013		No SSC data available
23/07/2013 – 26/07/2013		No velocity & salinity data available
16/10/2013 – 06/11/2013		No velocity, SSC & salinity data available
17/02/2014 – 19/02/2014		No velocity, SSC & salinity data available
Prosperpolder – 2.5 m above bottom		
Period	***Instrument Type***	***Comment***
13/06/2013 – 20/06/2013	Valeport CTD	No salinity data available

4.1.1.2 Results (weekly)

The data gathered during these long-term measurements are visualized in week plots in Annex B.1:

- The title shows the week number followed by the year
- The first graph shows the current velocity scaled from 0 till 2m/s
- The second graph shows current direction scaled from 0 to 360°
- The fourth graph depicts the salinity
- The third and last graph shows the water level at the nearest tidal gauge and the daily water discharge at Schelle

All times are given in UTC.

4.1.1.3 Monthly results

Monthly results (minimum, maximum and average) are shown in Annex B.2. The minimum, maximum and average value for velocity magnitude, temperature and suspended sediment concentration are given for every month. For salinity the minimum, maximum and mean are calculated for both high water slack and low water slack.

An overview of the evolution of the monthly minimum, maximum and average values for velocity magnitude, temperature and suspended sediment concentration is given in

Annex B.3. The dredging and disposal volumes nearby Buoy84 and Oosterweel are also given on these graphs (see §4.4.1).

For salinity the minimum, maximum and mean are given for both high water slack and low water slack. On these graphs the monthly water discharge at Schelle is also shown (see §4.2).

4.1.1.4 Total yearly results (April 2013 – March 2014)

The results for the whole deployment period are also given in Annex B. The minimum, maximum and average value for velocity magnitude, temperature and suspended sediment concentration are given for the period from April 2013 till March 2014. For salinity the minimum, maximum and mean are calculated for both high water slack and low water slack is given.

4.1.2 Vertical tide

The tidal data was provided by Flanders Hydraulics Research. It is reported together with the processed data of the long-term measurement campaigns and those at Antwerp (Oosterweel) and Prosperpolder in Annex B.

4.2 FRESH WATER INFLOW

The fresh water discharge of the Kleine Nete (Grobbendonk), the Grote Nete (Hulshout), the Dijle (Wilsele-Wijgmaal), the Demer (Aarschot), the Dender (Appels, Dendermonde), the Zenne (Eppegem) and the Scheldt (Melle) are provided by Flanders Hydraulics Research. These gauging stations are not influenced by the tide. The calculated discharges at the gauging stations are converted to discharges at the mouth of the tributaries and then to a total fresh water discharge at Schelle. This procedure is described in AZ (1974) and is based on the use of correction coefficients that take in account the surface of the hydrological basins.

In Annex C a graph of the evolution of the fresh water discharge is given just as a table with the decade averages of the fresh water discharge. Also the monthly averages are compared to the expected discharges in a graph.

4.3 METEOROLOGICAL DATA

The meteorological conditions for the measurement station Deurne for the reporting period is presented in Annex D. This data have been obtained from the KMI (Royal Meteorological Institute of Belgium).

4.4 HUMAN ACTIVITIES

4.4.1 Dredging activities

Maritime Access Division provided information about the dates, times, volumes and locations of dredging activities. In Annex E an overview is given of all the dredging activities from 01/04/2013 till 31/03/2014. Weekly volumes are given per location.

In IMDC (2013d) is demonstrated that there is strong relation between the sediment concentration and the dredging activities on the Lower Sea Scheldt. The dredging and disposal activities close to the measurement locations Oosterweel and Buoy84 are also visualized in Annex B on a long-term scale. The disposal volumes near Oosterweel is a summation of disposal locations: Plaat van Boomke, Oosterweel and Punt van Melsele; the dredging volumes near Buoy84: Europa-terminal, Drempel van Frederik, Lillovaarwater, Deurganckdok and Drempel van Lillo.

4.4.2 Navigation

Weekly data of navigation was delivered by Shipping Assistance Division (ScheldeRaderKeten) for the period of 01/04/2013 till 31/03/2014. To order the data a splitting up of the Lower Sea Scheldt was done in 4 areas. The first area is from de Belgian border up to locks of Zandvliet – Berendrecht, the second goes from this point forward up to Deurganckdok. The third area is from Deurganckdok up to the lock of Kallo (Kallosluis) and finally the fourth goes up to the lock of Royers (Royerssluis). A more detailed description of the areas can be found in Annex F. Also a distinction is made between the draughts. In Annex F a total number is given which refers to the total of passing ships registered by Shipping Assistance Division (ScheldeRadarKeten). In addition a difference was made between inland navigation and seagoing ships, just as between arrival and departure. Notice that for a certain area and certain draught, the total may deviate from the sum of inland navigation and seagoing. This can be explained by the presence of ships like dredgers, which were only counted in the column ‘total’. Also a difference may occur between the total number and the sum of the arrival and departure number. This is due to vessels that have the same entry and exit point.

Finally it should be mentioned that not all inland shipping is observed by the system, which means that the actual number of inland shipping will be higher.

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IMDC (2009h) Langdurige metingen Deurganckdok: Opvolging en analyse aanslibbing Deelrapport 1.24: Annual Sediment Balance (I/RA/11283/08.080/MSA).

IMDC (2009i) Langdurige metingen Deurganckdok: Opvolging en analyse aanslibbing. Deelrapport 2.26: Through tide measurement Sediview during neap tide Winter 2009 (I/RA/11283/08.087/MSA).

IMDC (2009j) Langdurige metingen Deurganckdok: Opvolging en analyse aanslibbing. Deelrapport 2.30: Through tide measurement SiltProfiler winter 2009 (I/RA/11283/08.091/MSA).

IMDC (2009k) Langdurige metingen Deurganckdok: Opvolging en analyse aanslibbing. Deelrapport 2.31: Through tide measurement Salinity Profiling winter 2009 (I/RA/11283/08.092/MSA).

IMDC (2009l) Langdurige metingen Deurganckdok: Opvolging en analyse aanslibbing. Deelrapport 2.33: Salt-Silt distribution Deurganckdok: six monthly report 1/10/2008 – 31/3/2009 (I/RA/11283/08.094/MSA).

IMDC (2009m) Langdurige metingen Deurganckdok: Opvolging en analyse aanslibbing. Deelrapport 3.21: Boundary conditions: Six monthly report 1/10/2008 – 31/03/2009 (I/RA/11283/08.097/MSA).

IMDC (2009n) Langdurige metingen Deurganckdok: Opvolging en analyse aanslibbing. Deelrapport 2.27: Through tide measurement Sediview during spring tide Winter 2009 (I/RA/11283/08.088/MSA).

IMDC (2009o) Langdurige metingen Deurganckdok: Opvolging en analyse aanslibbing. Deelrapport 4.20: Analysis of siltation Processes and Factors (I/RA/11283/08.098/MSA).

IMDC (2009p) Langdurige metingen Deurganckdok: Opvolging en analyse aanslibbing. Deelrapport 2.35: Salt-Silt distribution Deurganckdok: nine monthly report 1/04/2009 – 31/12/2009 (I/RA/11283/09.085/MSA).

IMDC (2010a) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.5 Through Tide measurement: eddy currents DGD 02/03/2010 (I/RA/11283/10.051/MSA).

IMDC (2010b) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.8 Sal-Silt distribution Deurganckdok 01/04/2009 – 31/03/2010 (I/RA/11354/10.068/NZI).

IMDC (2011a) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 1.1 Annual Sediment Balance year 1: 1/04/2009 – 31/03/2010 (I/RA/11354/10.067/NZI).

IMDC (2011b) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 1.2 Annual Sediment Balance year 2: 1/04/2009 – 31/03/2010 (I/RA/11354/10.100/MBO/ANF).

IMDC (2011c) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 1.4 Boundary Conditions year 1: 01/04/2009 – 31/03/2010 (I/RA/11354/10.102/MBO/ANF).

IMDC (2011d) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 1.7 Synthesis report of research on Current Deflecting Wall (I/RA/11354/10.063/MBO).

IMDC (2012a) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.1 Through Tide Sediview measurement: entrance DGD during spring tide in Autumn 2011 (I/RA/11354/10.106/MBO/ANF).

IMDC (2012b) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.1 Through Tide Sediview measurement: entrance DGD during neap tide in Autumn 2011 (I/RA/11354/10.107/MBO/ANF).

IMDC (2012c) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.5 Through Tide measurement: eddy currents DGD Autumn 2011 (I/RA/11354/10.110/MBO/ANF).

IMDC (2012d) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.10 Salt-Silt & Current Distribution entrance Deurganckdok: Frame measurements and through tide measurements: Autumn 2011 (I/RA/11354/11.131/BQU).

IMDC (2012e) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.12 Calibration stationary & mobile equipment 16/03/2011 (I/RA/11354/10.113/MBO/ANF).

IMDC (2012f) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 1.5 Boundary conditions year 2: 01/04/2010 – 31/03/2011 (I/RA/11354/10.103/MBO/ANF).

IMDC (2012g) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.3 Through Tide Sediview measurement: entrance DGD during spring tide in Winter 2012 (I/RA/11354/10.108/MBO/ANF).

IMDC (2012h) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.4 Through Tide Sediview measurement: entrance DGD during neap tide in Winter 2012 (I/RA/11354/10.109/MBO/ANF).

IMDC (2012k) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.7 Through Tide measurement: eddy currents DGD Winter 2012 (I/RA/11354/10.111/MBO/ANF).

IMDC (2012l) Evaluatie externe effecten aanslibbing Deurganckdok Deelrapport 2.11 Salt-Silt & Current Distribution entrance Deurganckdok: Frame measurements and through tide measurements: Winter 2012 (I/RA/11354/10.114/MBO/ANF).

IMDC (2012m) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 1.3 Annual Sediment Balance year 3: 1/04/2011 – 31/03/2012 (I/RA/11354/10.101/MBO/ANF).

IMDC (2012n) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.9 Sal-Silt distribution Deurganckdok 01/06/2011 – 31/05/2012 (I/RA/11354/10.112/MBO/ANF).

IMDC (2012o) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 2.13 Calibration stationary & mobile equipment 01/06/2012 (I/RA/11354/12.011/JCA).

IMDC (2012p) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 1.6 Boundary conditions year 3: 01/04/2011 – 31/03/2012 (I/RA/11354/10.104/MBO/ANF).

IMDC (2013a) Evaluatie externe effecten aanslibbing Deurganckdok. Deelrapport 1.8 Analysis of external effects on siltation processes and factors (I/RA/11354/10.105/MBO/ANF).

IMDC (2013b) Evaluatie externe effecten aanslibbing Deurganckdok (2012-2014). Deelrapport 1.13 Analysis of boundary conditions of survey years 3 and 4: 01/04/2008 – 31/03/2010 (I/RA/11406/13.054/MGO).

IMDC (2013b) Evaluatie externe effecten aanslibbing Deurganckdok (2012-2014). Deelrapport 1.14 Analysis of boundary conditions of survey years 5 and 6: 01/04/2010– 31/03/2012 (I/RA/11406/13.062/MGO).

IMDC (2013c) Evaluatie externe effecten aanslibbing Deurganckdok (2012-2014). Deelrapport 1.09 Annual sediment balance in survey year 7: 01/04/2012-31/03/2013 (I/RA/11406/13.143/JCA).

IMDC (2014a) Evaluatie externe effecten aanslibbing Deurganckdok (2012-2014). Deelrapport 1.11 Boundary conditions survey year 7: April 2012 – March 2013 (I/RA/11406/13.145/JCA).

IMDC (2014b) Evaluatie externe effecten aanslibbing Deurganckdok (2012-2014). Deelrapport 1.10 Annual sediment balance in survey year 8: April 2013 – March 2014 (I/RA/11406/13.144/JCA).

IMDC (2013d) Monitoringsprogramma flexibel storten – Fase 2, Deelopdracht 1 – Analyse slibconcentratiemetingen in de Zeeschede, in opdracht van Afdeling Maritieme Toegang (I/RA/11353/13.169/DPP).

Unesco (1983). Algorithms for computation of fundamental properties of seawater, UNESCO Technical Papers in Marine Science, 44. UNESCO, France.

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Annex A Instrument specifications

A.1 Valeport Monitor CTD

MONITOR CTD

The MONITOR CTD has been developed from Valeport's MIDAS CTD, utilising the same accurate, robust sensors and synchronised sampling technique, but packaged as a smaller, lightweight unit to suit small boat or shallow water applications.

Sensors
The MONITOR CTD is fitted with Valeport's high stability conductivity sensor, a high accuracy temperature compensated piezo-resistive pressure transducer, and a fast response PRT temperature sensor.

Conductivity

Range:	0 - 80 mS/cm
Resolution:	0.002mS/cm
Accuracy:	±0.01mS/cm

Temperature

Range:	-5°C to +35°C
Resolution:	0.005°C
Accuracy:	±0.01°C

Pressure

Range:	50 Bar standard, others available
Resolution:	0.005% range
Accuracy:	±0.1% range

Data Acquisition
The MONITOR CTD uses the concept of distributed processing, where each sensor has its own microprocessor controlling sampling and calibration of readings. Each of these is then controlled by a central processor, which issues global commands and handles all the data. This means that all data is sampled at precisely the same instant, giving superior quality profile data.

Sampling Modes

Continuous:	Regular output from all sensors at 1, 2, 4 or 8Hz.
Burst:	Regular sampling pattern, where instrument takes a number of readings, then sleeps for a defined time.
Trip/Profile:	Data is output as a chosen parameter changes by a set value, usually Pressure for profiling.
Conditional:	Instrument sleeps until a selected parameter reaches a set value.
Delay:	Instrument sleeps until predefined start time

Communications
The instrument will operate autonomously, with setup and data extraction performed by direct communications with PC before and after deployment. It also operates in real time, with a choice of communication protocols for a variety of cable lengths, all fitted as standard and selected by pin choice on the output connector:

Standard

RS232	Up to 200m cable, direct to serial port via USB adaptor
RS485	Up to 1000m cable, addressable half duplex comms
Baud Rate:	2400 - 115200 (FSK fixed at 19200, USB 460800)
Protocol:	8 data bits, 1 stop bit, No parity, No flow control

Memory
The MONITOR CTD is fitted with 16Mb solid state non-volatile FLASH memory. Total capacity depends on sampling mode; continuous & burst modes have a single time stamp at the start of the file, trip mode (profiling) stores a time stamp with each reading. A single line of CTD data uses 6 bytes, and a time stamp uses 7 bytes.

Continuous:	>2,750,000 data points
Profile:	>1,200,000 data points (>600 profiles to 500m).

Electrical

Internal:	8 x C cells, 1.5v alkaline or 3.6v lithium
External:	9 - 30vDC
Power:	0.6W (sampling), <1mW (sleeping)
Battery Life:	<100 hours operation (alkaline) <250 hours operation (lithium)
Connector:	Subconn MCBH10F

Physical

Materials:	Acetal housing, polyurethane and titanium sensor components, stainless steel (316) cage
Depth Rating:	500m
Instrument Size:	88mmØ x 540mm long
Cage Size:	640 x 140 x 120mm
Weight (in cage):	7.5kg (in air), 4.5kg (in water)
Shipping:	74 x 35 x 27cm, 17kg

Software
System is supplied with DataLog Express Windows based PC software, for instrument setup, data extraction and display. DataLog Express is licence free.

Ordering

0650003	MONITOR CTD Profiler, supplied with deployment cage, Subcon switch plug, 3m communications lead, USB adaptor, DataLog Express software, manual , tool kit and transit case.
0400002	16 Mbyte memory upgrade (max 64 Mbyte)
0400EA9	RS485 communications adaptor
0400EA6	Advanced Y lead for RS485 operation

Datasheet Reference: MONITOR CTD version 2A, Feb 2011

Valeport Limited, St. Peter's Quay Totnes, Devon, TQ9 5EW UK
t. +44 (0)1803 869292 f. +44 (0)1803 869293 e. sales@valeport.co.uk w. www.valeport.co.uk

A.2 AADI Seaguard RCM

AANDERAA
a xylem brand

SEAGUARD® Recording Current Meter

The SeaGuard RCM series is a completely new generation of current meters based on the SeaGuard data logger platform and the ZPulse Doppler Current Sensor. Modern computer technology combined with advanced digital signal processing provides accurate and detailed measurements with almost unlimited resolution. Optional parameters are available through a new range of smart sensors that include temperature, pressure, conductivity, oxygen, wave and tide. The new SeaGuard RCM series come in 300m, 2000m and 6000m depth ranges.

Advantages:

- *Large storage capacity on SD card*
- *Broadband ZPulse multi-frequency technology reduces power consumption and improves quality*
- *Down to 2 second recording interval*
- *Low current drain*
- *Smart sensor topology based on a reliable semi-high speed CANbus interface (AiCaP)*
- *Up to 4 Analog sensor input (0-5V)*
- *Windows CE based datalogger with TFT based color touch panel for local configuration*
- *SeaGuard Studio visualization software*
- *For use in sea and fresh water*
- *Real-Time XML Output (optiona*

The new SeaGuard RCM series replaces the industry standard RCM 9 and RCM 11 series. It has been completely redesigned from bottom up and employs modern technology in the datalogger section and in the different sensor solutions.

The SeaGuard architecture is based on a general data logger unit and a set of autonomous smart sensors. The data logger and the smart sensors are interfaced by means of a reliable CANbus interface(AiCaP), using XML for plug and play capabilities. During power-up, each of the sensors that are connected to the bus will report their capabilities and specifications to the data logger. The data logger then assembles the information and provides the user with the possibility to configure the instrument based on the present nodes. The solution provides for great flexibility in both use and design of the different elements within the system.

The autonomous sensor topology also gives the sensor designer flexibility and opportunities where each sensor type may be optimized with regard to its operation, each sensor may now provide several parameters without increasing the total system load. Data storage takes place on a Secure Digital (SD) card. The current capacity for this card type is up to 2GBytes, is more than adequate for most applications.The SeaGuard also has a built-in power calculator which gives an etsimated deployment lenght bases on selected interval, battery type and current drain information, obtained from each smart sensor.

The SeaGuard RCM comes standard with the ZPulse multi-frequency Doppler current sensor. The new current sensor comprises acoustic pulses of several frequency components to lower the statistical variance in the Doppler shift estimate. The advantage of this is reduced statistical error with fewer pings, providing increased sampling speed and lower power consumption.

The new Doppler Current Sensor also incorporates a robust fully electronic compass and a tilt sensor. The SeaGuard RCM may also be delivered with new smart sensor solutions for Temperature, Pressure, Conductivity and Oxygen. All sensors have increased resolution compared with the older models. The temperature sensor also has decreased settling time to utilize the increased sampling speed provided by the SeaGuard platform. There is also an analog Turbidity Sensor available for direct connection on the top end plate.

D368 - Jan 2013

Specifications

Top-end Plate capability:	Up to 6 sensors can be fitted onto the Top-end Plate, of which 4 can be analog sensors (0-5V)
Recording System:	Data Storage on SD card
Storage Capacity:	≥ 2GB
Battery:	
Alkaline 3988:	9V, 15Ah (nominal 12.5Ah; 20W down to 6V at 4°C)
or Lithium 3908:	7V, 35Ah
Recording Interval:	From 2s, depending on the node configuration for each instrument
Recording settings:	Fixed interval settings or Customized Sequence setting
Protocol:	AiCaP CANbus based protocol
Depth Capacity:	300m/2000m/6000m
Platform Dimensions:	
300m version (SW):	H: 356mm OD: 139mm
2000m version (IW):	H: 352mm OD: 140mm
6000m version (DW):	H: 368mm OD: 143mm
External Materials:	
300m version:	PET, Titanium, Stainless Steel 316, Durotong DT322 polyurethane
2000/6000m version:	Titanium, Stainless steel 316, OSNISIL, Durotong DT322 polyurethane

Weight:	In Air	In Water
300m version (SW):	7.6 kg	2.0 kg
2000m version (IW):	14.8 kg	8.5 kg
6000m version (DW):	15.7 kg	10.5 kg

Supply Voltage:	6- 14 Volts
Operating Temperature:	-5 to +50°C

ZPulse Doppler Current Sensor (DCS) Specifications

Current Speed:	(Vector averaged)
Range:	0-300 cm/s
Resolution:	0.1 mm/s
Mean Accuracy:	± 0.15 cm/s
Relative:	± 1% of reading
Statistic variance (std):	0.3 cm/s (ZPulse mode), 0.45 cm/s [1]
Current Direction:	
Range:	0 – 360° magnetic
Resolution:	0.01°
Accuracy:	±5° for 0-15° tilt ±7.5° for 15-35° tilt
Tilt Circuitry:	
Range:	0-35°
Resolution:	0.01°
Accuracy:	±1.5°
Compass Circuitry:	
Resolution:	0.01°
Accuracy:	±3°
Acoustics:	
Frequency:	1.9 to 2.0 MHz
Power:	25 Watts in 1ms pulses
Beam angle (main lobe):	2°
Installation distance:	
From surface:	0.75m
From bottom:	0.5m
Accessories Included:	SeaGuard Studio SD card: 2 GB Alkaline Battery 3988 Documentation on CD Carry handle 4132

Optional Accessories:	Carry handle 4032,3965
Mooring frame:	In-line 4044[2]/3824A Bottom 3448R Protecting Rods 3783 Sub-surface floats 2211,2212
Battery/Power:	Internal Lithium 3908 Internal Alkaline 3988 Internal Battery Shell 4513 Electrical terminal 4784C AC/DC adapter, lab. use 4908
Other:	Real Time licence and collector Offline Configuration 4811 Analog cable/license 4564/4802 Maintenance Kit 3813/3813A Tools kit 3986A Vane Plate 3781,3681 Hardcopy Documentation

Optional Sensors:

Temperature Sensor 4060/4880

Range:	-4-36°C (32-96.8°F)[3]
Resolution:	0.001°C (0.0018°F)
Accuracy:	±0.03°C (0.054°F)
Response Time 63%):	< 2 seconds

Conductivity Sensor 4319

Range:	0-7.5 S/m
Resolution:	0.0002 S/m
Accuracy	
4319 A:	±0.005 S/m
4319 B:	±0.0018 S/m
Response Time:	<3s[5]

Wave and Tide Sensor 4648A

Pressure:	Range: 0-400kPa (0-58psia) Resolution : <0,002% FSO Accuracy: ±0,04% FSO
Wave:	Sampling rate: 2Hz, 4Hz No. of samples: 256, 512, 1024, 2048

Pressure Sensor 4117

Resolution:	<0.002% FSO
Accuracy:	±0.02° FSO
4117A Range:	0 - 1000kPa (0 – 145 psia)[4]
4117B Range:	0 - 4000kPa (0 – 580 psia)
4117C Range:	0 – 10000kPa (0 – 1450 psia)[4]
4117D Range:	0 – 20000kPa (0 – 2900 psia)
4117E Range:	0 – 40000kPa (0 – 5800 psia)[4]
4117F Range:	0 – 60000kPa (0 – 8700 psia)
Turbidity Sensor 4112:	0-5V Analog Output
4112 Range:	0-25 FTU
4112A Range:	0-125 FTU
4112B Range:	0-500 FTU
4112C Range:	0-2000 FTU[6]

Oxygen Optode 4835/4330:

	O_2-Concentration	Air Saturation
Measurement Range:	0 – 500 mM	0 - 150%
Resolution:	< 1 mM	0.4 %
Accuracy:	<8 mM or 5%[7] whichever is greater	<5 %[8]
Response Time (63%):	4330F (with fast response foil) <8 sec 4835/4330 (with standard foil) <25 sec	

[1] Based on 300 pings
[2] In-line Mooring Frame 4044: breaking strength 800 kg
[3] Extended range available on request.
[4] Available on request
[5] Dependent on flow through cell bore
[6] Sensor is non-linear above 750 FTU
[7] Requires salinity compensation for salinity < 1mS/cm
[8] Within calibrated range 0-120%

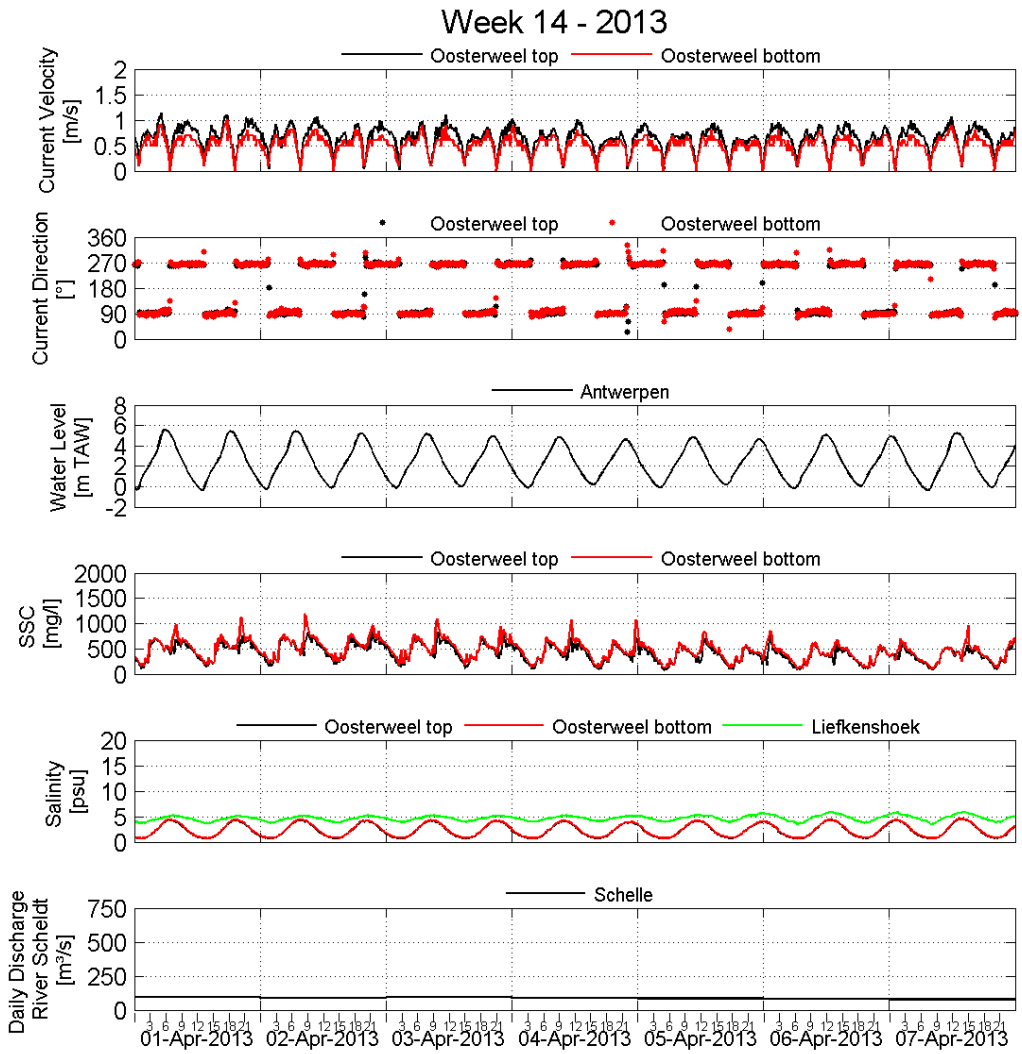
D368 - Jan 2013

Annex B Long-term measurements at Prosperpolder, Buoy 84, Liefkenshoek and Oosterweel

B.1 Datasheets week series

B.1.1 Oosterweel & Liefkenshoek

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

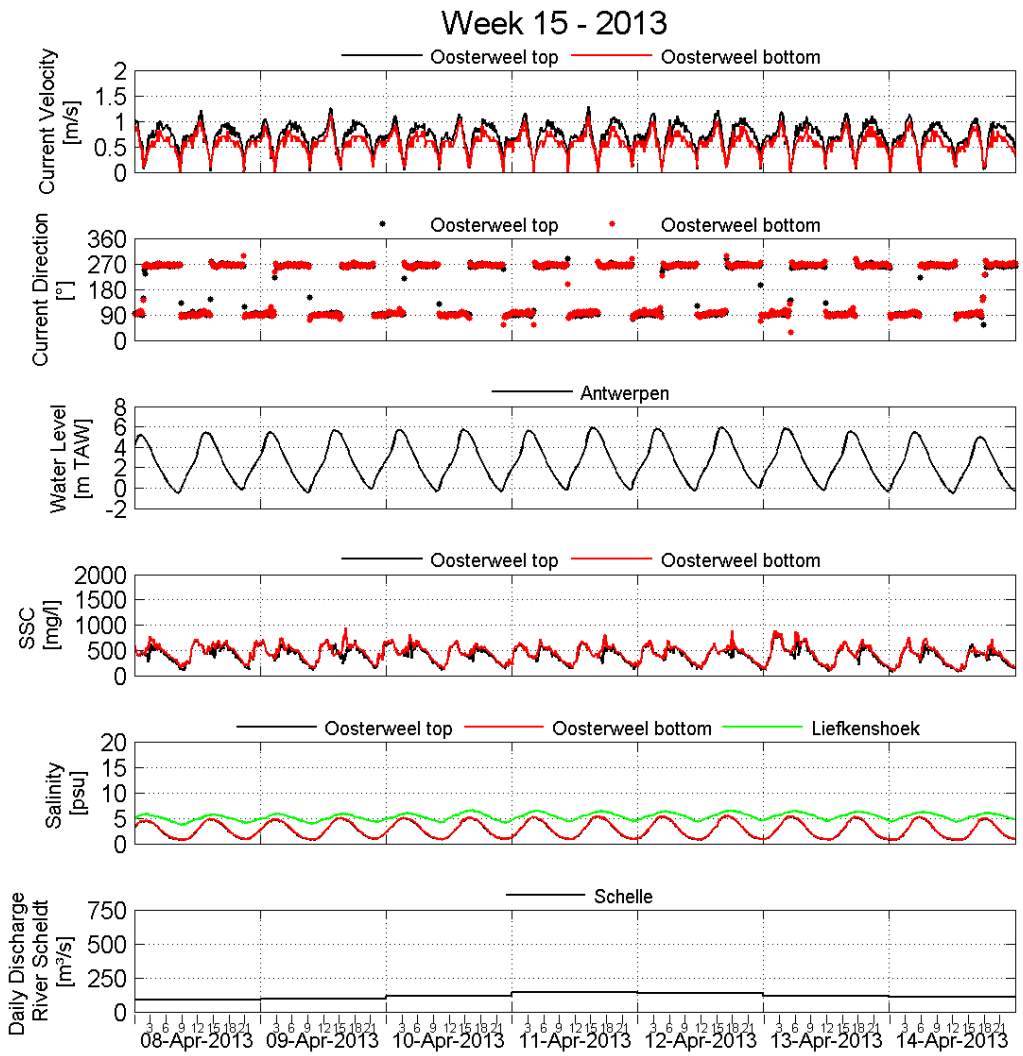
Location:

Liefkenshoek & Oosterweel (top & bottom)

In Association with: Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

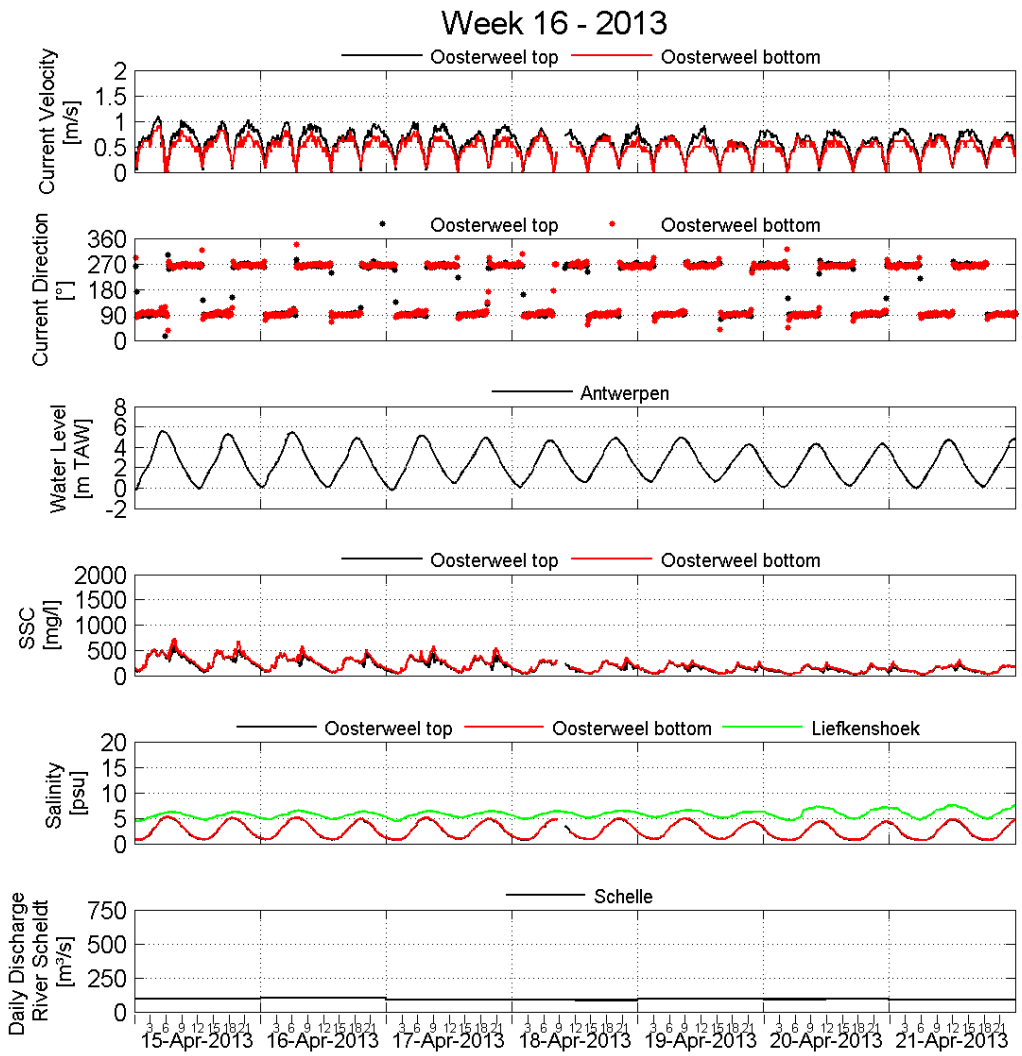
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

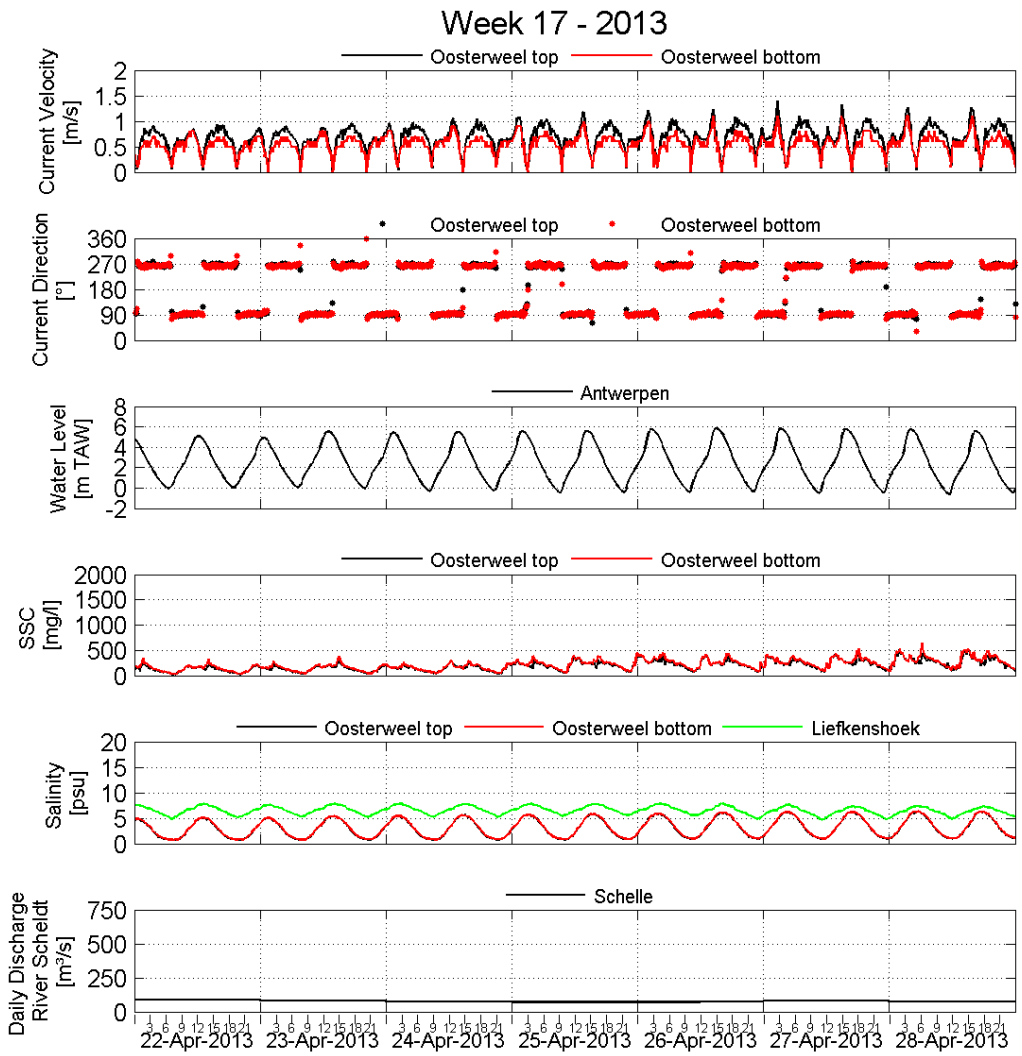
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

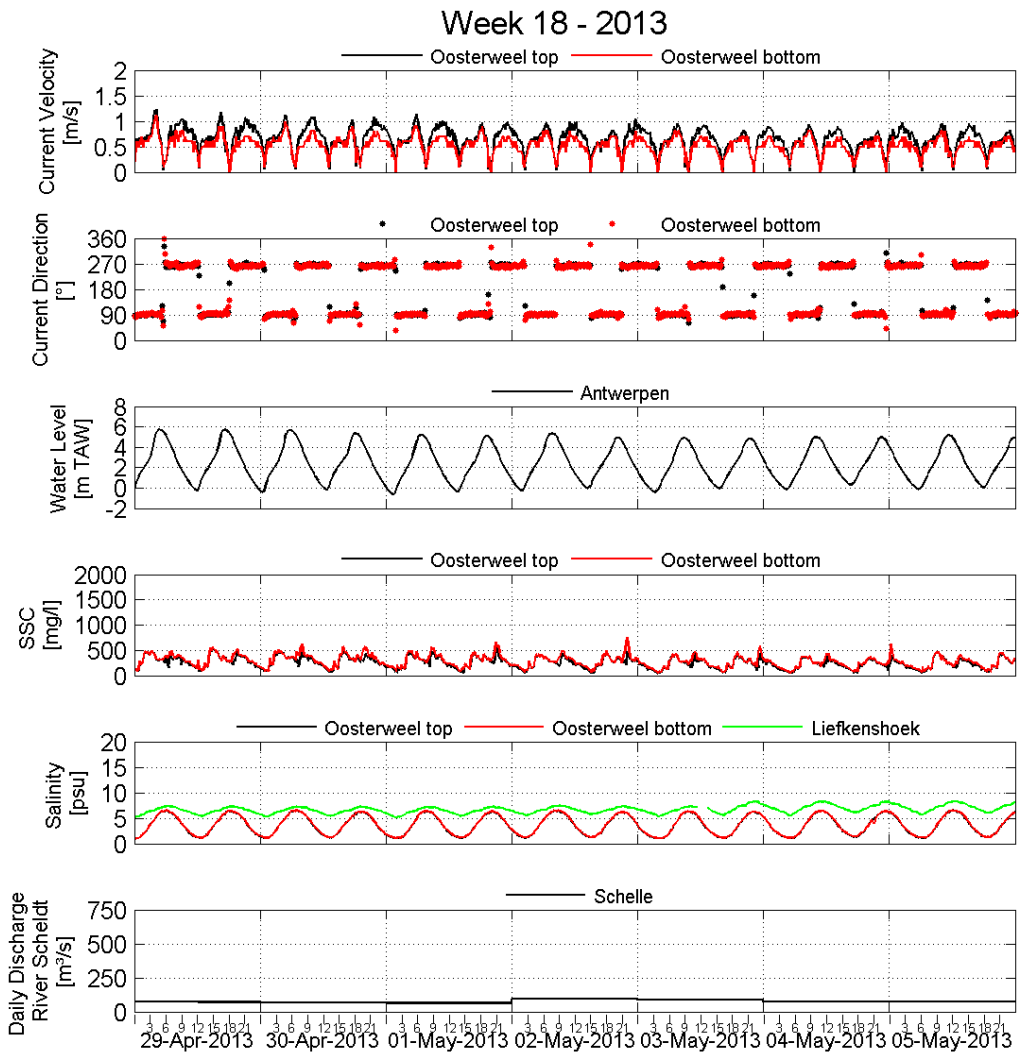
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

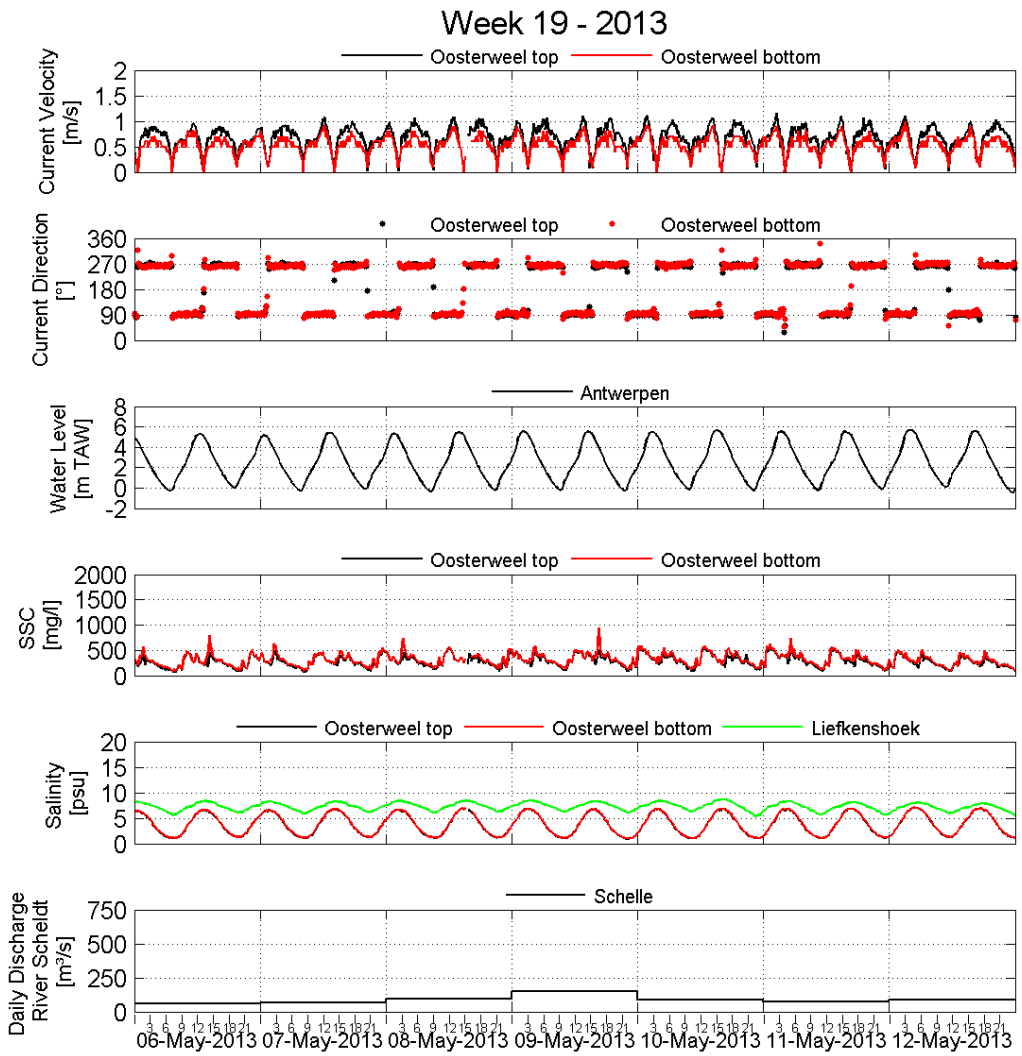
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

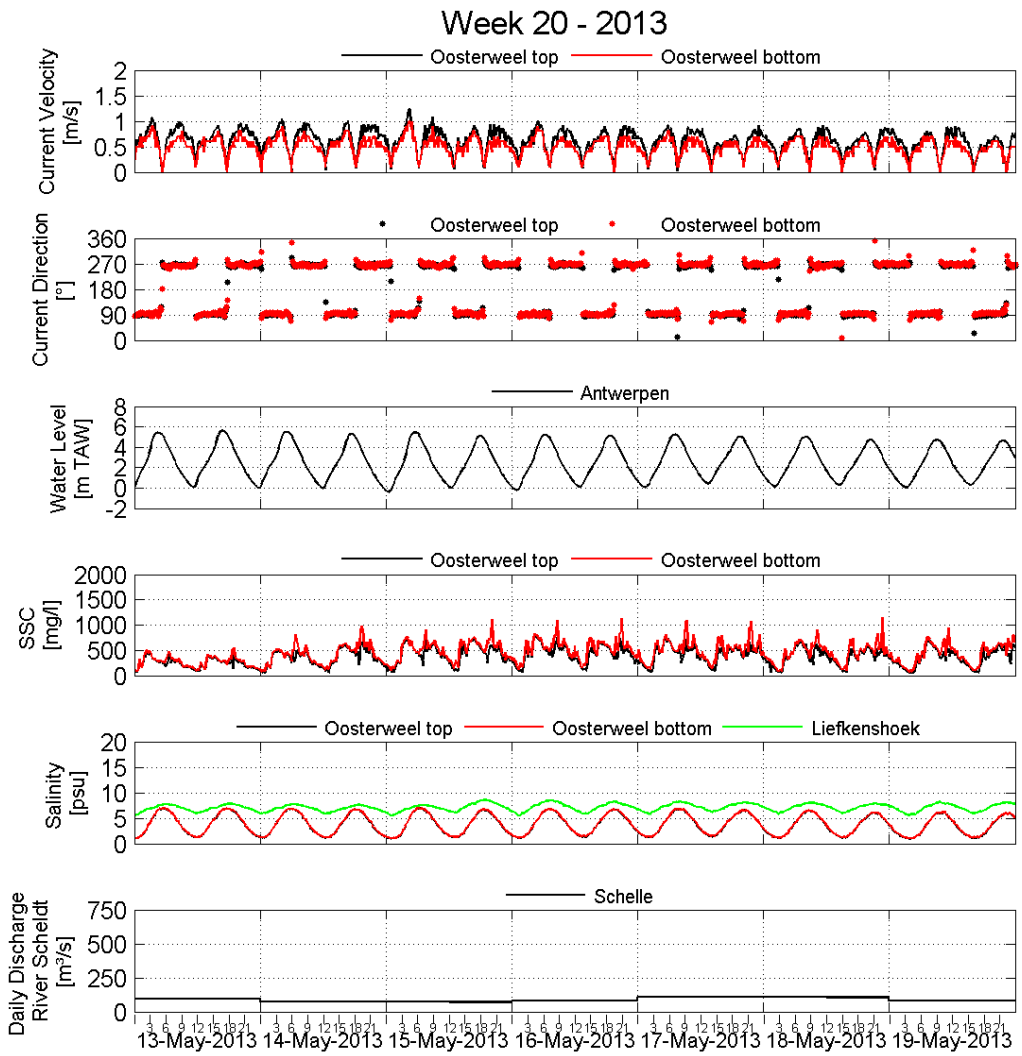
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

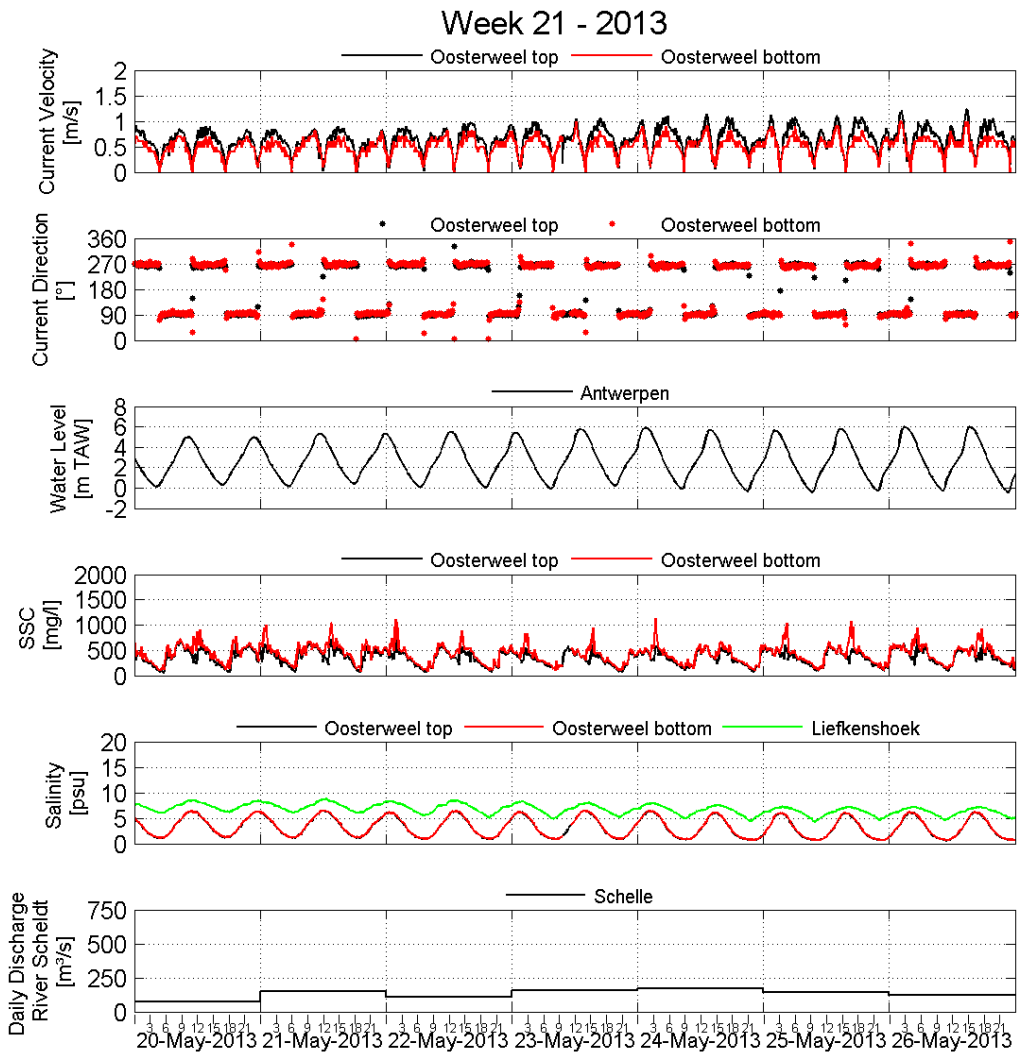
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

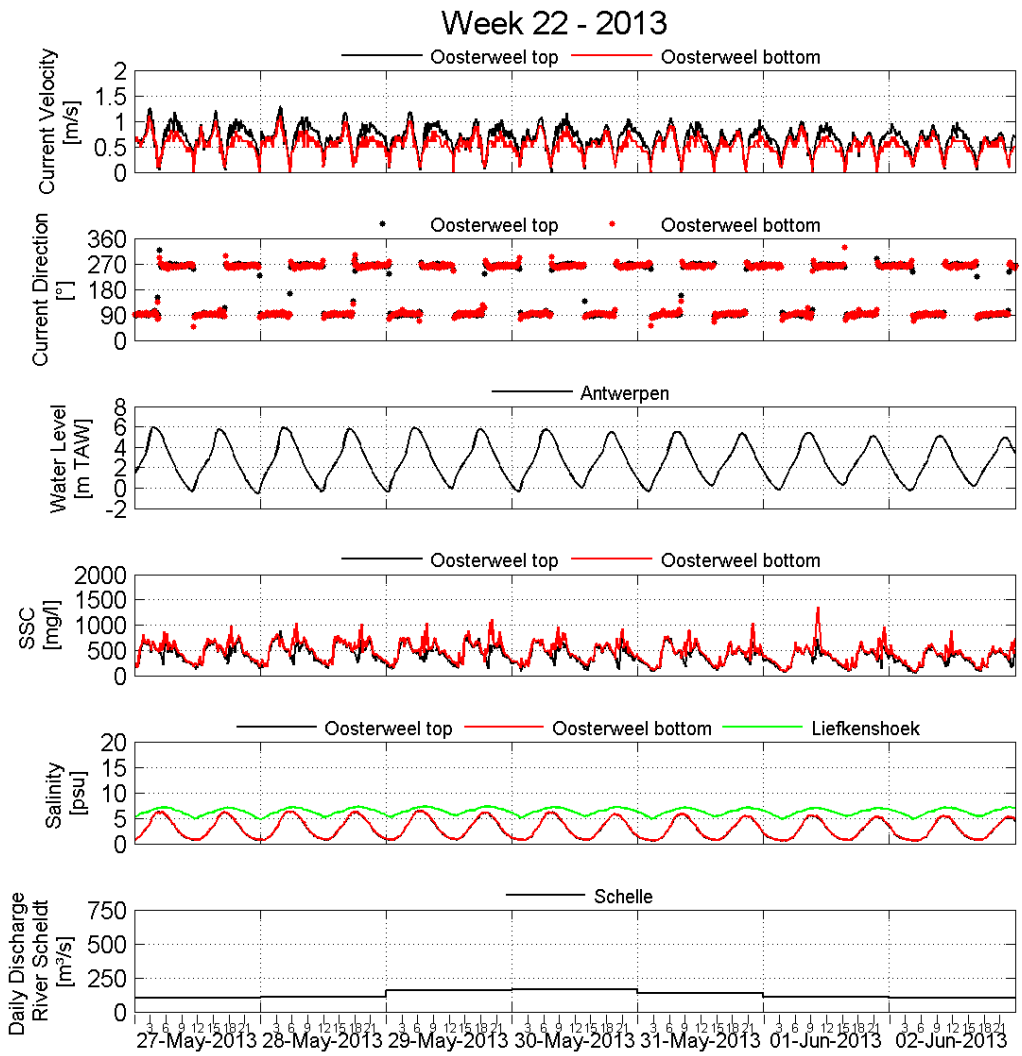
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

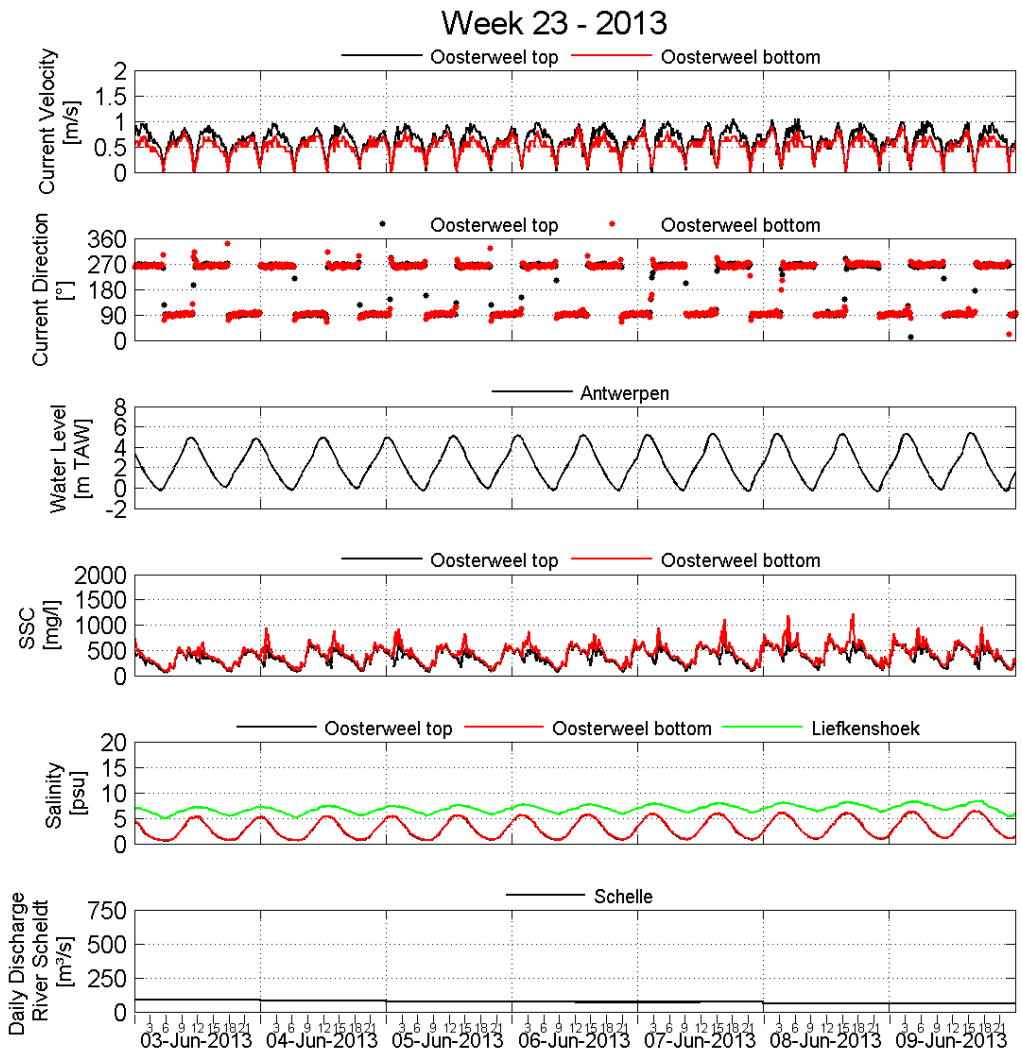
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

IMDC

In Association with:

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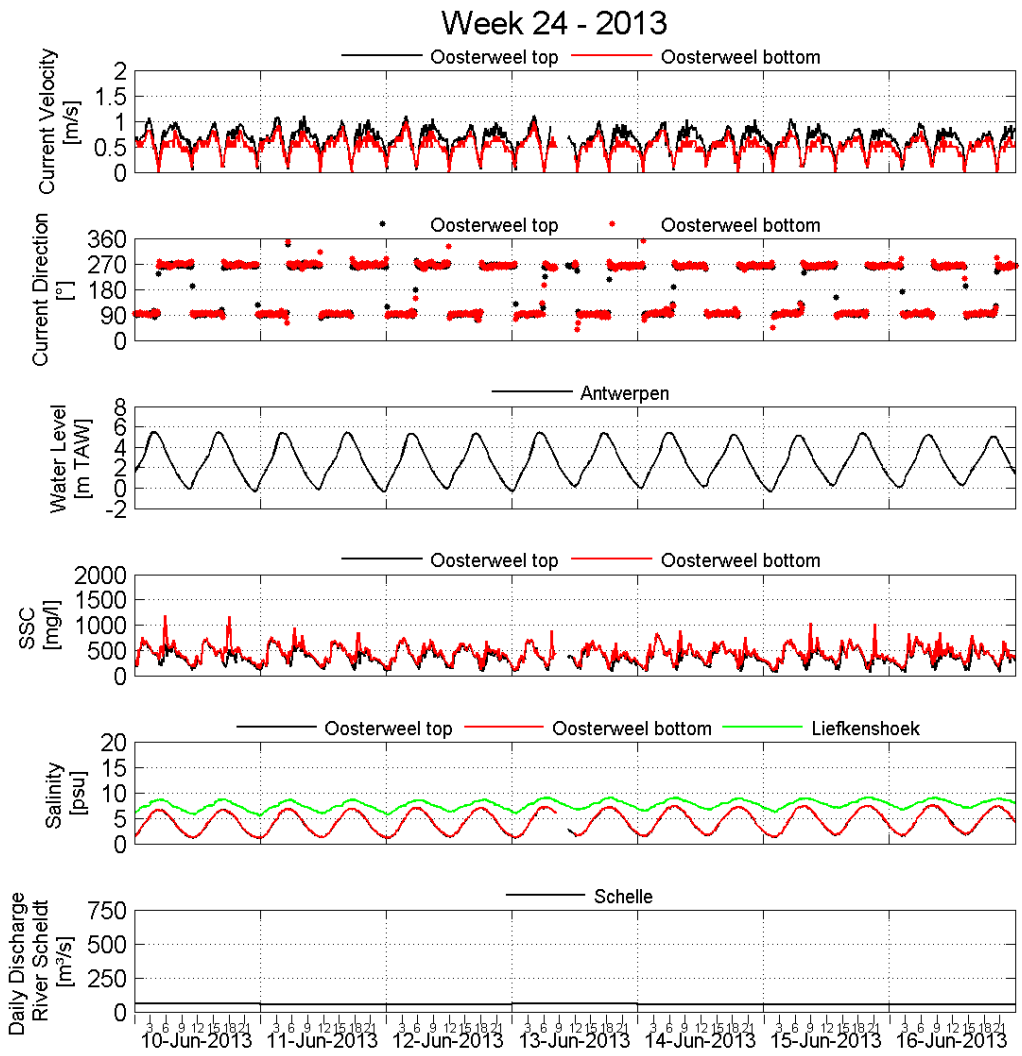

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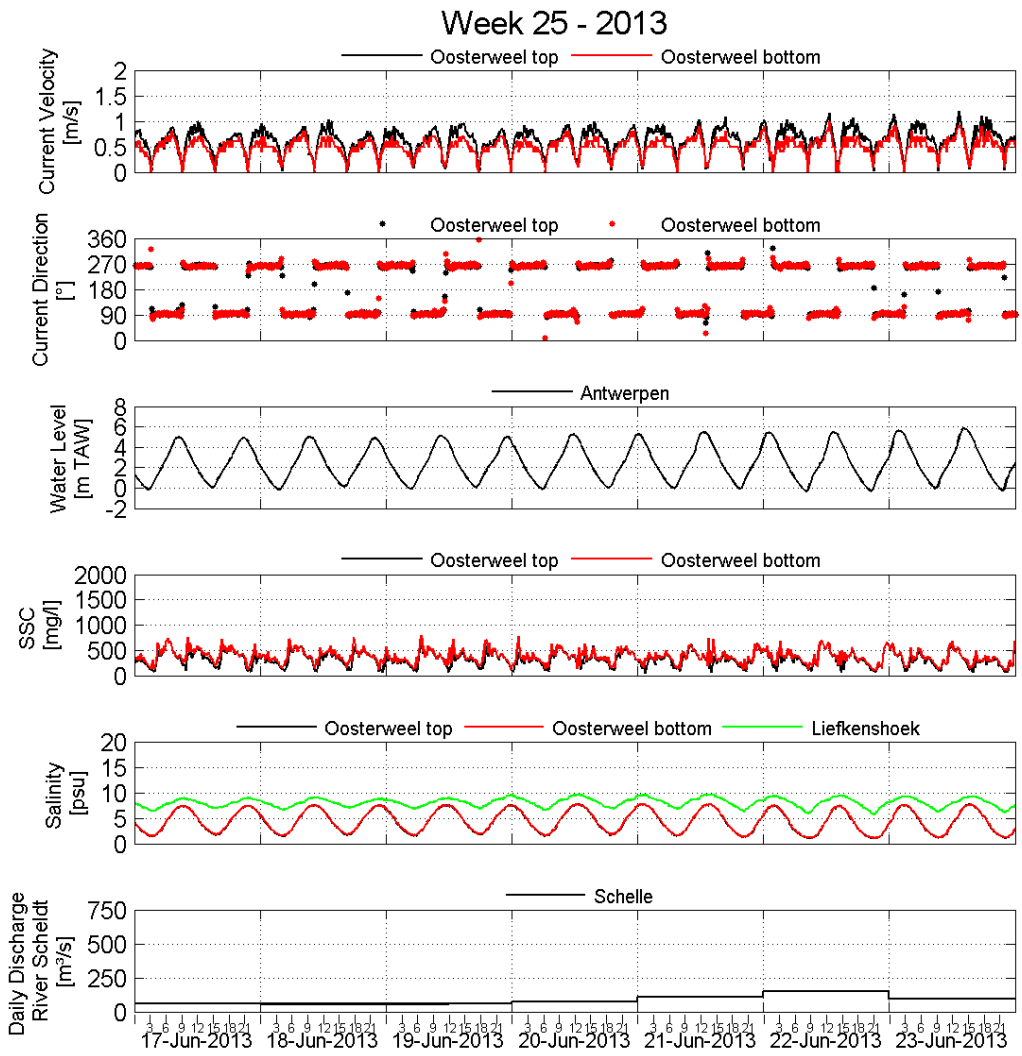

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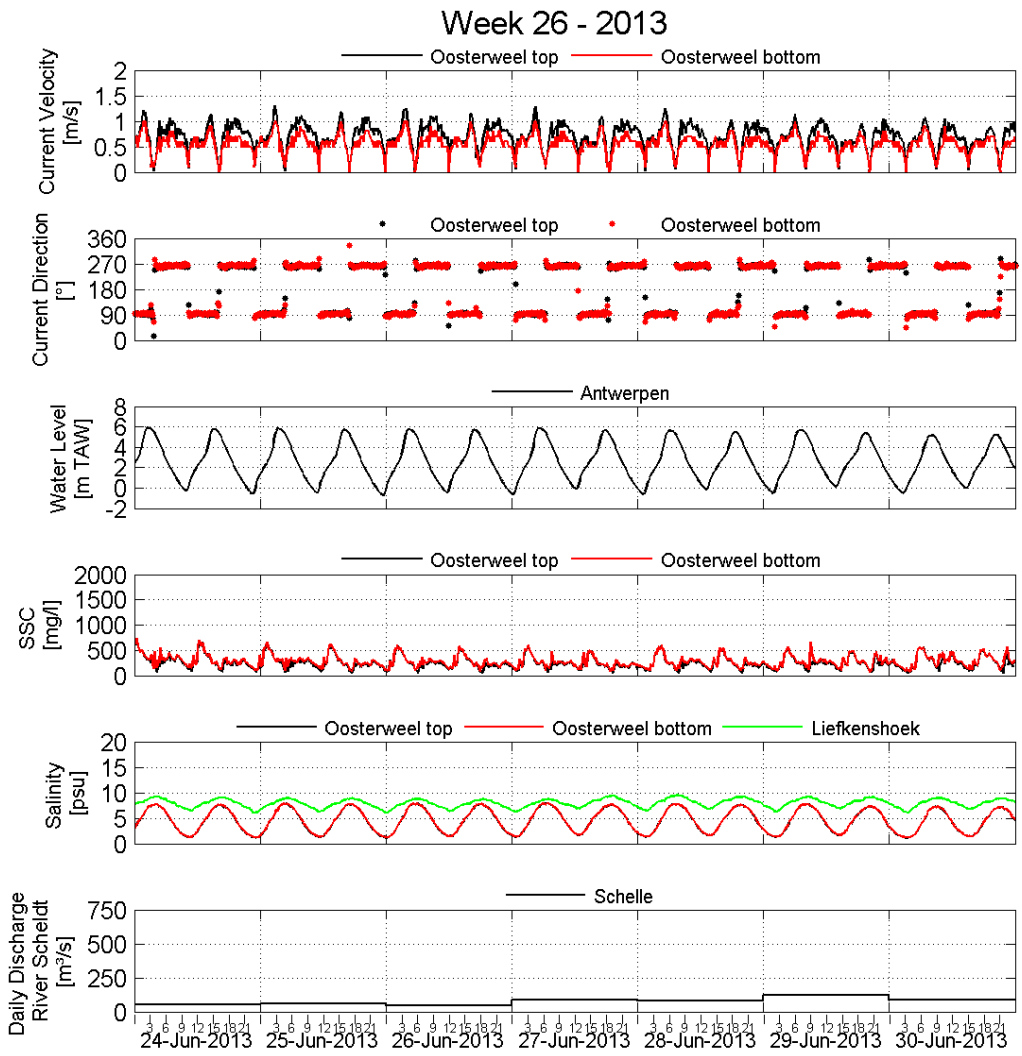

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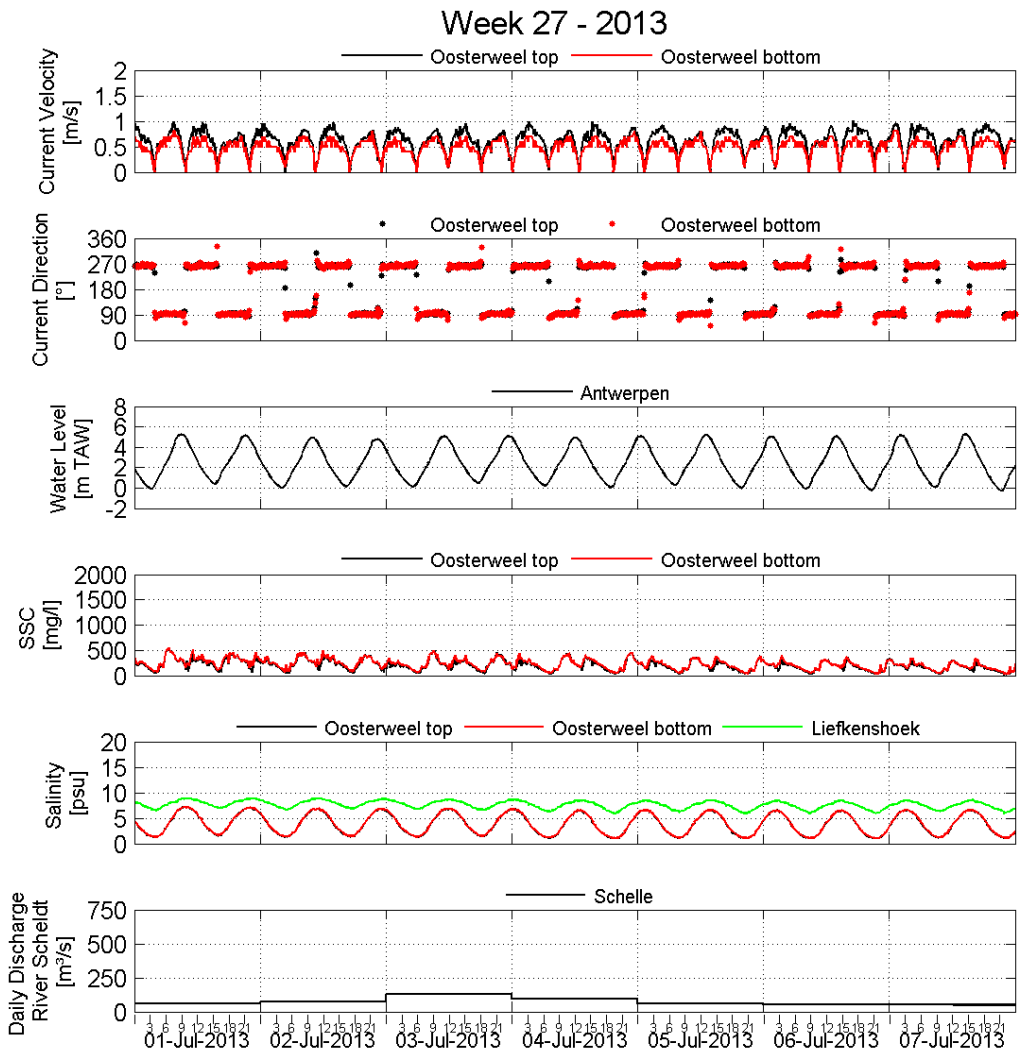

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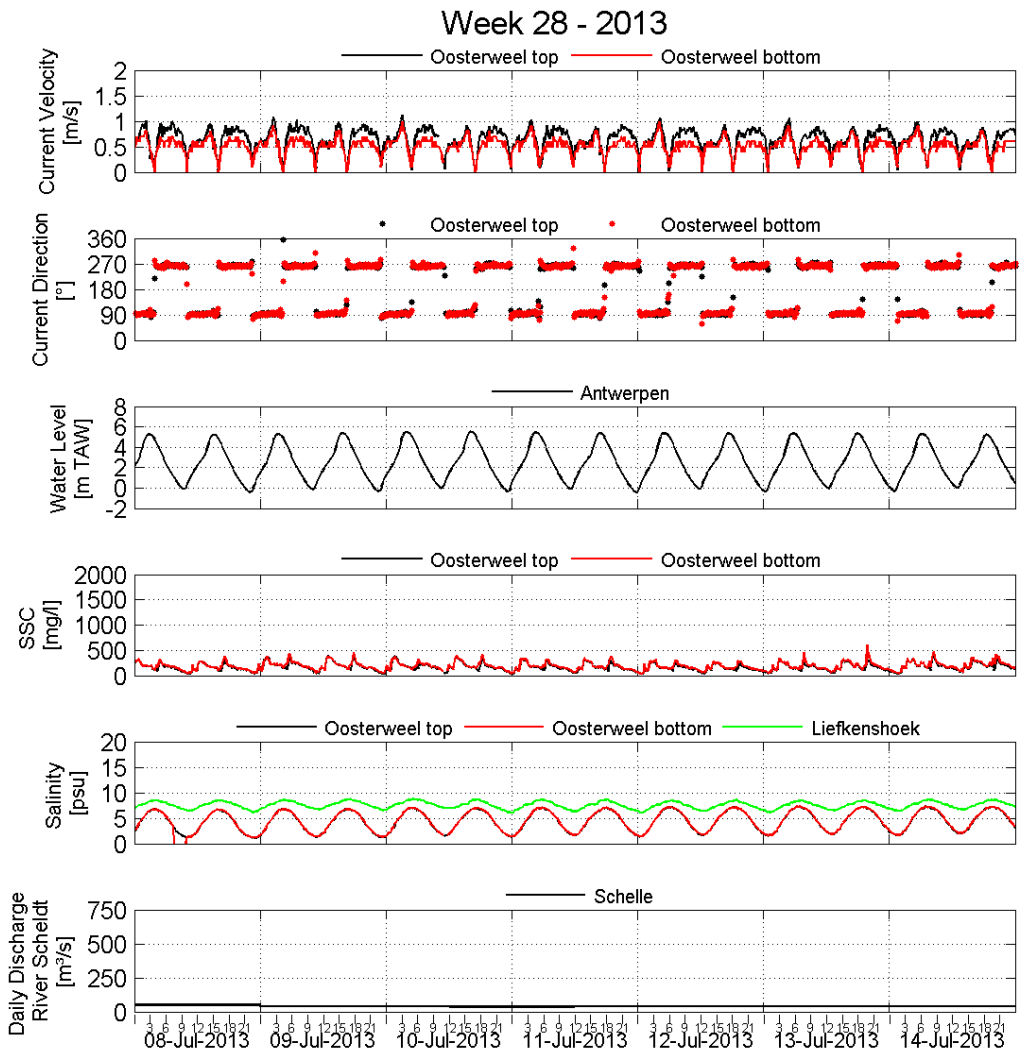

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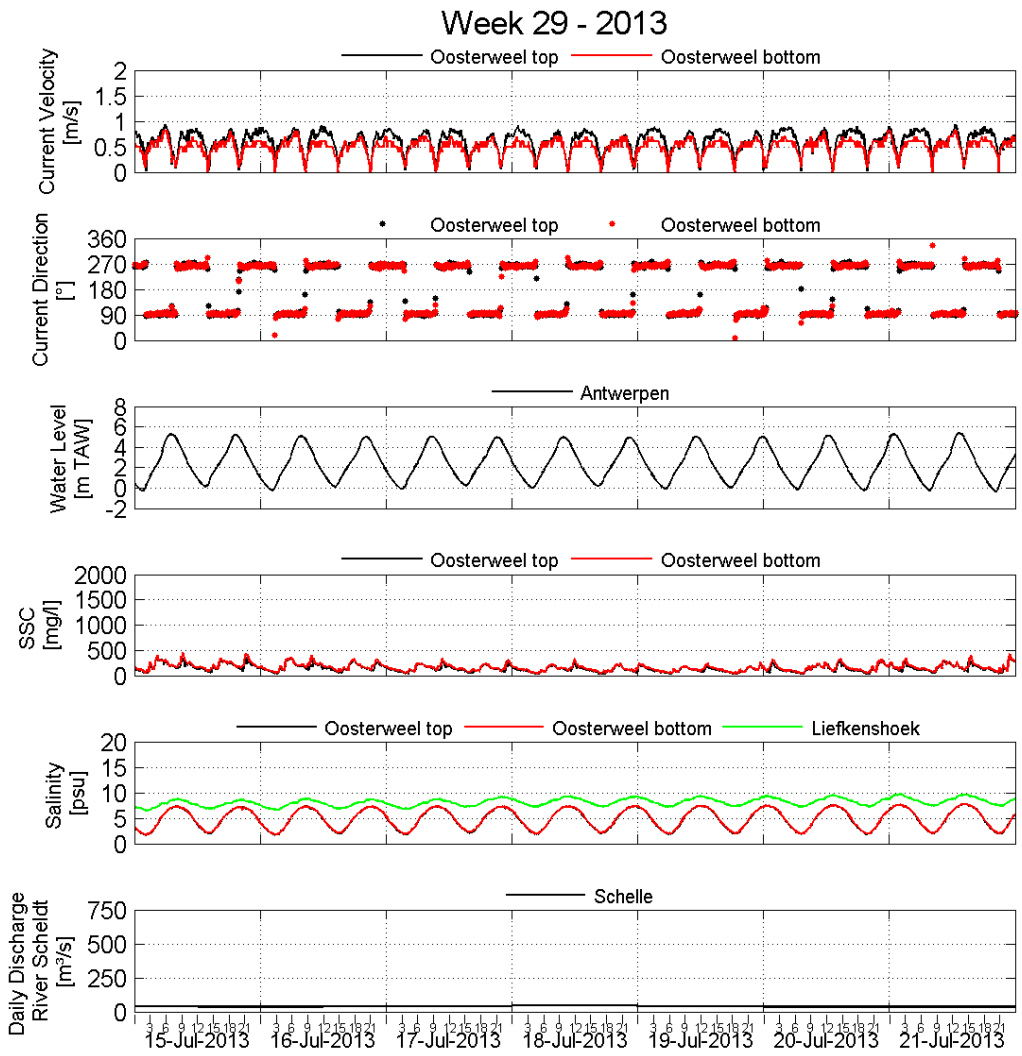

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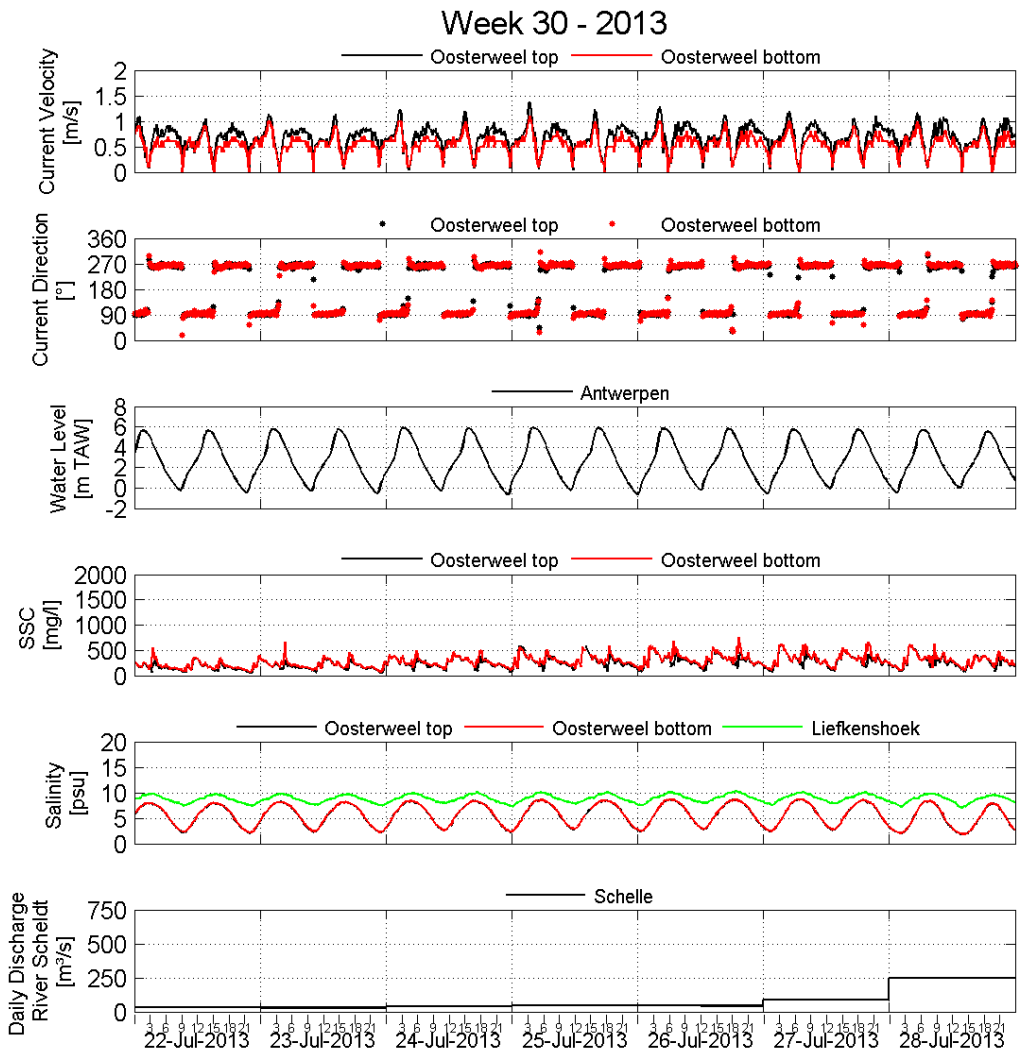

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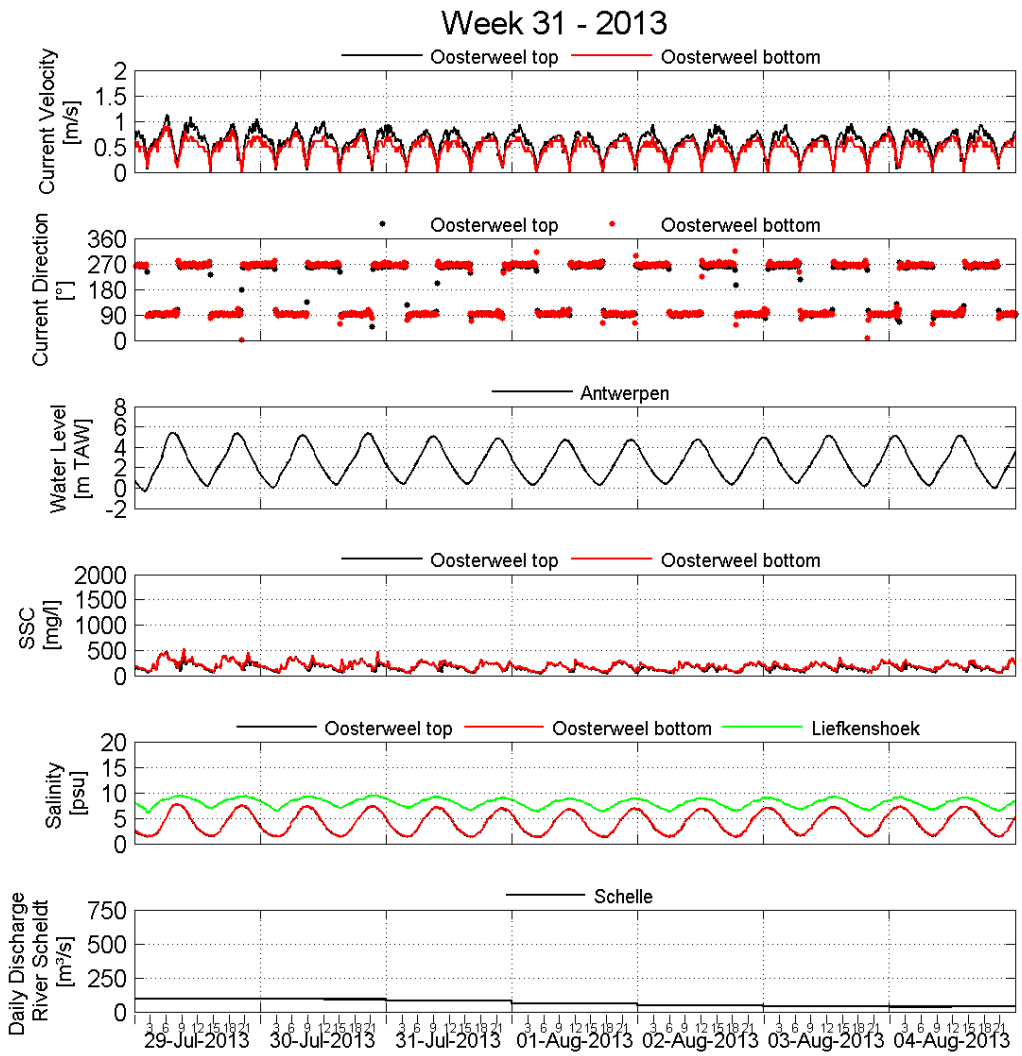

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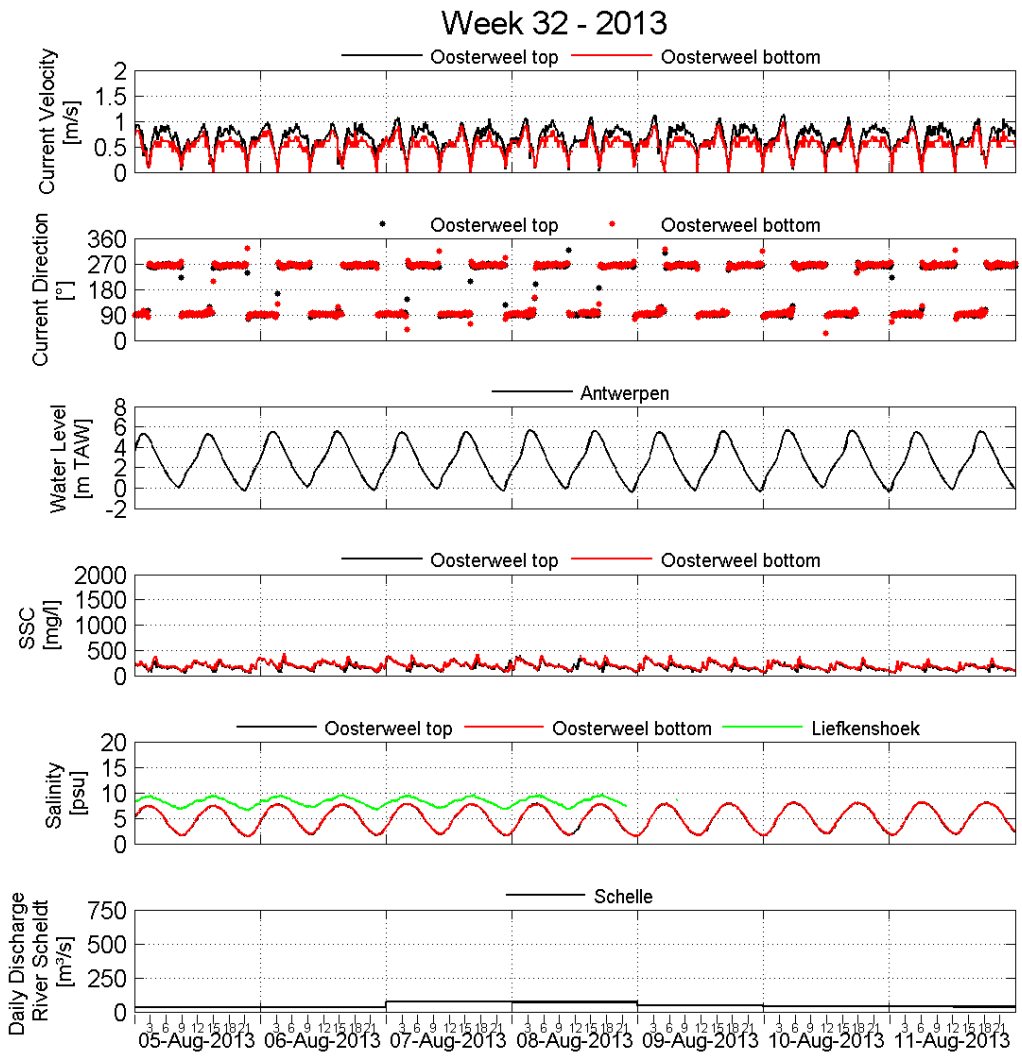

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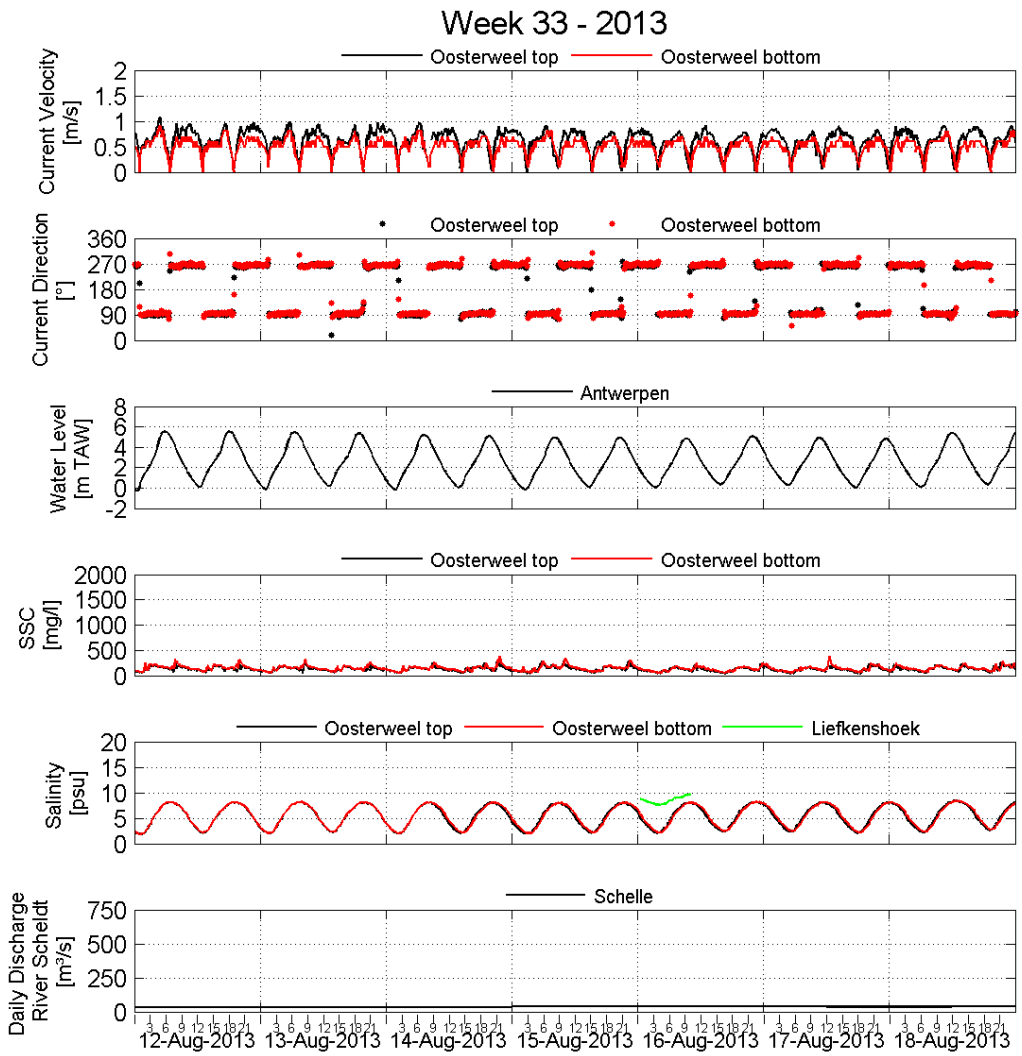

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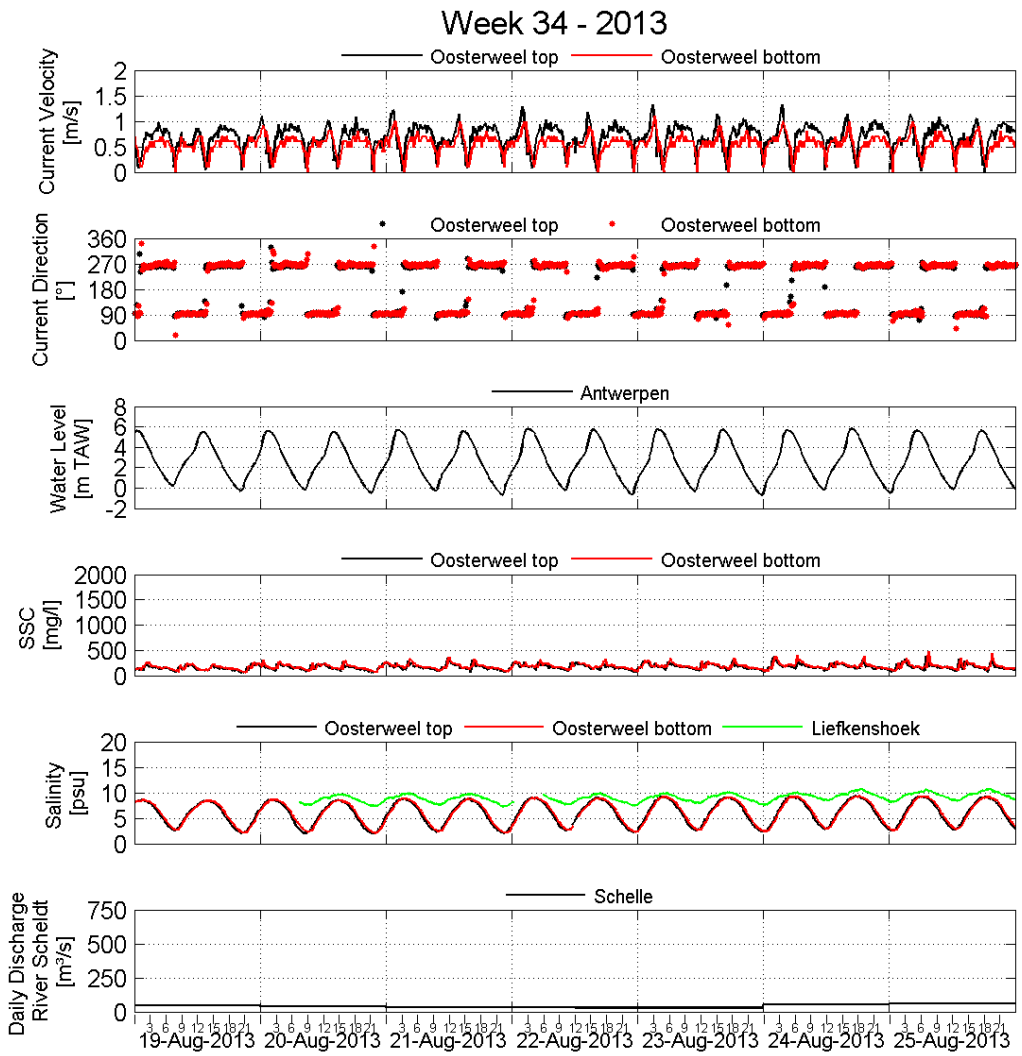

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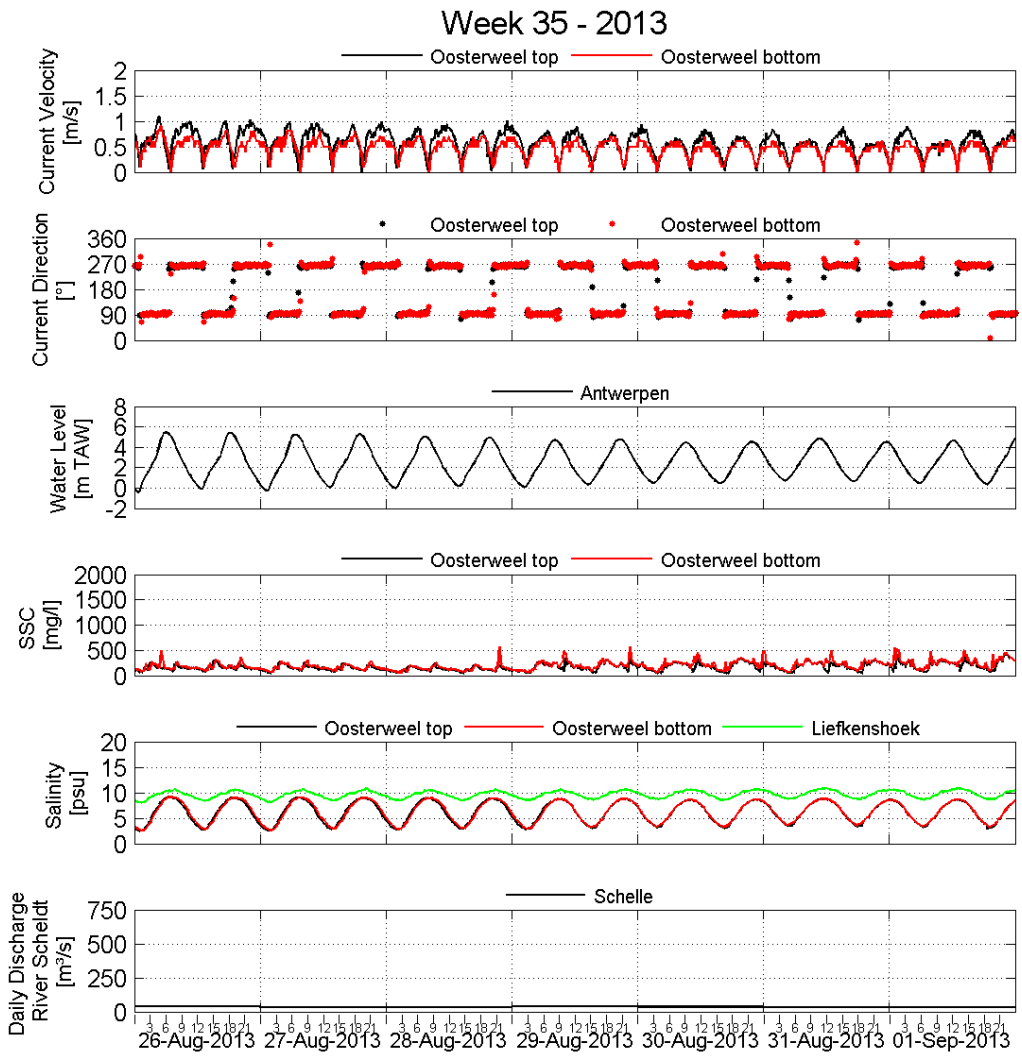

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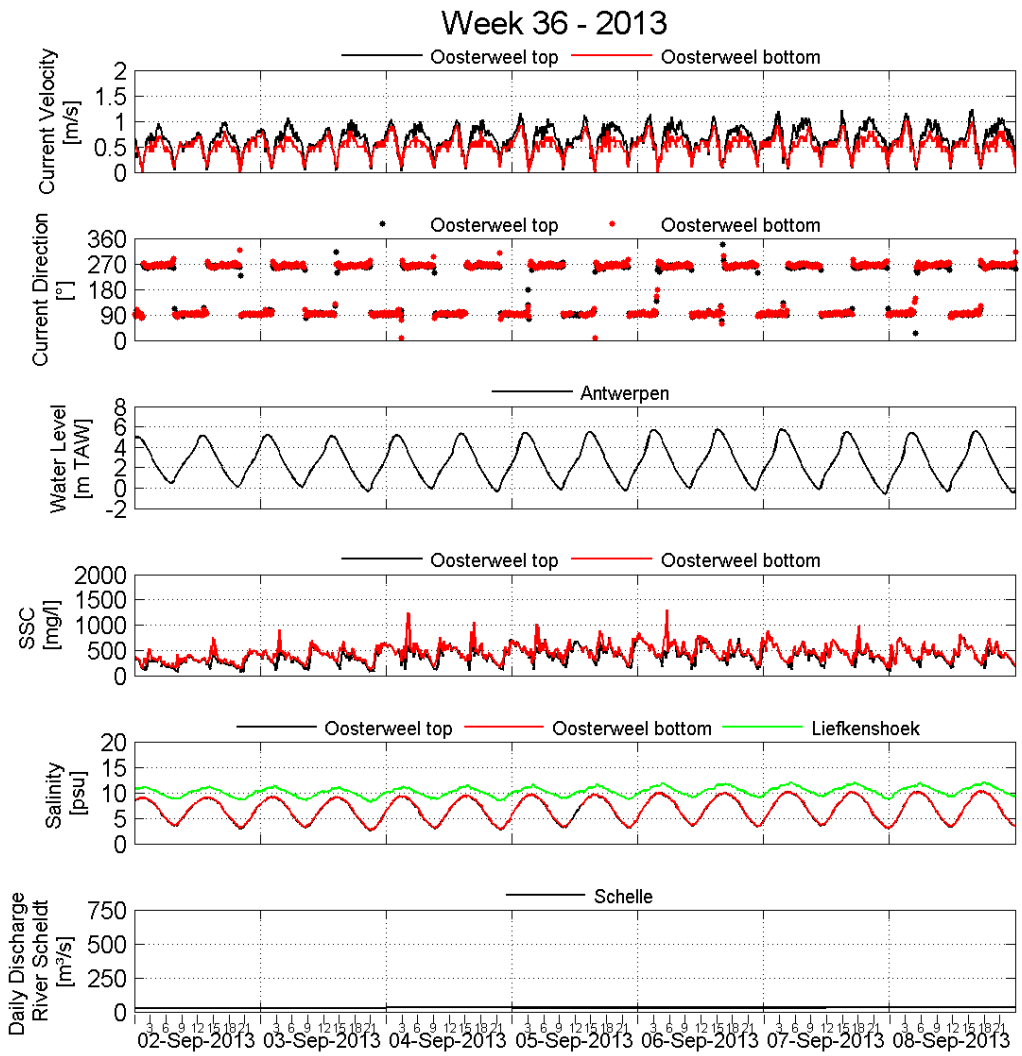

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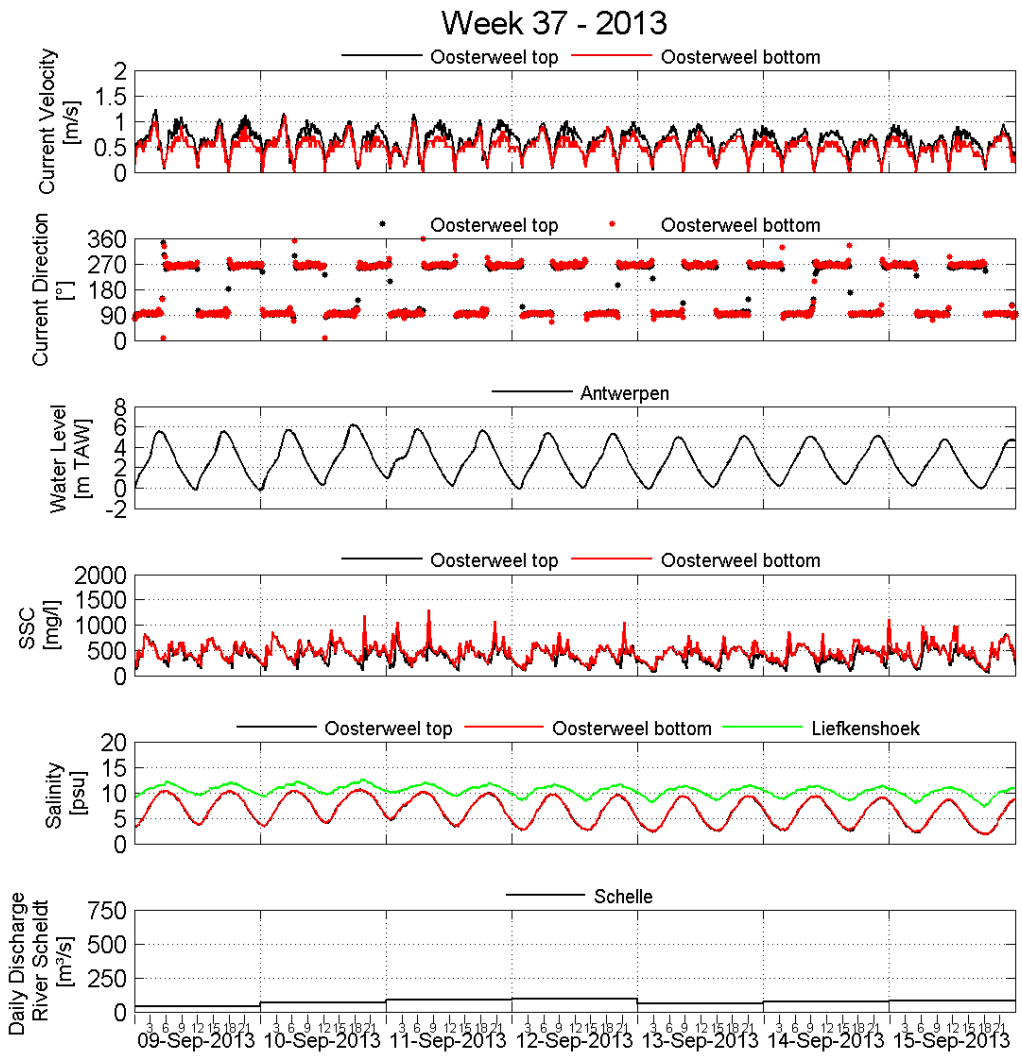

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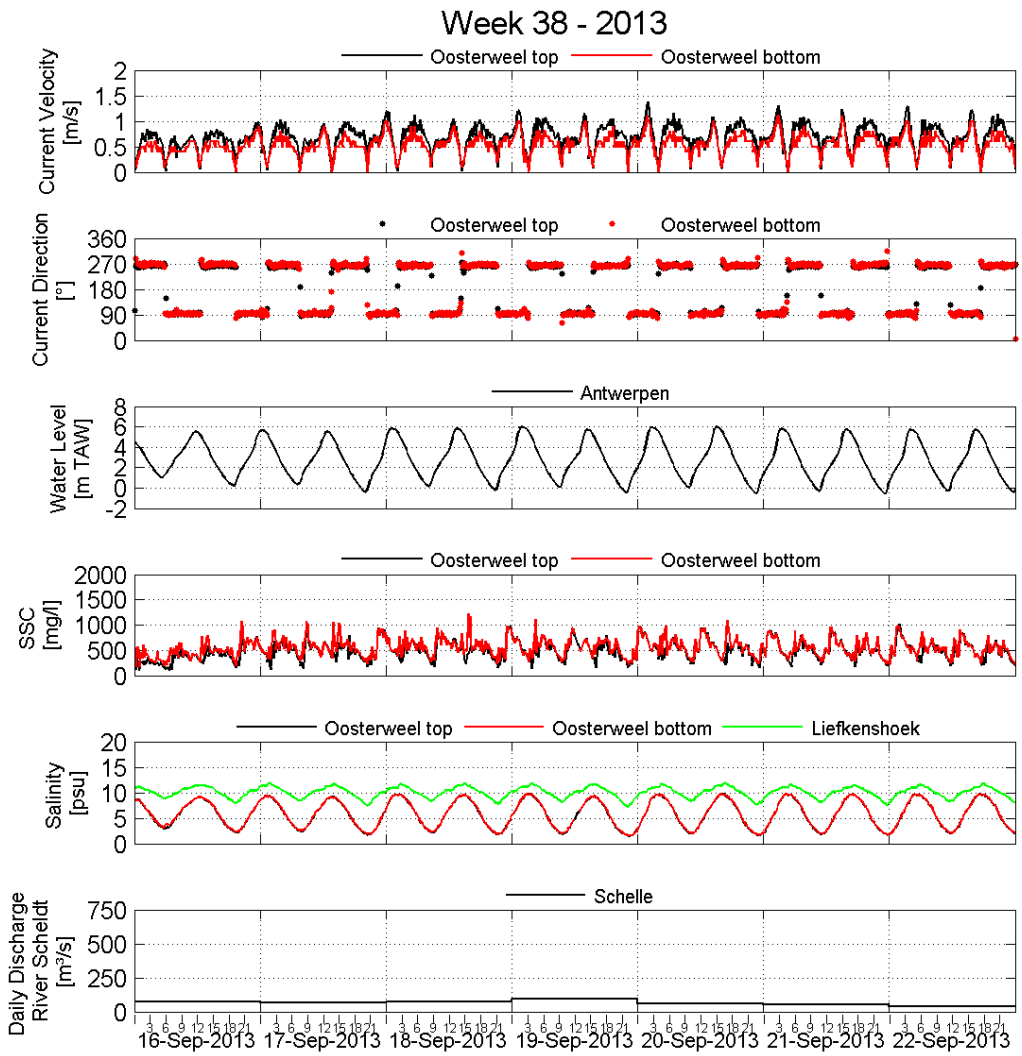

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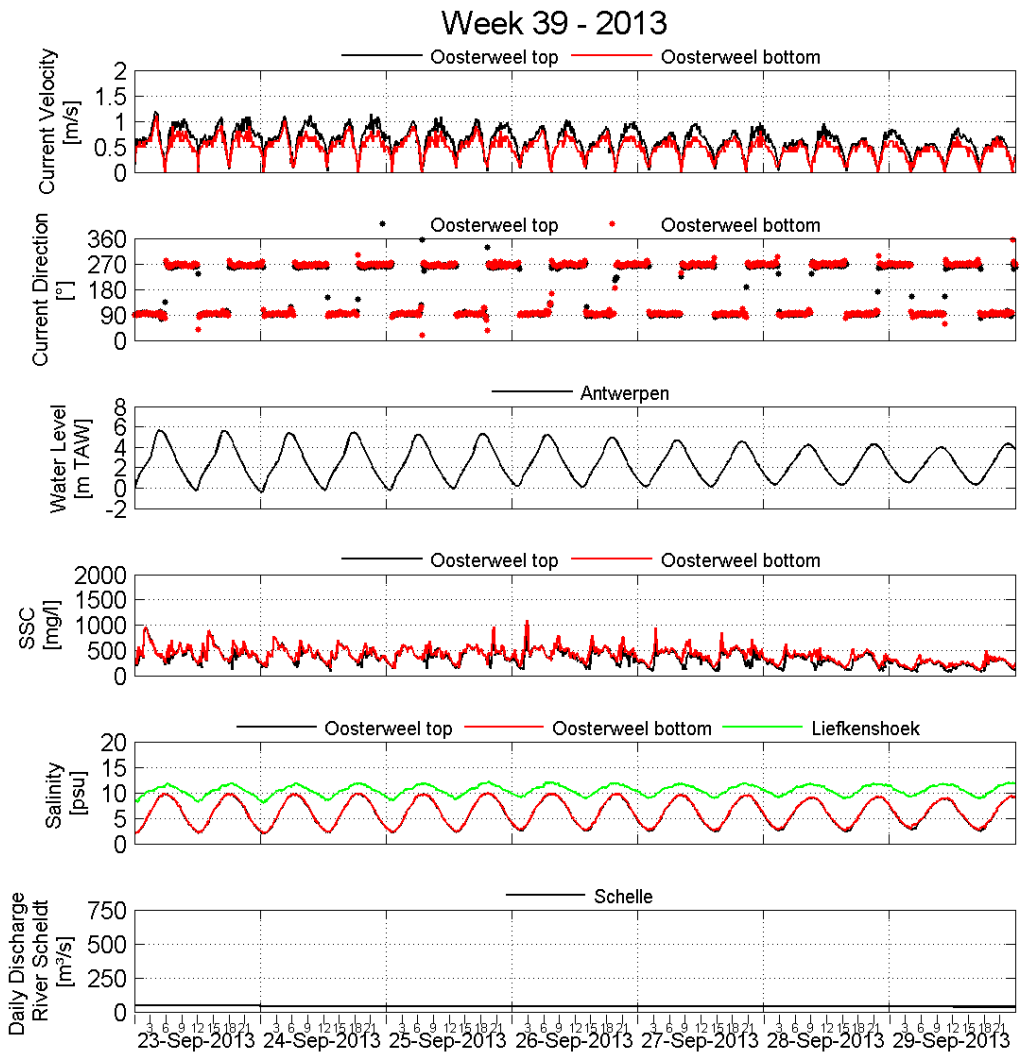

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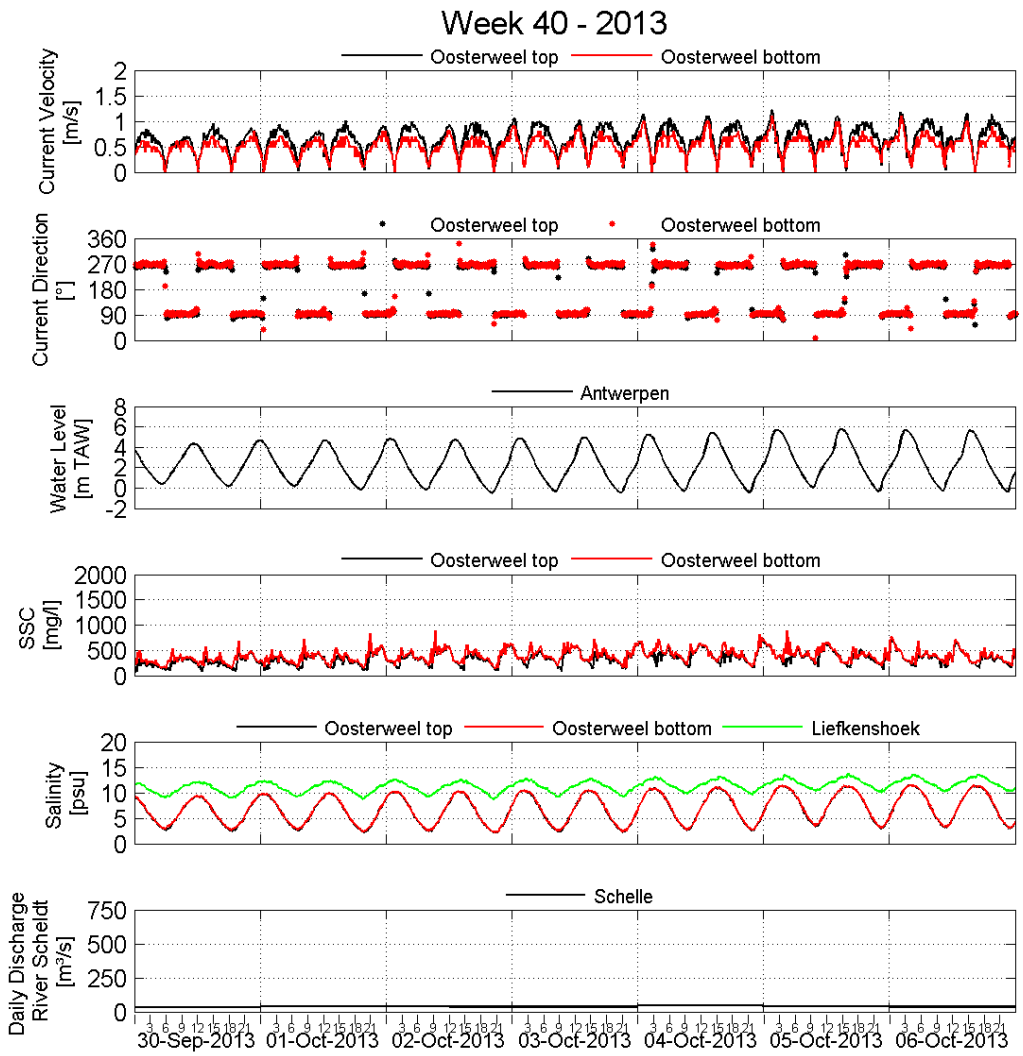

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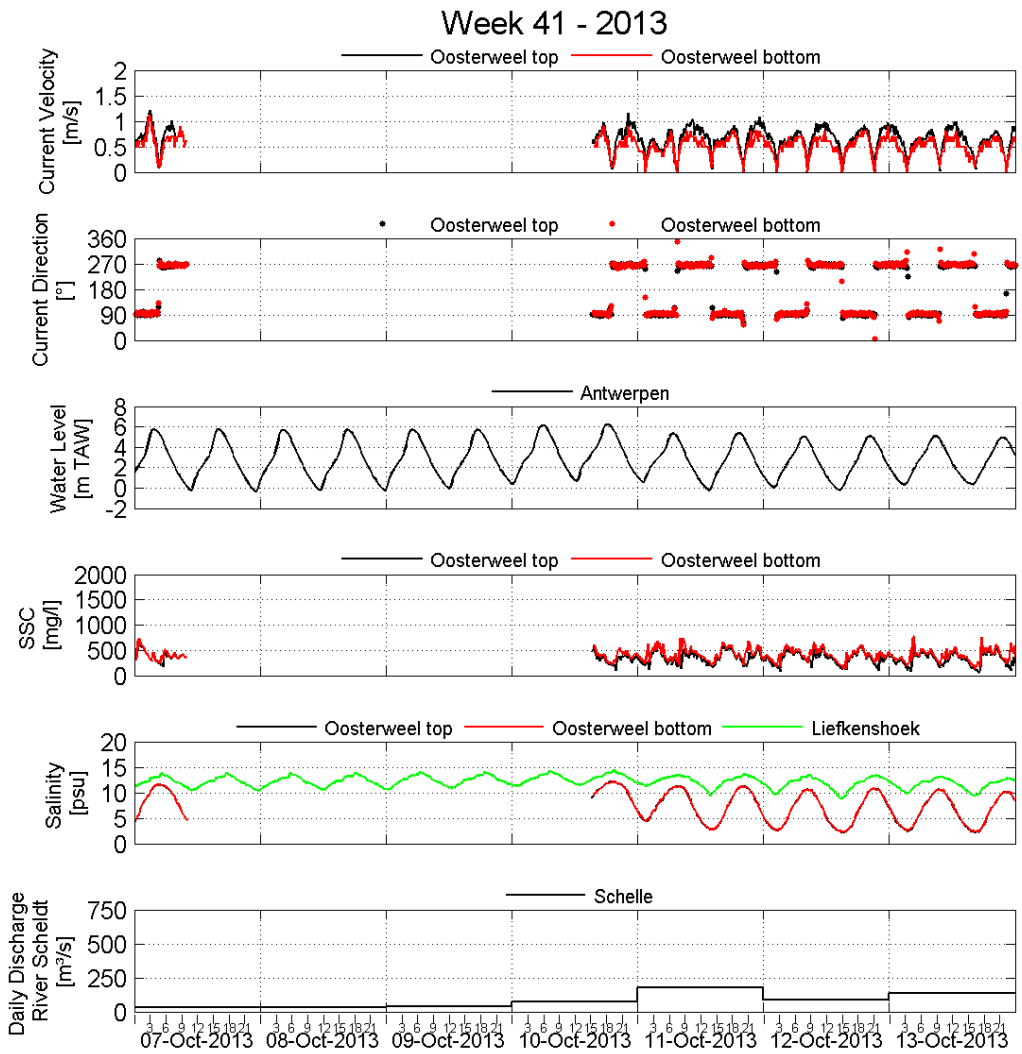

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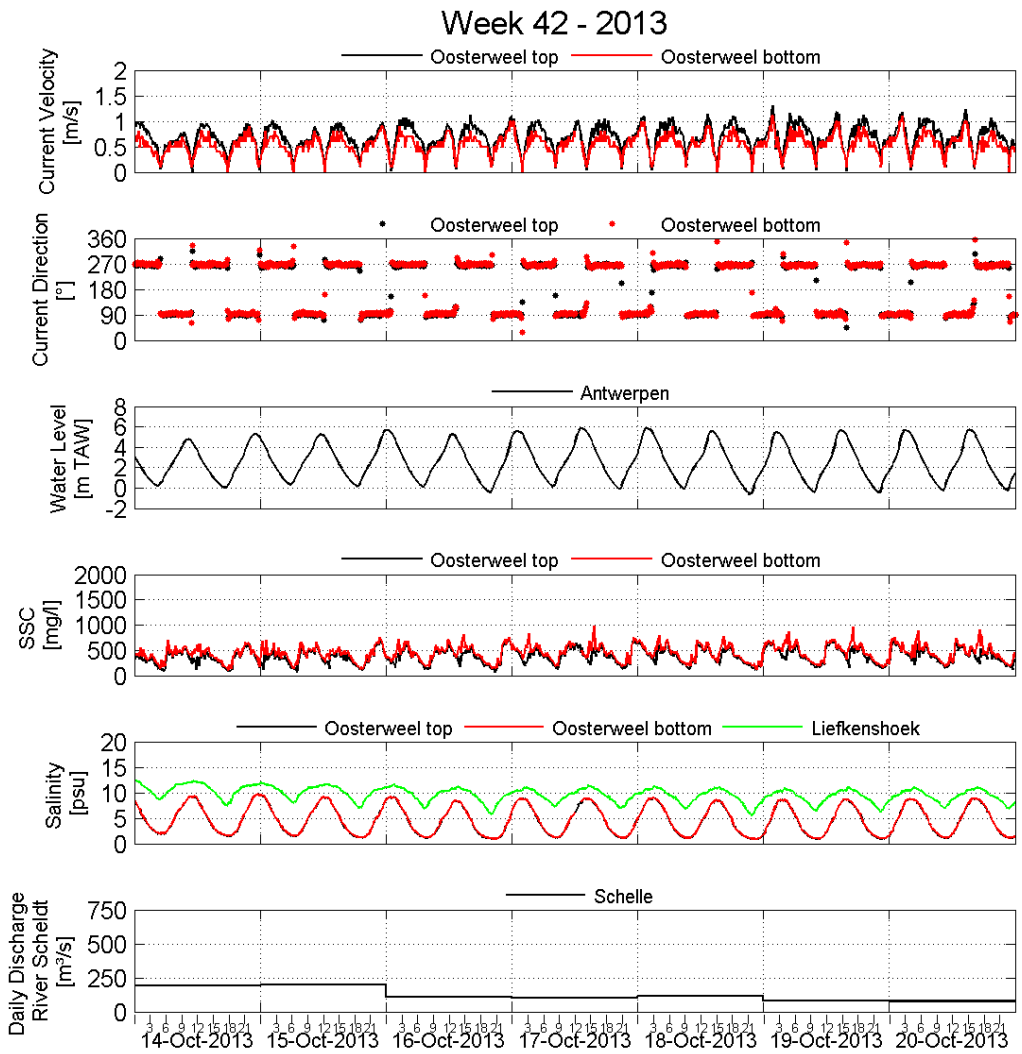

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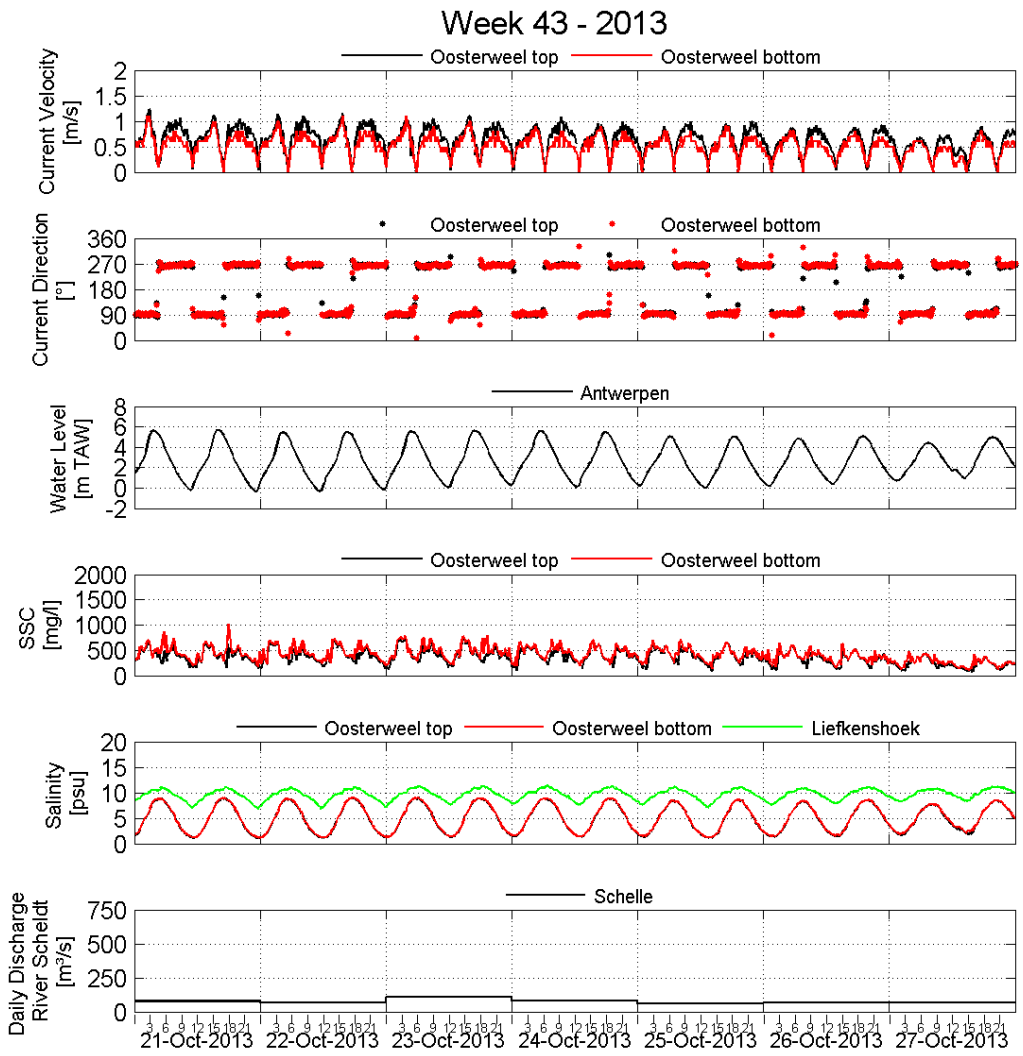

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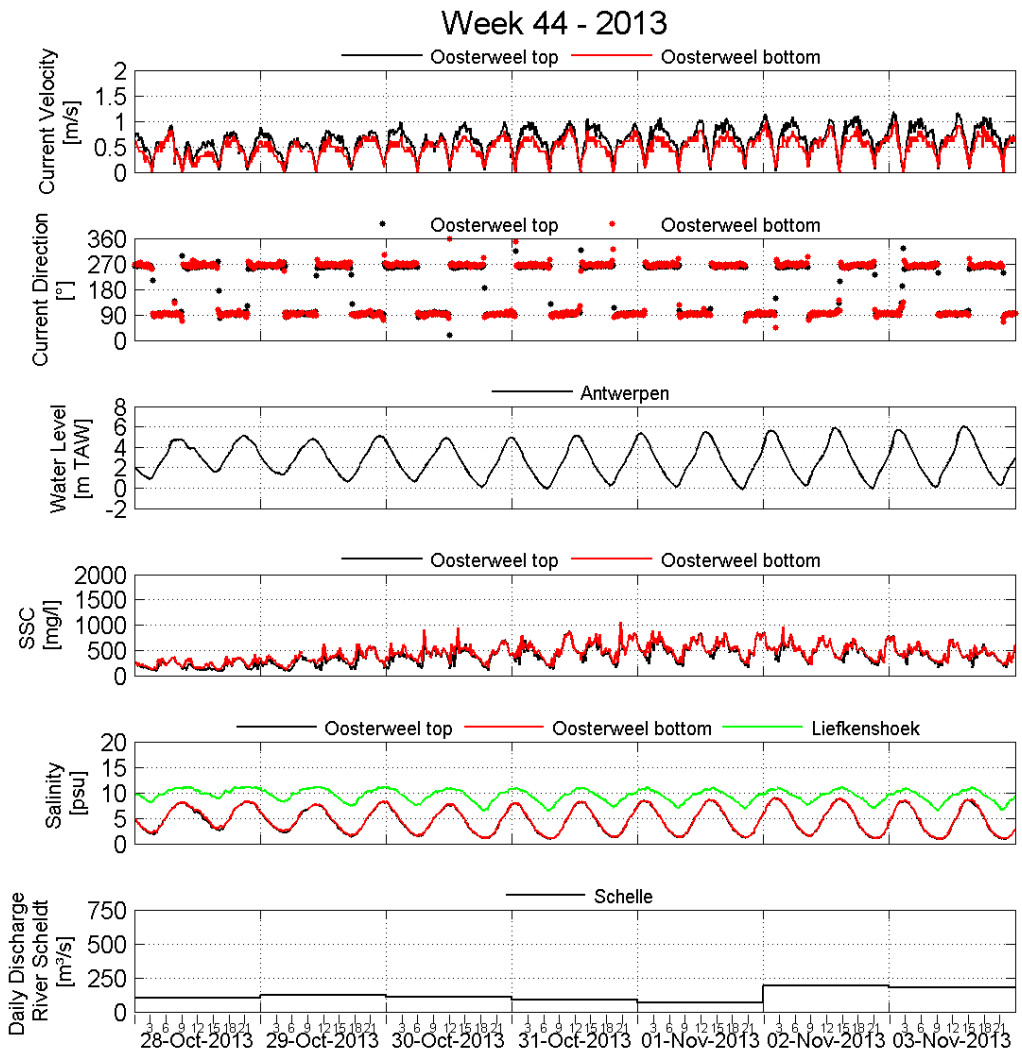

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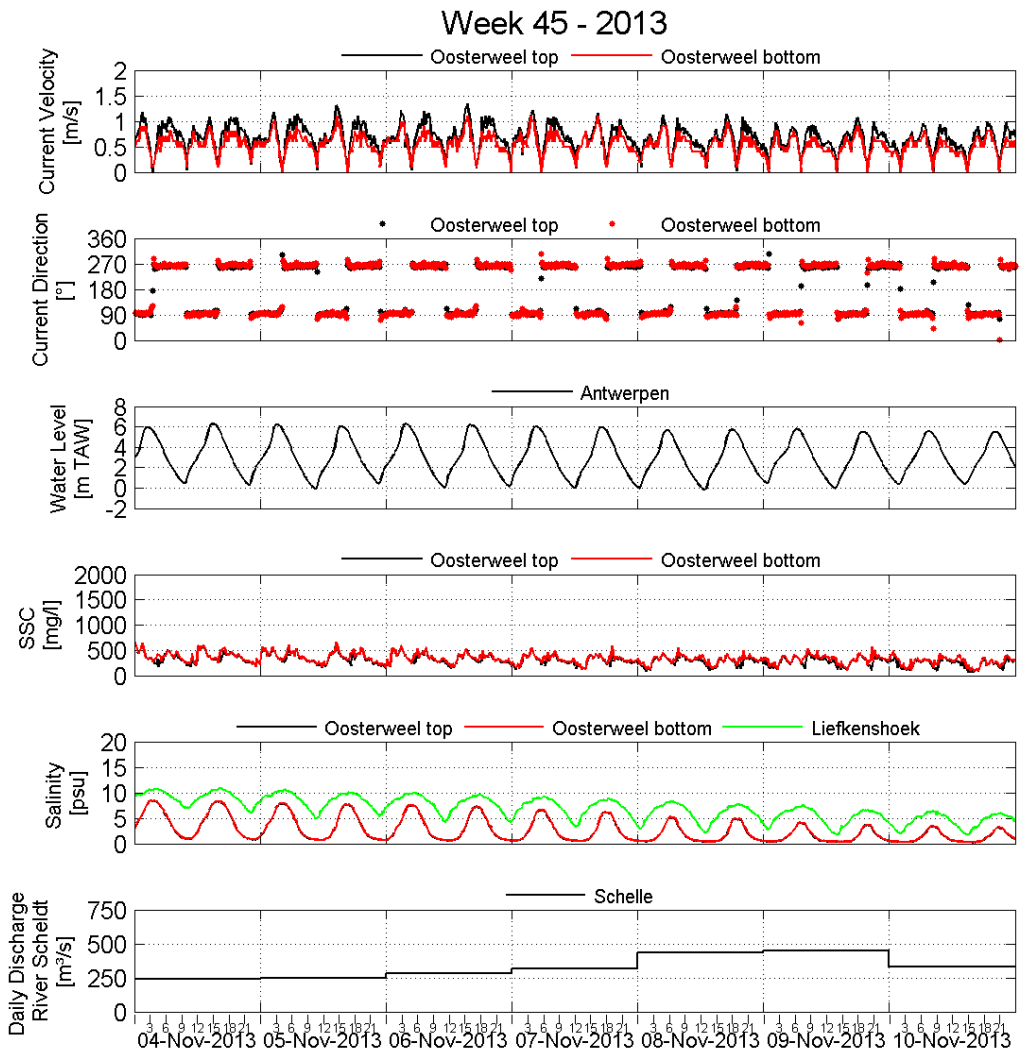

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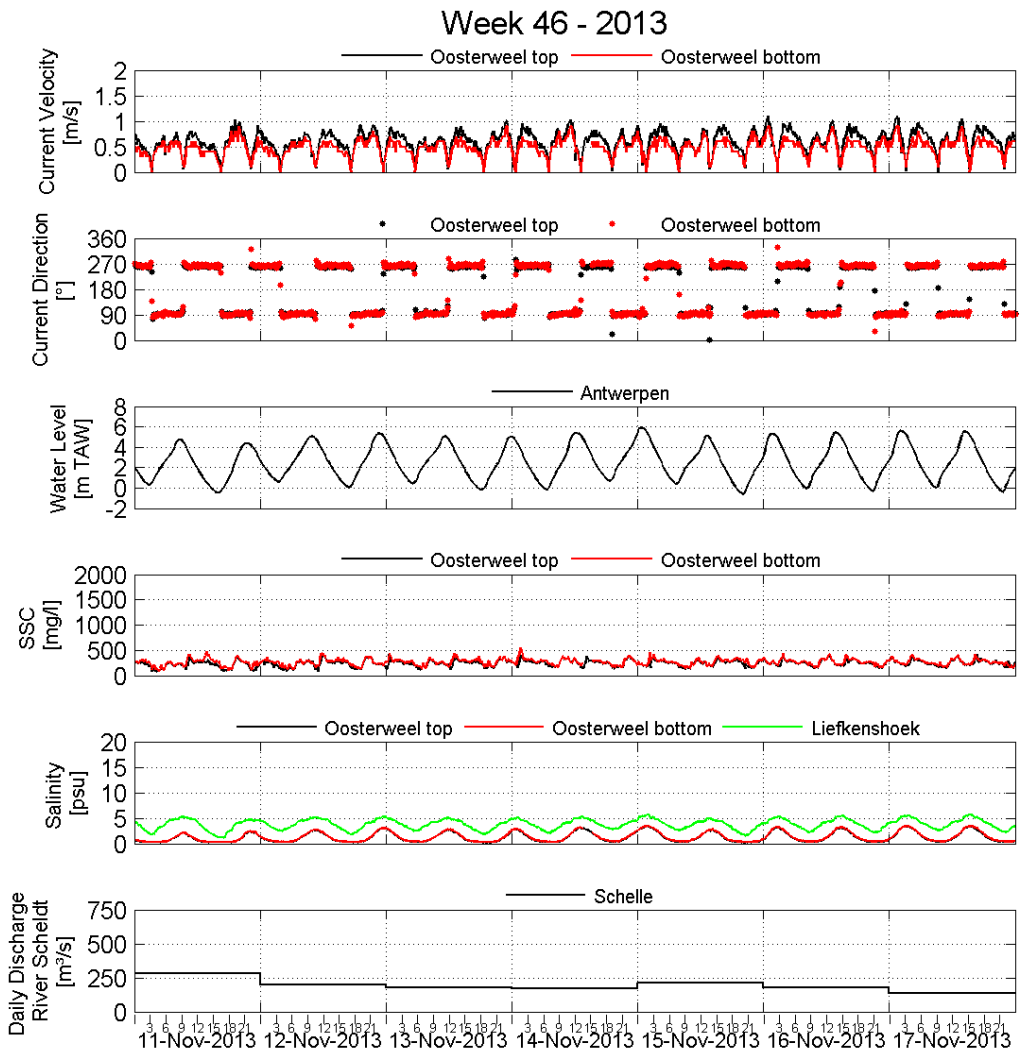

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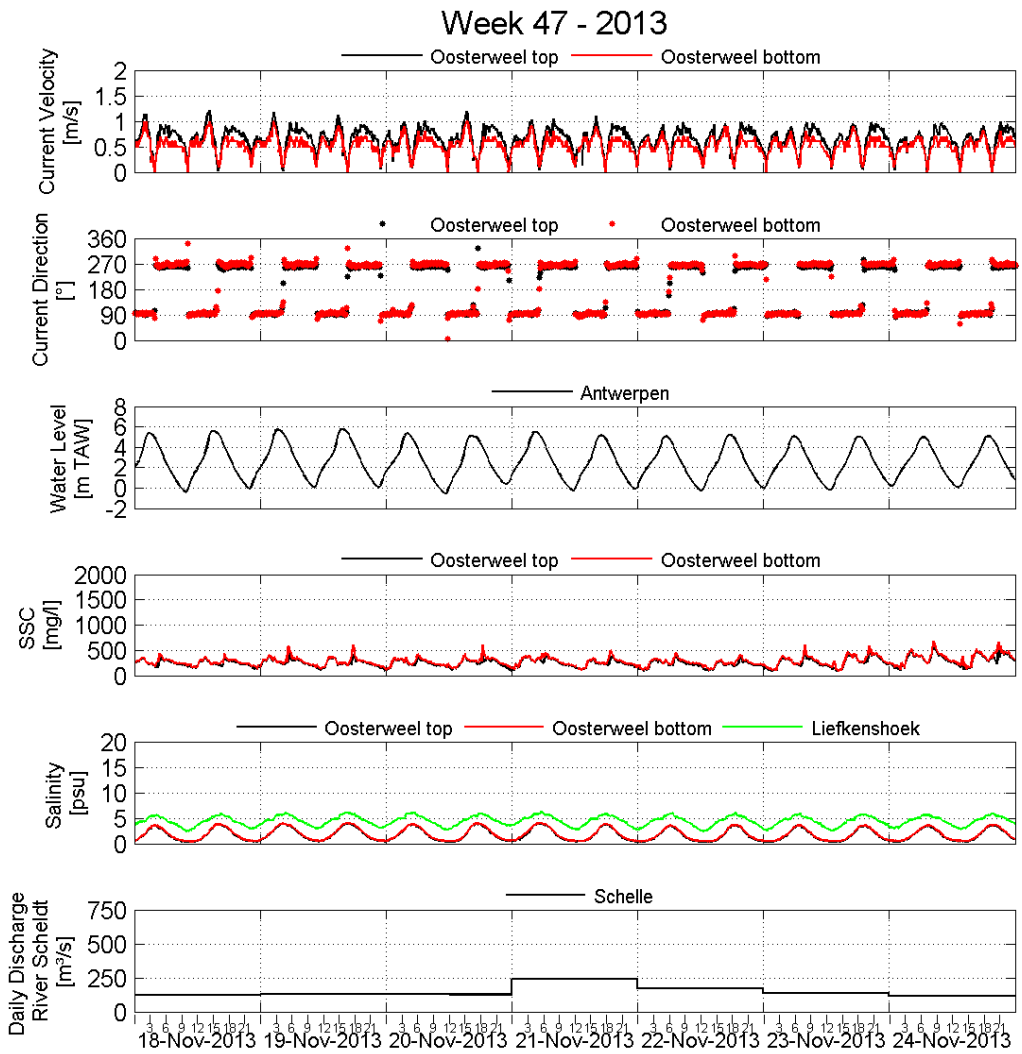

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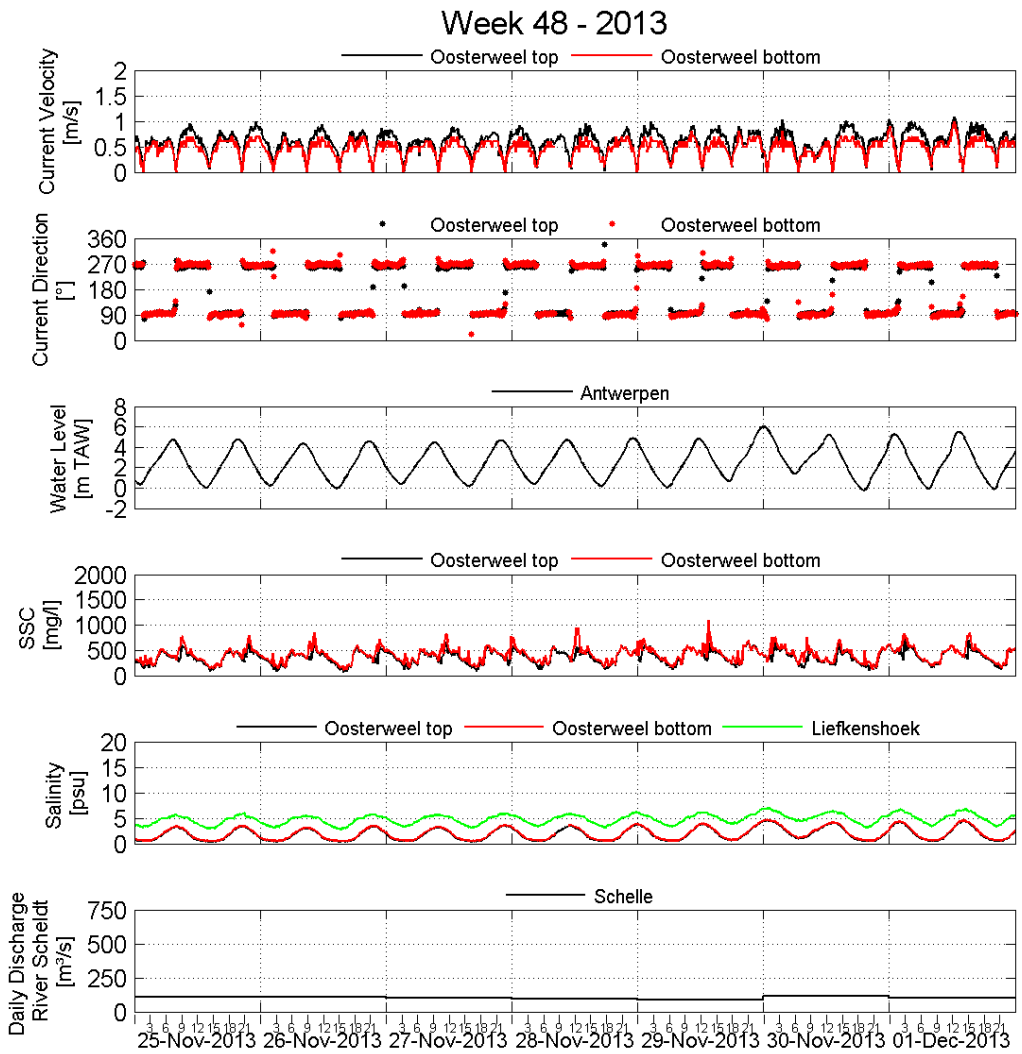

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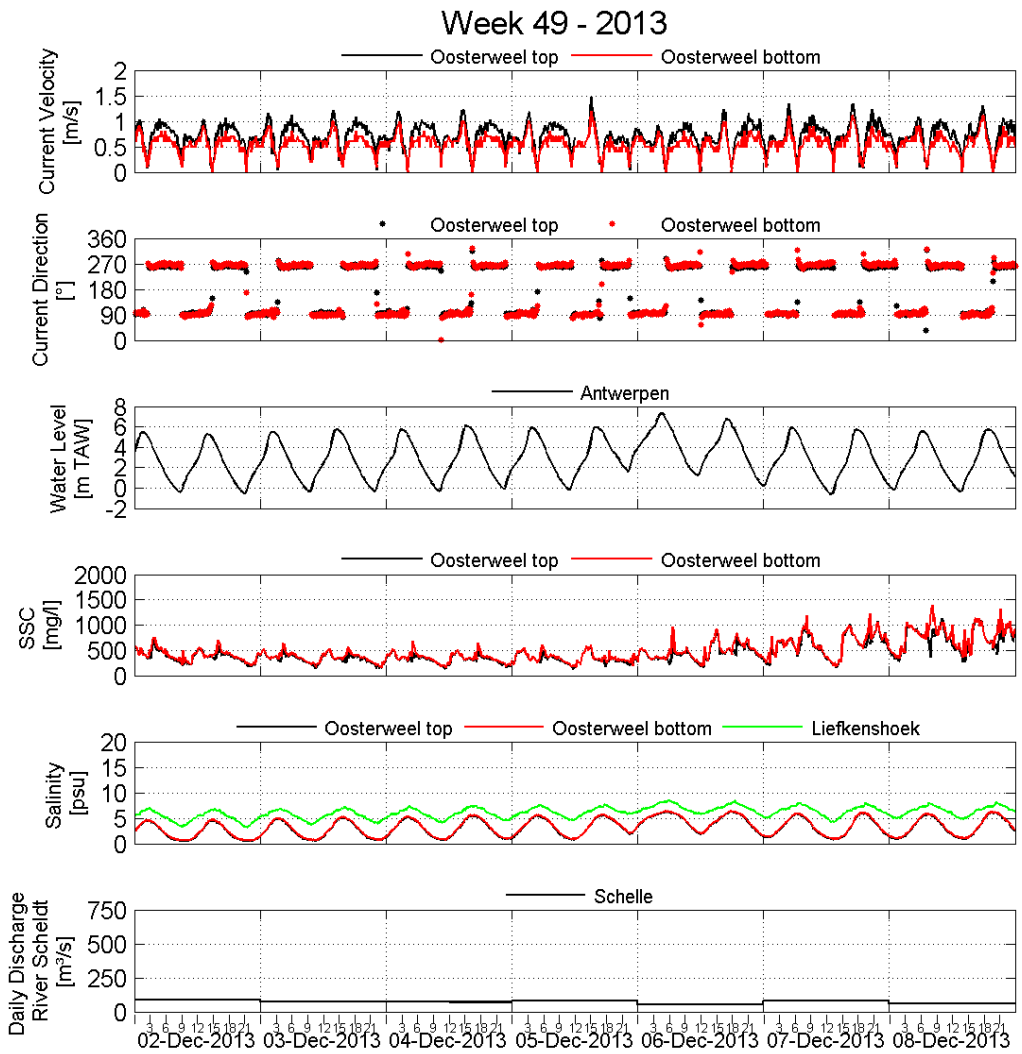

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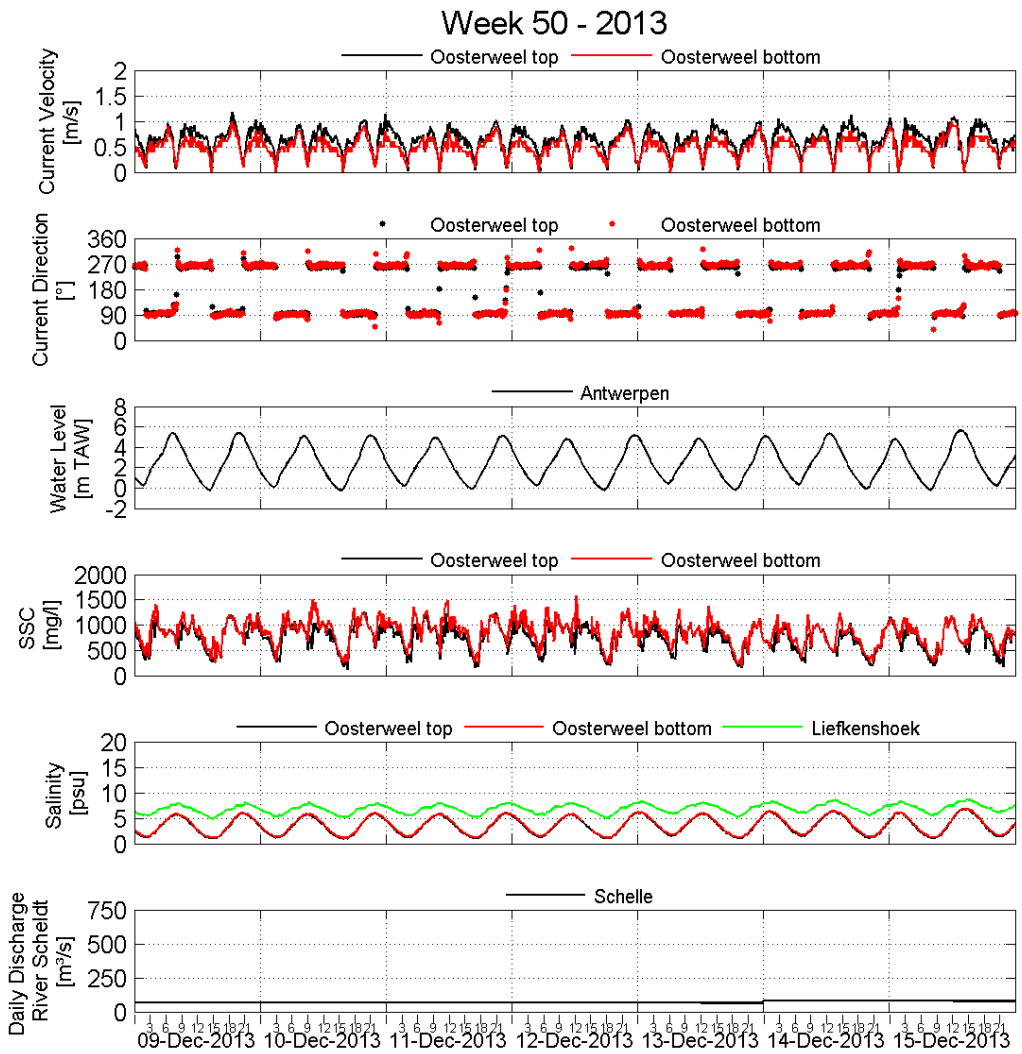

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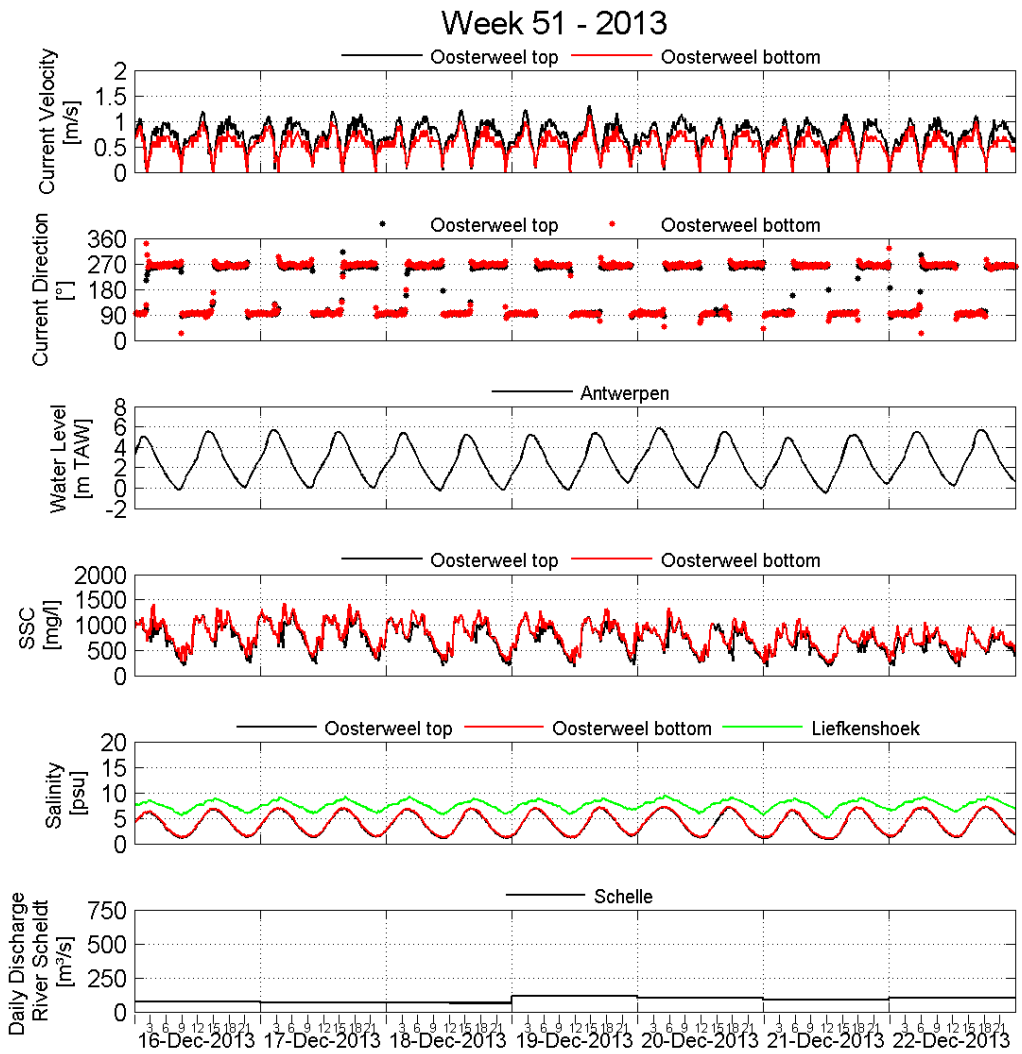

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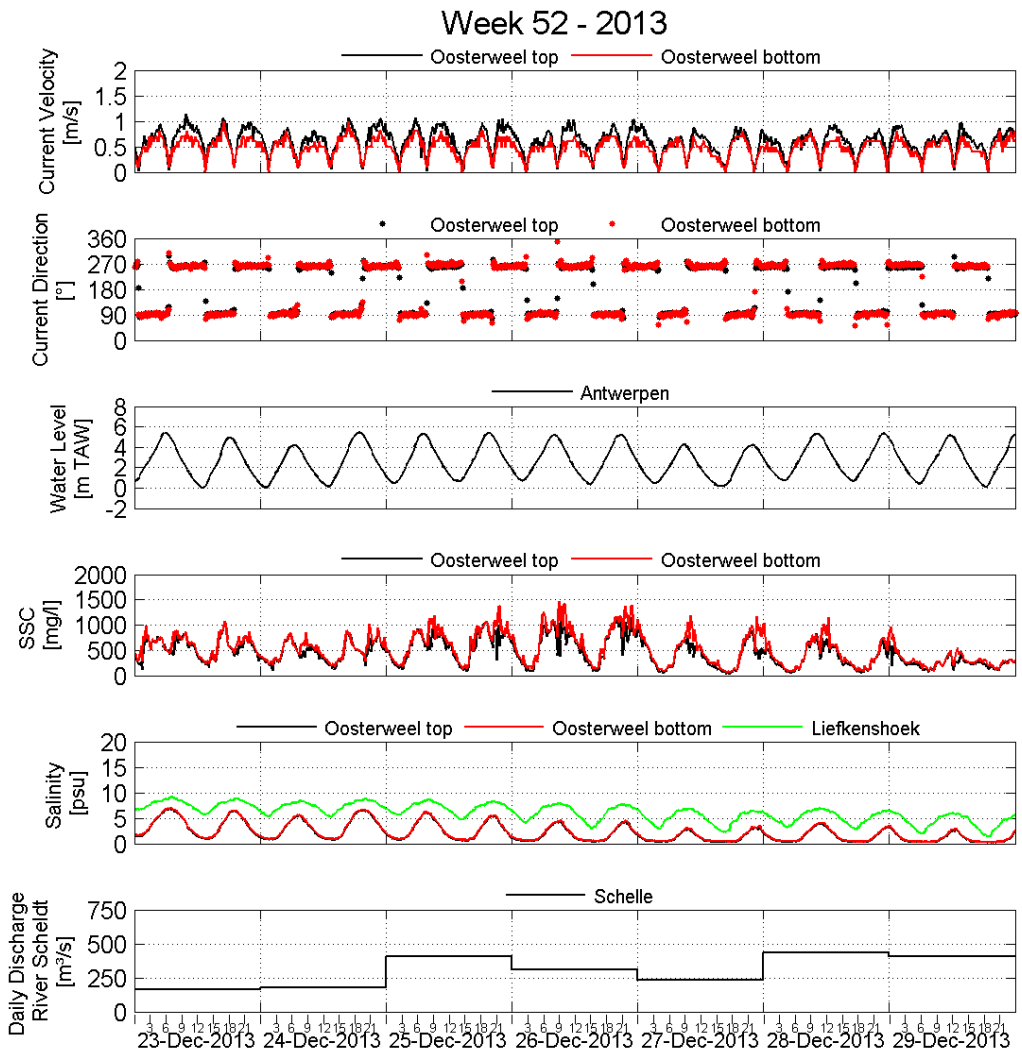

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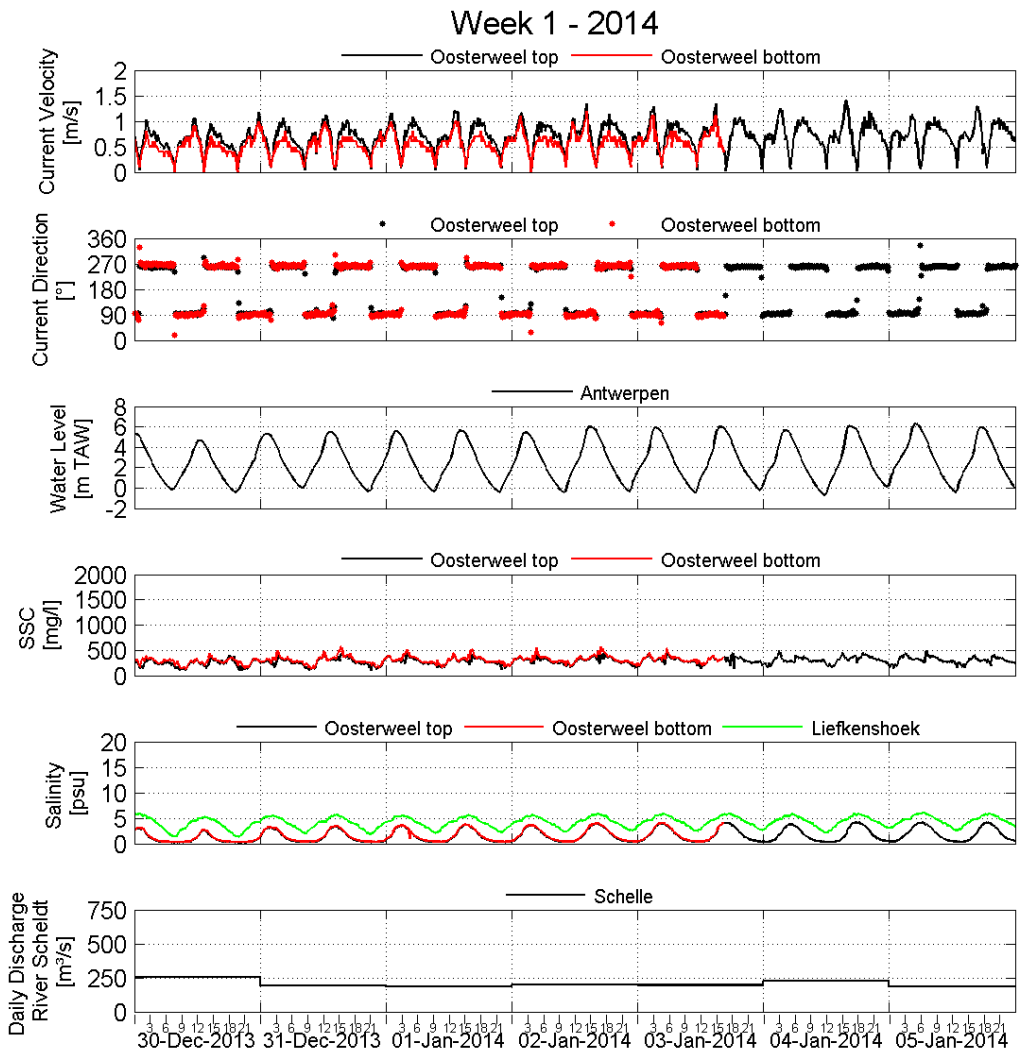

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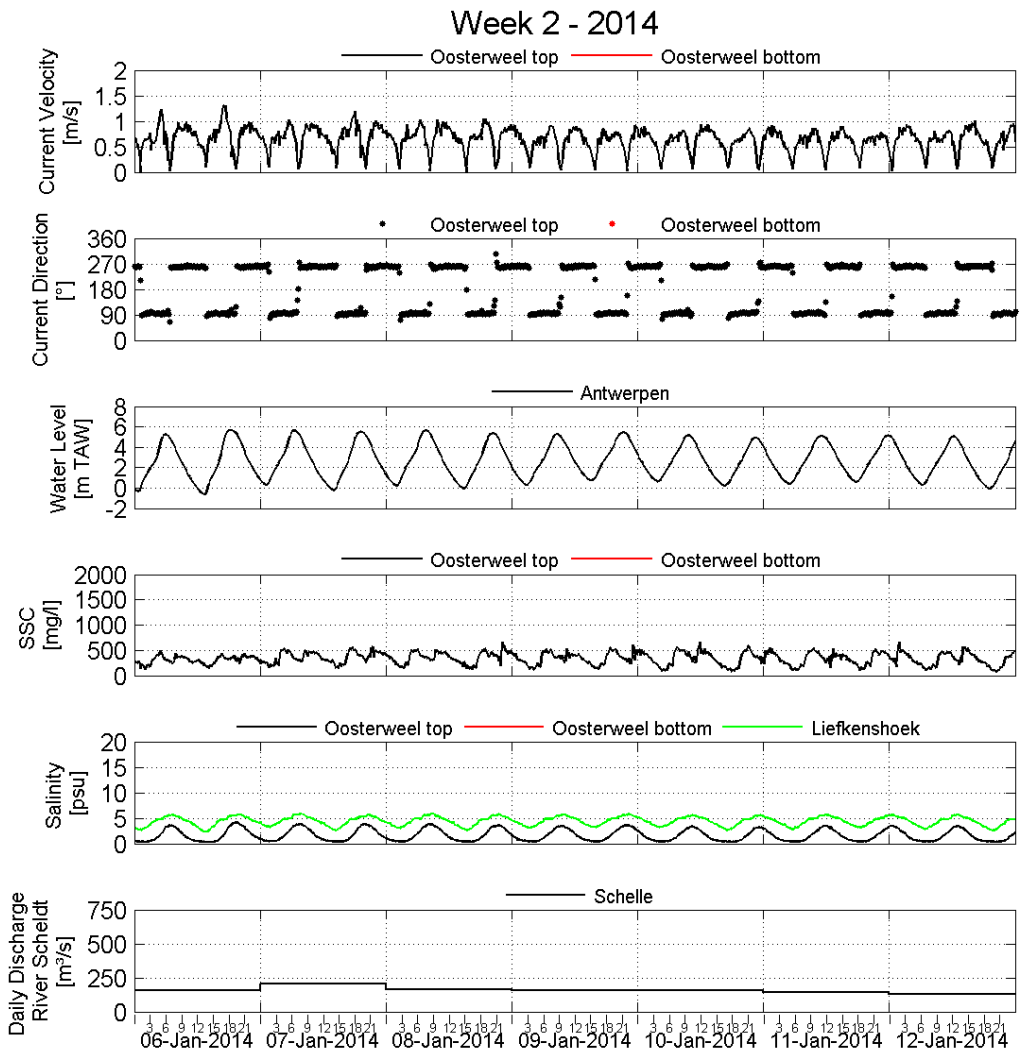

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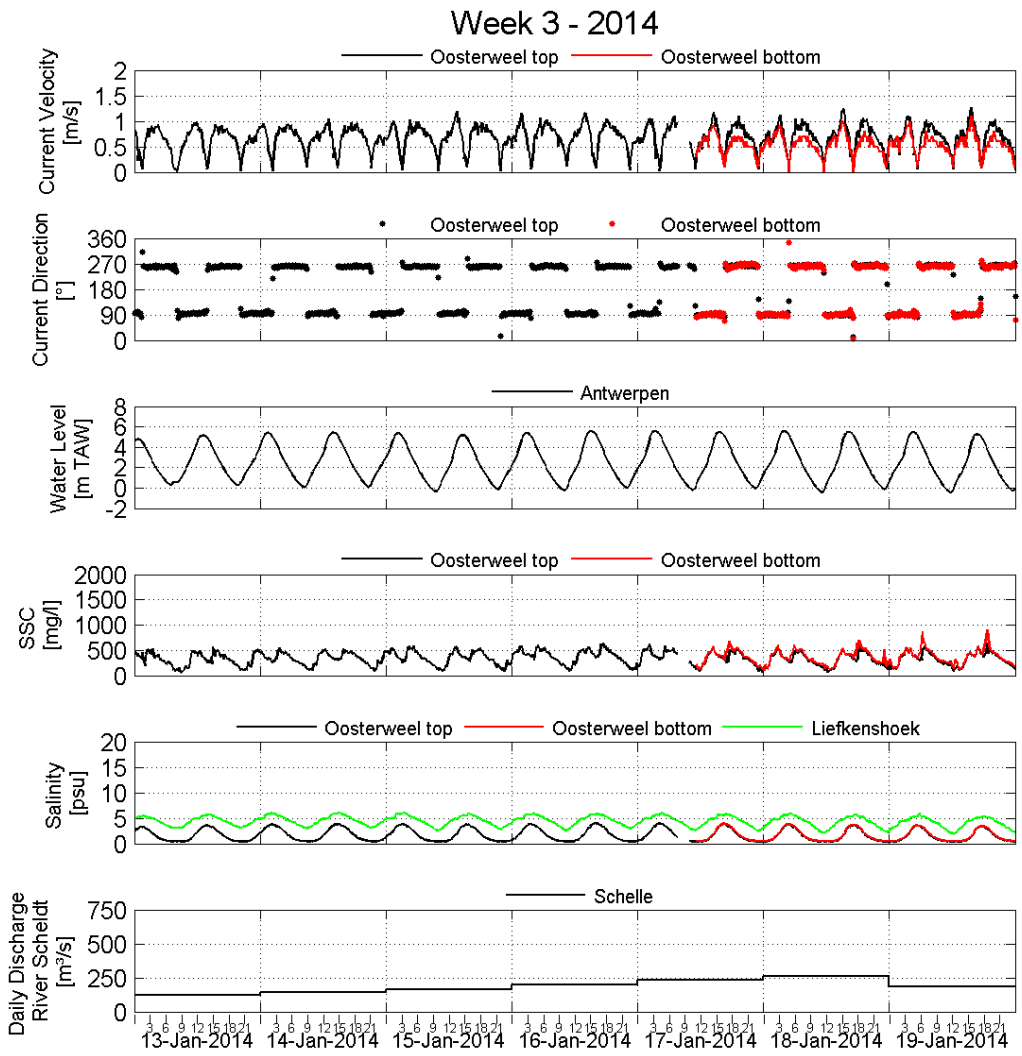

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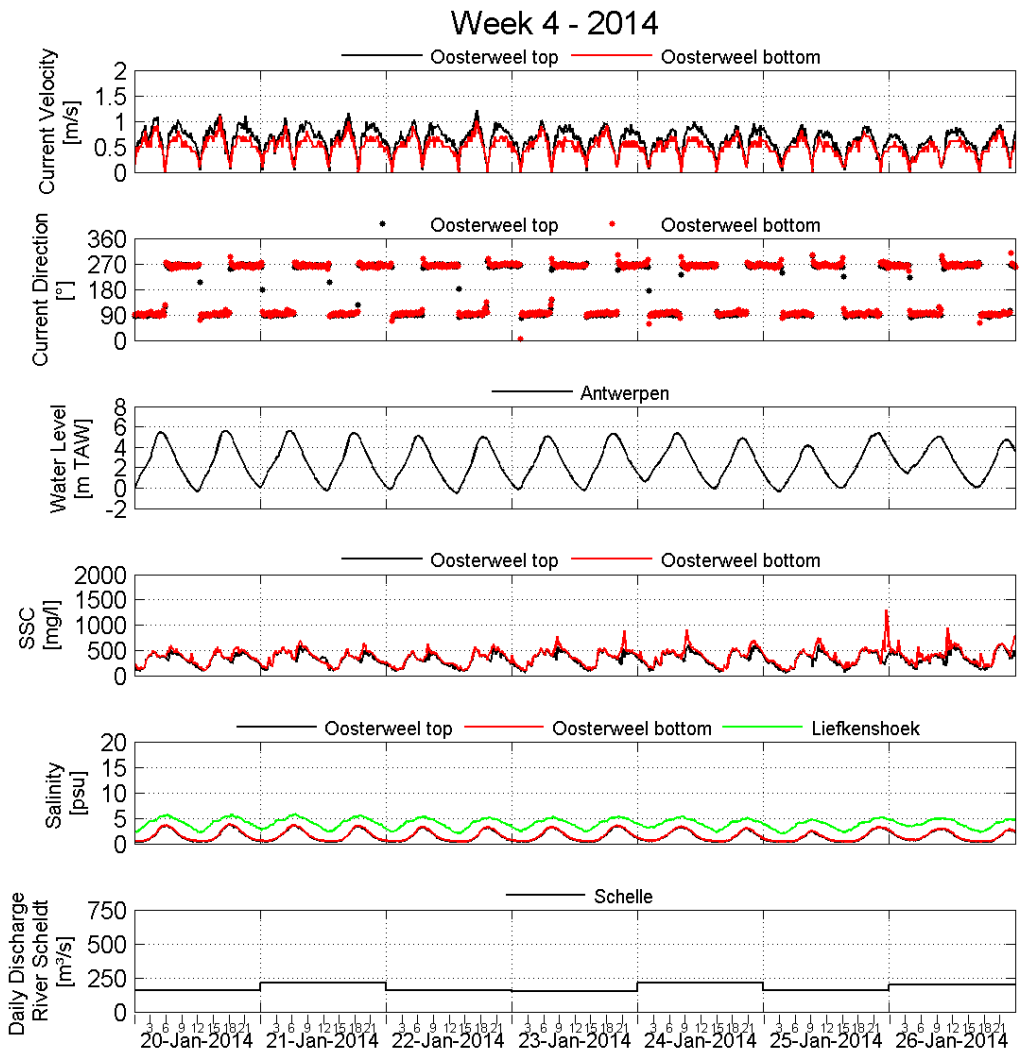

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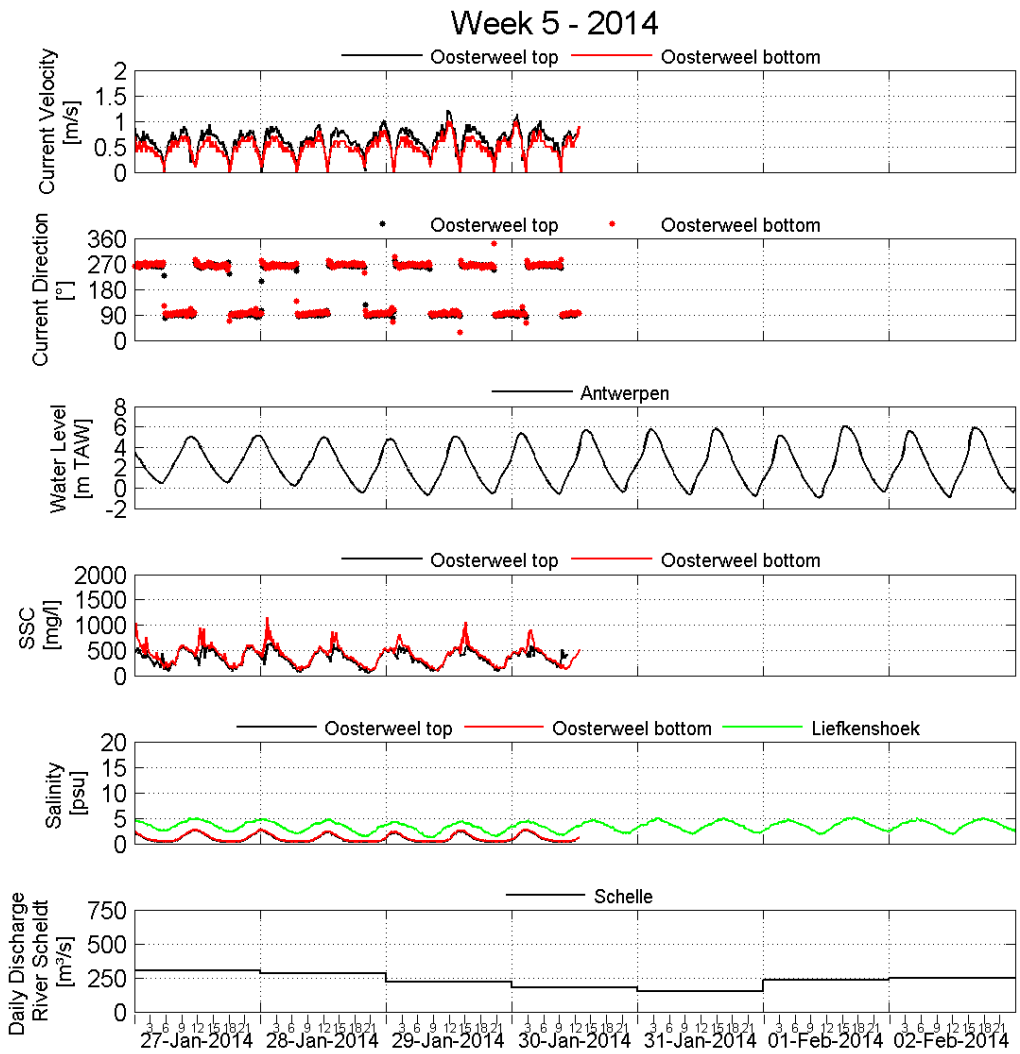

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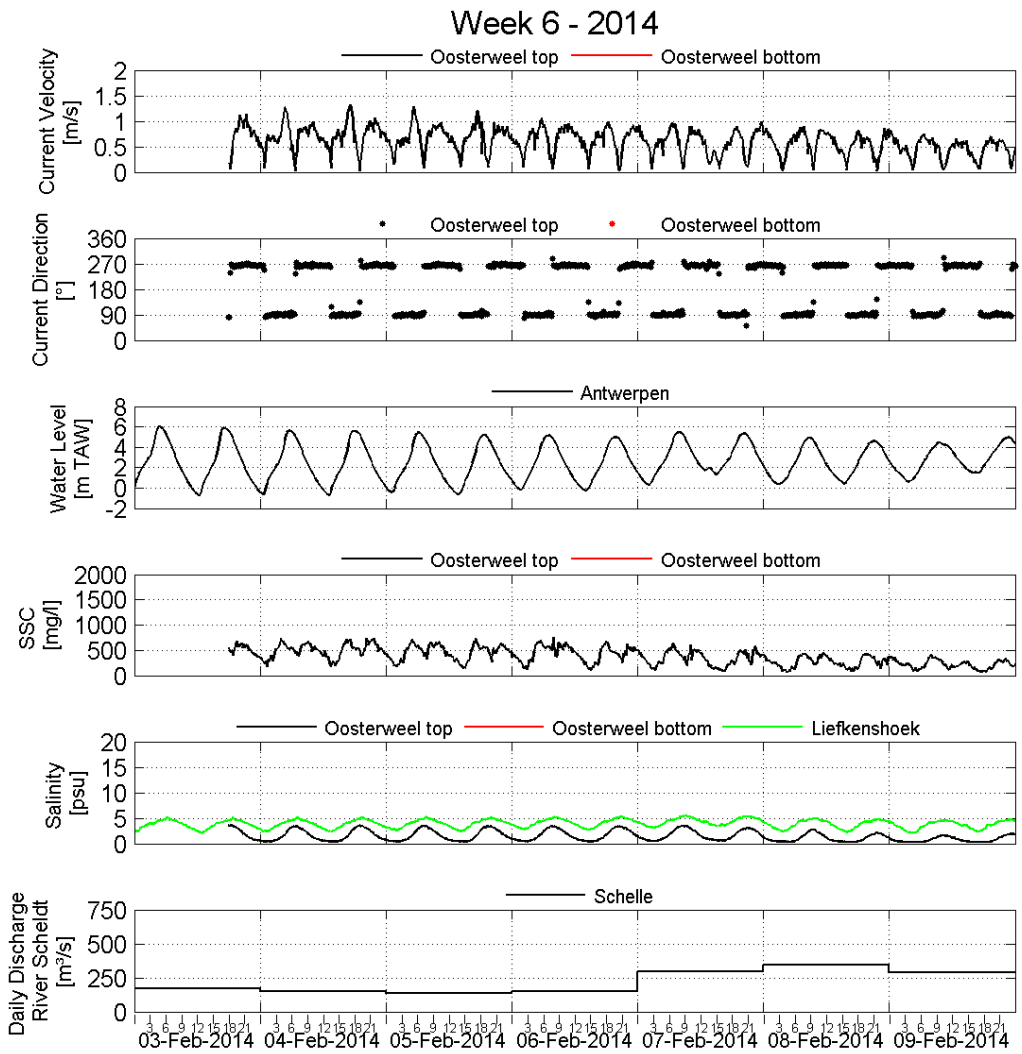

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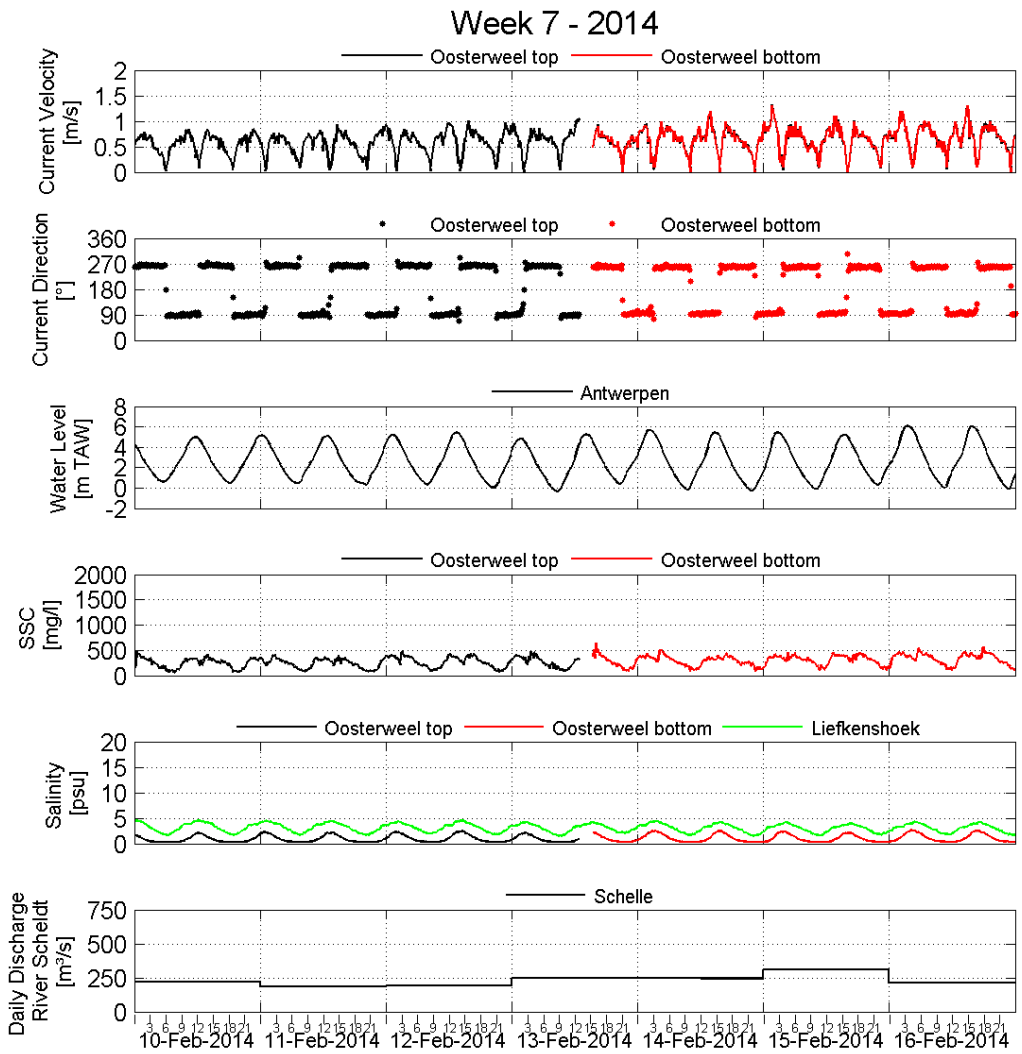


Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

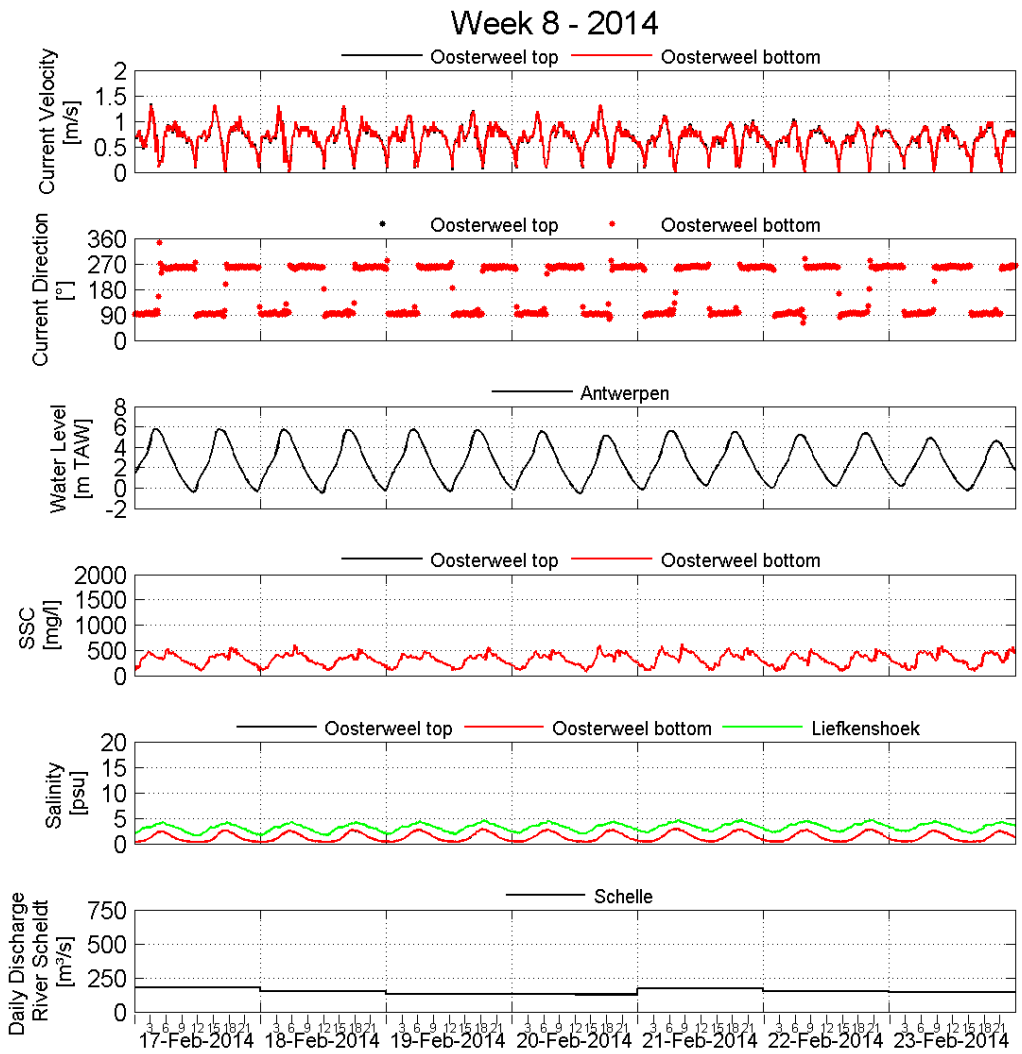
Location:

Liefkenshoek & Oosterweel (top & bottom)

In Association with: Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

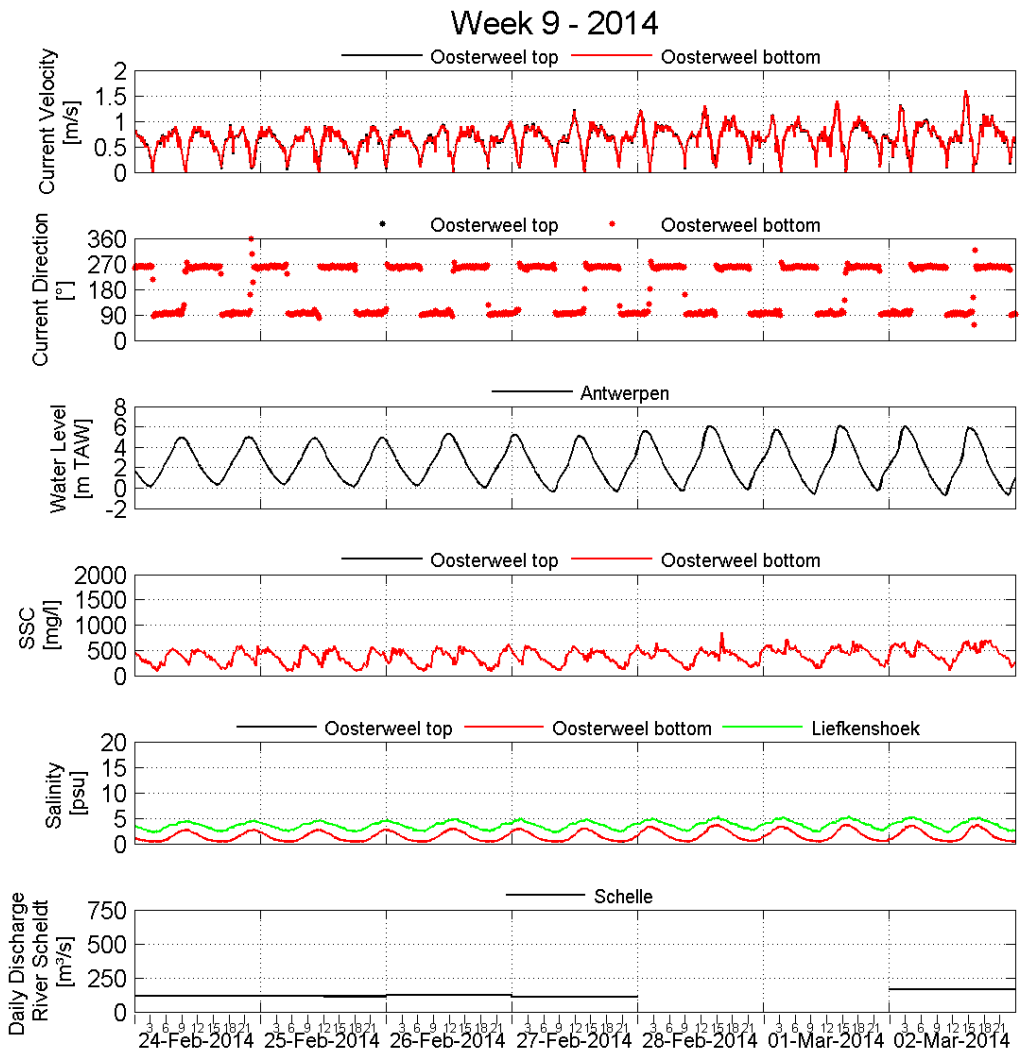
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

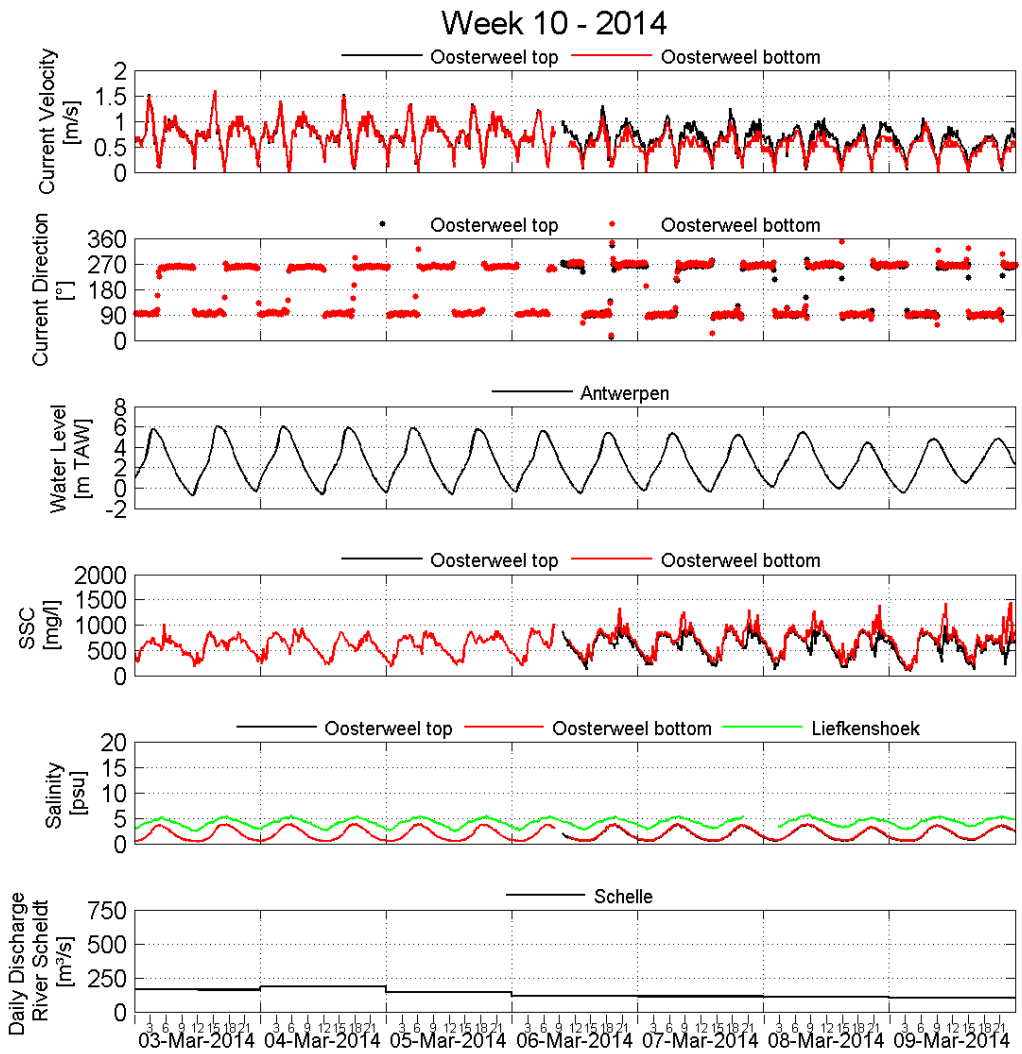
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

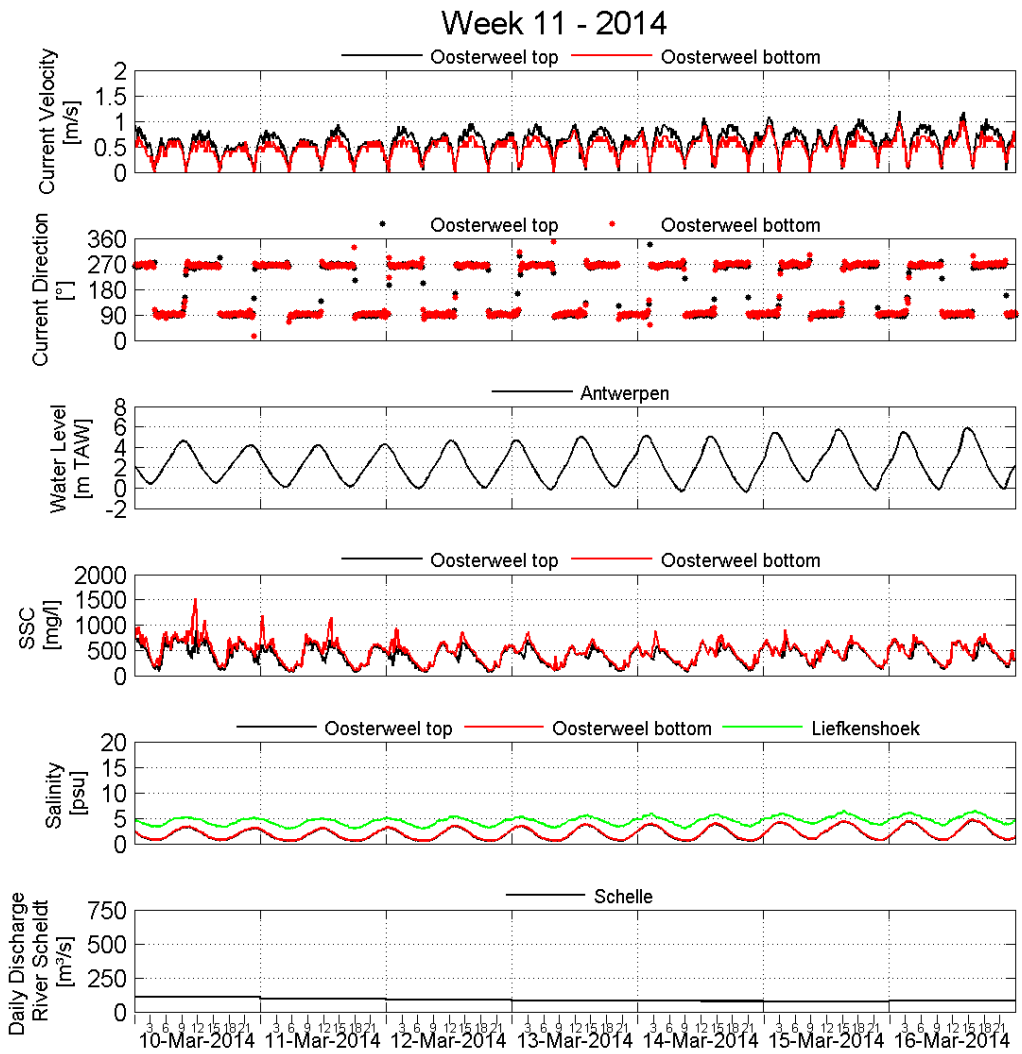
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

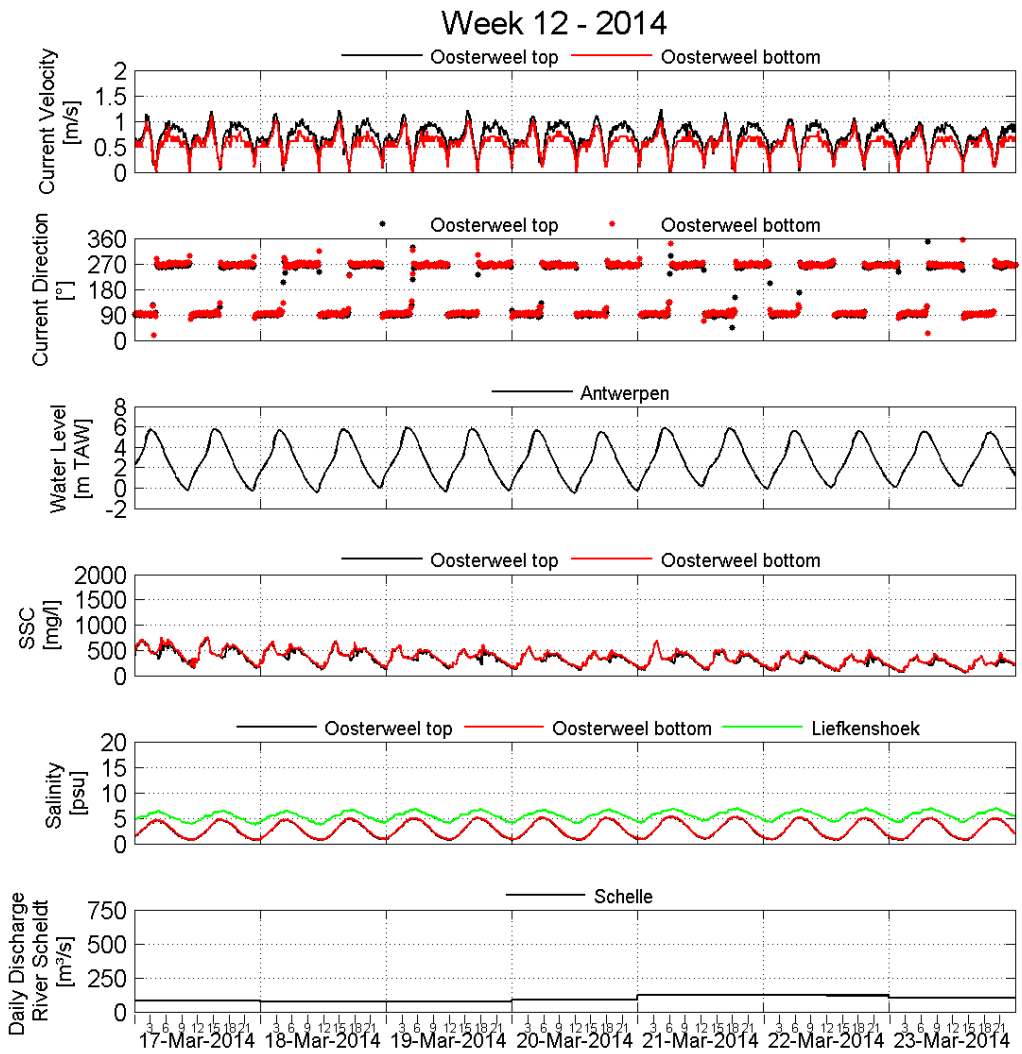
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

In Association with: Deltares

Location:

Liefkenshoek & Oosterweel (top & bottom)

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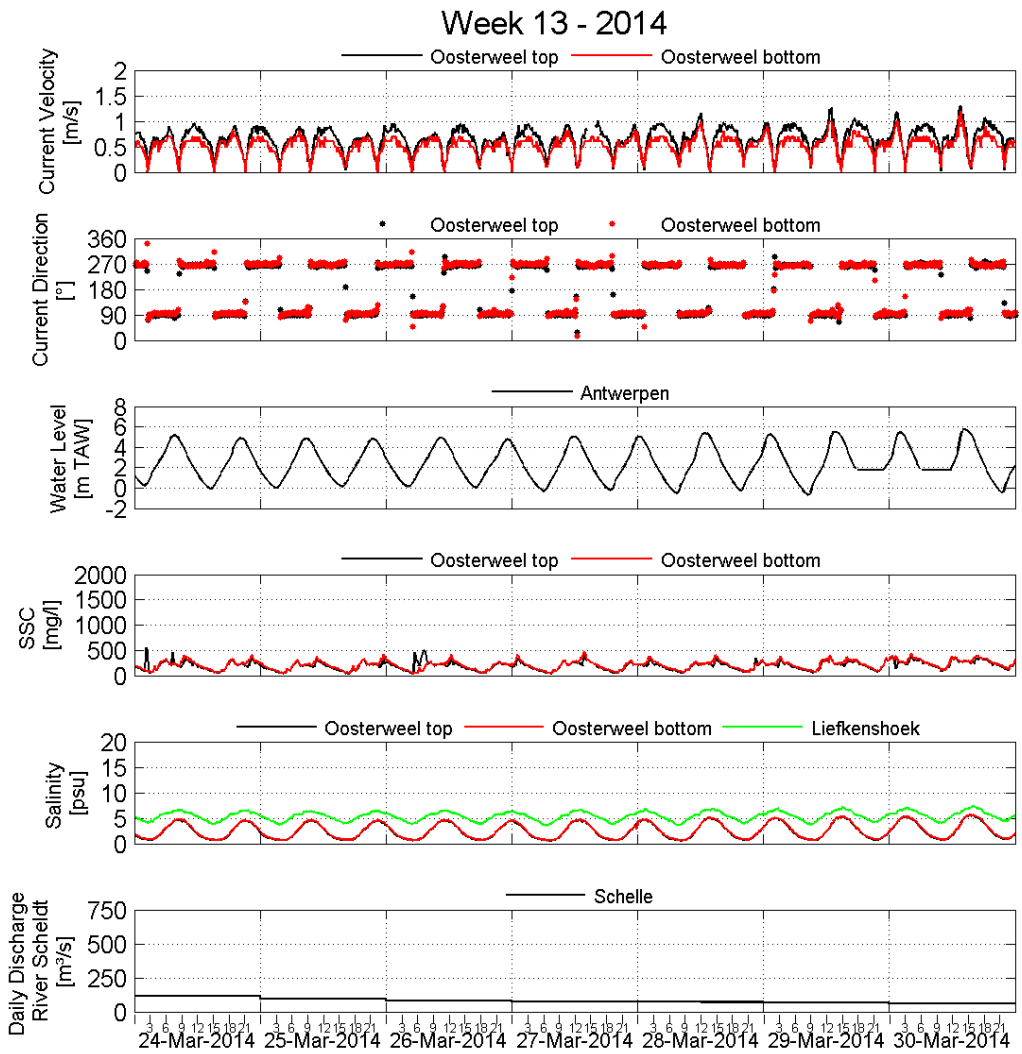


Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Liefkenshoek & Oosterweel (top & bottom)

Processed by:

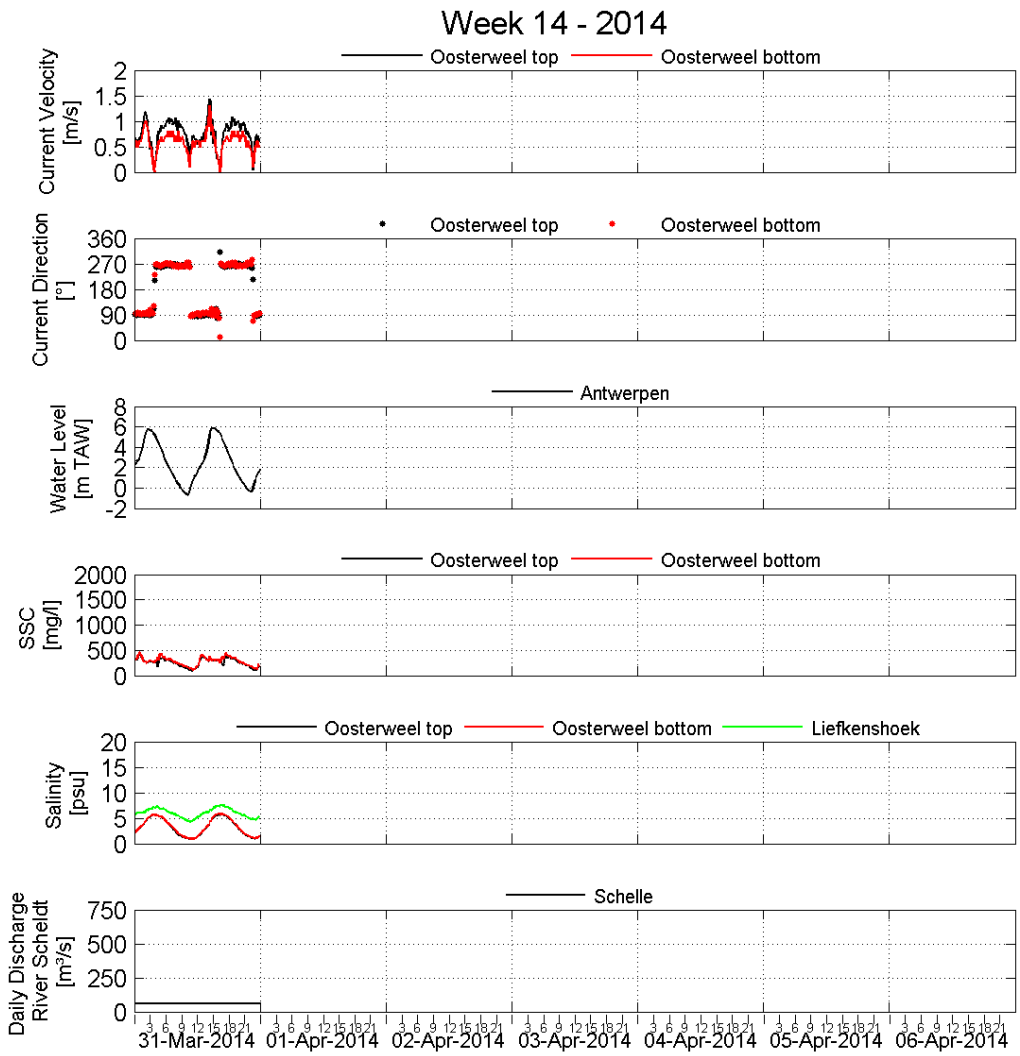
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

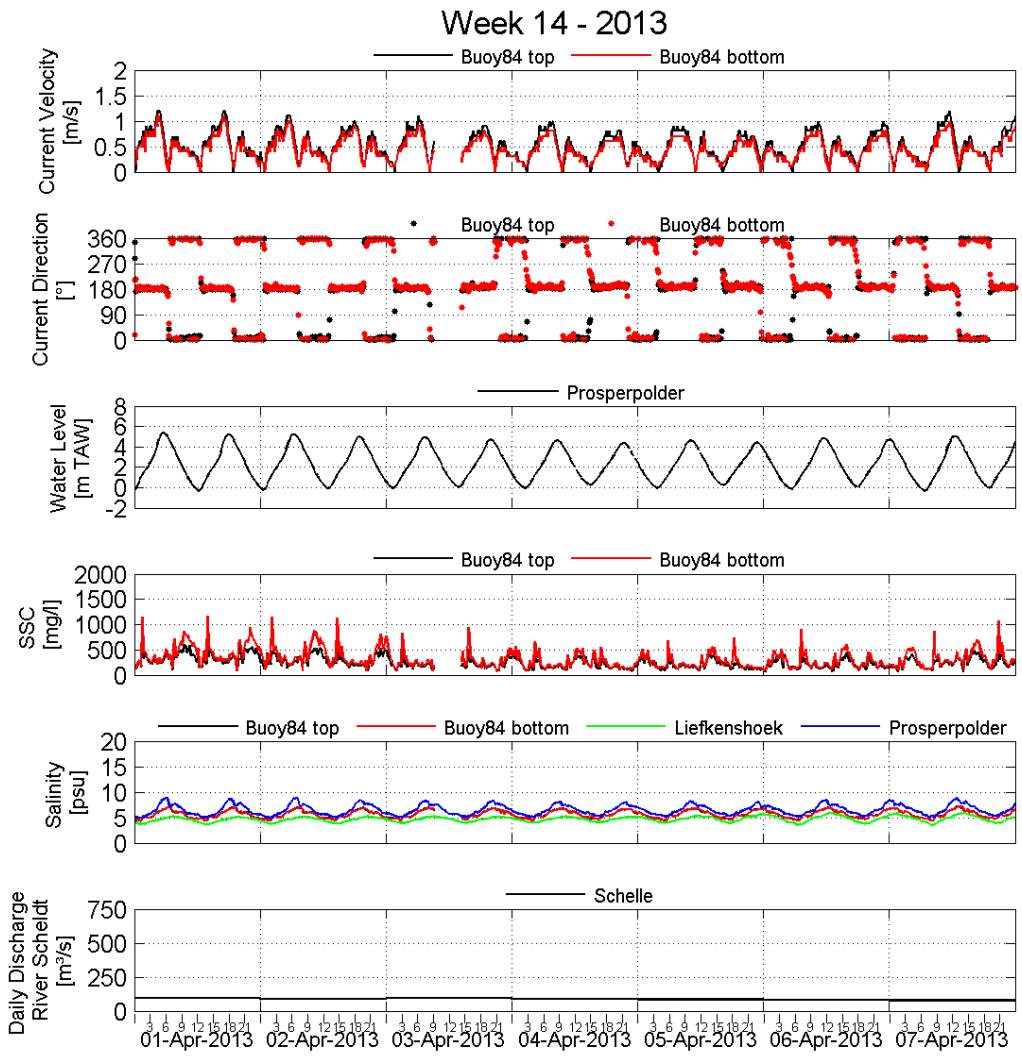
Liefkenshoek & Oosterweel (top & bottom)

In Association with: Deltares

I/RA/11406/13.146/JCA

B.1.2 Liefkenshoek, Buoy84 & Prosperpolder

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

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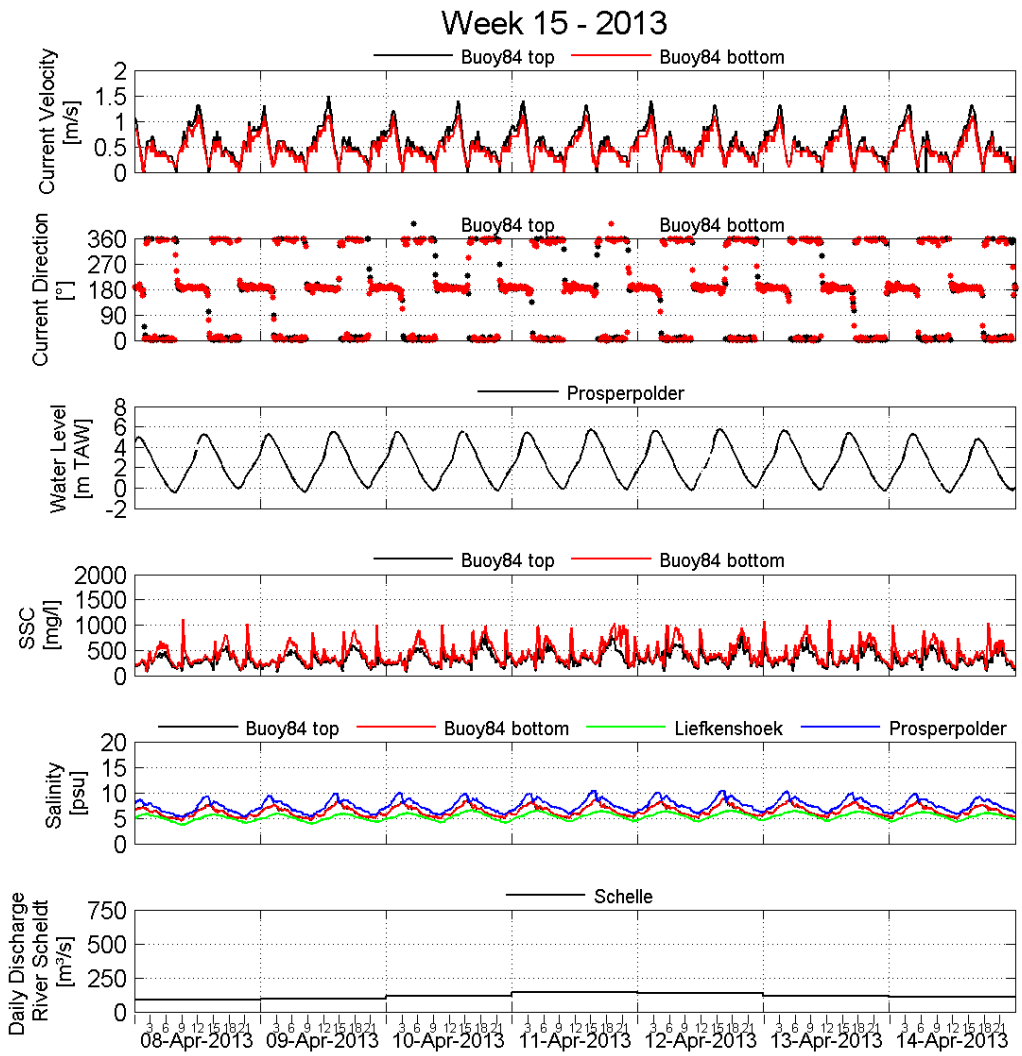
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

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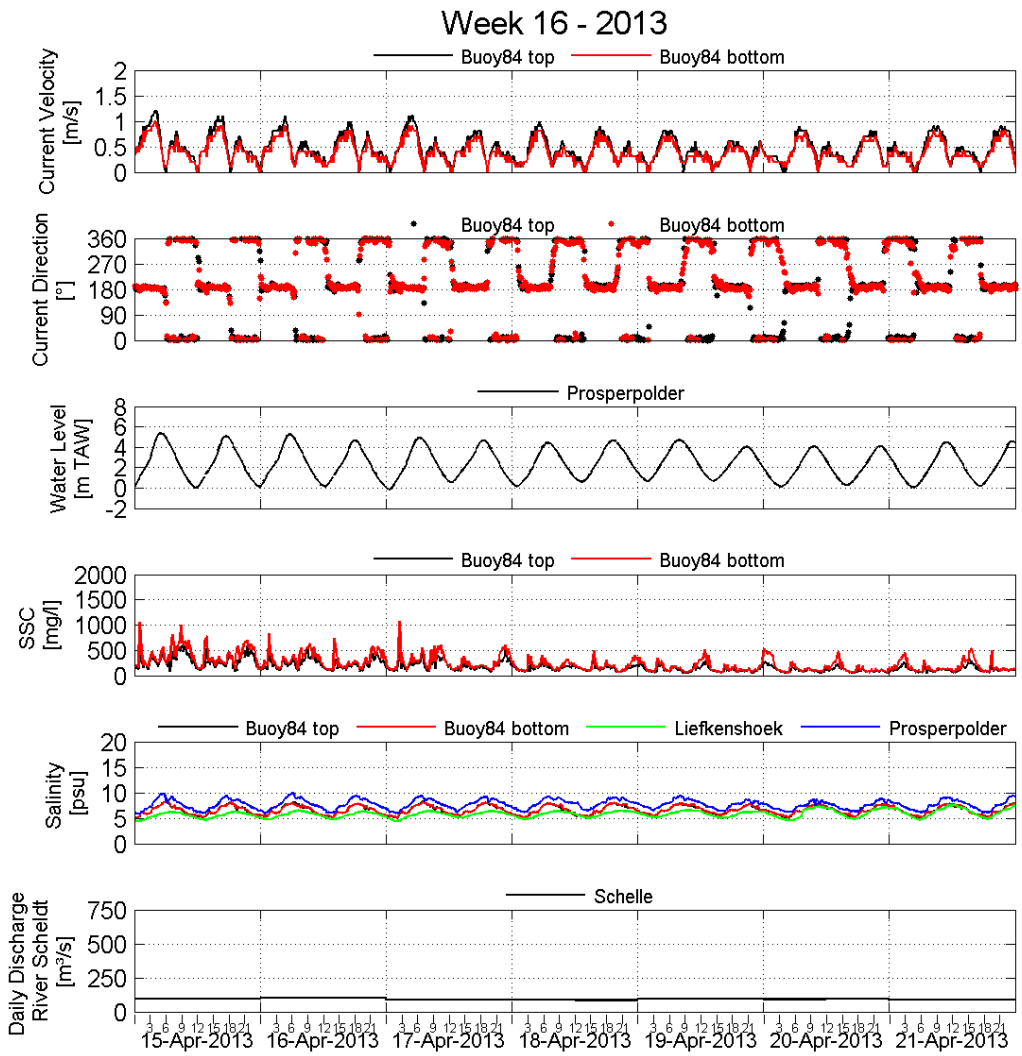
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

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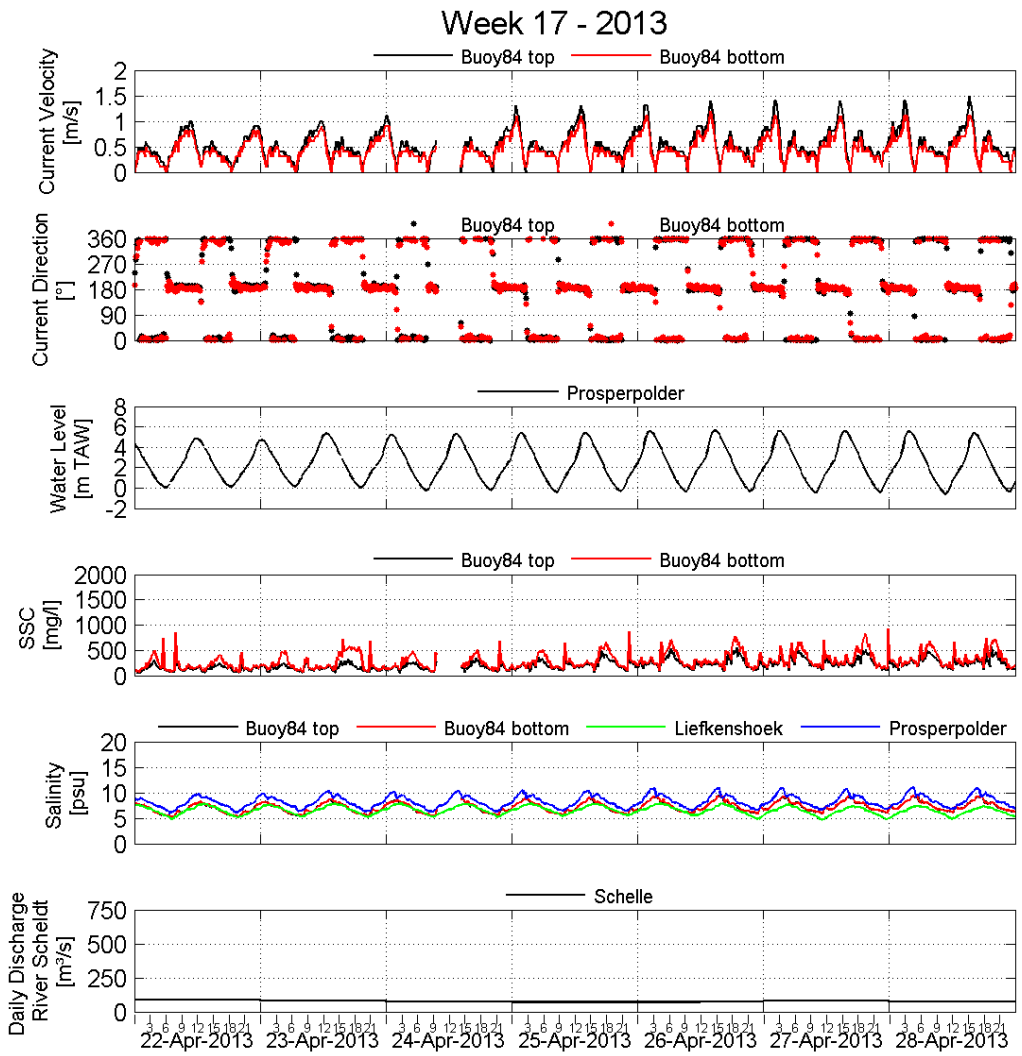
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by:

IMDC

In Association with:

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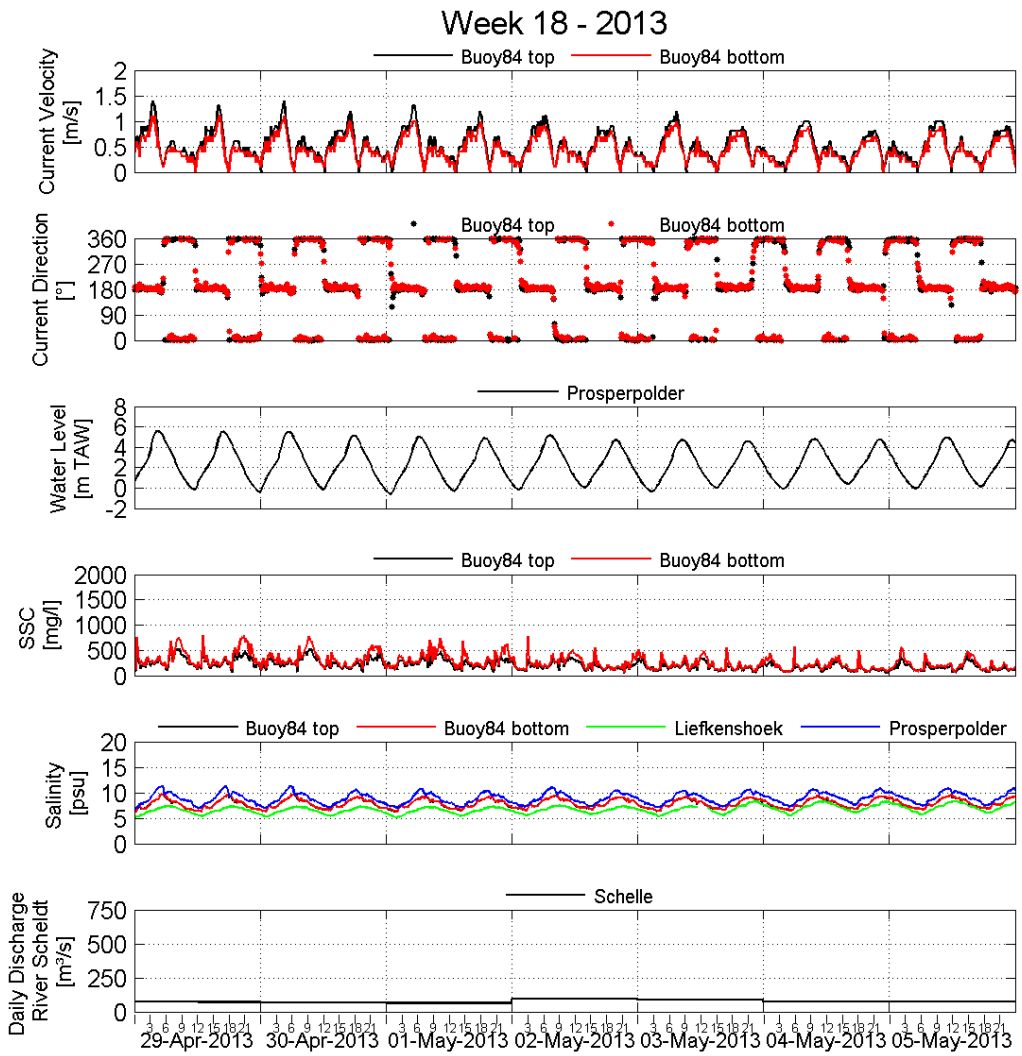
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

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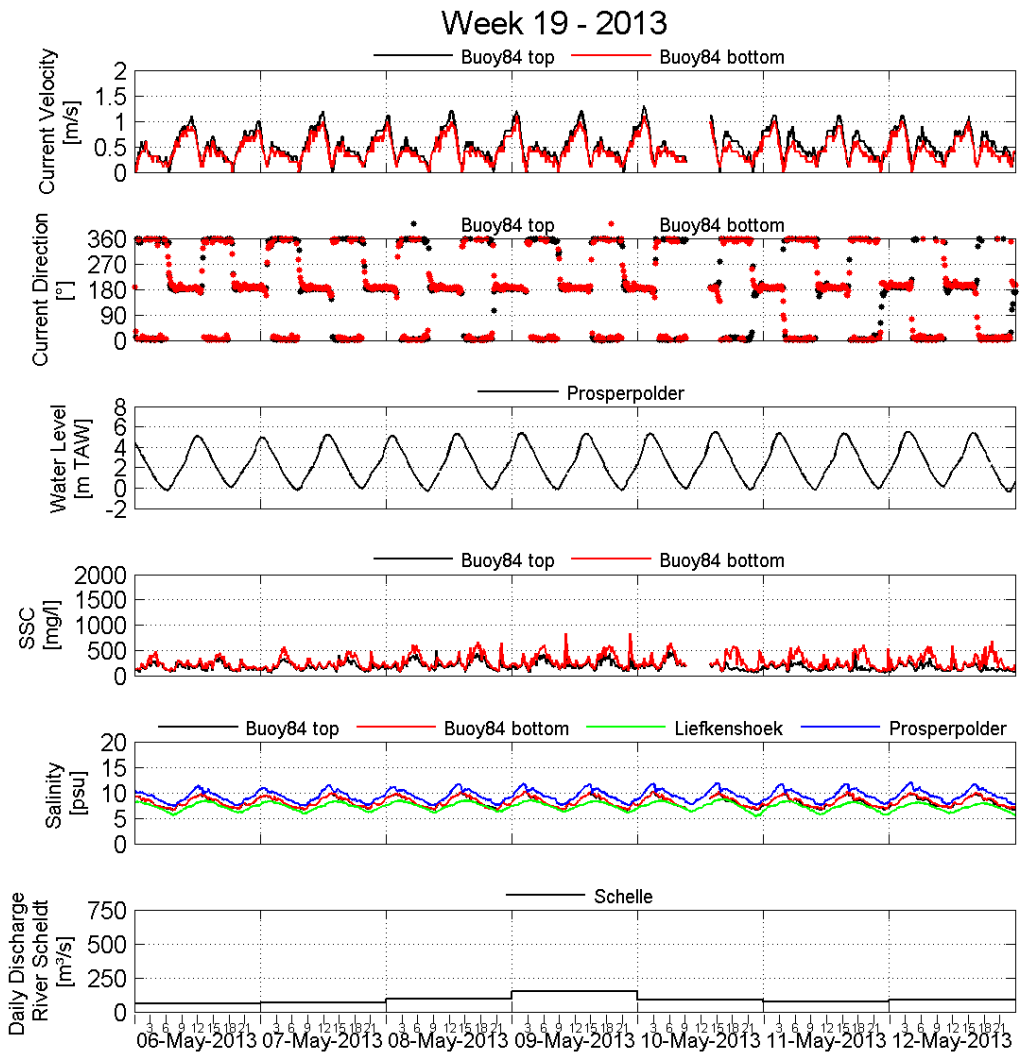
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by:

IMDC

In Association with:

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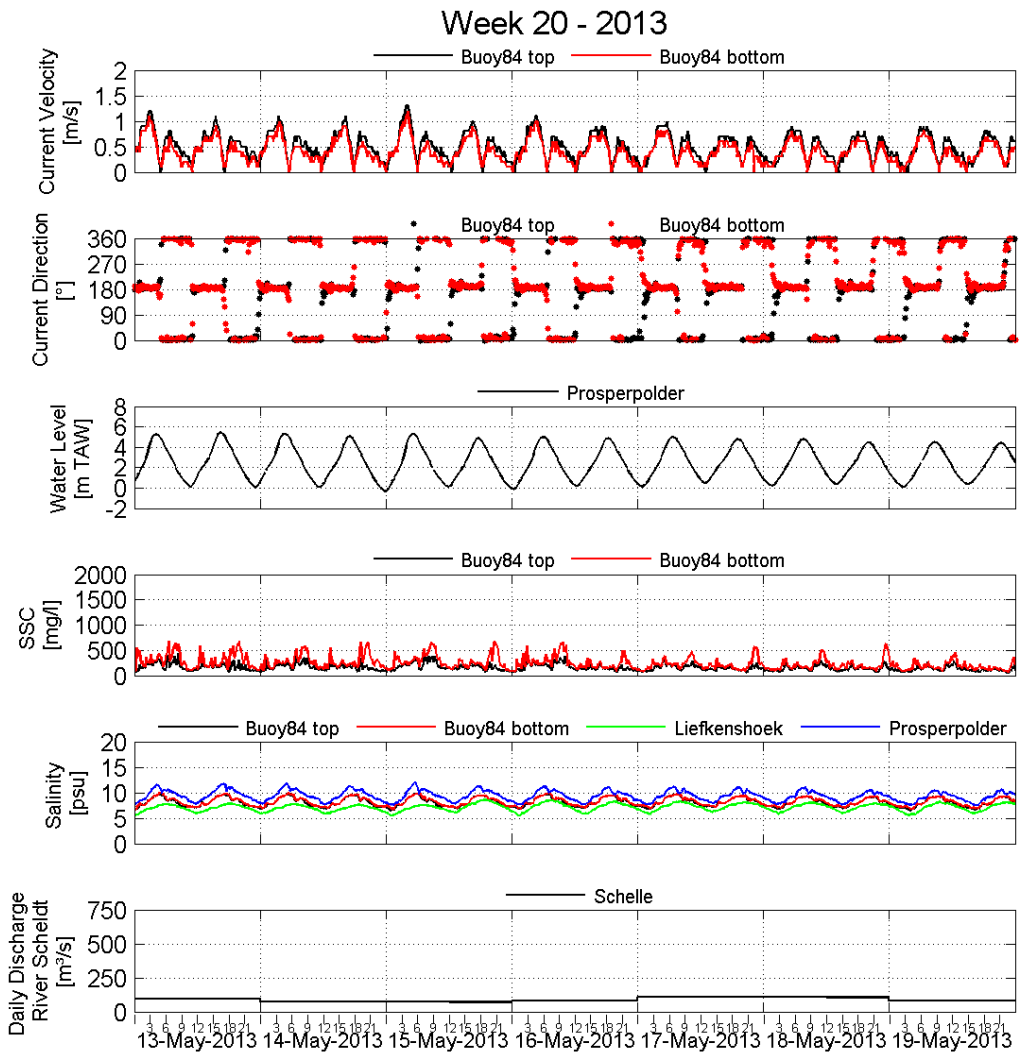

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

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Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

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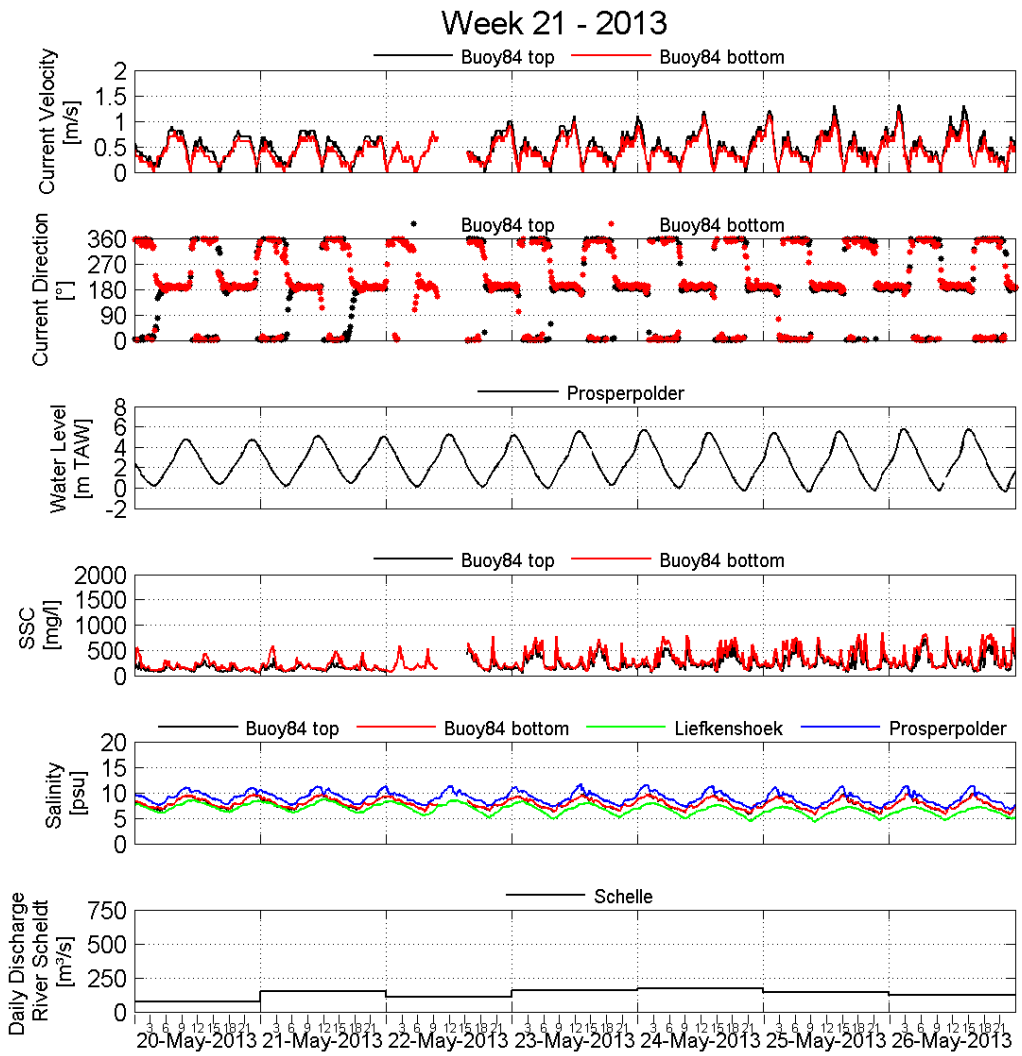
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

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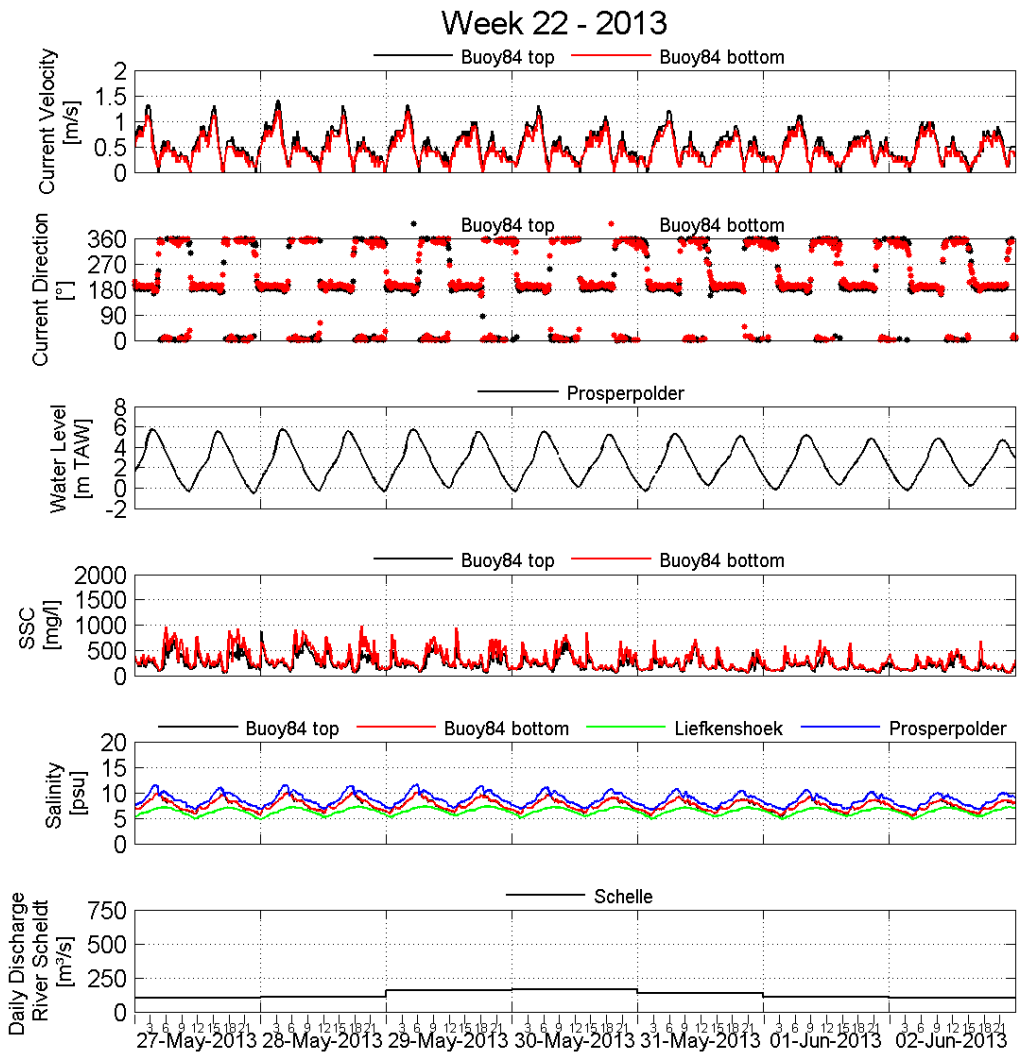
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by:

IMDC

In Association with:

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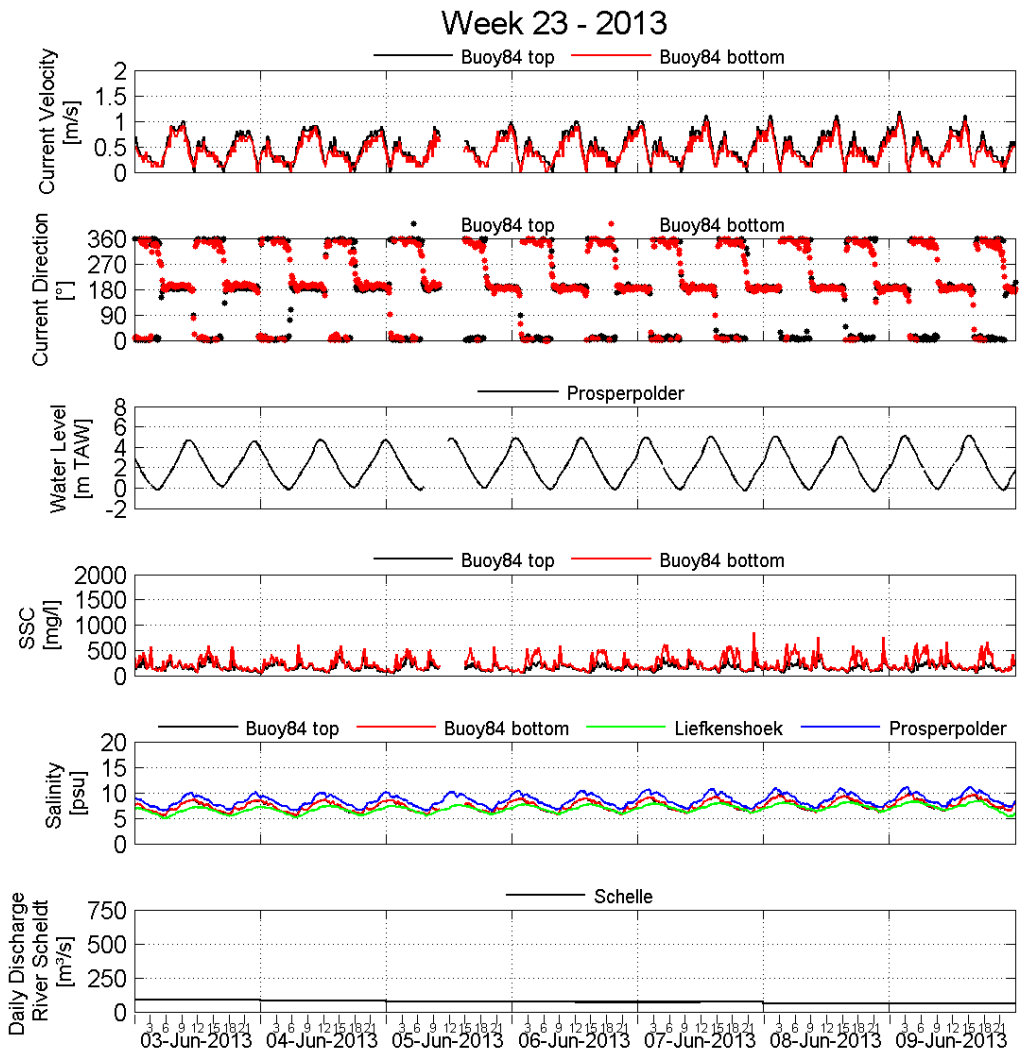
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

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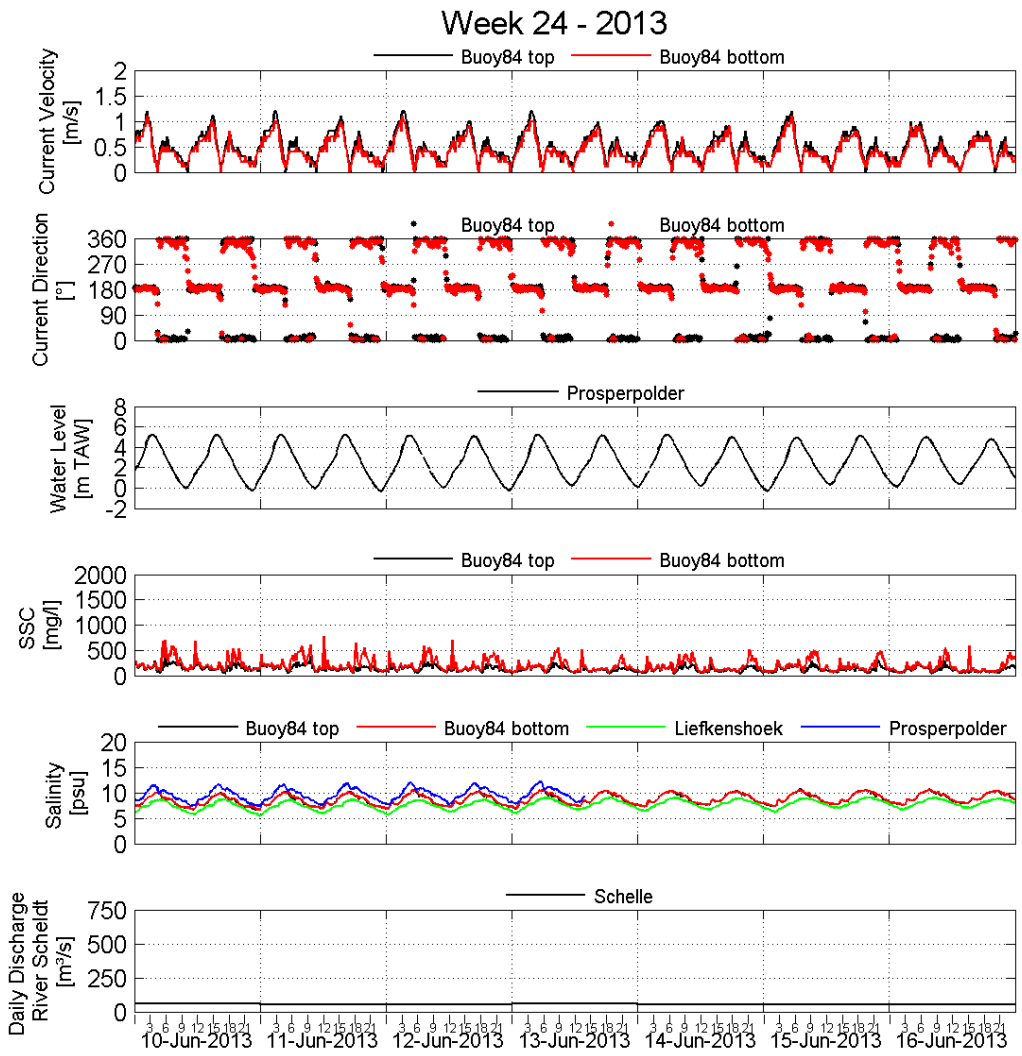
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by: IMDC

In Association with: Deltares

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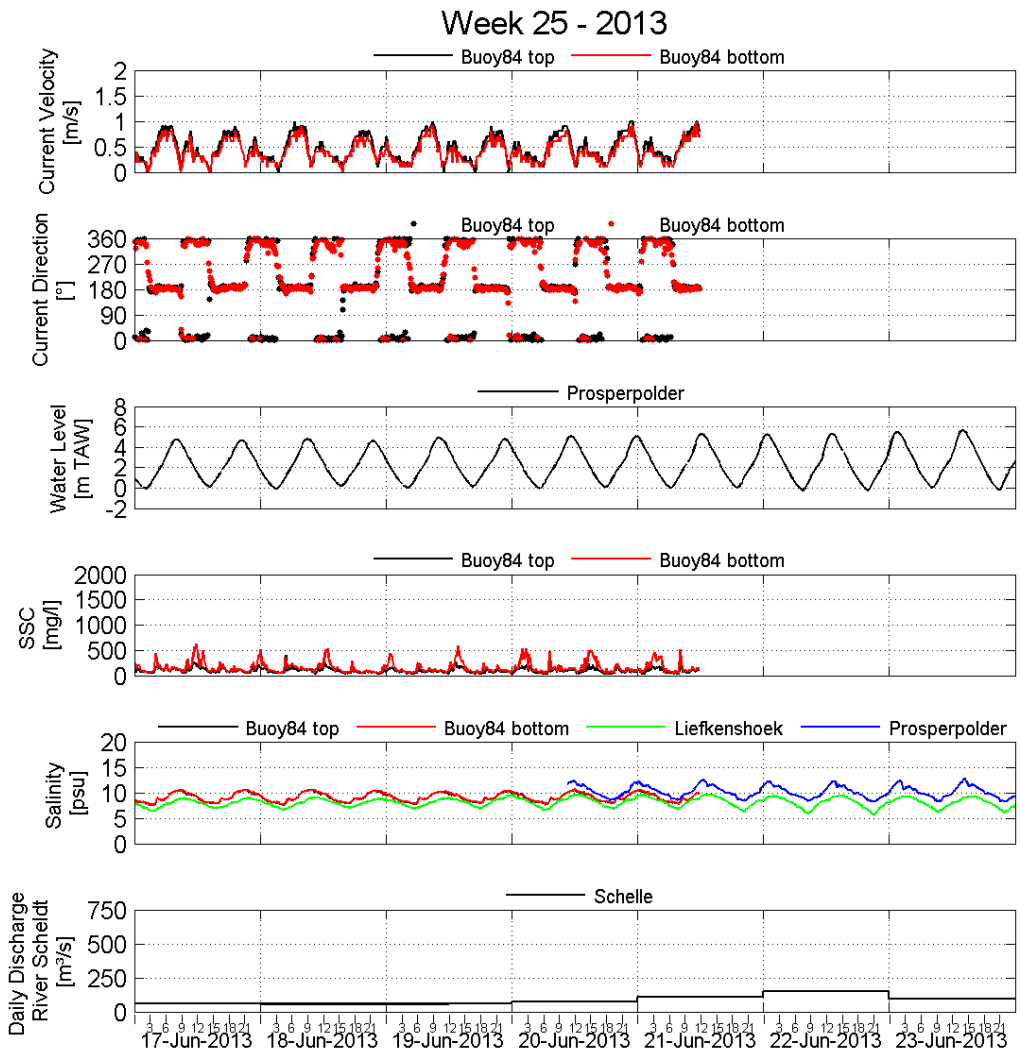
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

In Association with: Deltares

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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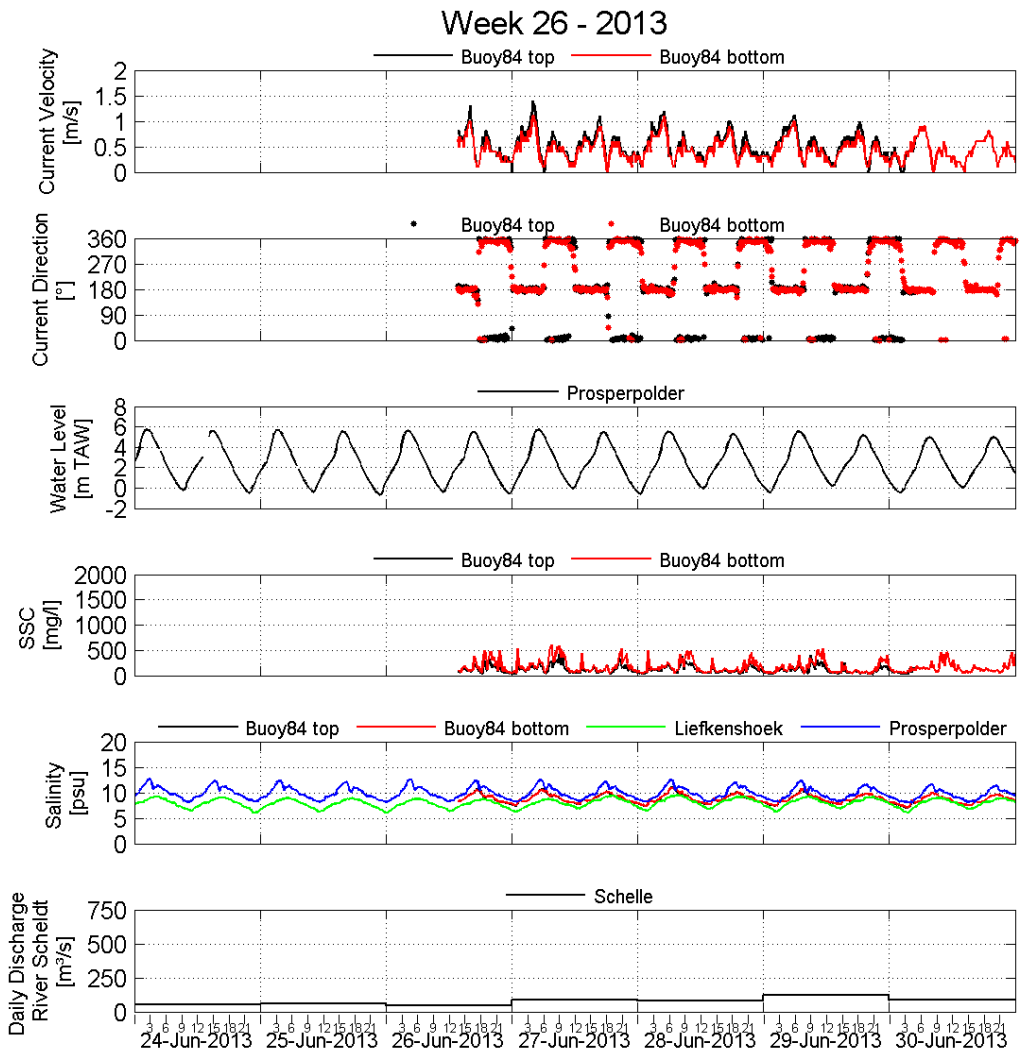

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

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Location:

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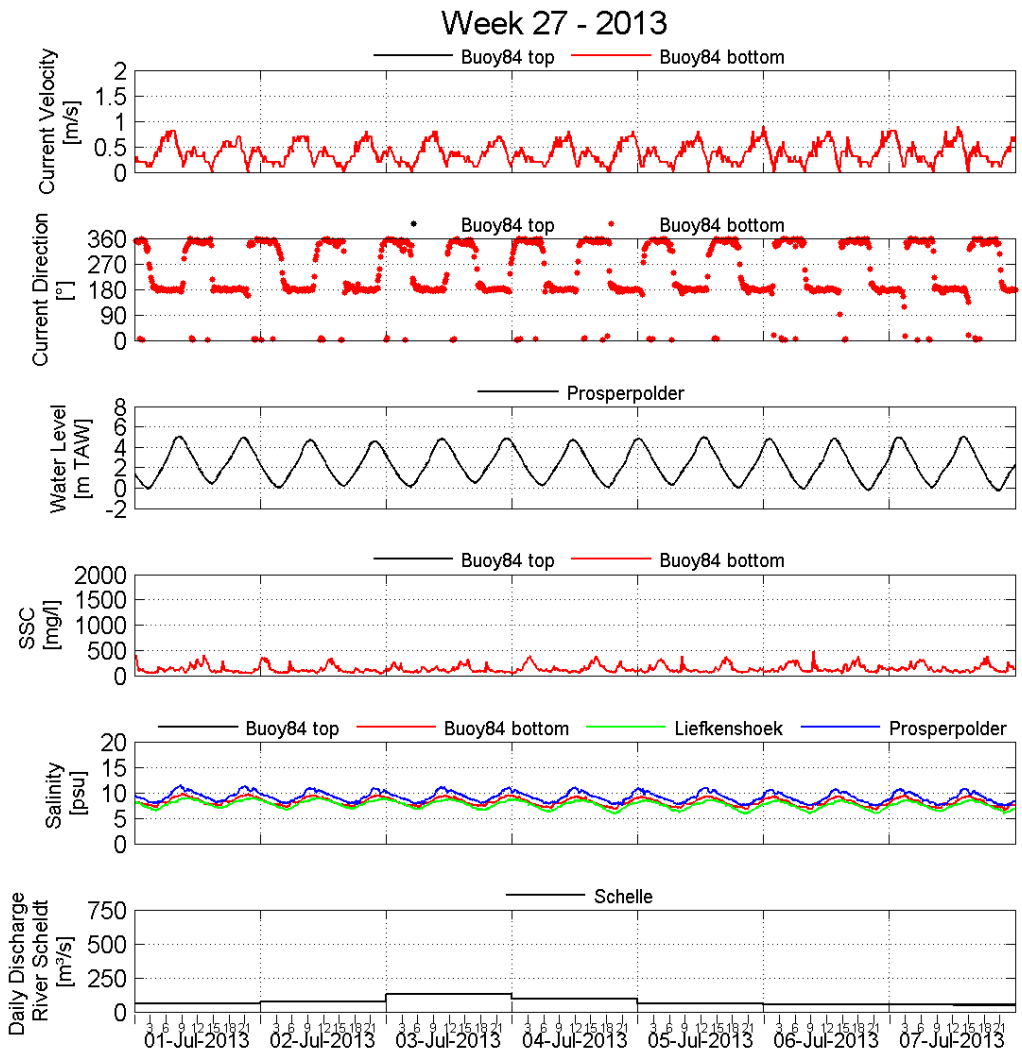

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

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Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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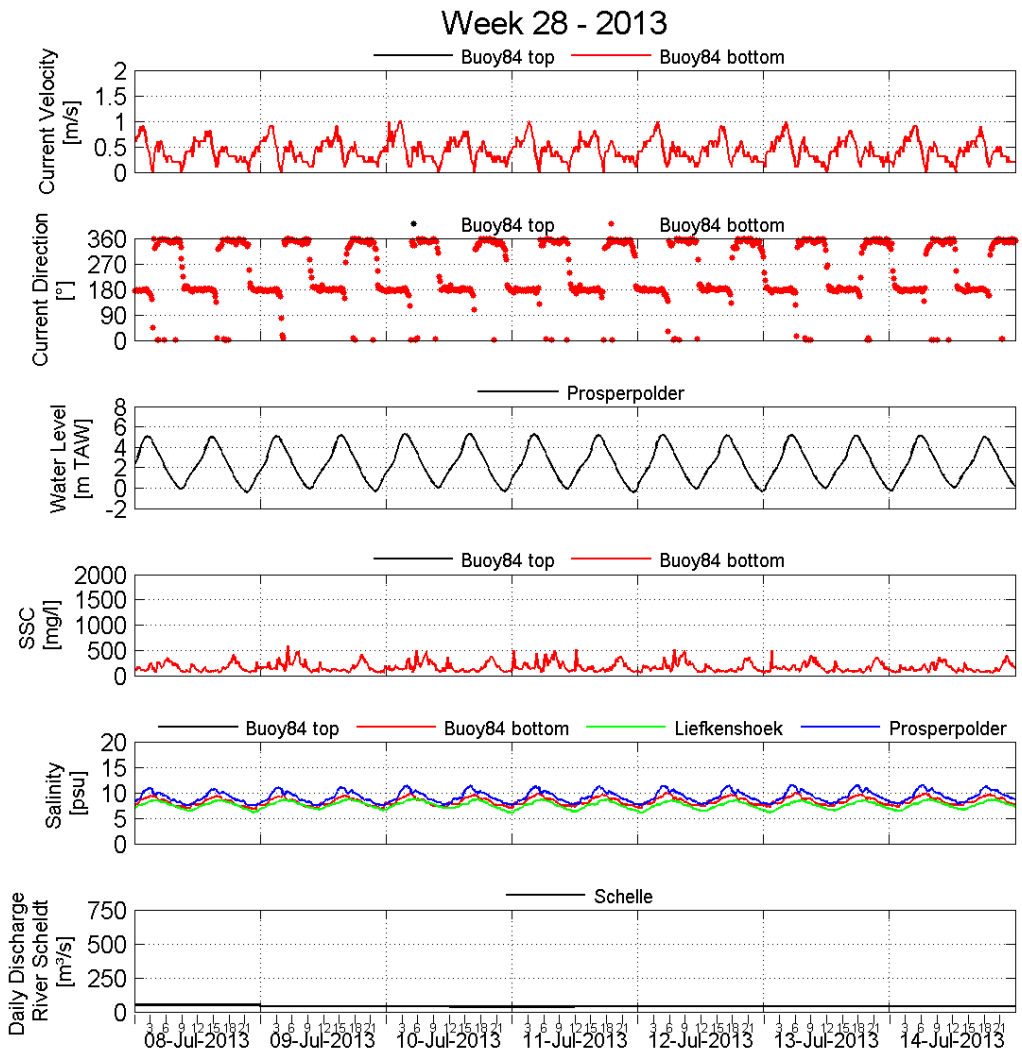

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by: IMDC

In Association with: Deltares

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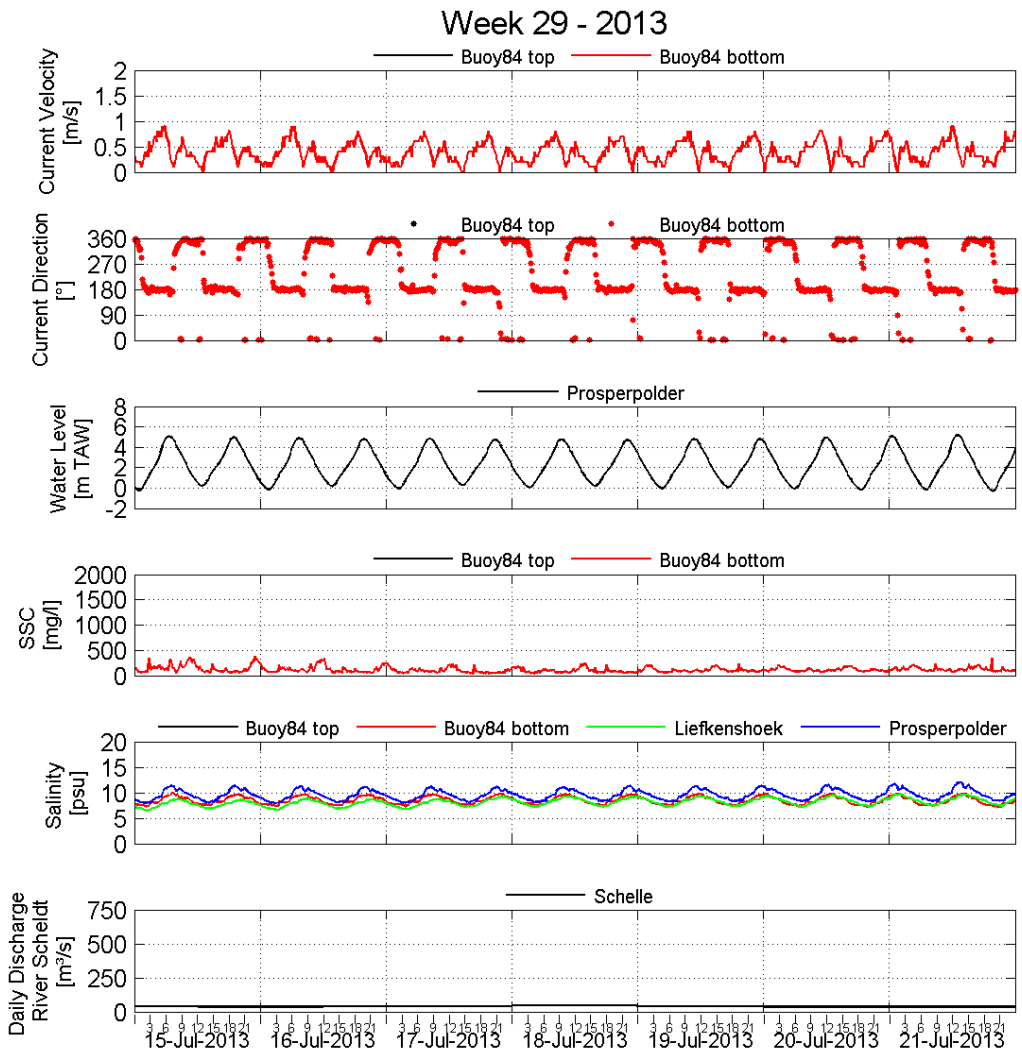

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

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IMDC

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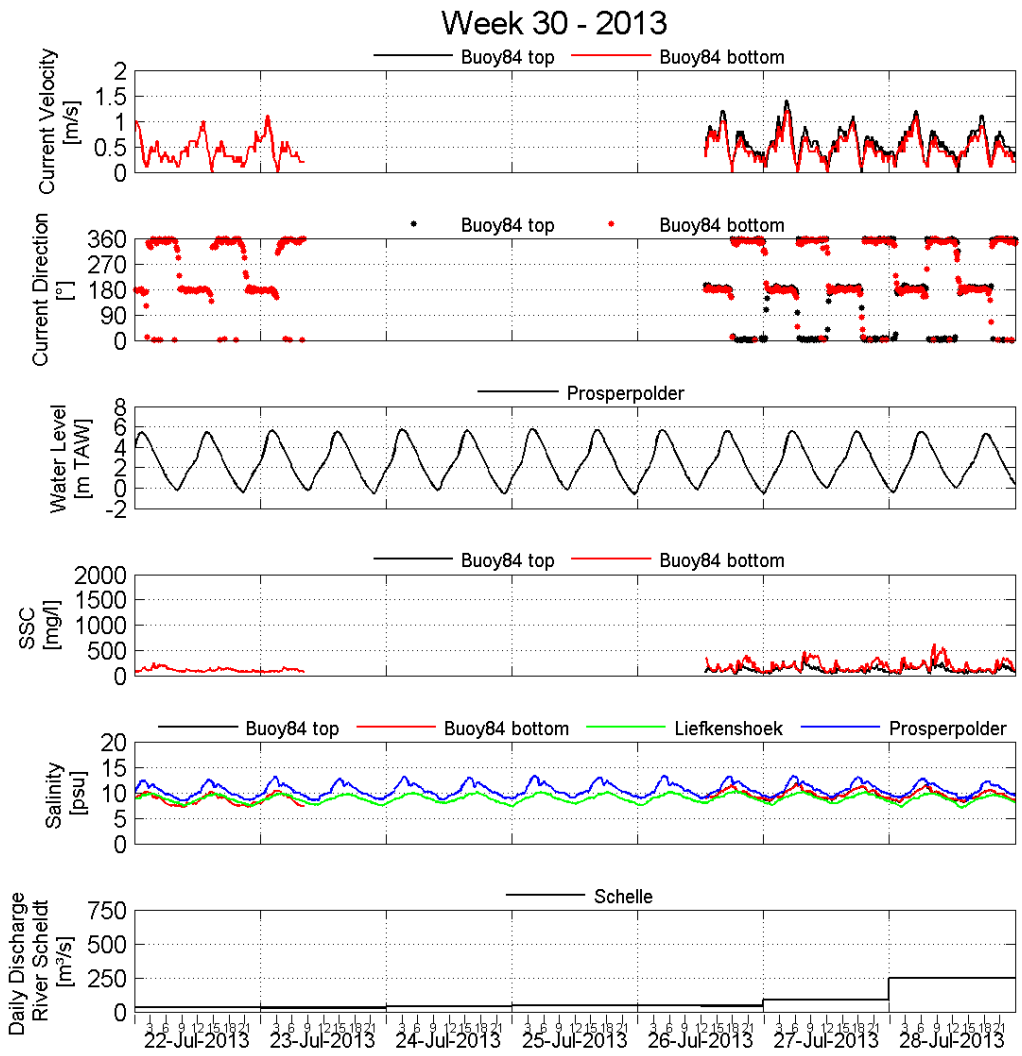

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

In Association with: Deltares

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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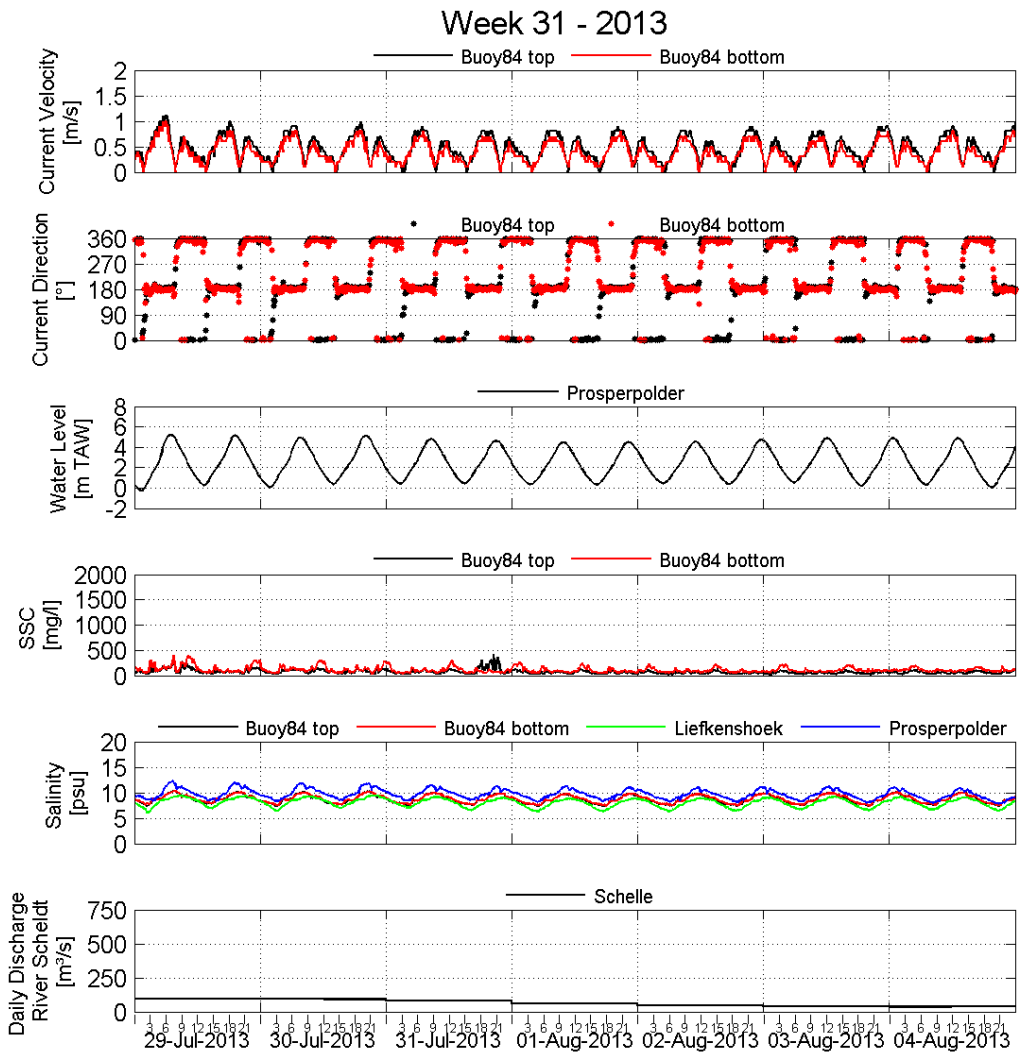

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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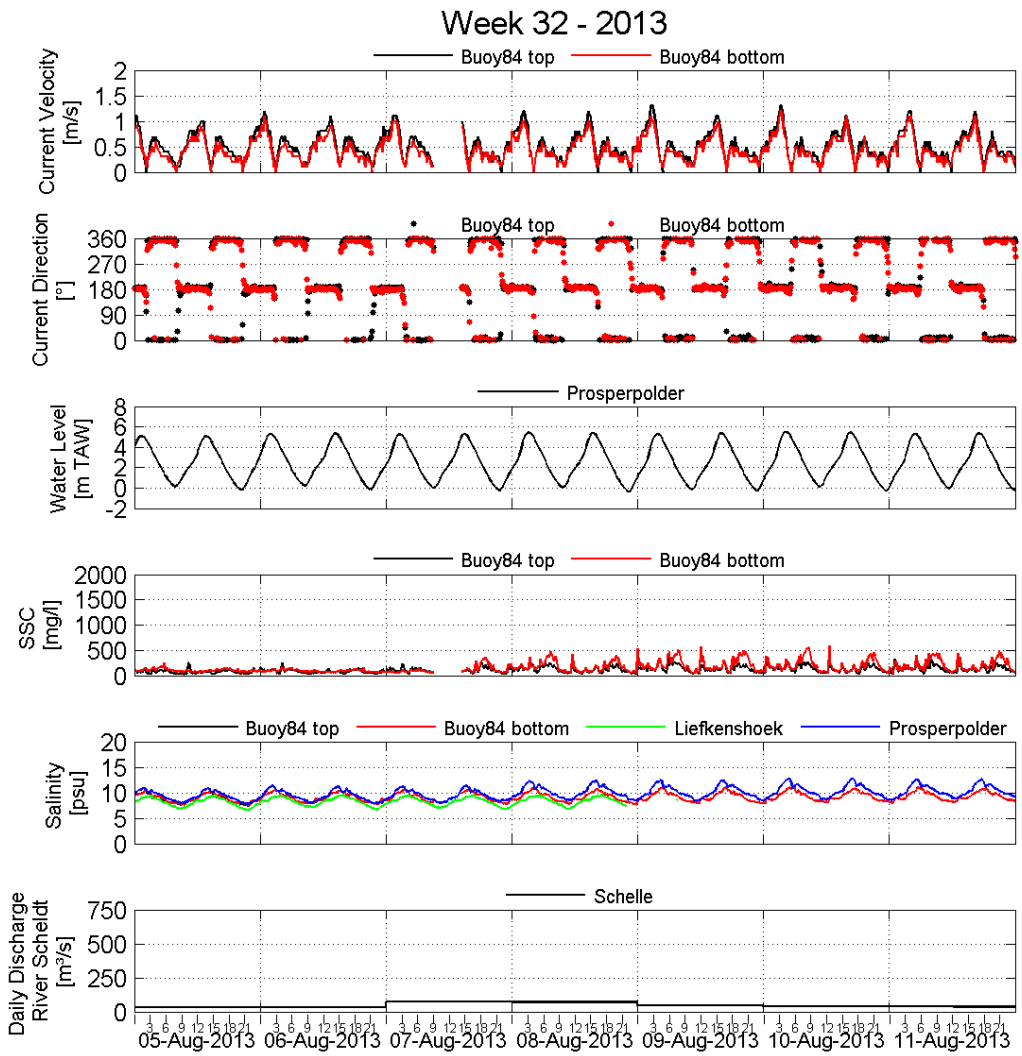

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by:

IMDC

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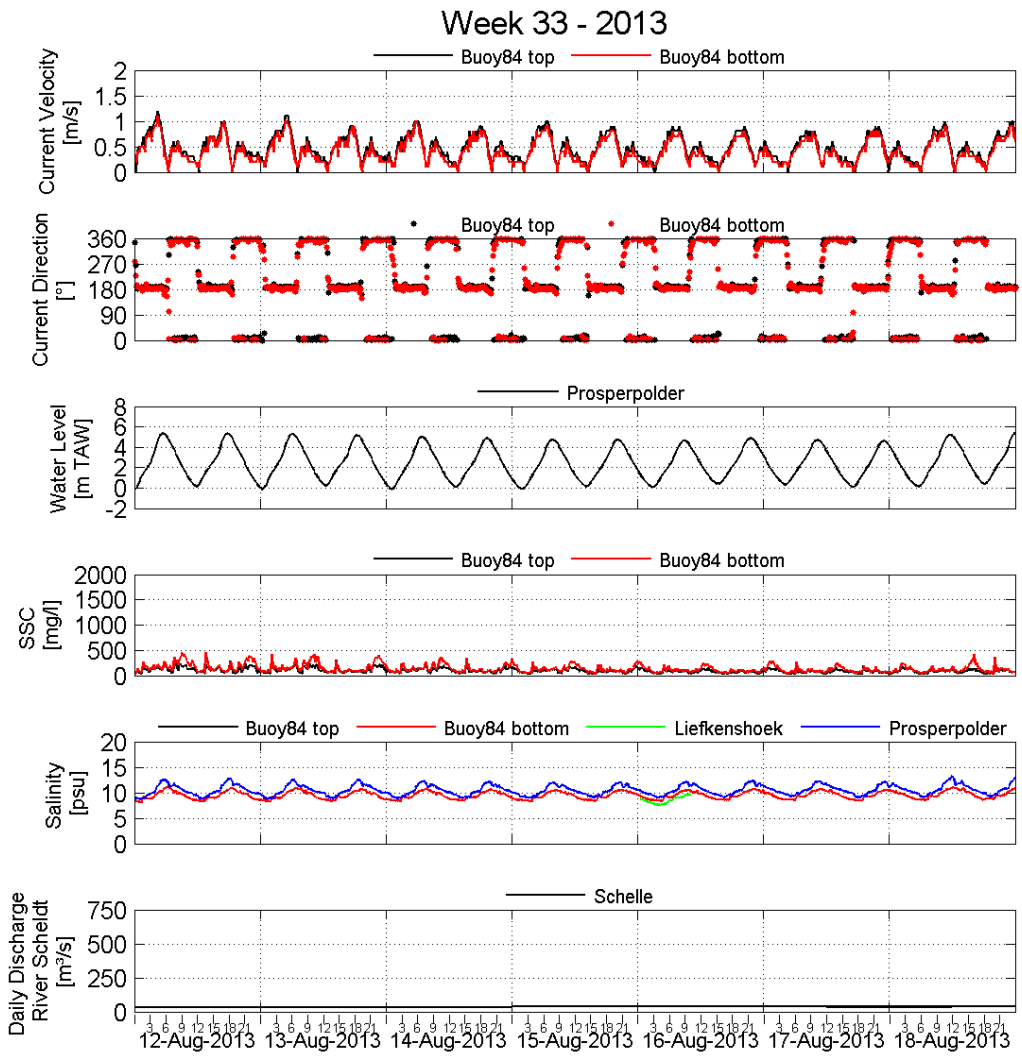

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

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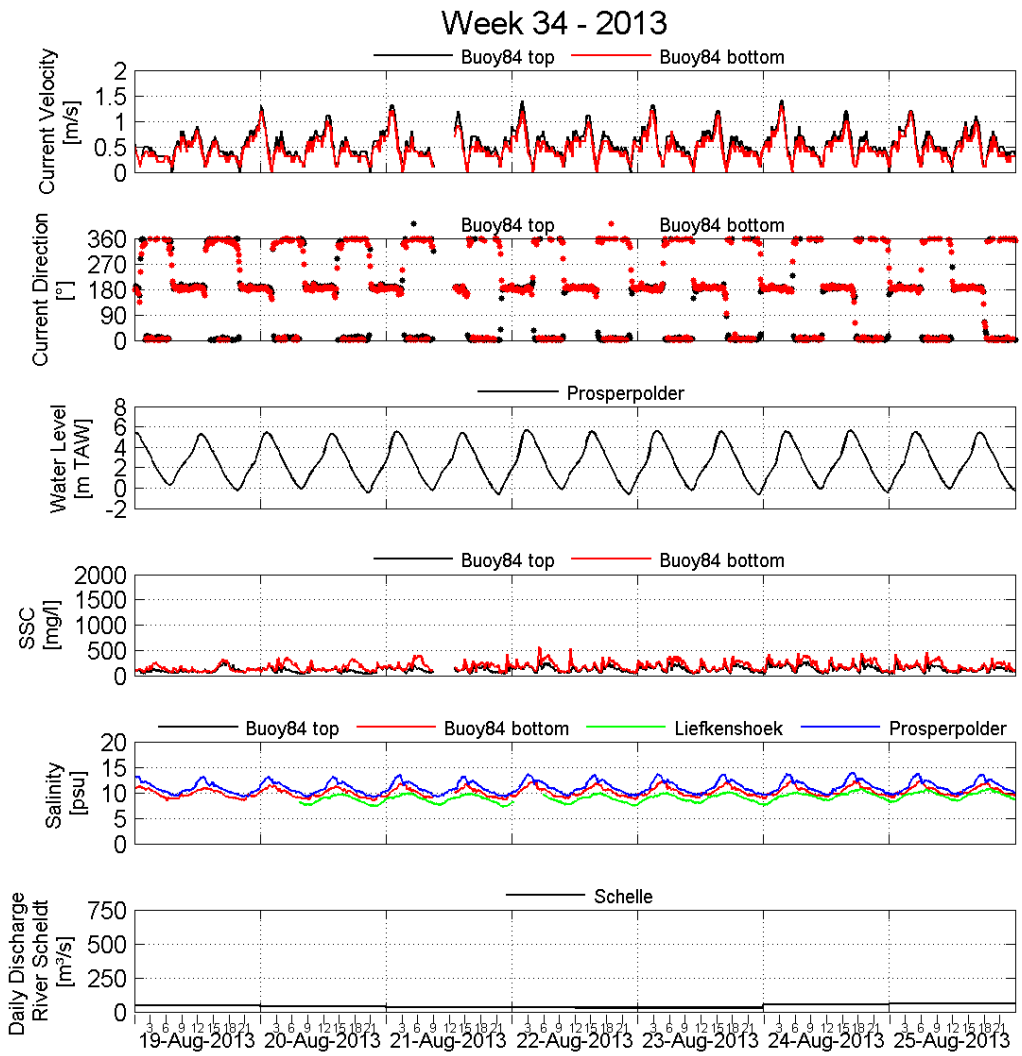

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by:

IMDC

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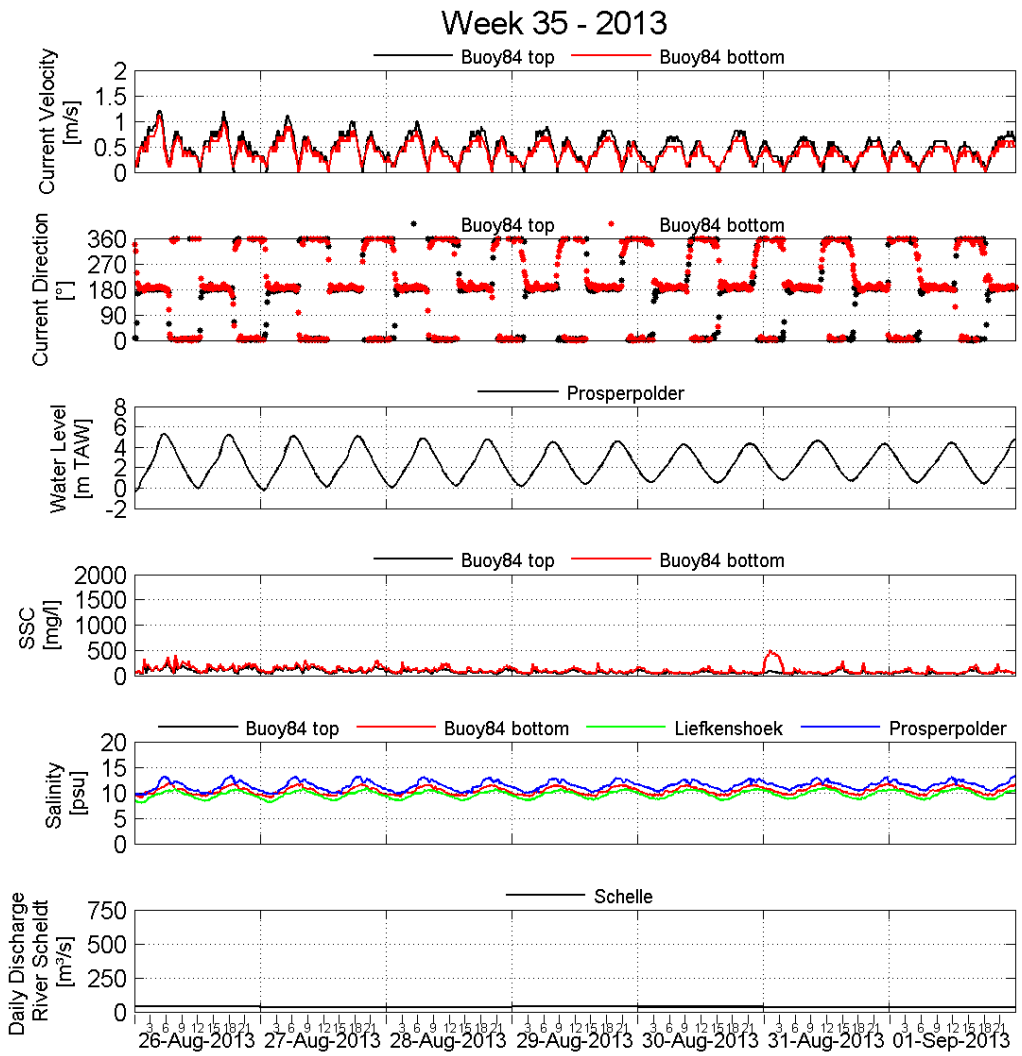

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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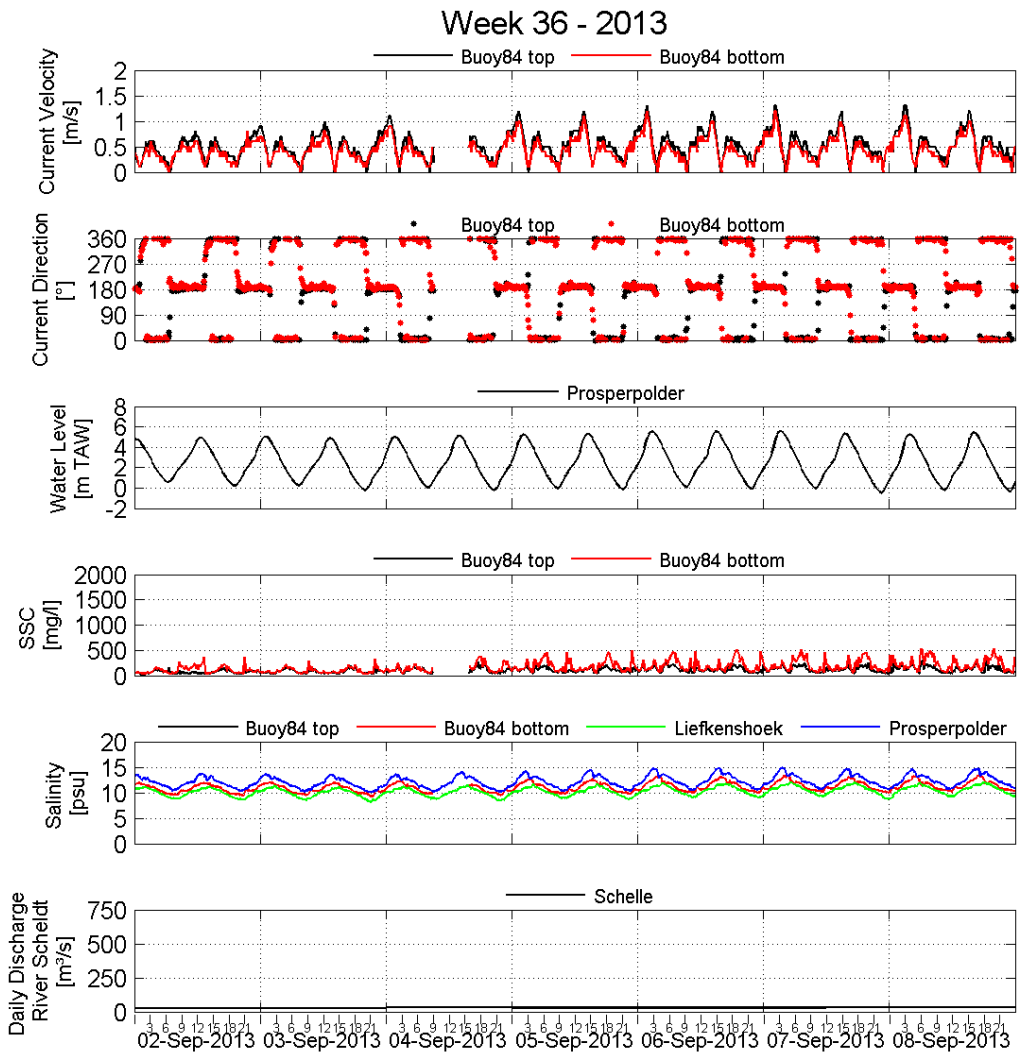

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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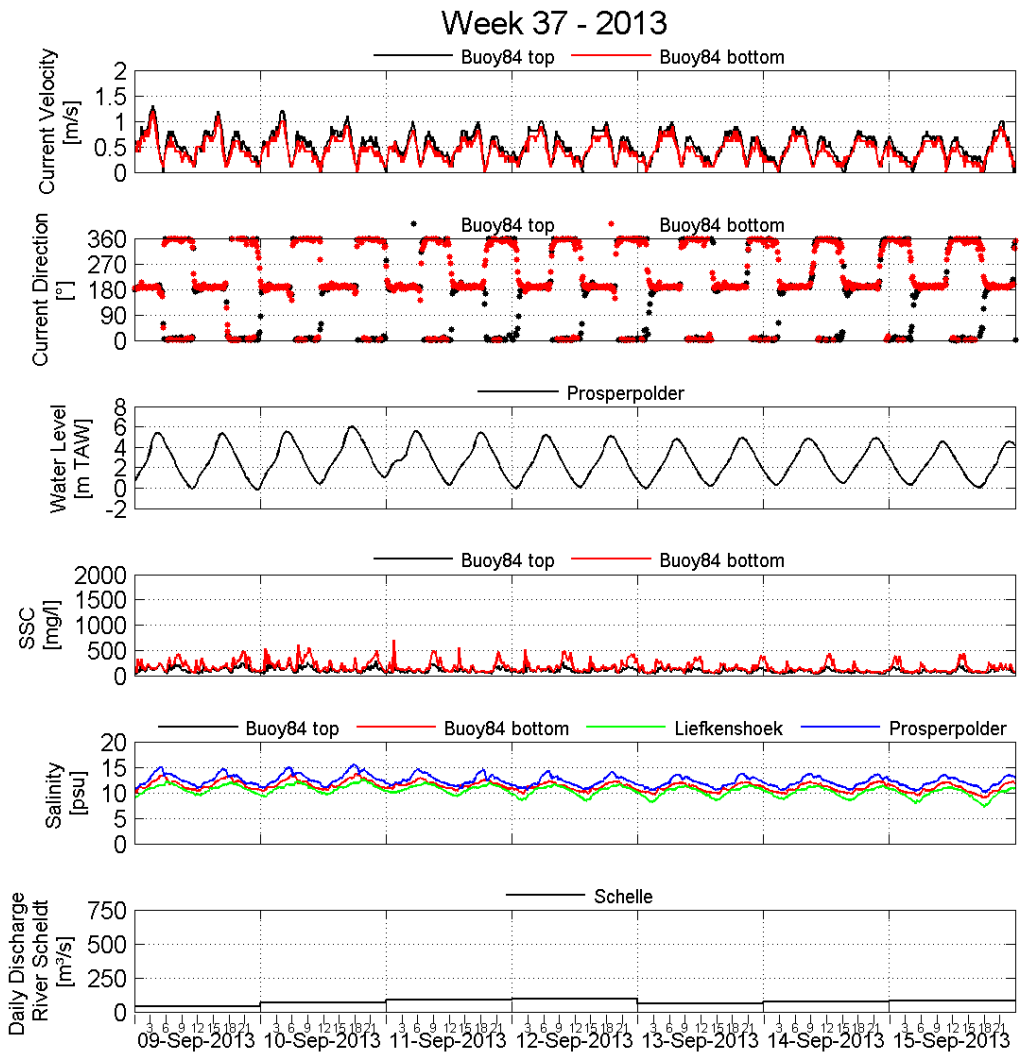

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

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Location:

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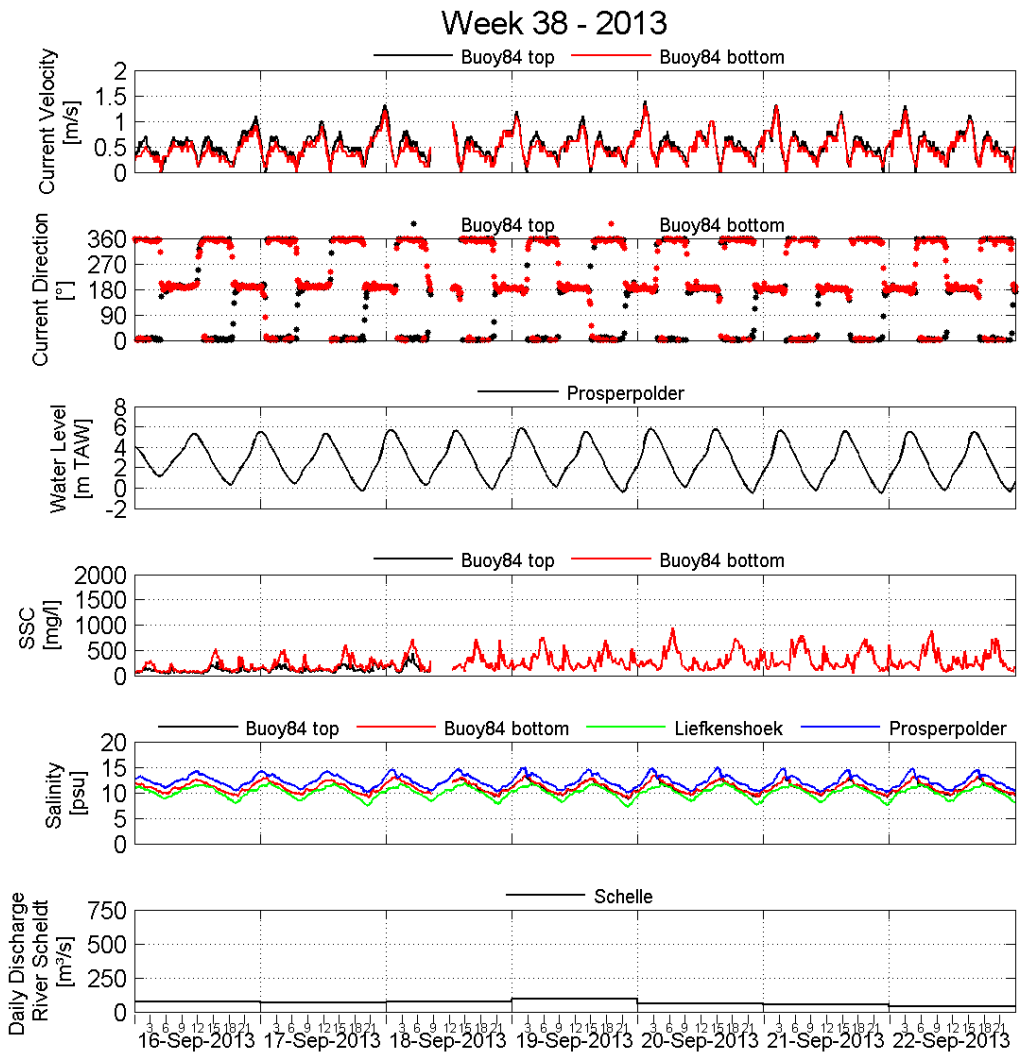

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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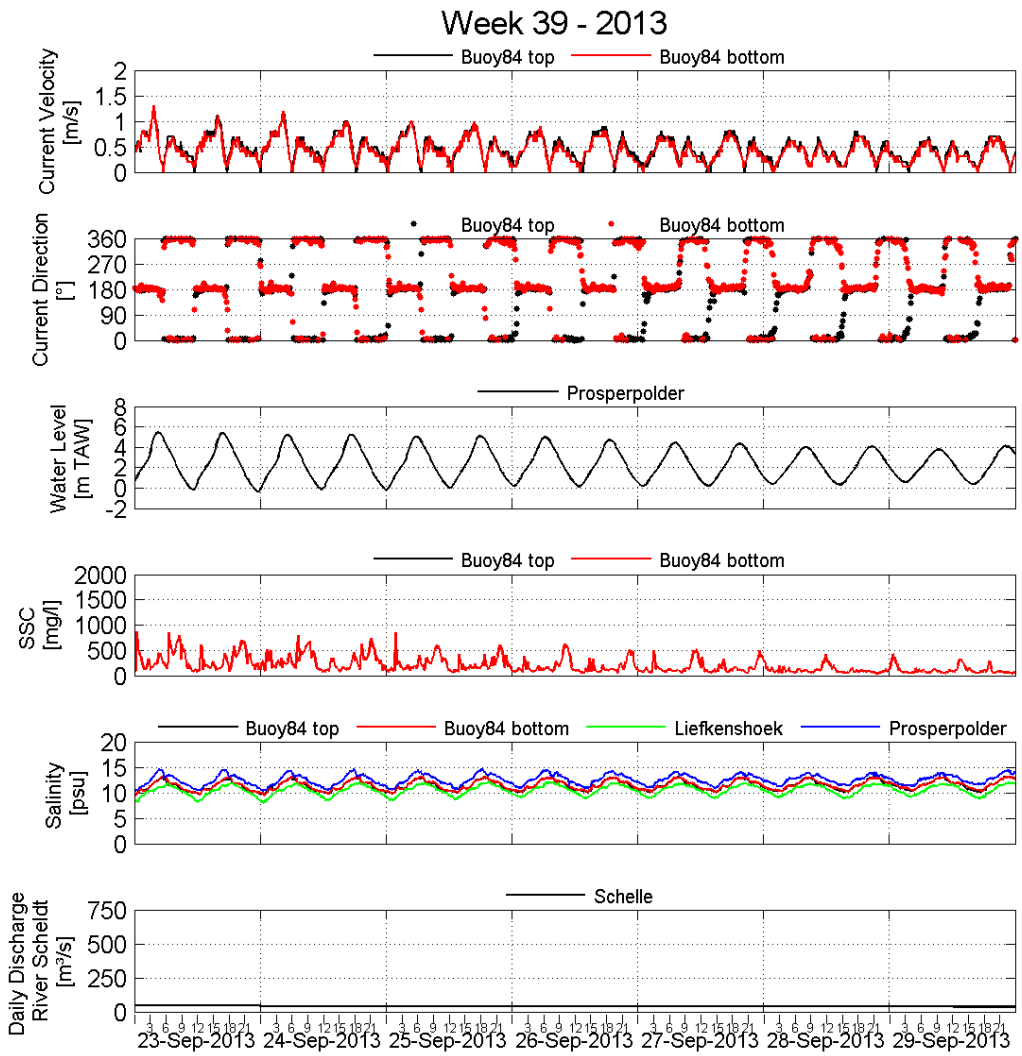

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

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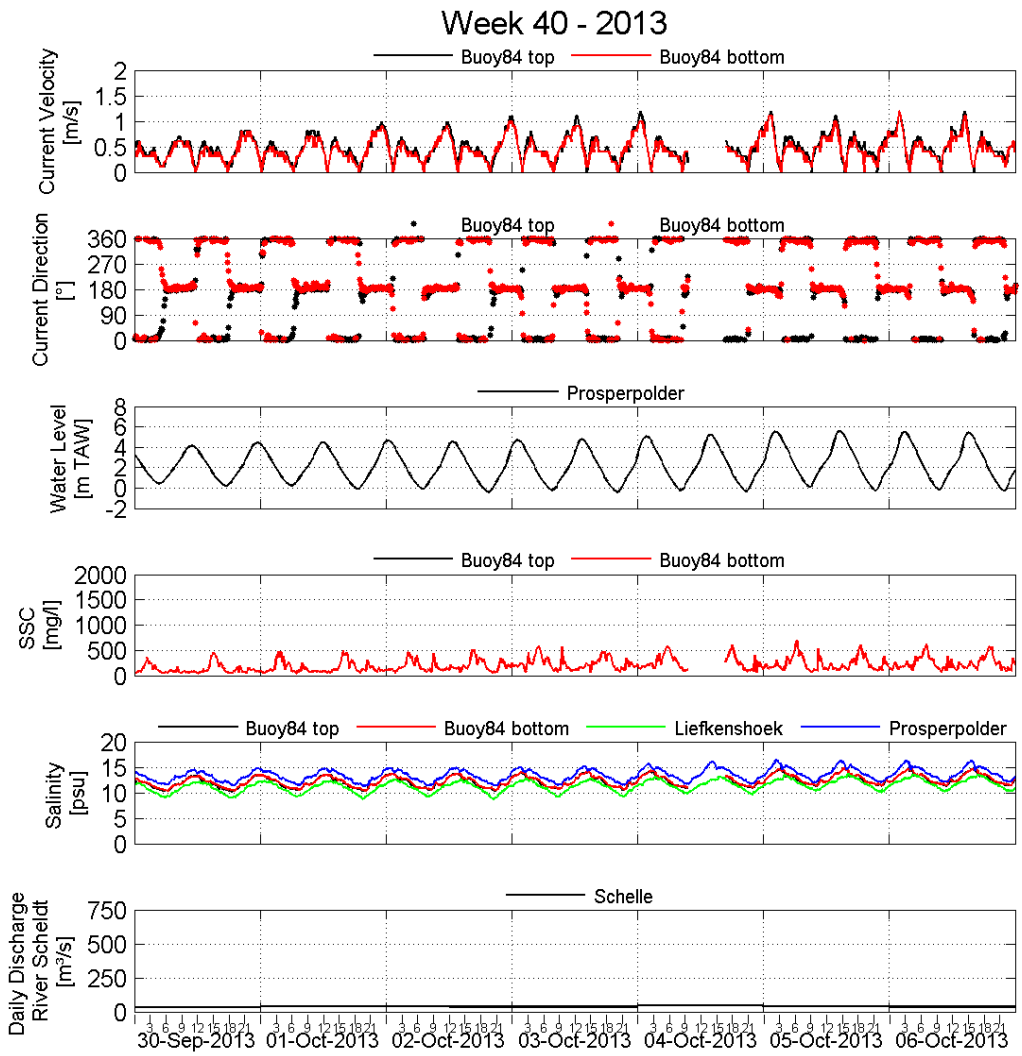

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

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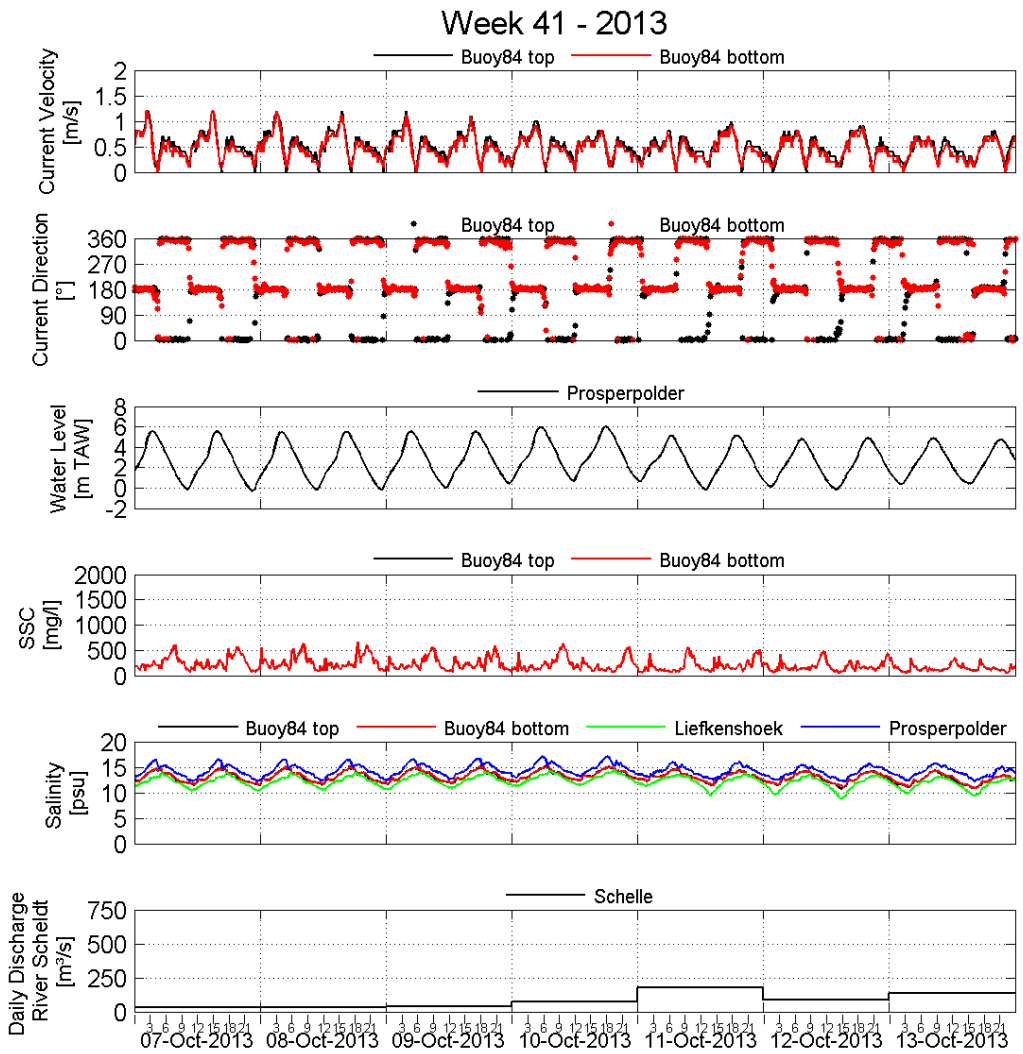

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

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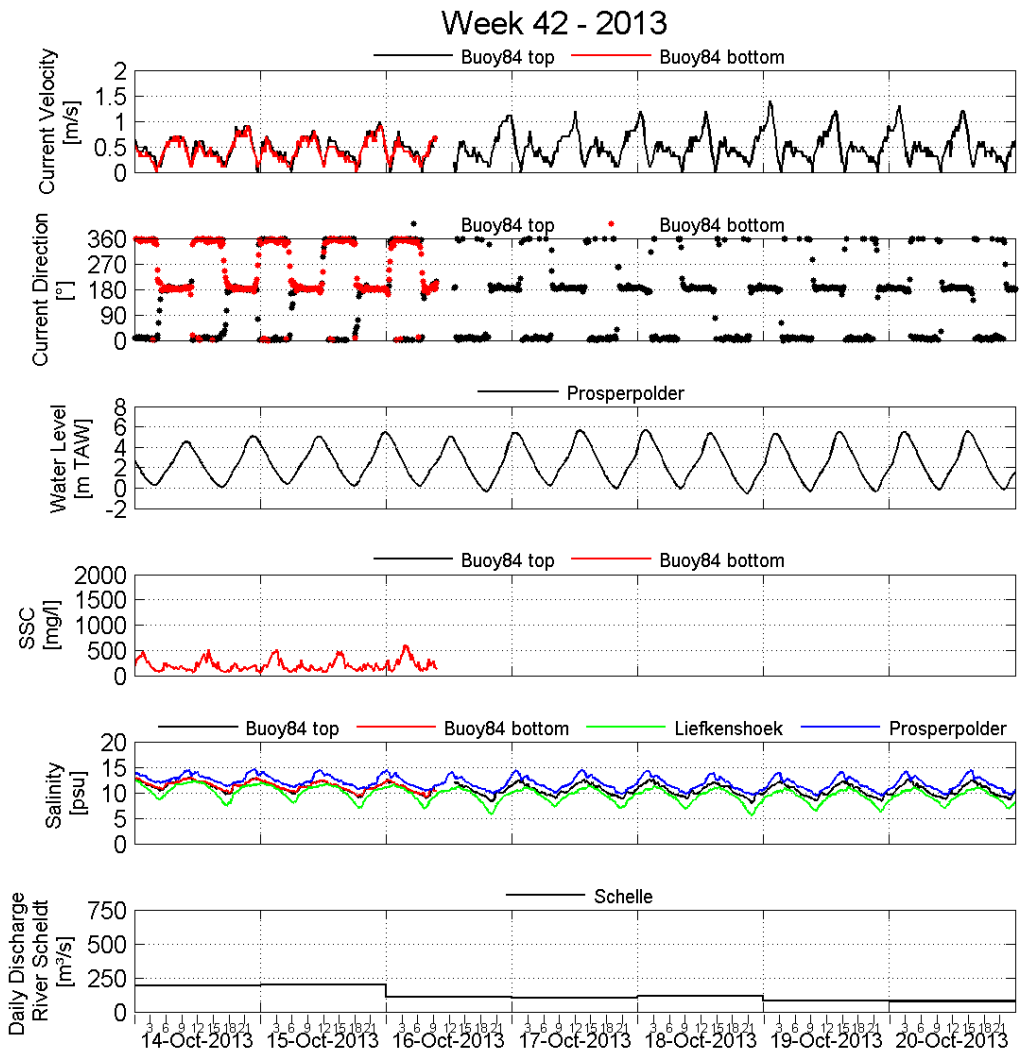
In Association with: Deltares

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

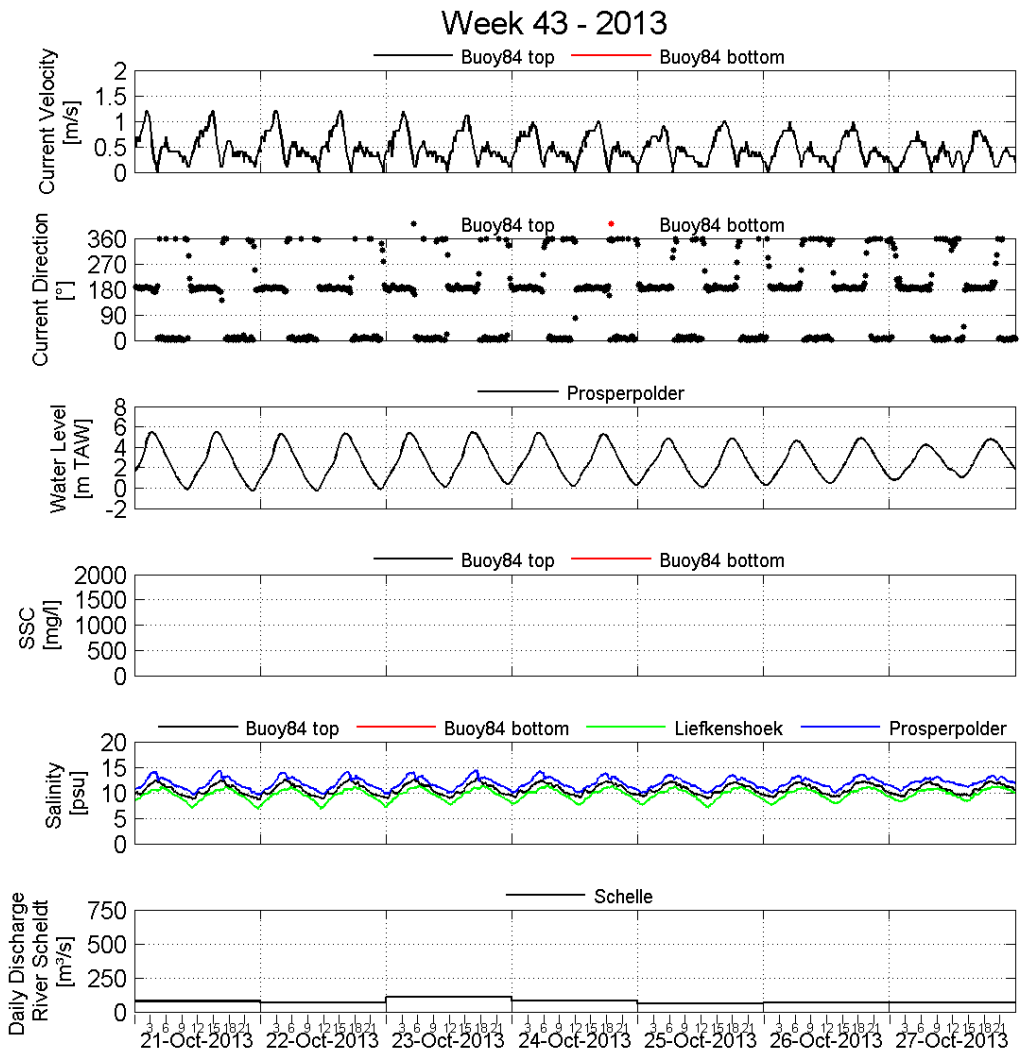
Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by:

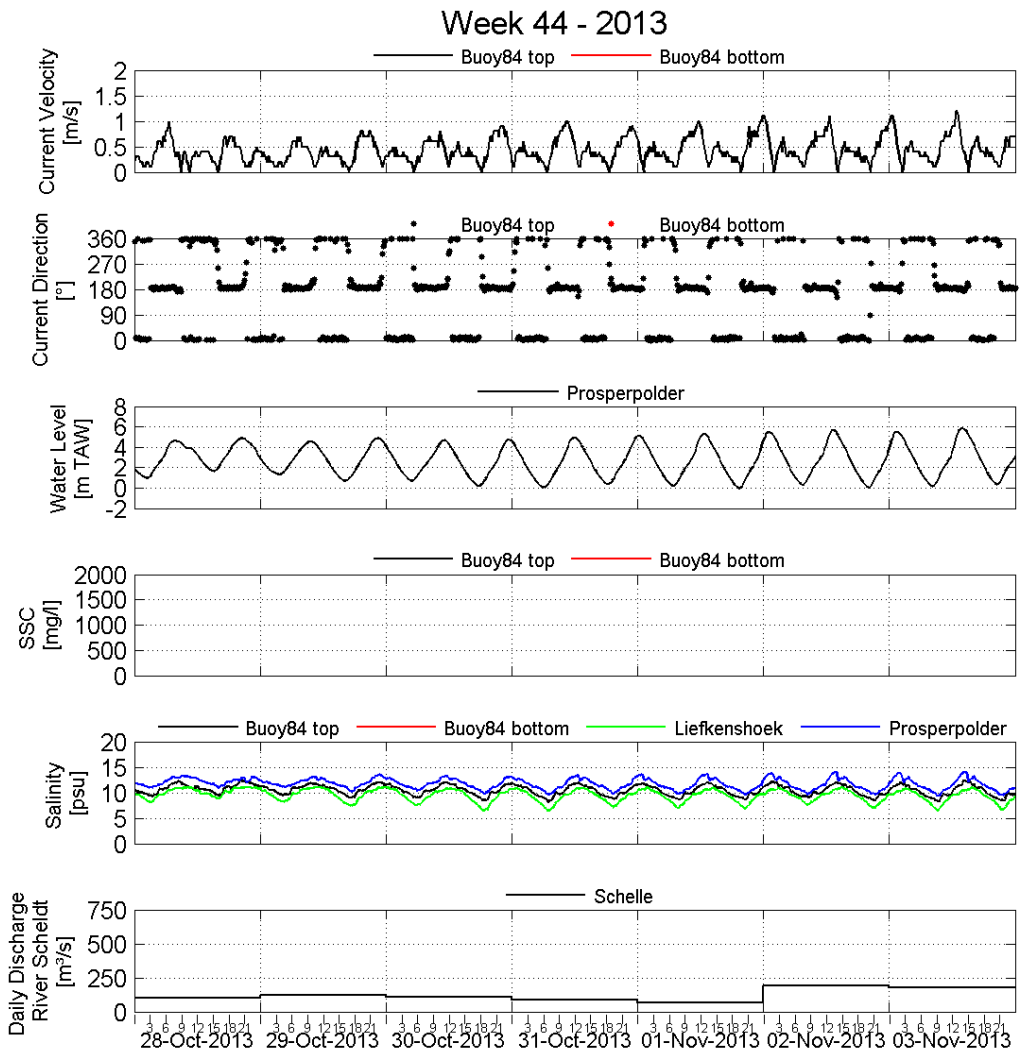
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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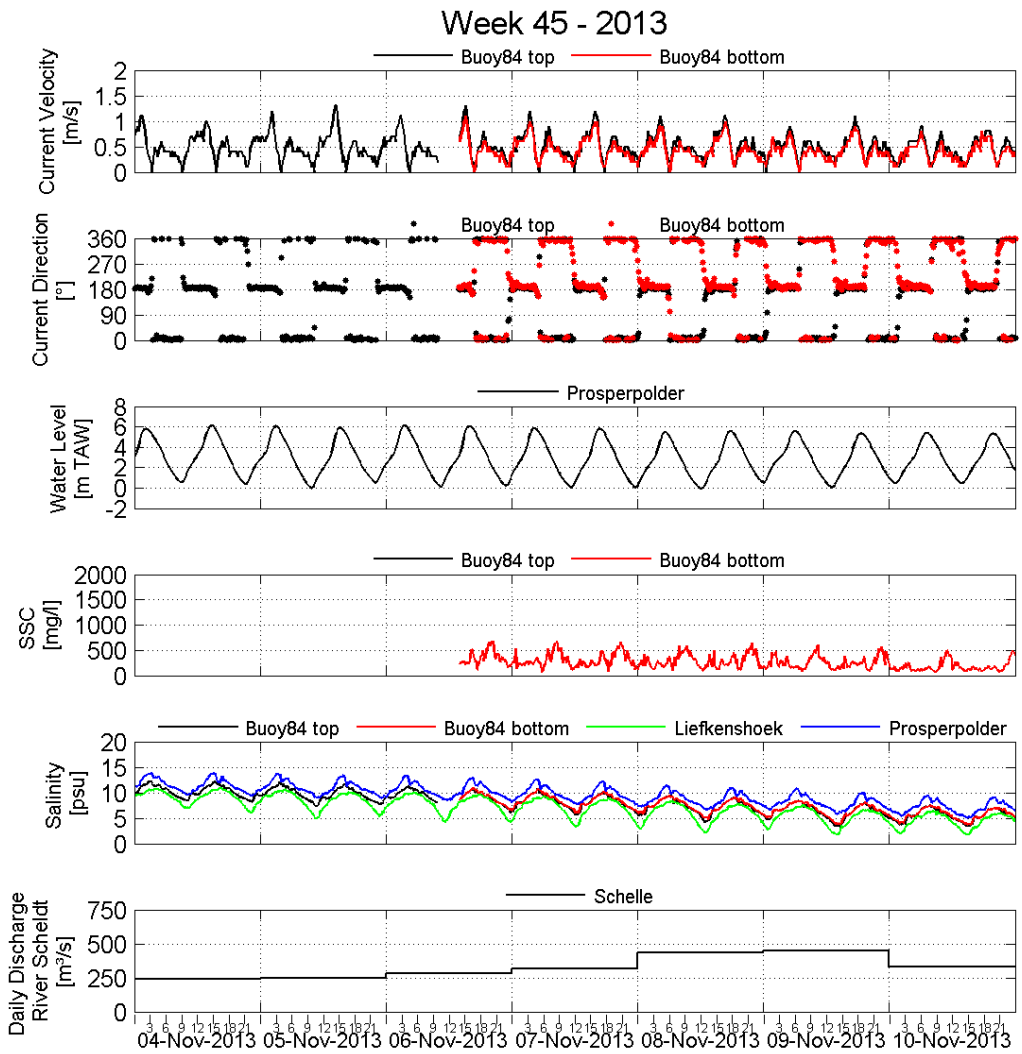
I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

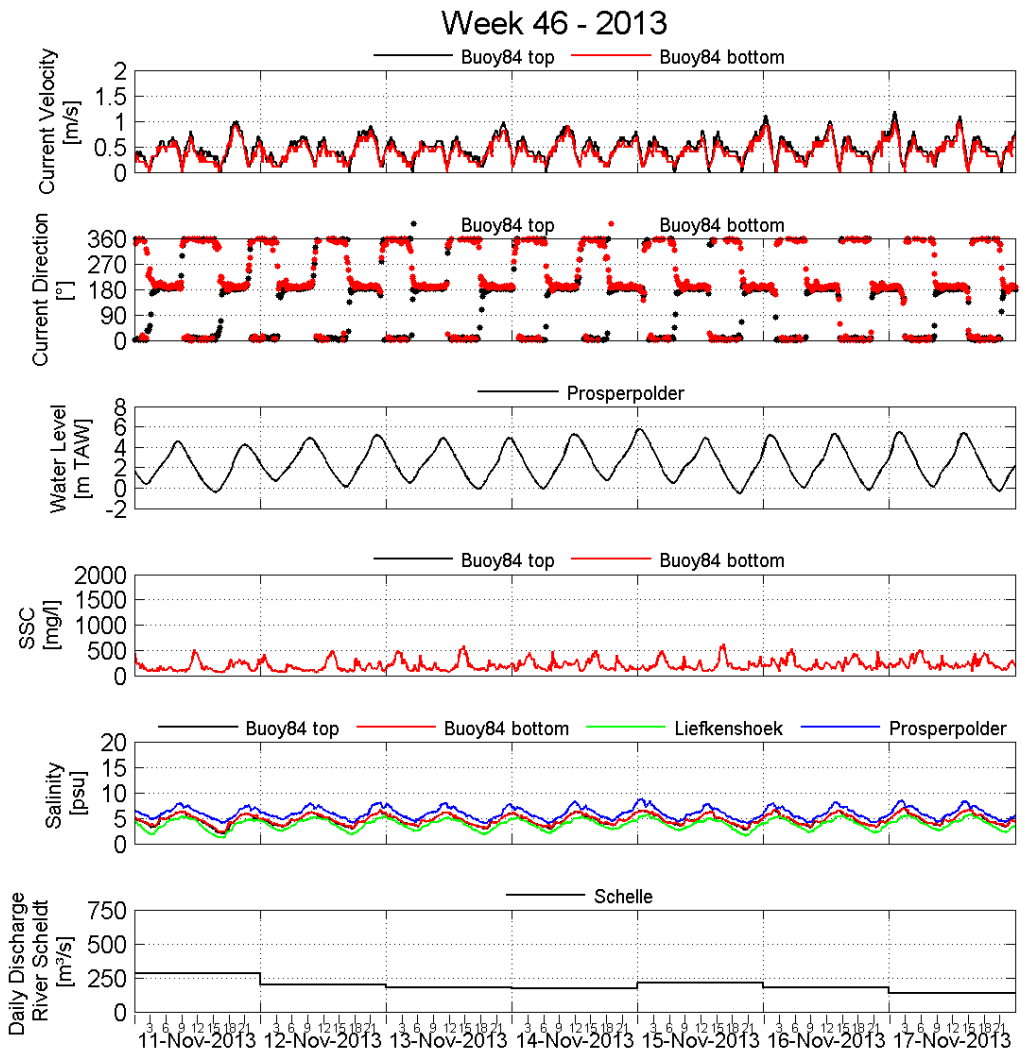
Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by:

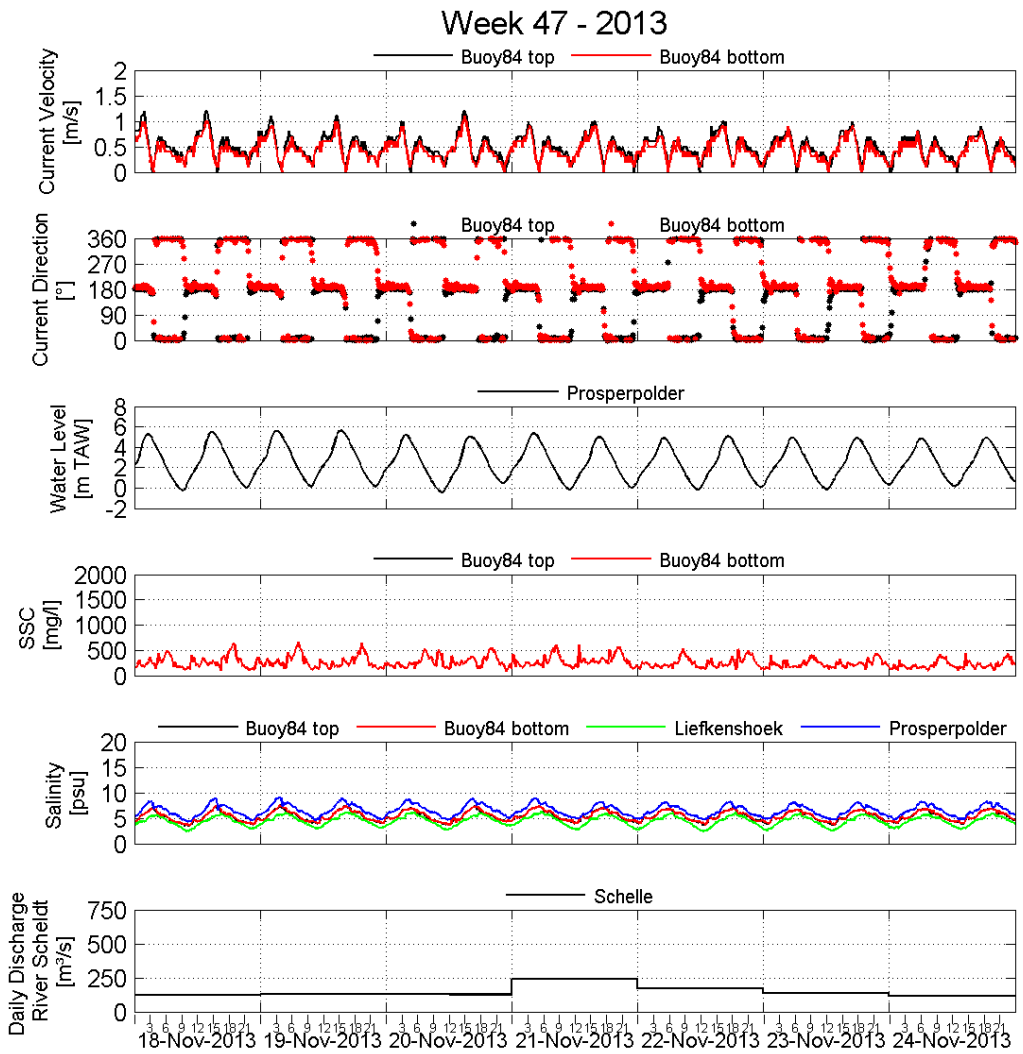
IMDC

In Association with:

Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

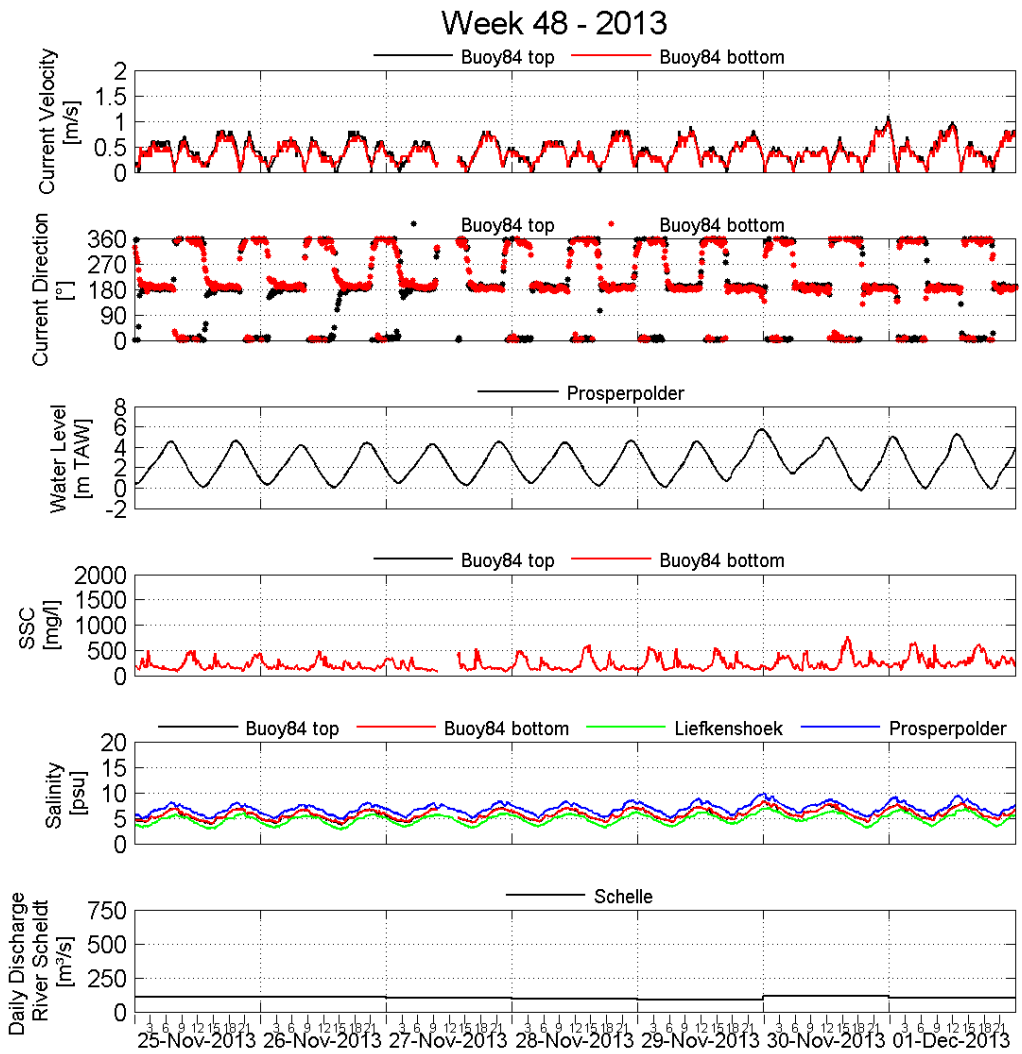
Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

I/RA/11406/13.146/JCA

11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

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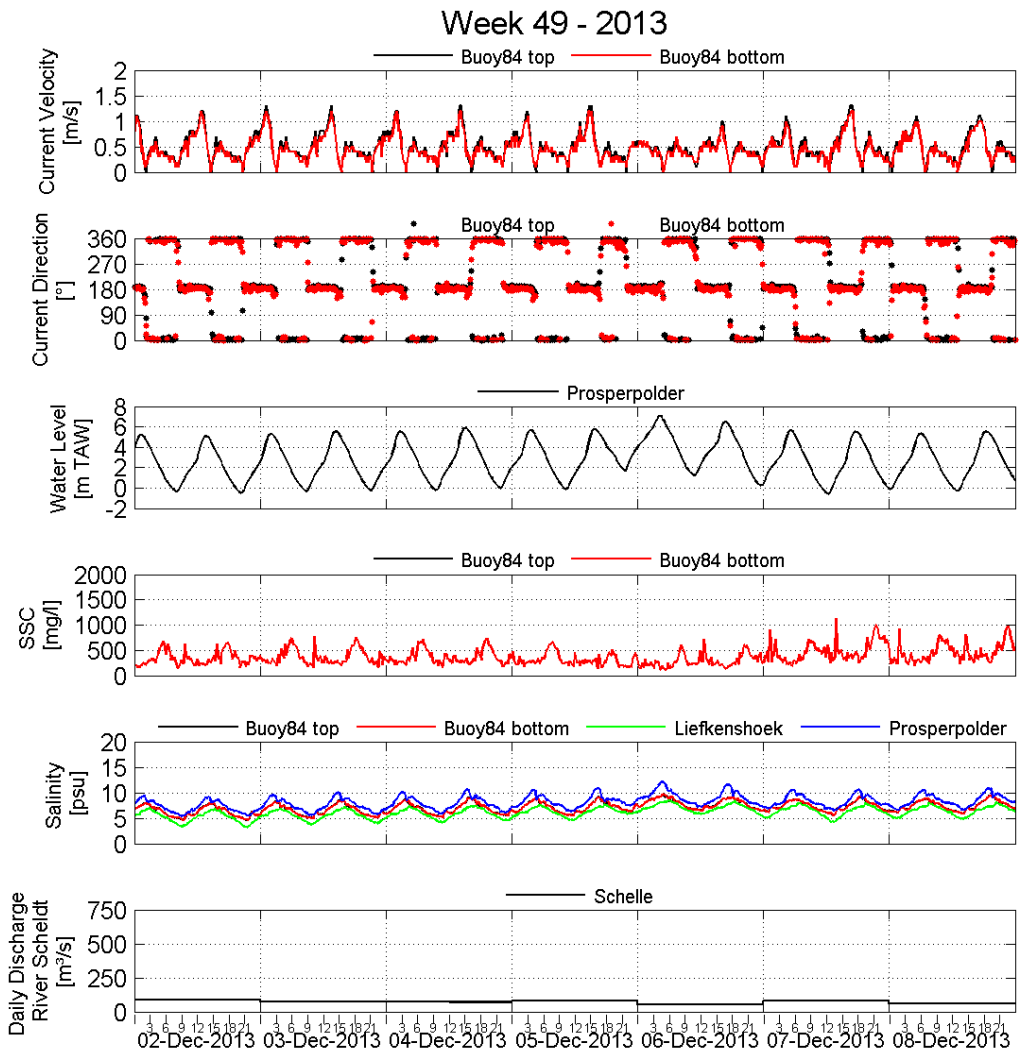
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

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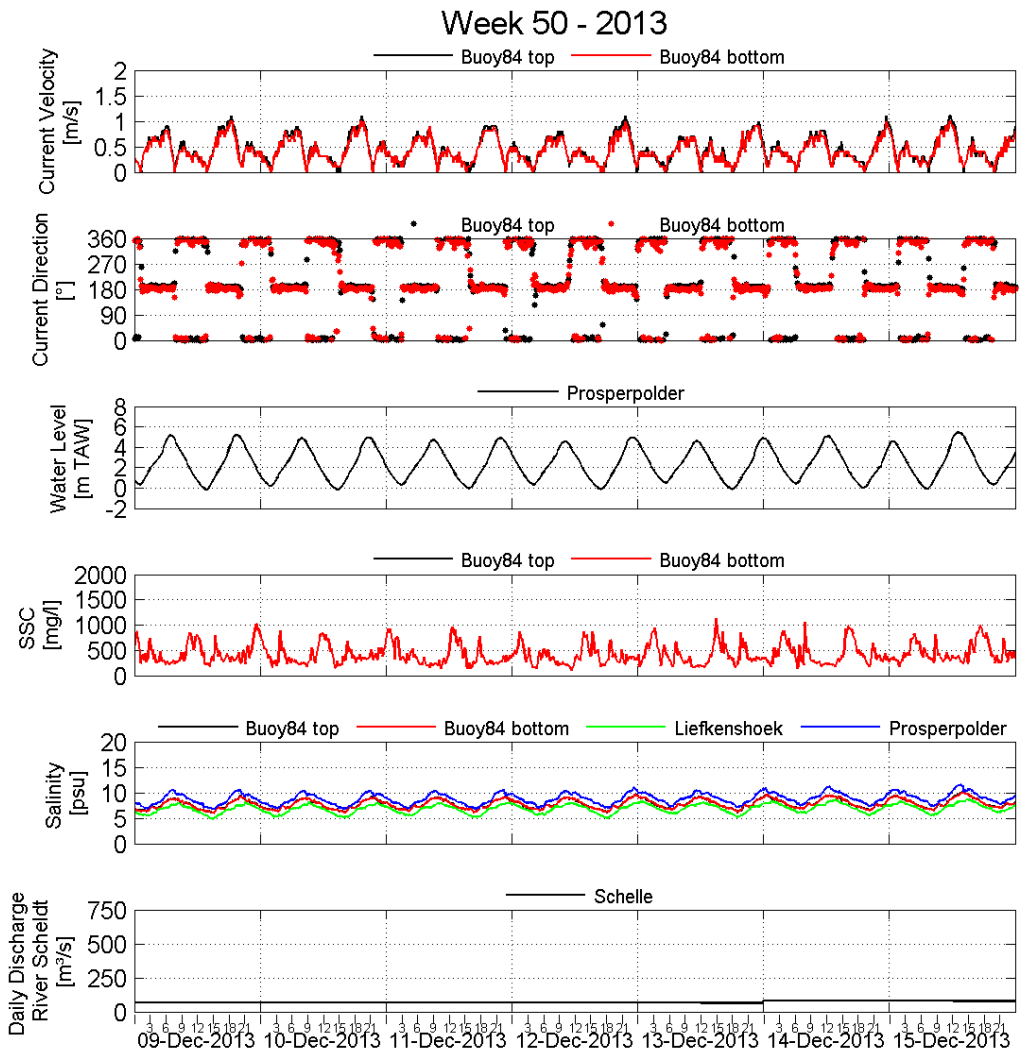
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by: IMDC

In Association with: Deltares

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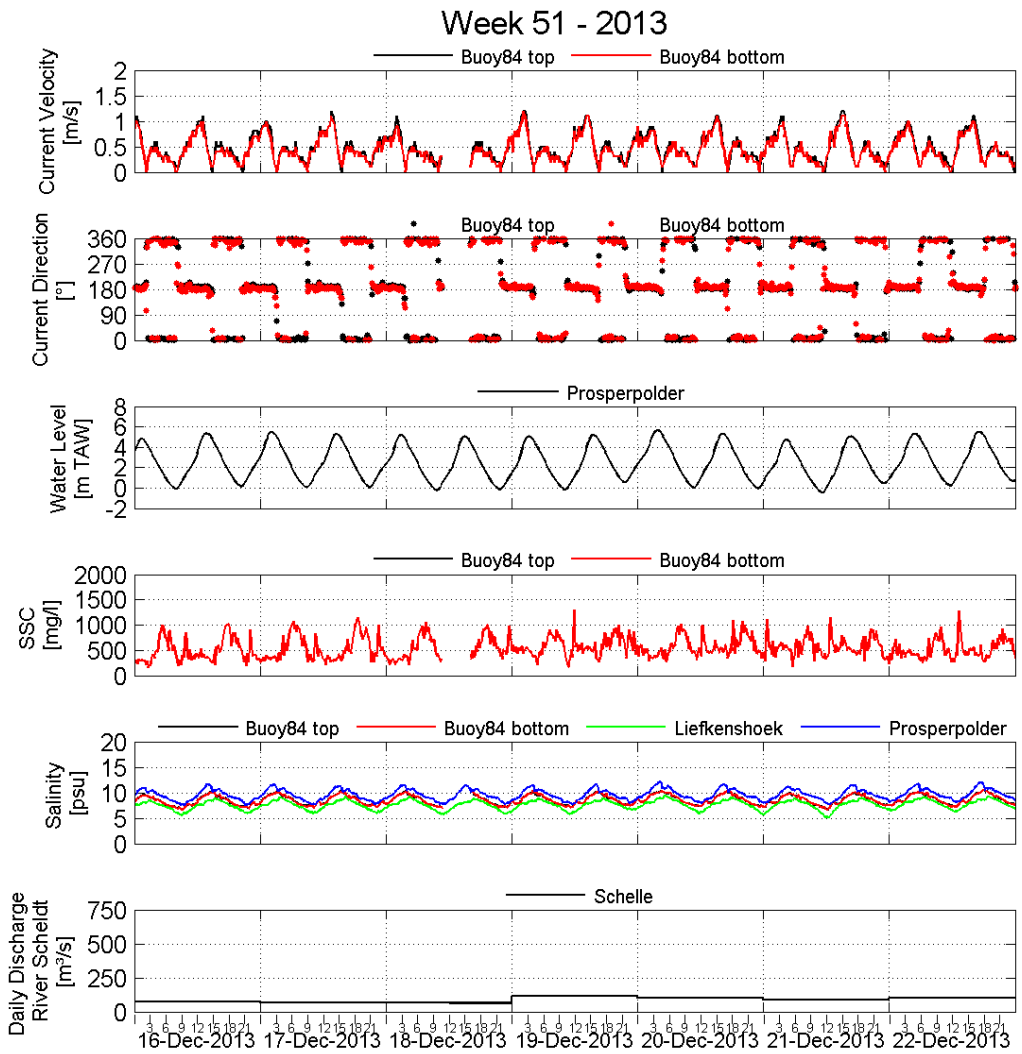
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by:

IMDC

In Association with:

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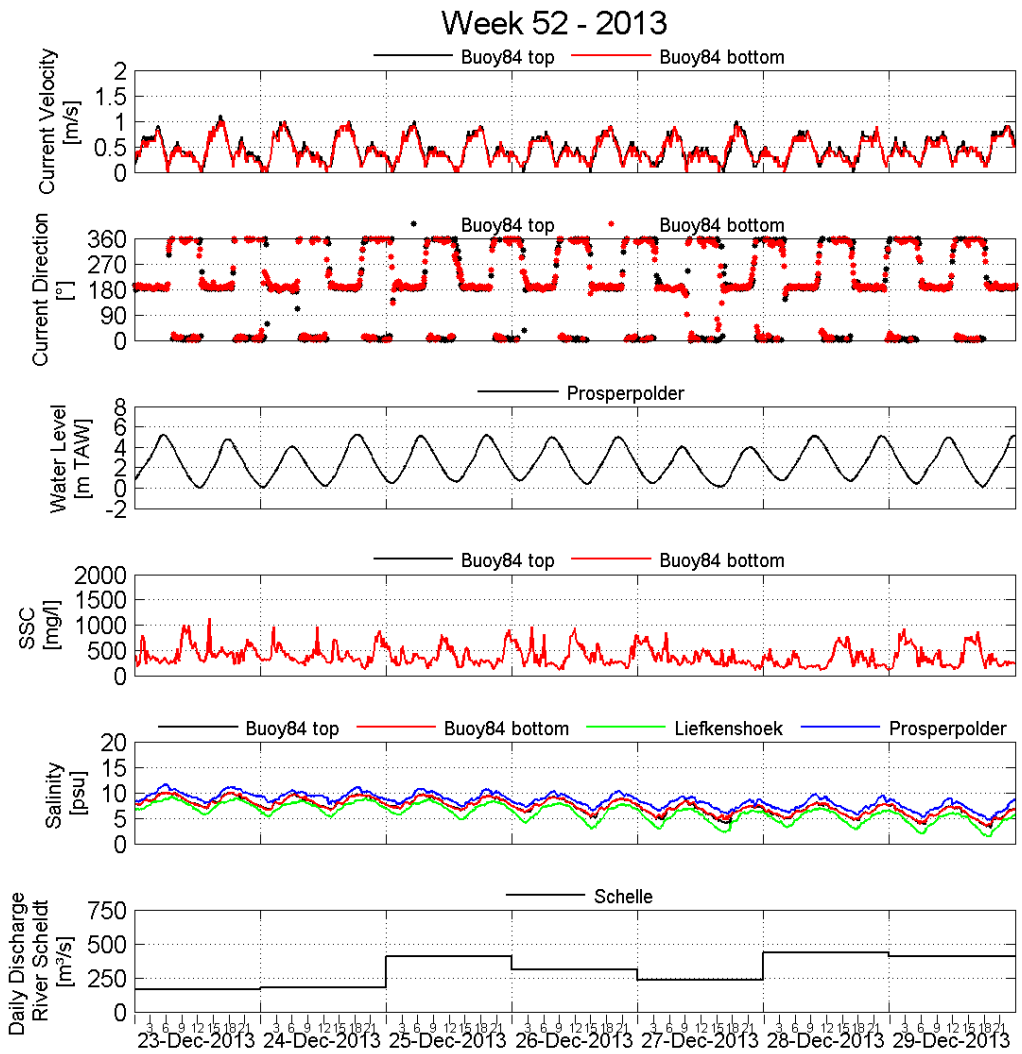
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by:

IMDC

In Association with:

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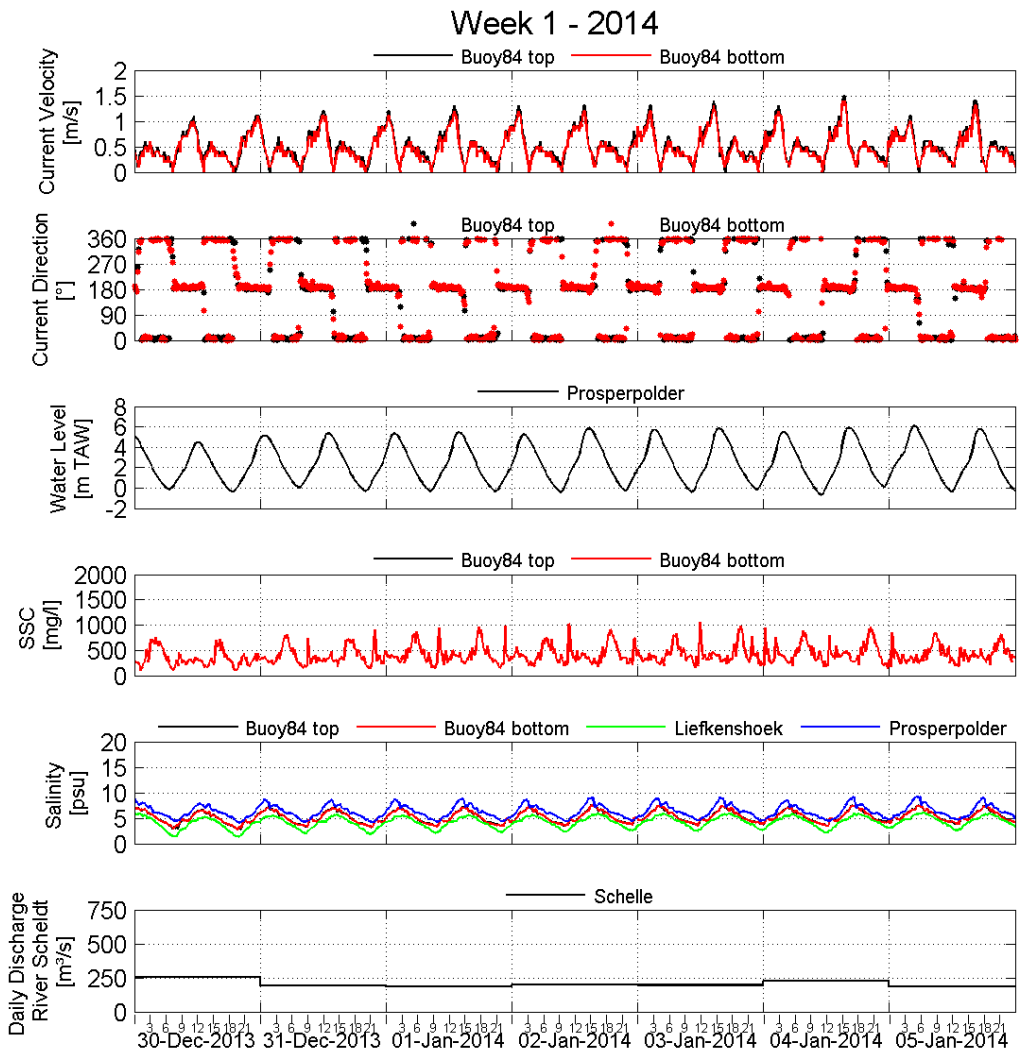
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

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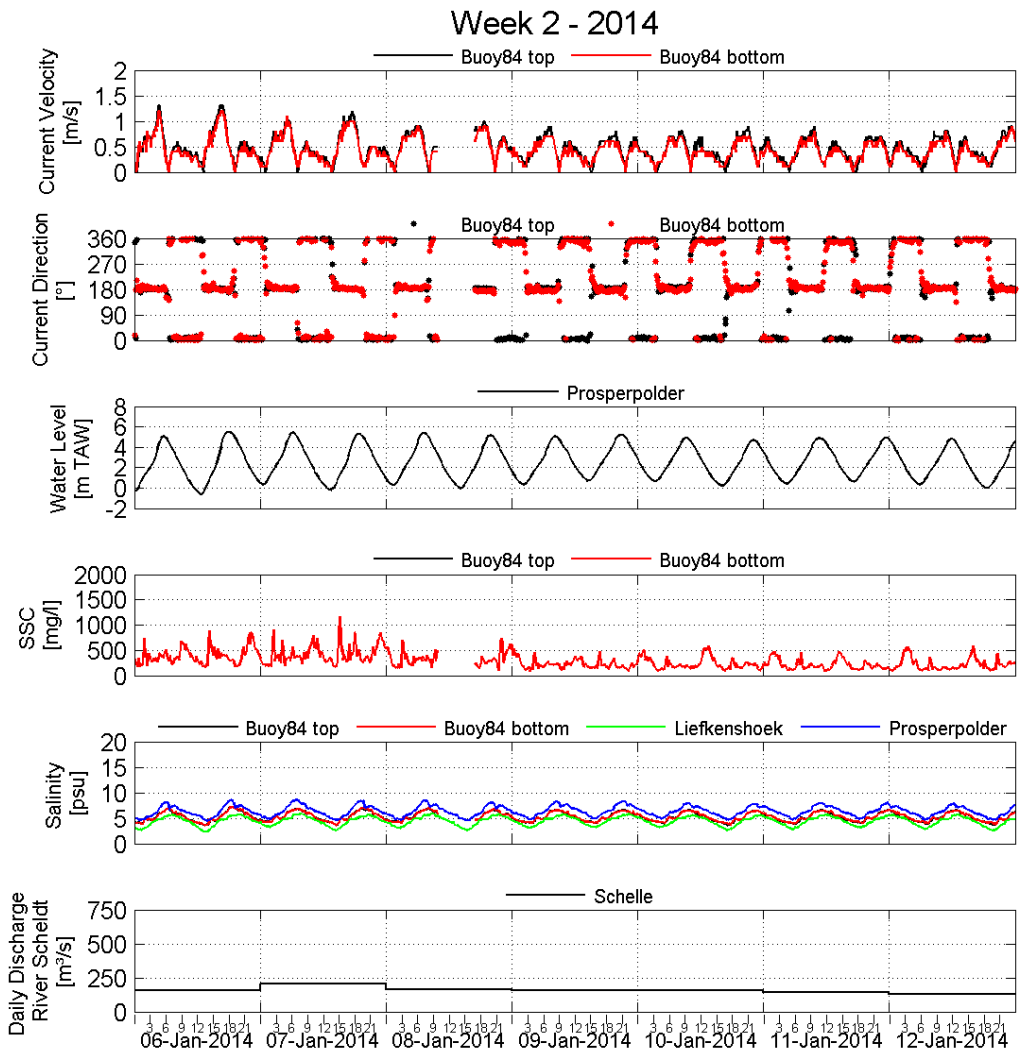
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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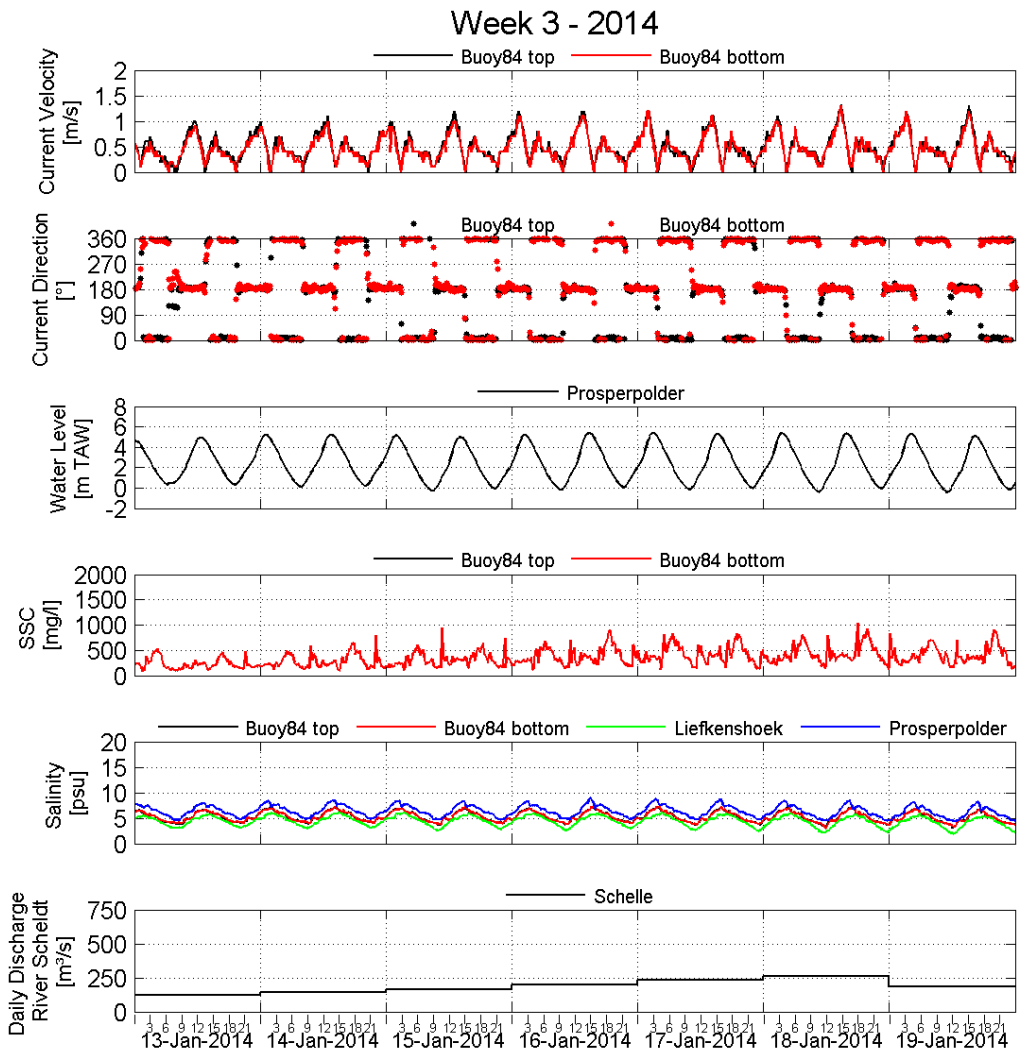
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

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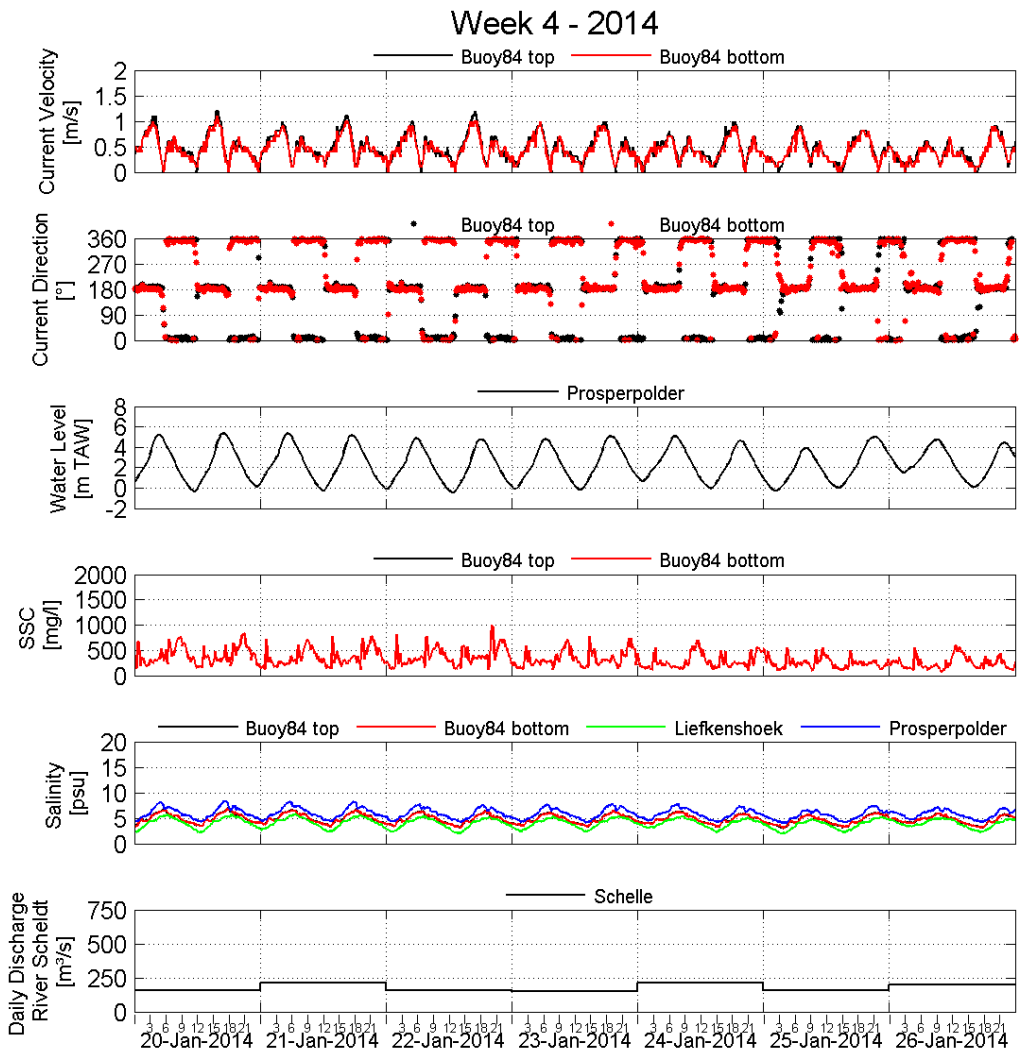
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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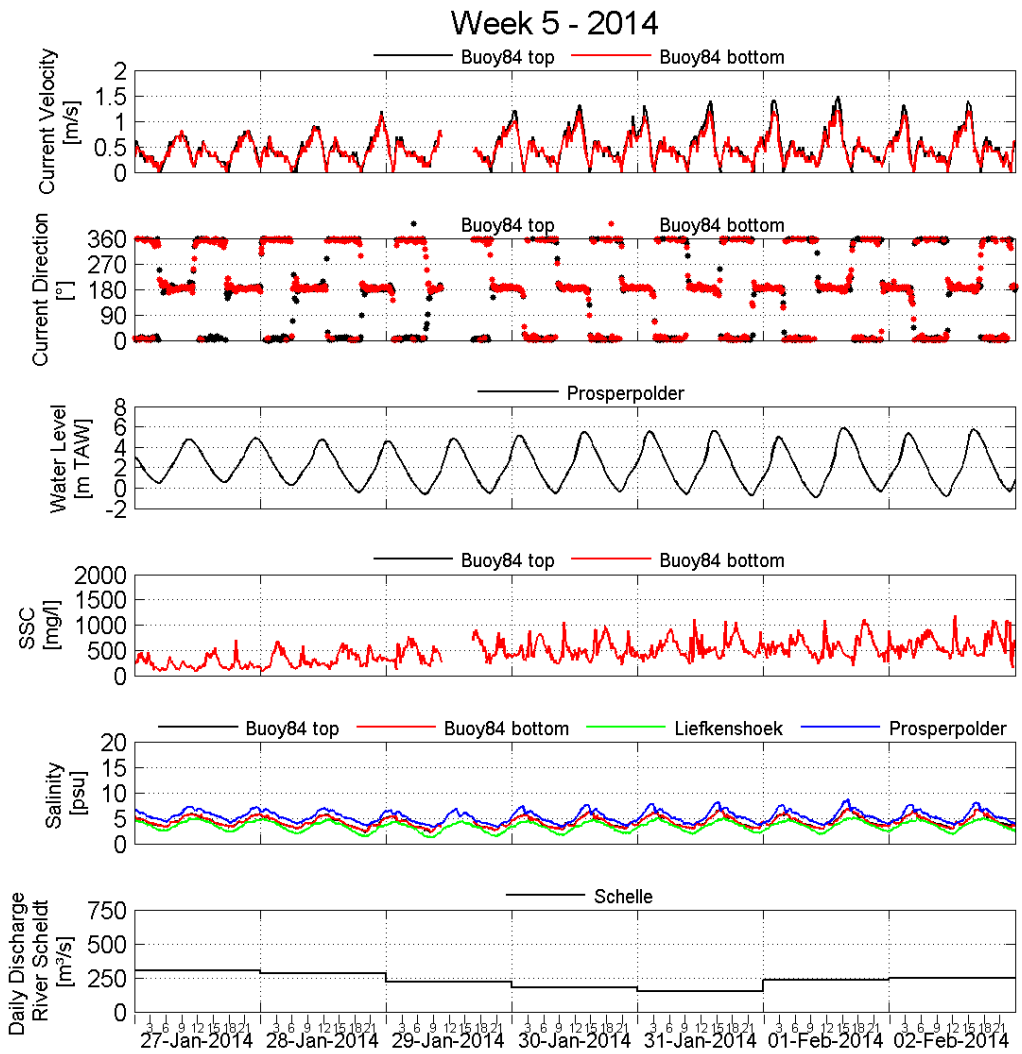

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

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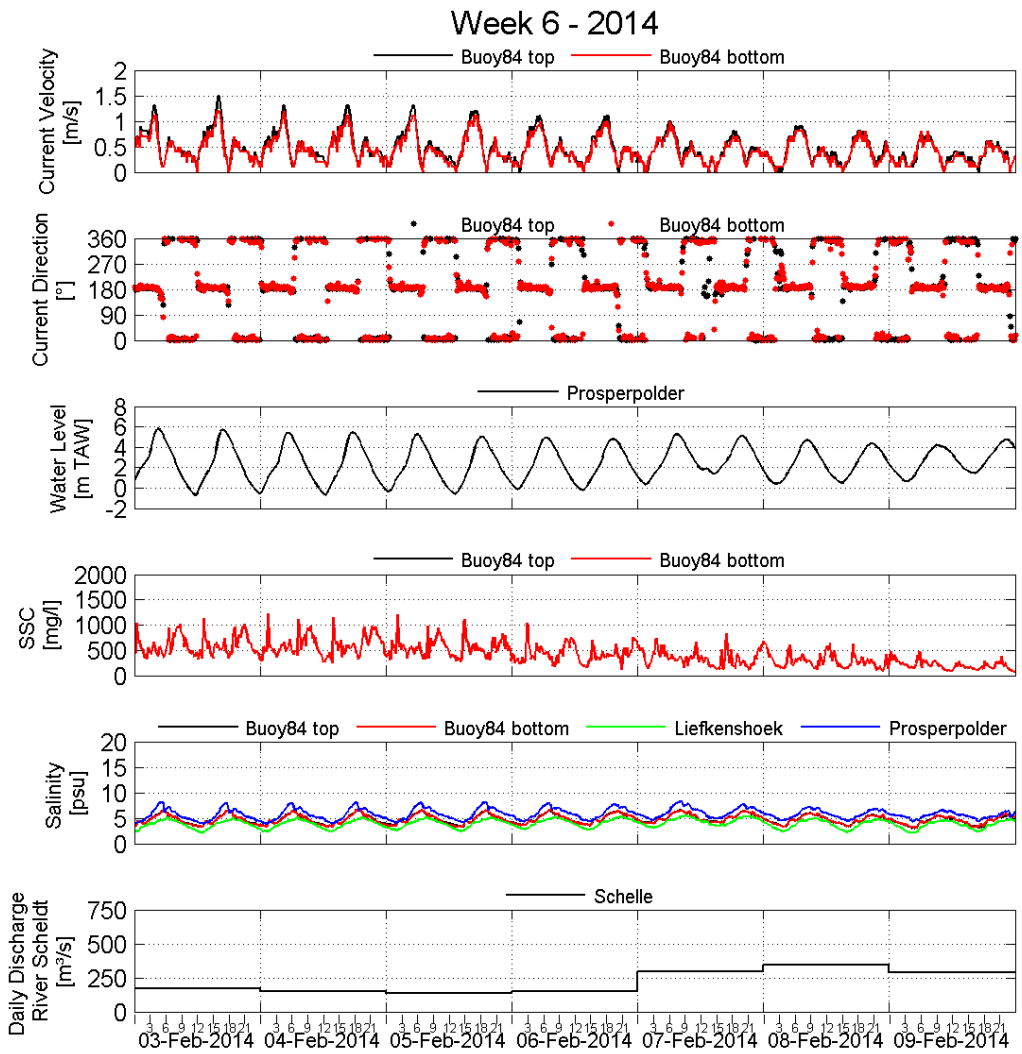

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

Processed by:

IMDC

In Association with:

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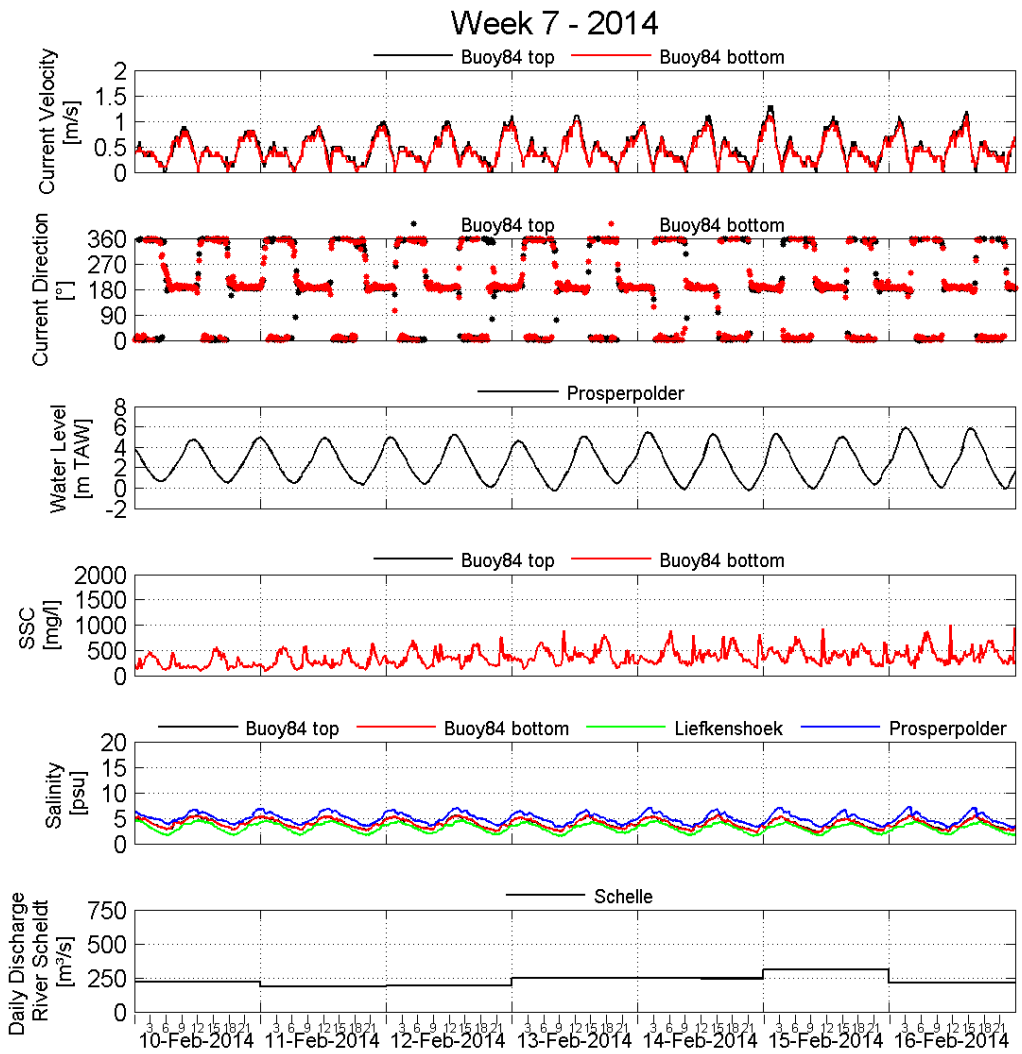
11406 - Boundary conditions report 01/04/2013 - 31/03/2014



Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

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Location:

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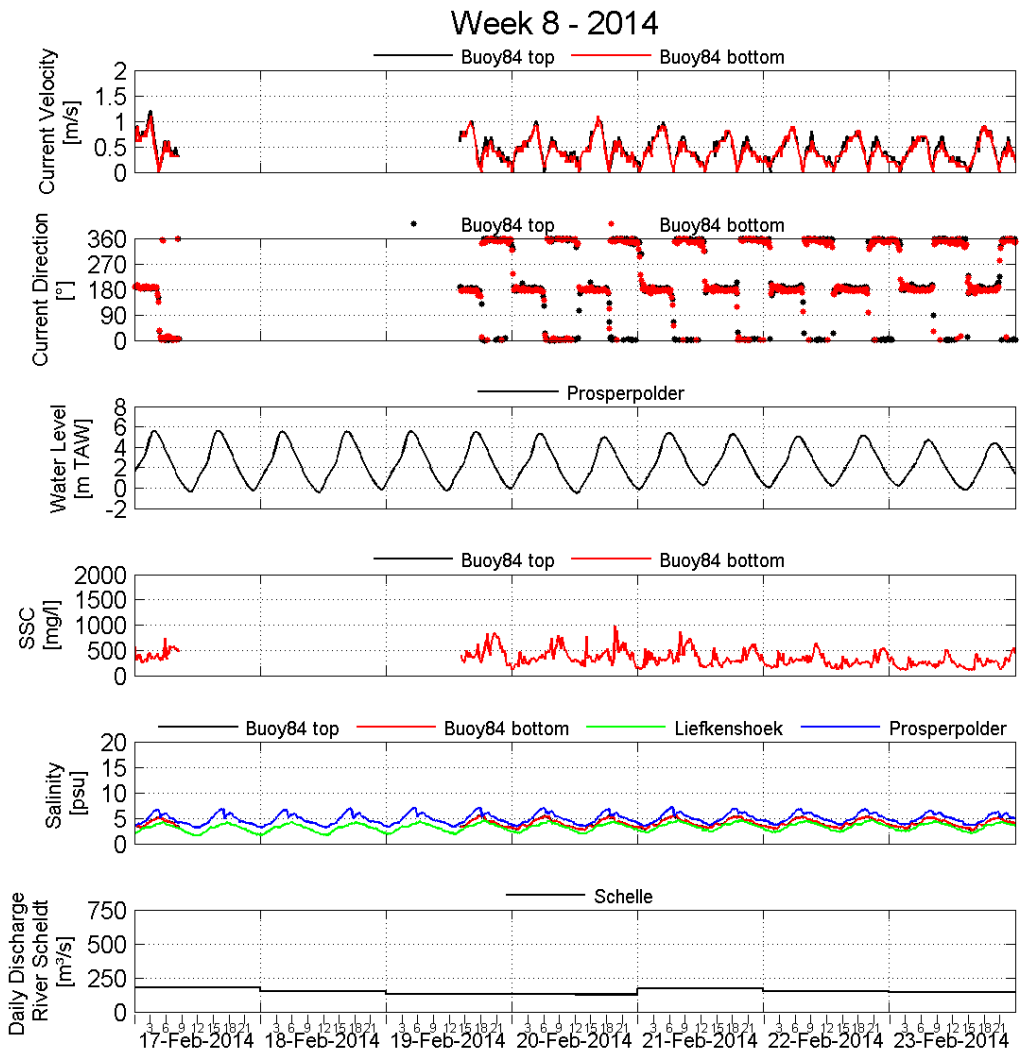

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

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Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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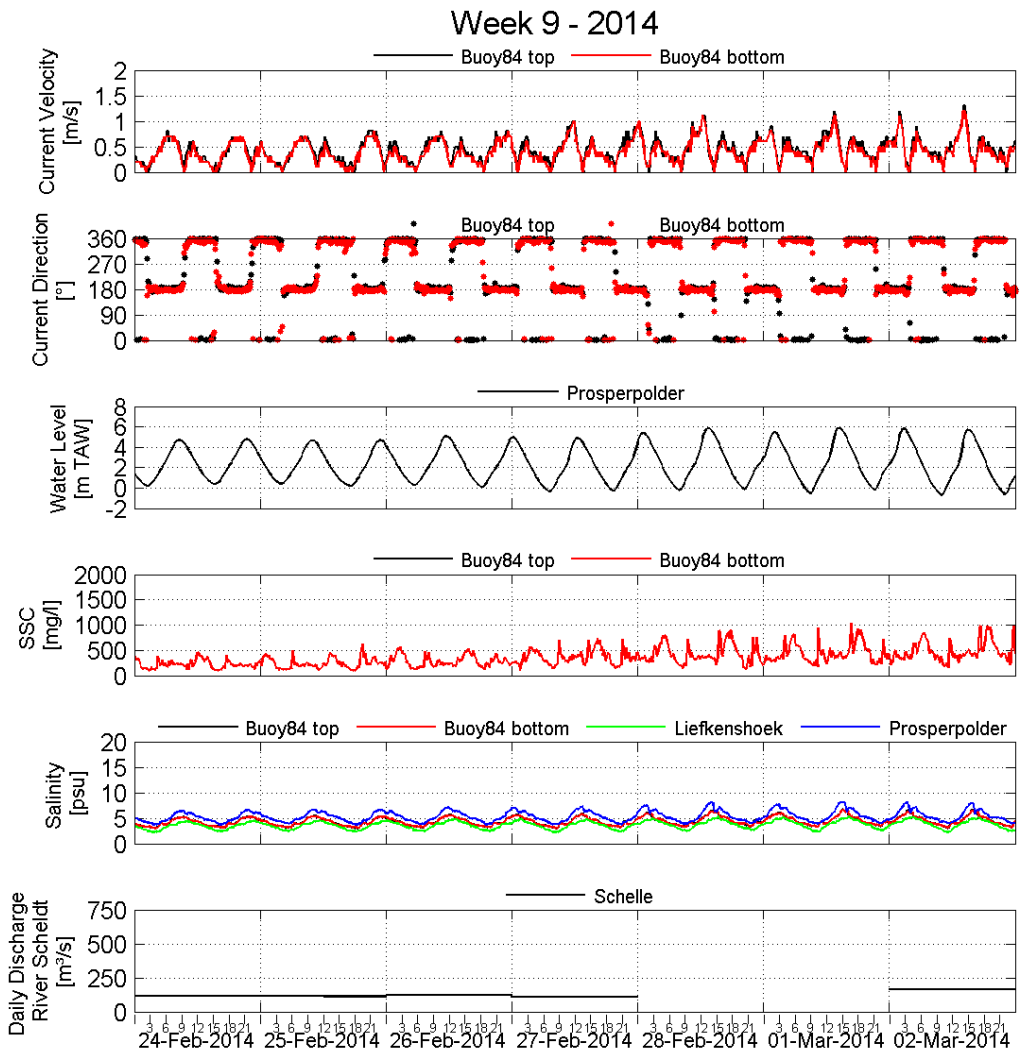

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

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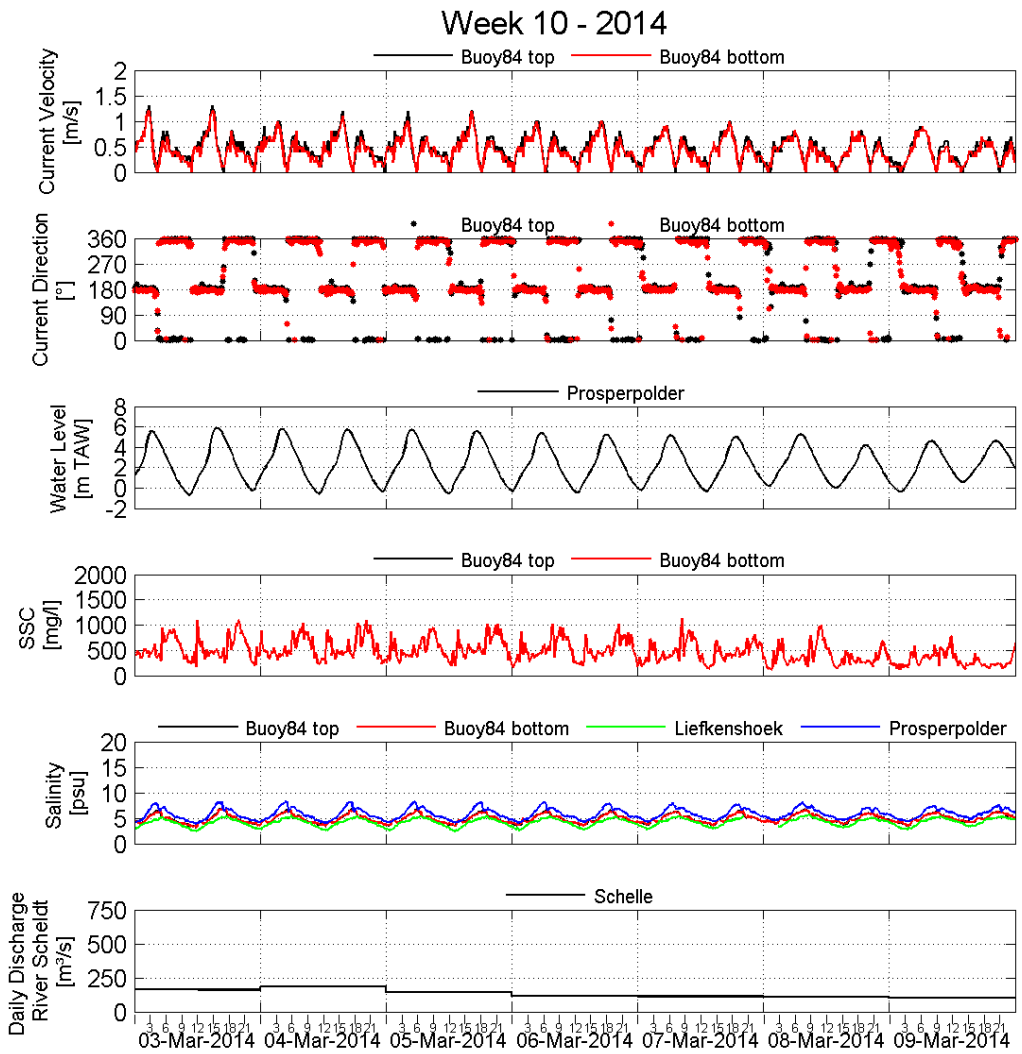

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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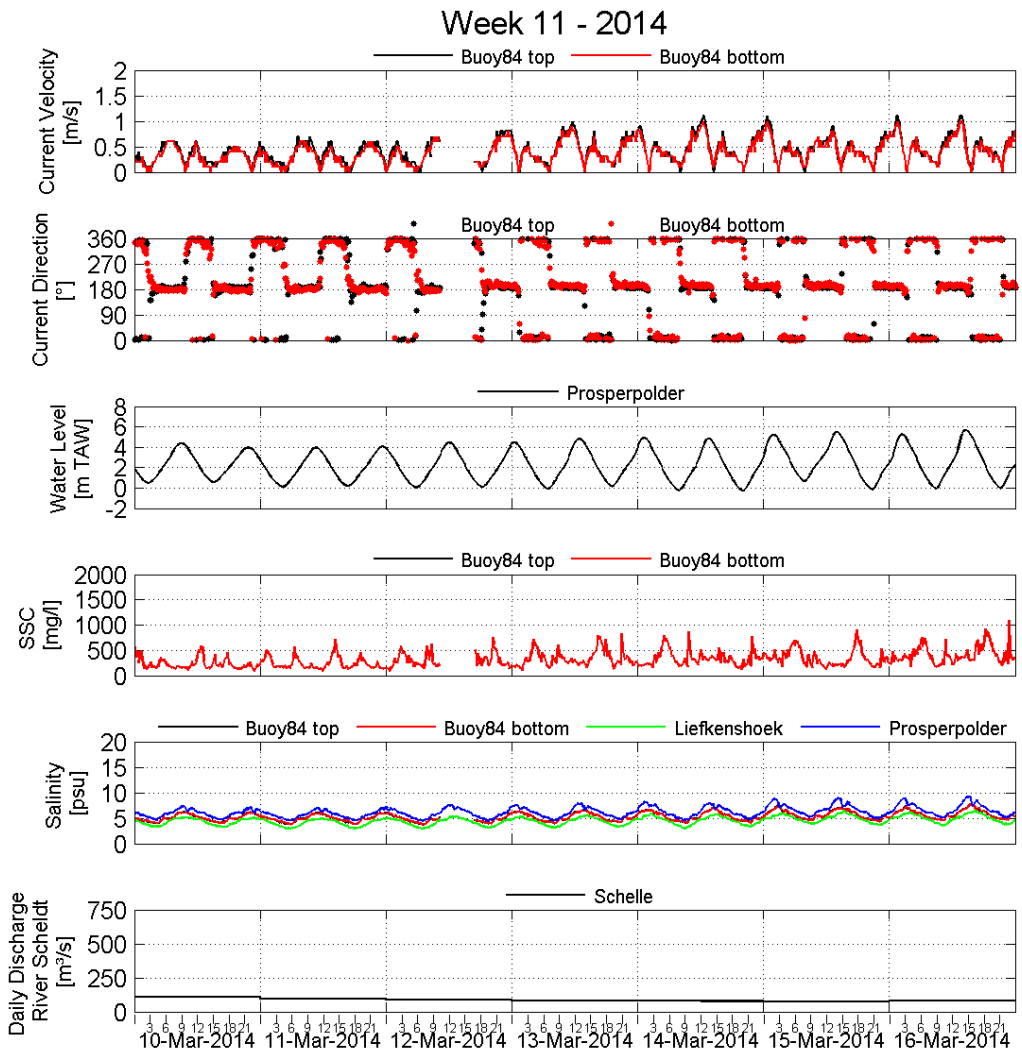

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

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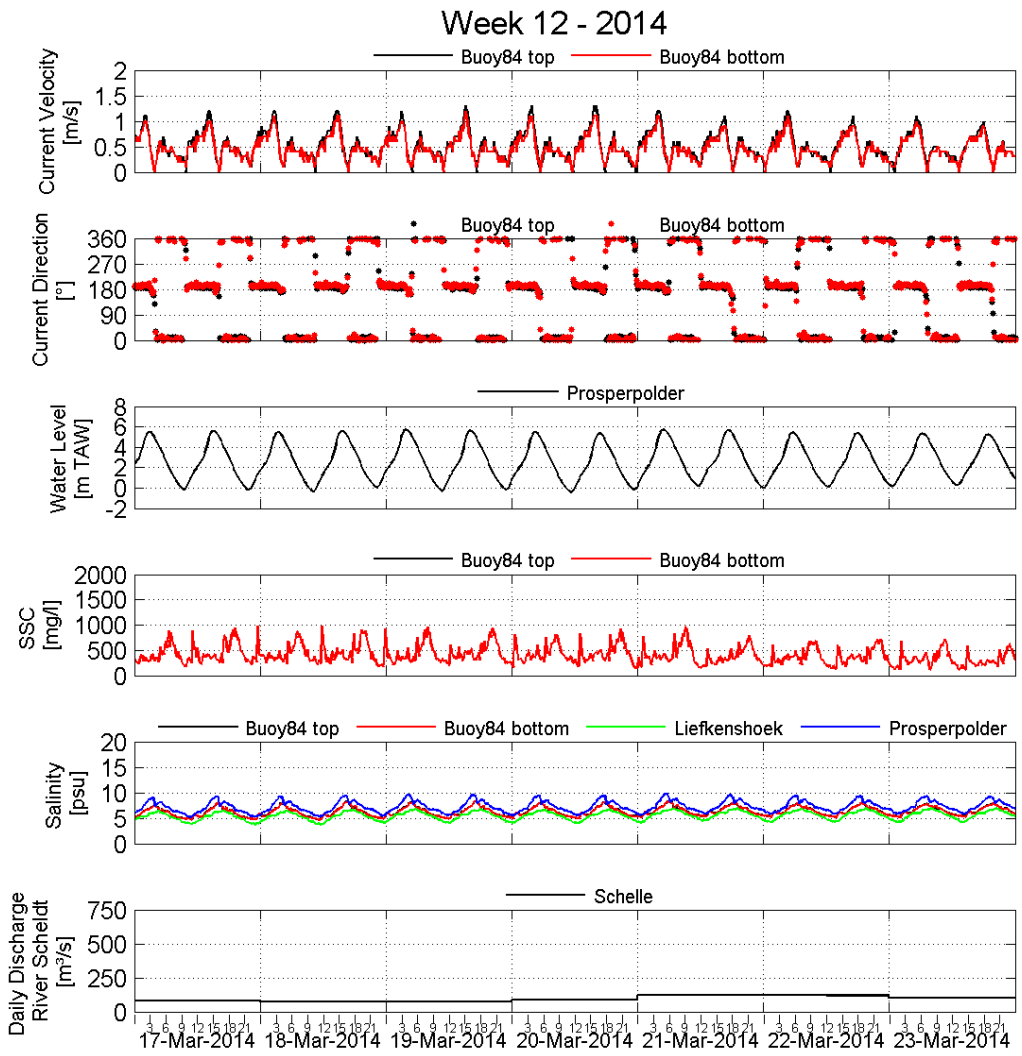

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

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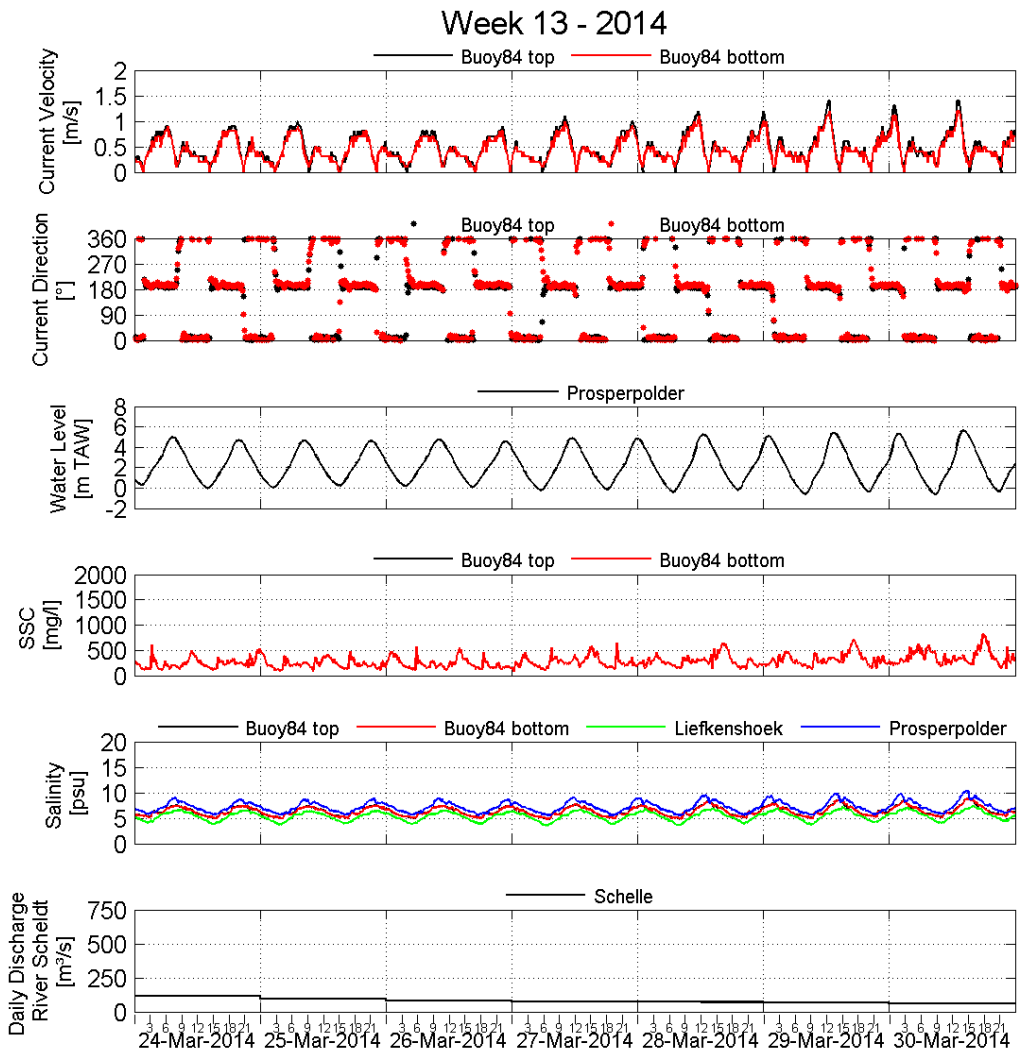

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Location:

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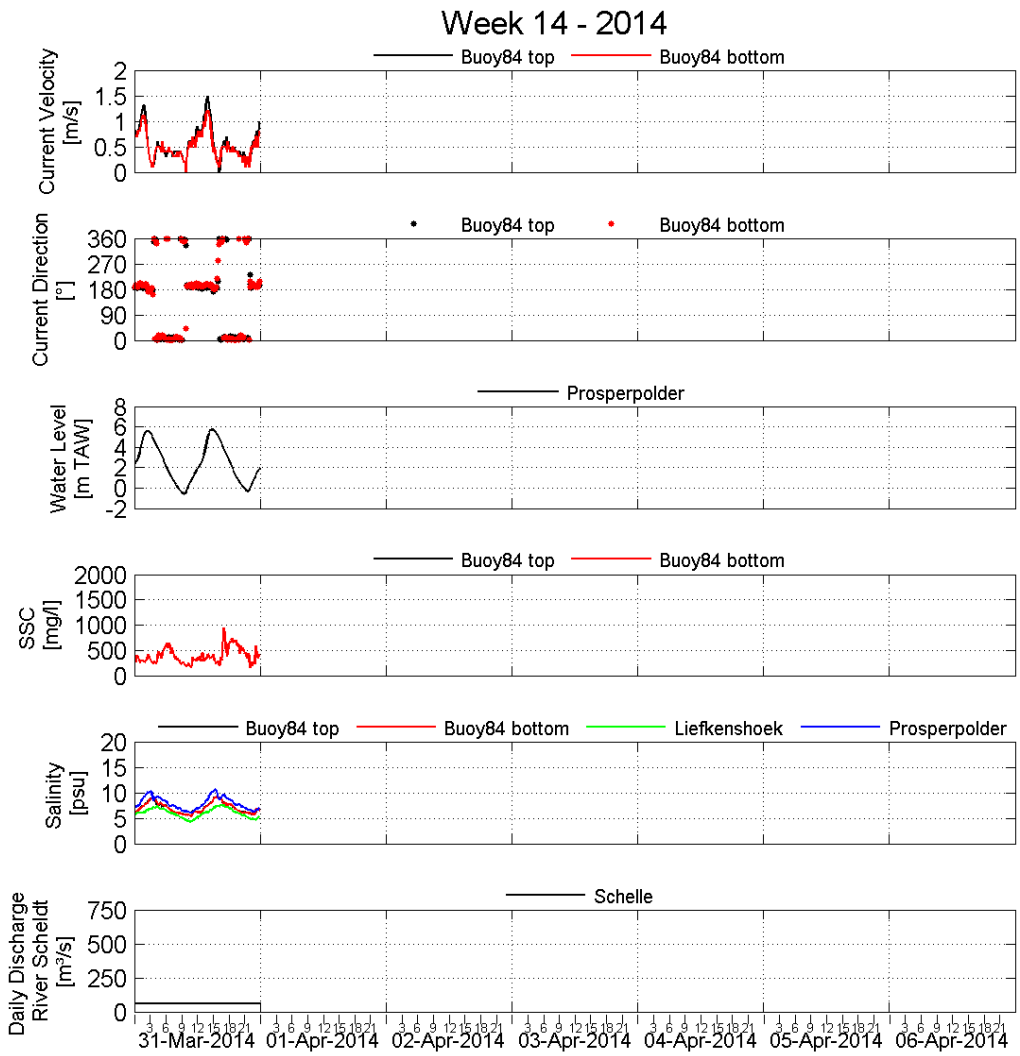

Week series of current velocity, direction, tide, suspended sediment concentration, salinity & discharge

Processed by: IMDC

Location:

Prosperpolder, Buoy84 (top & bottom) & Liefkenshoek

In Association with: Deltares

I/RA/11406/13.146/JCA

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B.2 Monthly results Minimum, Maximum and Average Velocity Magnitude, Temperature, Salinity & Suspended Sediment Concentration

Location: Oosterweel left bank

4.5 meter above bottom [-2.0 m TAW]

Velocity magnitude [m/s]			
Month	**Minimum**	**Maximum**	**Average**
April 2013	0.01	1.40	0.66
May 2013	0.00	1.29	0.65
June 2013	0.01	1.30	0.64
July 2013	0.00	1.37	0.63
August 2013	0.00	1.33	0.63
September 2013	0.01	1.38	0.63
October 2013	0.00	1.30	0.65
November 2013	0.01	1.34	0.63
December 2013	0.01	1.48	0.66
January 2014	0.00	1.40	0.65
February 2014	0.01	1.34	0.62
March 2014	0.01	1.61	0.66

Temperature [°C]			
Month	**Minimum**	**Maximum**	**Average**
April 2013	4.6	12.9	8.3
May 2013	11.6	15.3	13.8
June 2013	14.1	19	17.0
July 2013	18.2	23.9	21.1
August 2013	21.1	23.9	22.3
September 2013	16.5	21.9	19.3
October 2013	13.2	17.5	15.1
November 2013	7.1	14.4	10.3
December 2013	5.9	9.0	7.2
January 2014	5.5	7.9	7.1
February 2014	5.4	8.1	6.6
March 2014	7.4	11.1	9.3

-: No data or less than 30% of the monthly data available.
*: Less than 70% of the monthly data available.

Salinity [psu]						
Month	Minimum		Maximum		Average	
	HW	LW	HW	LW	HW	LW
April 2013	3.7	0.7	6.5	1.2	5.0	0.8
May 2013	5.3	0.6	7.0	1.4	6.3	1
June 2013	5	0.6	7.8	1.8	6.8	1.2
July 2013	6.3	1.0	8.6	2.7	7.3	1.7
August 2013	6.7	1.3	9.3	3.5	8.1	2.2
September 2013	8.5	1.7	10.4	4.6	9.4	2.6
October 2013	7.5	0.9	12.1	4.4	9.3	1.8
November 2013	2.1	0.3	8.8	1.4	4.5	0.5
December 2013	2.5	0.3	7.1	1.9	5.5	0.9
January 2014	1.9	0.3	4.1	0.6	3.4	0.4
February 2014	1.6	0.3	3.5	0.6	2.6	0.4
March 2014	2.9	0.5	5.6	1.0	4.2	0.7

Suspended sediment [mg/l]			
Month	Minimum	Maximum	Average
April 2013	19	839	297
May 2013	44	889	335
June 2013	50	818	328
July 2013	27	603	191
August 2013	36	396	155
September 2013	57	1009	396
October 2013	59	885	360
November 2013	71	850	305
December 2013	40	1330	563
January 2014	52	672	328
February 2014	62	754	329
March 2014	31	1044	380

-: No data or less than 30% of the monthly data available.
*: Less than 70% of the monthly data available.
**: Saturation value of the turbidity sensor.

Location: Oosterweel left bank

1.0 meter above bottom [-5.5 m TAW]

Velocity magnitude [m/s]			
Month	**Minimum**	**Maximum**	**Average**
April 2013	0.00	1.10	0.53
May 2013	0.00	1.10	0.52
June 2013	0.00	1.00	0.51
July 2013	0.00	1.10	0.51
August 2013	0.00	1.10	0.51
September 2013	0.00	1.10	0.50
October 2013	0.00	1.10	0.51
November 2013	0.00	1.10	0.51
December 2013	0.00	1.20	0.52
January 2014	0.00*	1.20*	0.52*
February 2014	0.00*	1.30*	0.64*
March 2014	0.00	1.60	0.56

Temperature [°C]			
Month	**Minimum**	**Maximum**	**Average**
April 2013	4.6	12.8	8.3
May 2013	11.6	15.2	13.8
June 2013	14.1	19	17.0
July 2013	18.2	23.9	21.1
August 2013	21.1	23.9	22.3
September 2013	16.5	21.8	19.3
October 2013	13.2	17.5	15.1
November 2013	7.1	14.4	10.3
December 2013	5.9	9.0	7.2
January 2014	5.5*	7.7*	6.8*
February 2014	6.0*	8.1*	7.0*
March 2014	7.4	11.1	9.3

-: No data or less than 30% of the monthly data available.
*: Less than 70% of the monthly data available.

Salinity [psu]						
Month	Minimum		Maximum		Average	
	HW	LW	HW	LW	HW	LW
April 2013	3.8	0.7	6.4	1.3	5.0	0.9
May 2013	5.3	0.7	7.1	1.5	6.4	1.1
June 2013	5.0	0.7	7.8	2.1	6.8	1.3
July 2013	6.3	1.1	8.7	3.0	7.3	1.8
August 2013	6.7	1.3	9.2	3.8	8.2	2.3
September 2013	8.5	1.6	10.5	4.8	9.5	2.8
October 2013	7.6	1	12.1	4.4	9.4	1.9
November 2013	2.1	0.3	8.7	1.5	4.6	0.6
December 2013	2.7	0.3	7.2	2.1	5.6	1.1
January 2014	2.1*	0.4*	4*	0.8*	3.3*	0.5*
February 2014	2.0*	0.3*	3.5*	0.5*	2.6*	0.4*
March 2014	3.0	0.5	5.8	1.2	4.3	0.8

Suspended sediment [mg/l]			
Month	Minimum	Maximum	Average
April 2013	25	1192	332
May 2013	56	1140	388
June 2013	59	1353	379
July 2013	32	750	213
August 2013	50	572	175
September 2013	95	1304	451
October 2013	103	1055	415
November 2013	82	1086	337
December 2013	67	1572	627
January 2014	92*	1299*	371*
February 2014	81*	846*	329*
March 2014	45	1523	415

-: No data or less than 30% of the monthly data available.
*: Less than 70% of the monthly data available.
**: Saturation value of the turbidity sensor.

Location: Liefkenshoek[1]

2.0 meter above bottom [-1.5 m TAW]

Temperature [°C]			
Month	**Minimum**	**Maximum**	**Average**
April 2013	4.4	12.6	8.1
May 2013	11.4	14.9	13.7
June 2013	14.0	18.9	16.9
July 2013	18.2	23.9	21.2
August 2013	21.4*	24.1*	22.5*
September 2013	17.3	22.3	19.7
October 2013	14.0	18.0	16.0
November 2013	8.5	14.9	11.3
December 2013	7.0	10.1	8.0
January 2014	6.1	8.6	7.6
February 2014	6.0	8.9	7.1
March 2014	7.7	11.5	9.7

[1] Current velocity and suspended sediment were not measured at Liefkenshoek.

Salinity [psu]						
Month	**Minimum**		**Maximum**		**Average**	
	HW	**LW**	**HW**	**LW**	**HW**	**LW**
April 2013	4.8	4.0	7.4	6.1	6.1	5.0
May 2013	6.6	5.0	8.4	6.8	7.5	6.1
June 2013	6.7	5.4	9.4	7.5	8.2	6.6
July 2013	8.0	6.3	9.8	8.2	8.7	7.2
August 2013	8.4*	6.7*	10.7*	9.0*	9.5*	7.9*
September 2013	10.4	7.7	11.9	10.4	11.2	9.1
October 2013	10.0	6.4	13.8	11.8	11.6	9.0
November 2013	4.5	1.4	10.5	8.2	6.5	3.8
December 2013	4.5	1.7	8.8	7.0	7.4	5.1
January 2014	3.7	1.4	5.8	3.6	5.0	2.8
February 2014	3.4	1.8	5.0	4.3	4.1	2.5
March 2014	4.2	2.5	6.6	5.0	5.6	3.9

-: No data or less than 30% of the monthly data available.
*: Less than 70% of the monthly data available.

Location: Buoy 84

3.3 meter above bottom [-6.0 m TAW]

Velocity magnitude [m/s]			
Month	**Minimum**	**Maximum**	**Average**
April 2013	0.00	1.50	0.51
May 2013	0.00	1.40	0.50
June 2013	0.00	1.40	0.48
July 2013	0.00-	1.40-	0.52-
August 2013	0.00	1.40	0.49
September 2013	0.00	1.40	0.50
October 2013	0.00	1.40	0.47
November 2013	0.00	1.30	0.46
December 2013	0.00	1.30	0.46
January 2014	0.00	1.50	0.48
February 2014	0.00	1.50	0.45
March 2014	0.00	1.50	0.47

Temperature [°C]			
Month	**Minimum**	**Maximum**	**Average**
April 2013	4.2	11.9	7.9
May 2013	11.1	14.7	13.5
June 2013	14.0	18.6	16.5
July 2013	-	-	-
August 2013	21.2	24.0	22.3
September 2013	17.3	21.9	19.6
October 2013	14.1	17.7	15.9
November 2013	8.9	14.7	11.3
December 2013	7.2	9.6	7.9
January 2014	6.5	8.9	7.6
February 2014	6.4	8.5	7.1
March 2014	7.5	11.5	9.5

-: No data or less than 30% of the monthly data available.
*: Less than 70% of the monthly data available.

Salinity [psu]						
Month	**Minimum**		**Maximum**		**Average**	
	HW	**LW**	**HW**	**LW**	**HW**	**LW**
April 2013	6.7	4.8	9.6	6.7	8.0	5.5
May 2013	8.5	6.1	10.2	7.4	9.4	6.9
June 2013	8.4	5.7	10.9	8.3	9.8	7.2
July 2013	-	-	-	-	-	-
August 2013	-	-	-	-	-	-
September 2013	12.5 *	9.2 *	13.2 *	10.6 *	12.8 *	10.1 *
October 2013	11.6	8.7	15	12.7	13	10.3
November 2013	5.7	2.3	12	9.3	8.0	5.0
December 2013	6.6	3.4	10.4	7.8	9.0	6.3
January 2014	5.3	2.8	7.3	4.4	6.6	3.9
February 2014	4.8	2.5	6.7	4.4	5.7	3.3
March 2014	5.8	3.4	8.9	6.0	7.2	4.7

Suspended sediment [mg/l]			
Month	**Minimum**	**Maximum**	**Average**
April 2013	50	953	241
May 2013	48	862	194
June 2013	27	579	134
July 2013	-	-	-
August 2013	22	367	95
September 2013	22	434	101
October 2013	-	-	-
November 2013	-	-	-
December 2013	-	-	-
January 2014	-	-	-
February 2014	-	-	-
March 2014	-	-	-

-: No data or less than 30% of the monthly data available.
*: Less than 70% of the monthly data available.
**: Saturation value of the turbidity sensor.

Location: Buoy 84

0.8 meter above bottom [-8.0 m TAW]

Velocity magnitude [m/s]			
Month	**Minimum**	**Maximum**	**Average**
April 2013	0.00	1.20	0.44
May 2013	0.00	1.20	0.42
June 2013	0.00	1.10	0.41
July 2013	0.00	1.20	0.40
August 2013	0.00	1.30	0.42
September 2013	0.00	1.30	0.43
October 2013	0.00*	1.20*	0.45 *
November 2013	0.00	1.10	0.41
December 2013	0.00	1.20	0.43
January 2014	0.00	1.40	0.44
February 2014	0.00	1.20	0.41
March 2014	0.00	1.20	0.43

Temperature [°C]			
Month	**Minimum**	**Maximum**	**Average**
April 2013	4.2	11.9	7.93
May 2013	11.1	14.8	13.49
June 2013	14	18.7	16.52
July 2013	18	23.6	20.91
August 2013	21.2	23.9	22.23
September 2013	17.3	21.9	19.59
October 2013	14.9 *	17.7 *	16.7 *
November 2013	8.9	13.2	10.75
December 2013	7.2	9.6	7.94
January 2014	6.5	8.7	7.55
February 2014	6.4	8.4	7.09
March 2014	7.5	11.3	9.53

-: No data or less than 30% of the monthly data available.
*: Less than 70% of the monthly data available.

Salinity [psu]						
Month	Minimum		Maximum		Average	
	HW	LW	HW	LW	HW	LW
April 2013	6.6	4.6	9.6	6.7	7.9	5.5
May 2013	8.5	6.2	10.2	7.6	9.5	7.0
June 2013	8.4	6.1	10.9	8.5	9.8	7.3
July 2013	9.1	7.1	11.4	8.9	9.8	7.7
August 2013	9.7	7.8	12.2	9.9	11.0	8.7
September 2013	11.7	9.3	13.4	11.0	12.7	10.2
October 2013	12.3 *	9.4 *	15.0 *	12.7 *	14.0*	11.4 *
November 2013	5.8	3.1	10.8	7.4	7.1	4.5
December 2013	6.5	3.0	10.5	7.7	9.0	6.3
January 2014	5.3	3.0	7.4	4.5	6.6	4.0
February 2014	4.8	2.5	6.6	4.4	5.6	3.4
March 2014	5.7	3.5	9.1	6.1	7.1	4.8

Suspended sediment [mg/l]			
Month	Minimum	Maximum	Average
April 2013	53	1167	316
May 2013	59	987	268
June 2013	38	855	192
July 2013	36	618	136
August 2013	30	593	140
September 2013	28	937	189
October 2013	45	677	211
November 2013	56	768	230
December 2013	97	1299	416
January 2014	69	1163	349
February 2014	71	1221	377
March 2014	82	1132	372

-: No data or less than 30% of the monthly data available.
*: Less than 70% of the monthly data available.
**: Saturation value of the turbidity sensor.

Location: Prosperpolder[2]

2.5 meter above bottom [-1.5 m TAW]

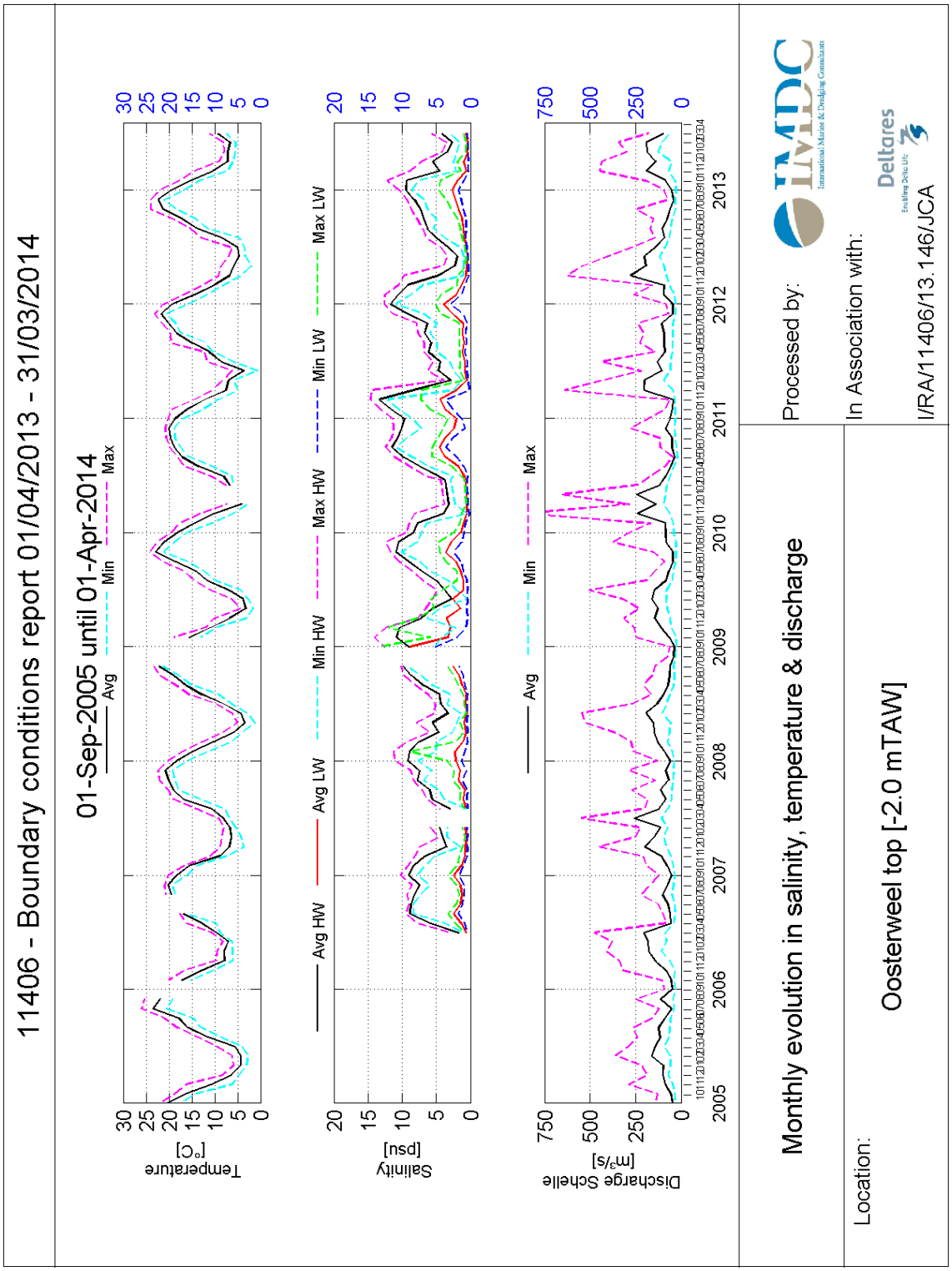
Temperature [°C]			
Month	**Minimum**	**Maximum**	**Average**
April 2013	4.1	12.2	7.8
May 2013	10.8	14.8	13.4
June 2013	13.9	18.8	16.6
July 2013	17.7	23.7	21.0
August 2013	21	24.2	22.1
September 2013	16.9	21.9	19.5
October 2013	13.9	18.6	15.8
November 2013	8.8	14.7	11.3
December 2013	7.0	10.3	7.9
January 2014	6.3	9.1	7.5
February 2014	6.2	8.7	7.1
March 2014	7.2	11.6	9.5

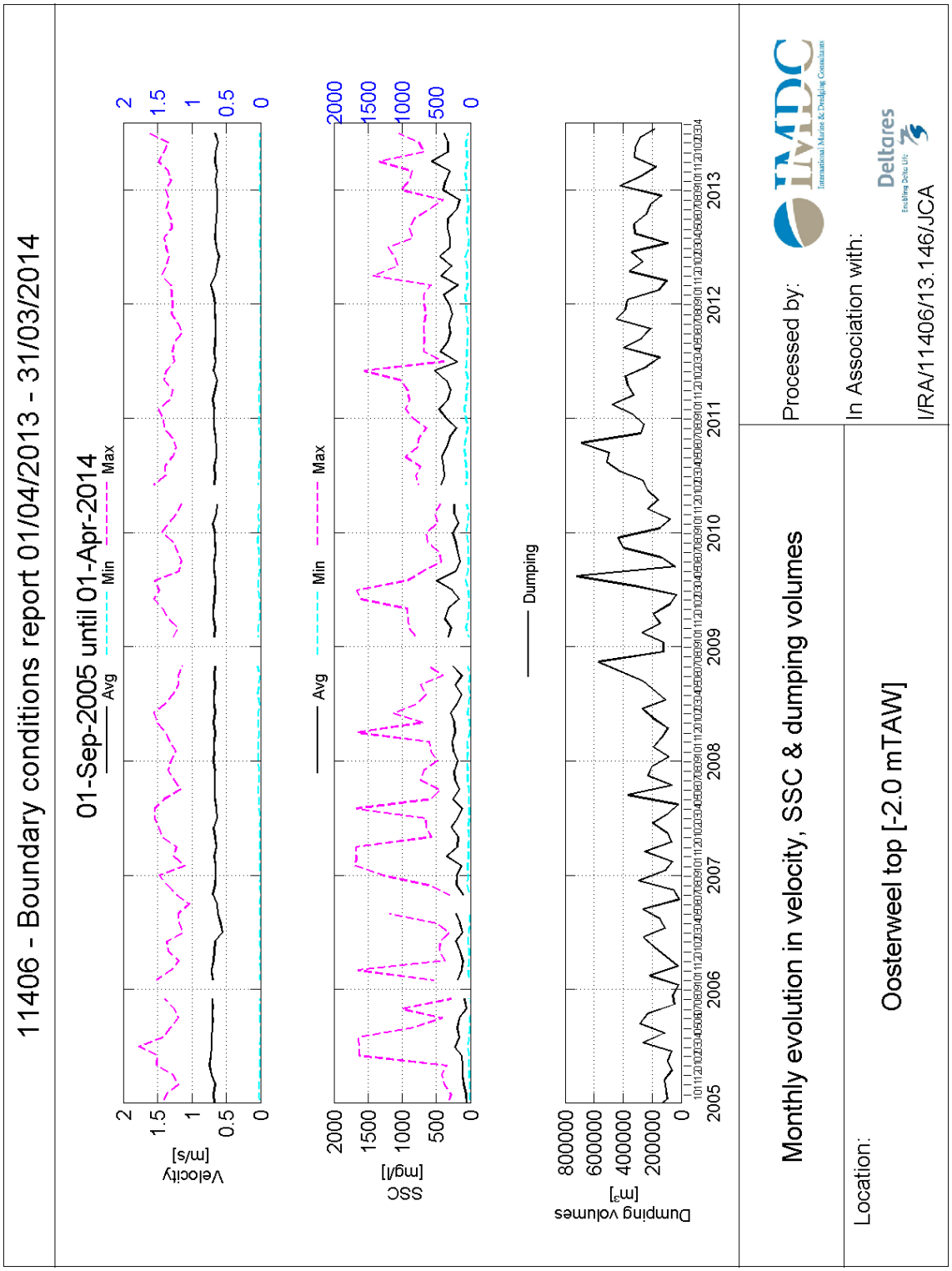
[2] Current velocity and suspended sediment were not measured at Prosperpolder.

Salinity [psu]						
Month	**Minimum**		**Maximum**		**Average**	
	HW	**LW**	**HW**	**LW**	**HW**	**LW**
April 2013	7.9	5.3	10.9	7.4	9.4	6.4
May 2013	10.2	7.1	11.5	8.8	11.0	7.9
June 2013	9.6	6.9	12.4	9.1	11.2	8.1
July 2013	10.5	7.7	13.0	9.8	11.4	8.6
August 2013	10.6	8.0	13.7	11	12.3	9.5
September 2013	12.9	10.3	15.2	12.3	14	11.2
October 2013	12.8	9.9	16.8	13.8	14.5	11.5
November 2013	7.1	4.4	13.7	10.6	9.4	6.5
December 2013	7.5	4.7	11.9	9.1	10.3	7.4
January 2014	6.3	3.8	8.9	5.7	7.8	5.0
February 2014	6.0	3.5	8.0	6.2	6.8	4.3
March 2014	6.6	4.2	10.1	6.8	8.3	5.5

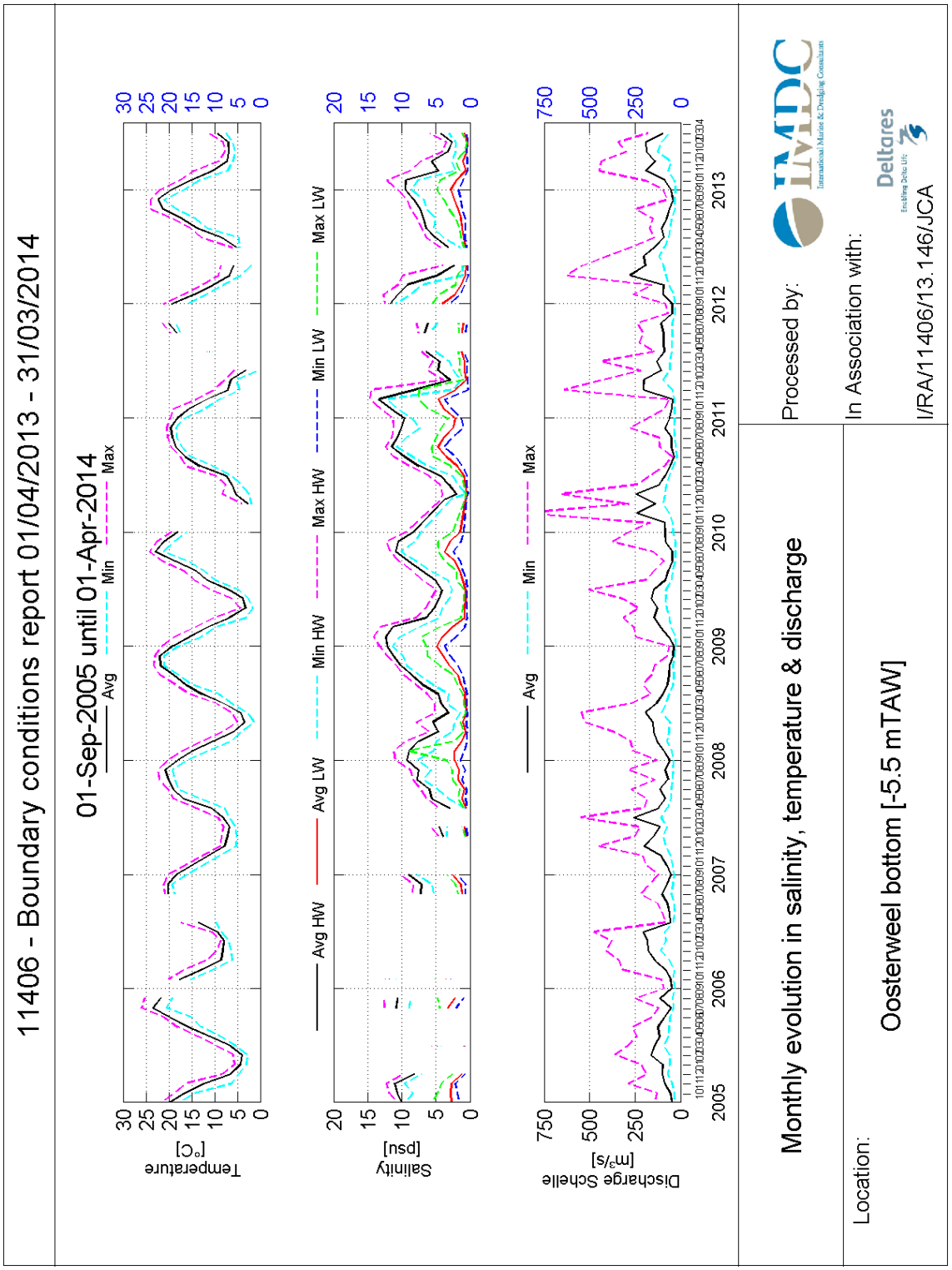
-: No data or less than 30% of the monthly data available.
*: Less than 70% of the monthly data available.

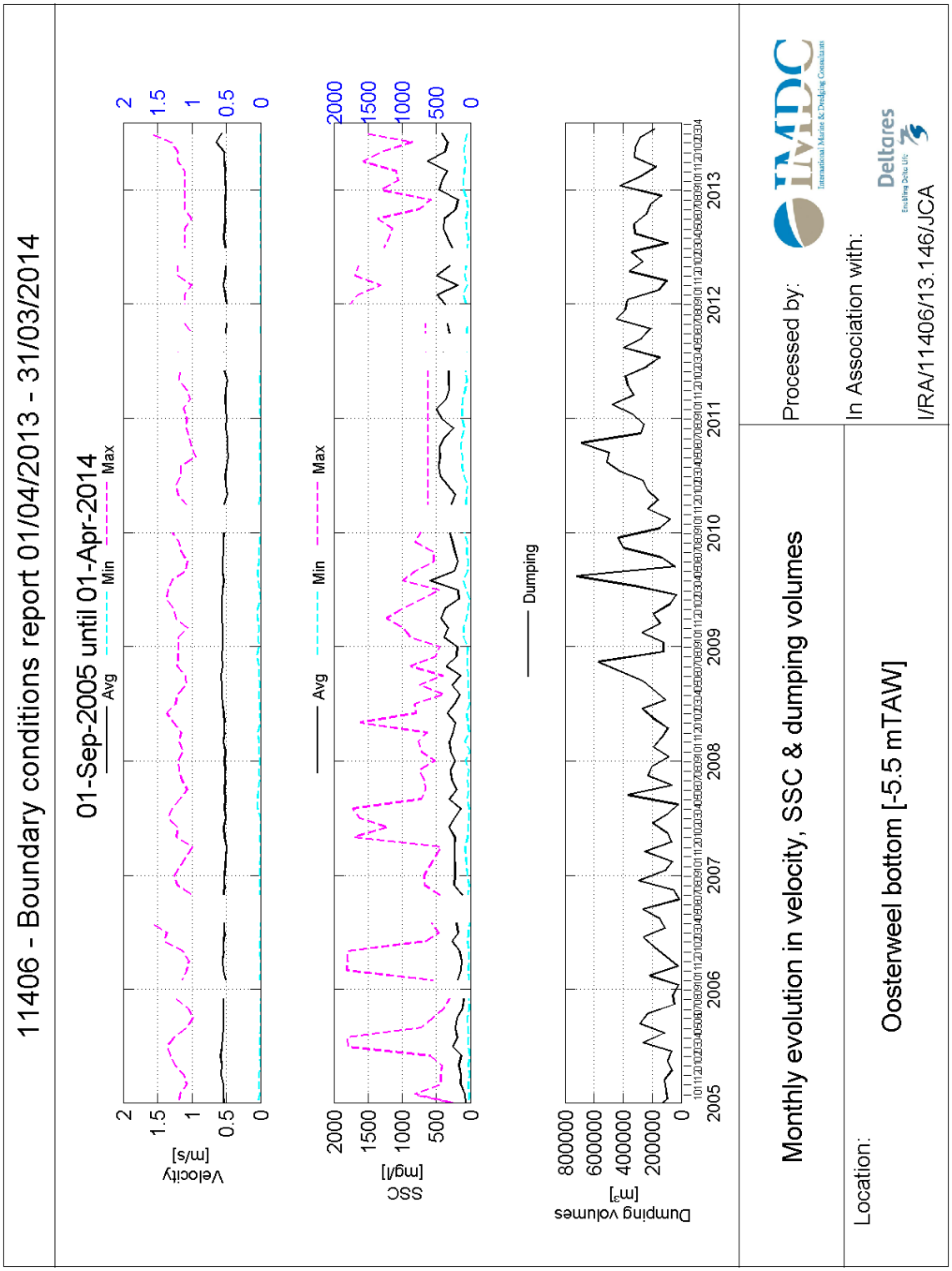
B.3 Long-term evolution based on monthly results



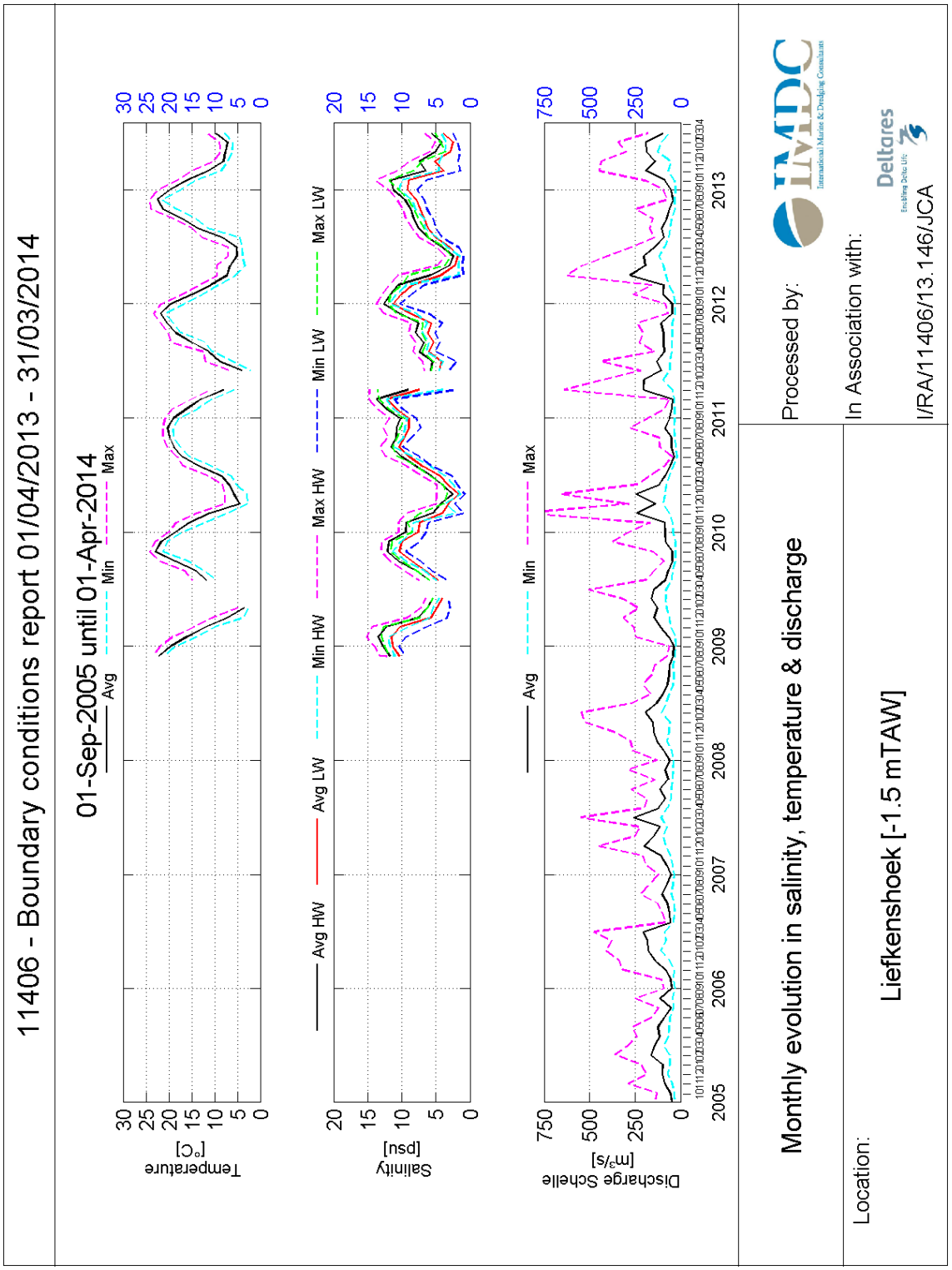


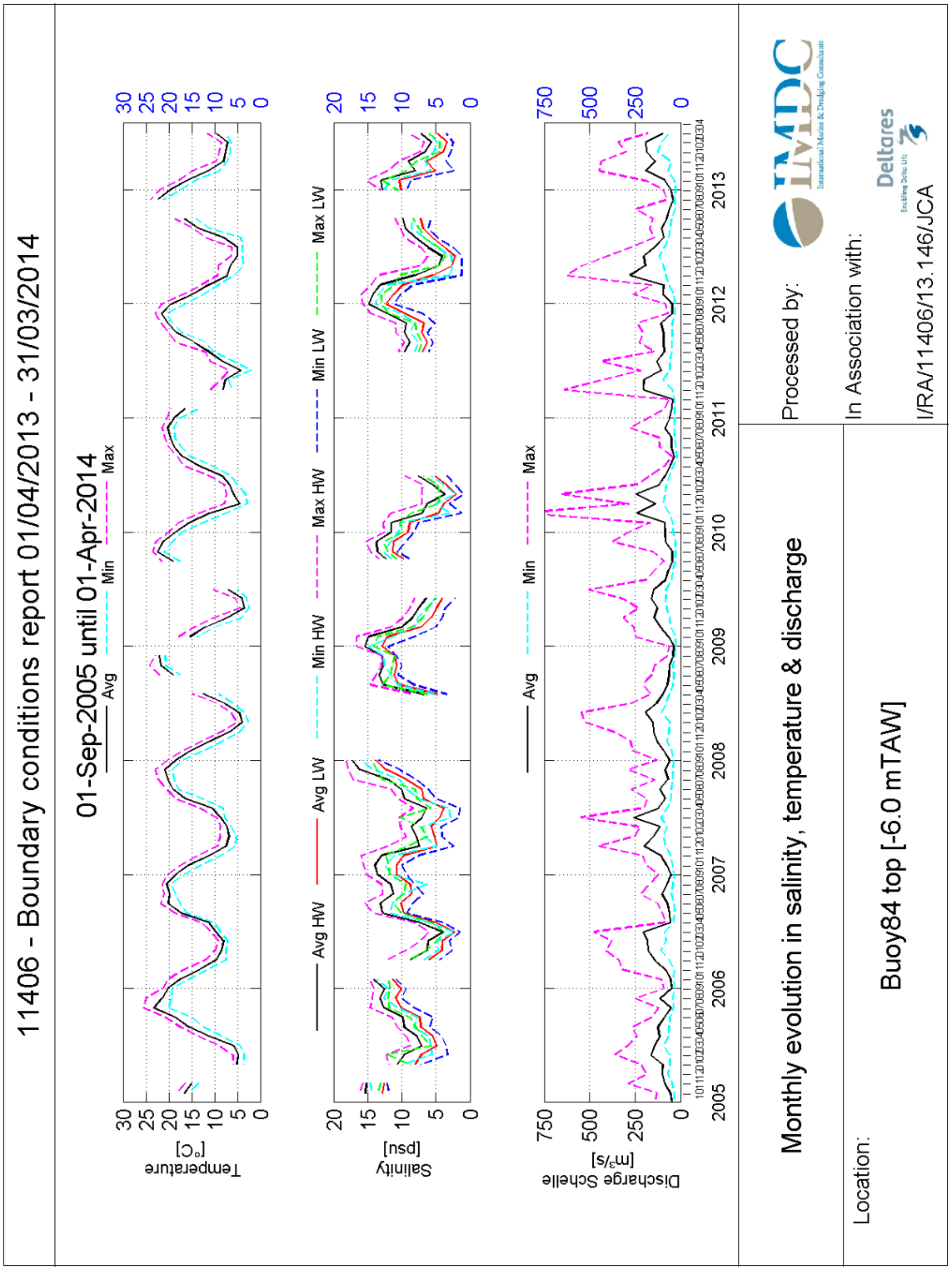
[Note: The disposal volumes are based on disposal locations close to Oosterweel: Plaat van Boomke, Oosterweel and Punt van Melsele]

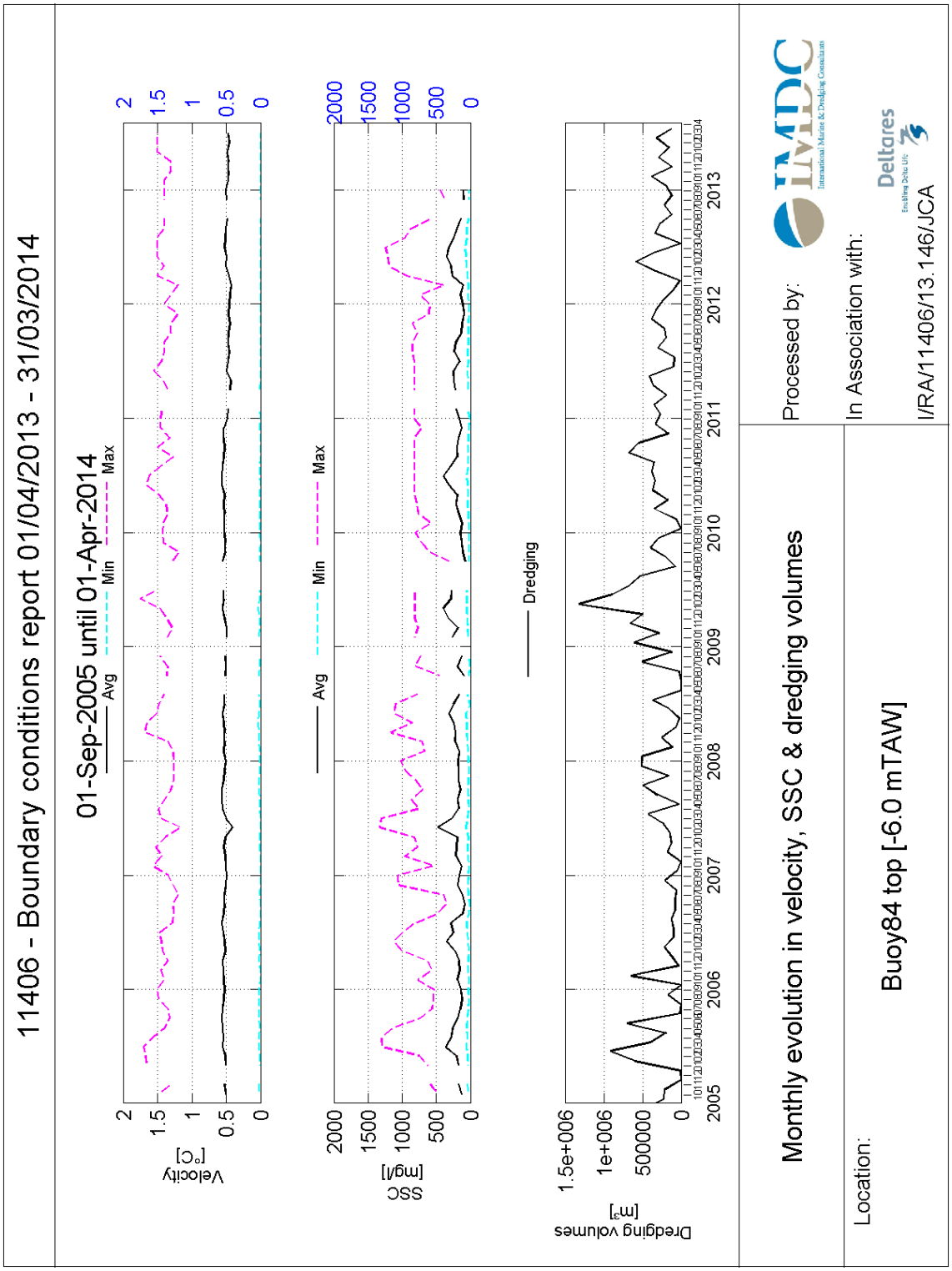

11406 - Boundary conditions report 01/04/2013 - 31/03/2014
01-Sep-2005 until 01-Apr-2014
Avg
Min
Max
Temperature [°C]
Avg HW
Avg LW
Min HW
Min LW
Max HW
Max LW
Salinity [psu]
Discharge Schelle [m³/s]
2005
2006
2007
2008
2009
2010
2011
2012
2013
Monthly evolution in salinity, temperature & discharge
Location:
Oosterweel bottom [-5.5 mTAW]
Processed by:
IMDC
In Association with:
Deltares
I/RA/11406/13.146/JCA



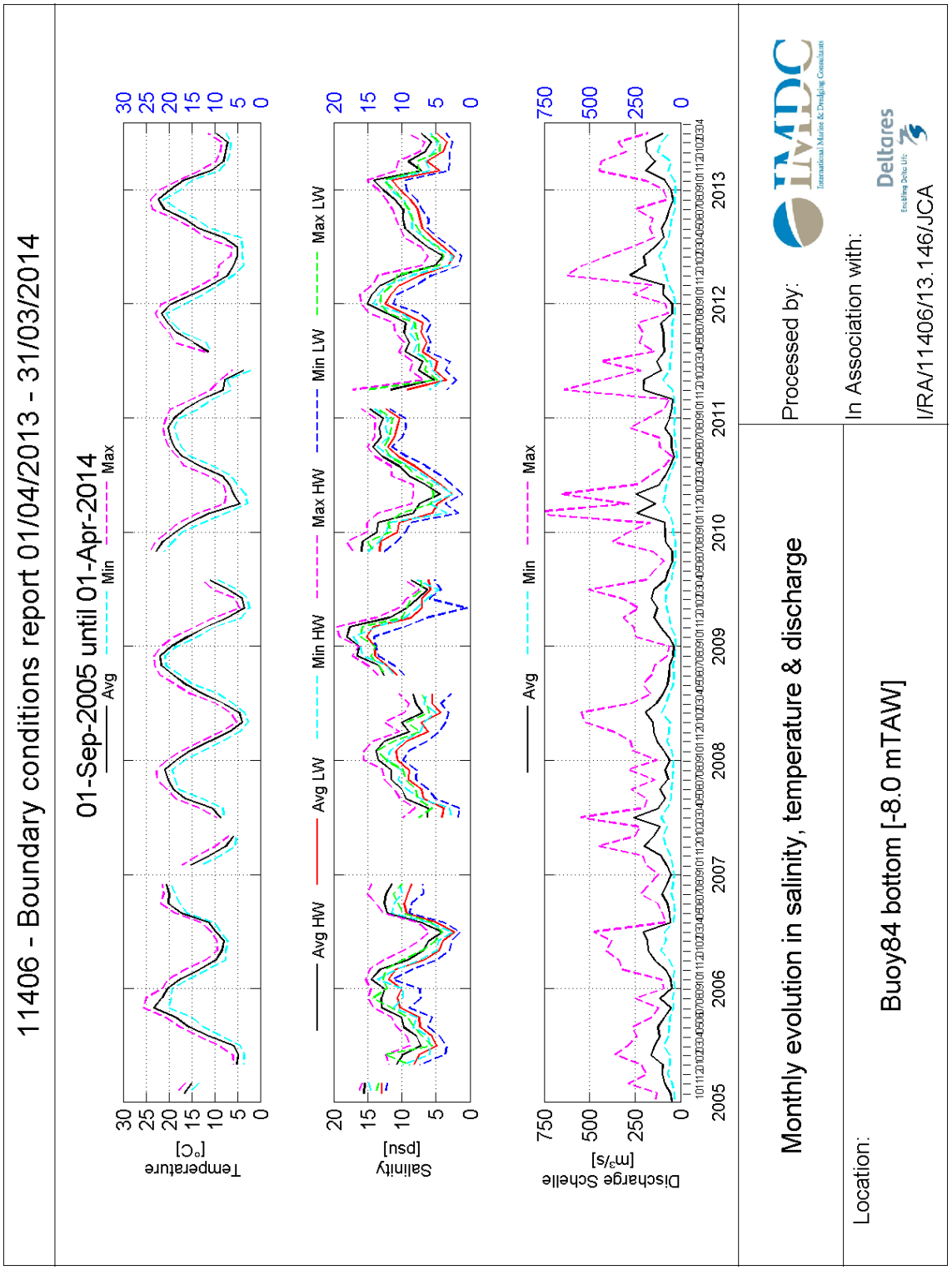
[Note: The disposal volumes are based on disposal locations close to Oosterweel: Plaat van Boomke, Oosterweel and Punt van Melsele]

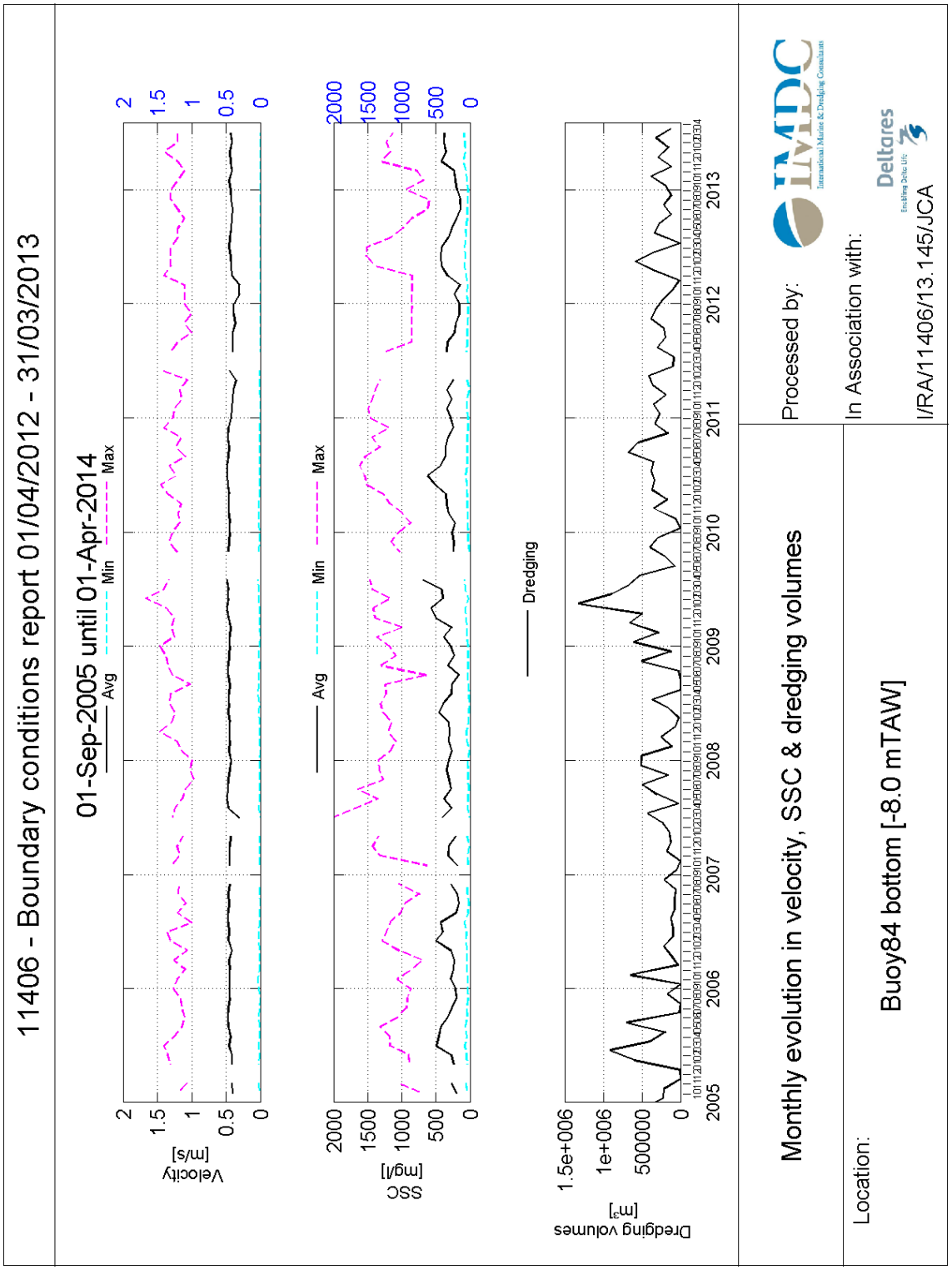

11406 - Boundary conditions report 01/04/2013 - 31/03/2014
01-Sep-2005 until 01-Apr-2014
Avg
Min
Max
Temperature [°C]
Avg HW
Avg LW
Min HW
Min LW
Max HW
Max LW
Salinity [psu]
Discharge Schelle [m³/s]
2005
2006
2007
2008
2009
2010
2011
2012
2013
Monthly evolution in salinity, temperature & discharge
Location:
Liefkenshoek [-1.5 mTAW]
Processed by:
IMDC
In Association with:
Deltares
I/RA/11406/13.146/JCA


11406 - Boundary conditions report 01/04/2013 - 31/03/2014
01-Sep-2005 until 01-Apr-2014
Avg
Min
Max
Temperature [°C]
Avg HW
Avg LW
Min HW
Min LW
Max HW
Max LW
Salinity [psu]
Discharge Schelle [m³/s]
2005
2006
2007
2008
2009
2010
2011
2012
2013
Monthly evolution in salinity, temperature & discharge
Location:
Buoy84 top [-6.0 mTAW]
Processed by:
IMDC
In Association with:
Deltares
I/RA/11406/13.146/JCA

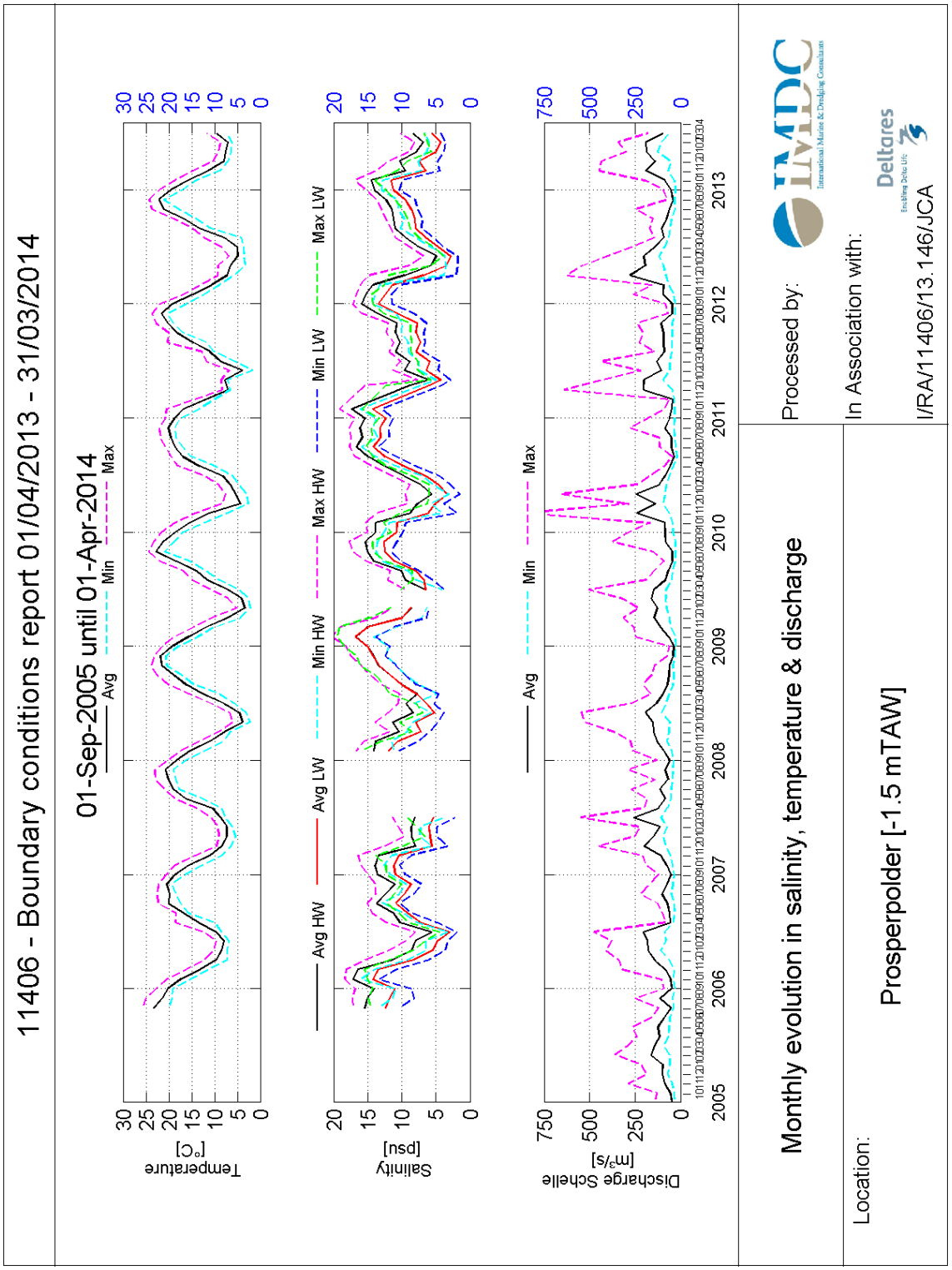


[Note: The dredging volumes are based on dredging activities close to Buoy84: Europaterminal, Drempel van Frederik, Lillovaarwater Plaat, Deurganckdok and Drempel van Lillo]


11406 - Boundary conditions report 01/04/2013 - 31/03/2014
01-Sep-2005 until 01-Apr-2014
Avg
Min
Max
Temperature [°C]
Avg HW
Avg LW
Min HW
Min LW
Max HW
Max LW
Salinity [psu]
Discharge Schelle [m³/s]
2005
2006
2007
2008
2009
2010
2011
2012
2013
Monthly evolution in salinity, temperature & discharge
Location:
Buoy84 bottom [-8.0 mTAW]
Processed by:
IMDC
In Association with:
Deltares
I/RA/11406/13.146/JCA



[Note: The dredging volumes are based on dredging activities close to Buoy84: Europaterminal, Drempel van Frederik, Lillovaarwater Plaat, Deurganckdok and Drempel van Lillo]


11406 - Boundary conditions report 01/04/2013 - 31/03/2014
01-Sep-2005 until 01-Apr-2014
Avg
Min
Max
Temperature [°C]
Avg HW
Avg LW
Min HW
Min LW
Max HW
Max LW
Salinity [psu]
Discharge Schelle [m³/s]
2005
2006
2007
2008
2009
2010
2011
2012
2013
Monthly evolution in salinity, temperature & discharge
Location:
Prosperpolder [-1.5 mTAW]
Processed by:
IMDC
In Association with:
Deltares
I/RA/11406/13.146/JCA

B.4 Total result from April 2013 till March 2014 of velocity magnitude. temperature. salinity and suspended sediment concentration

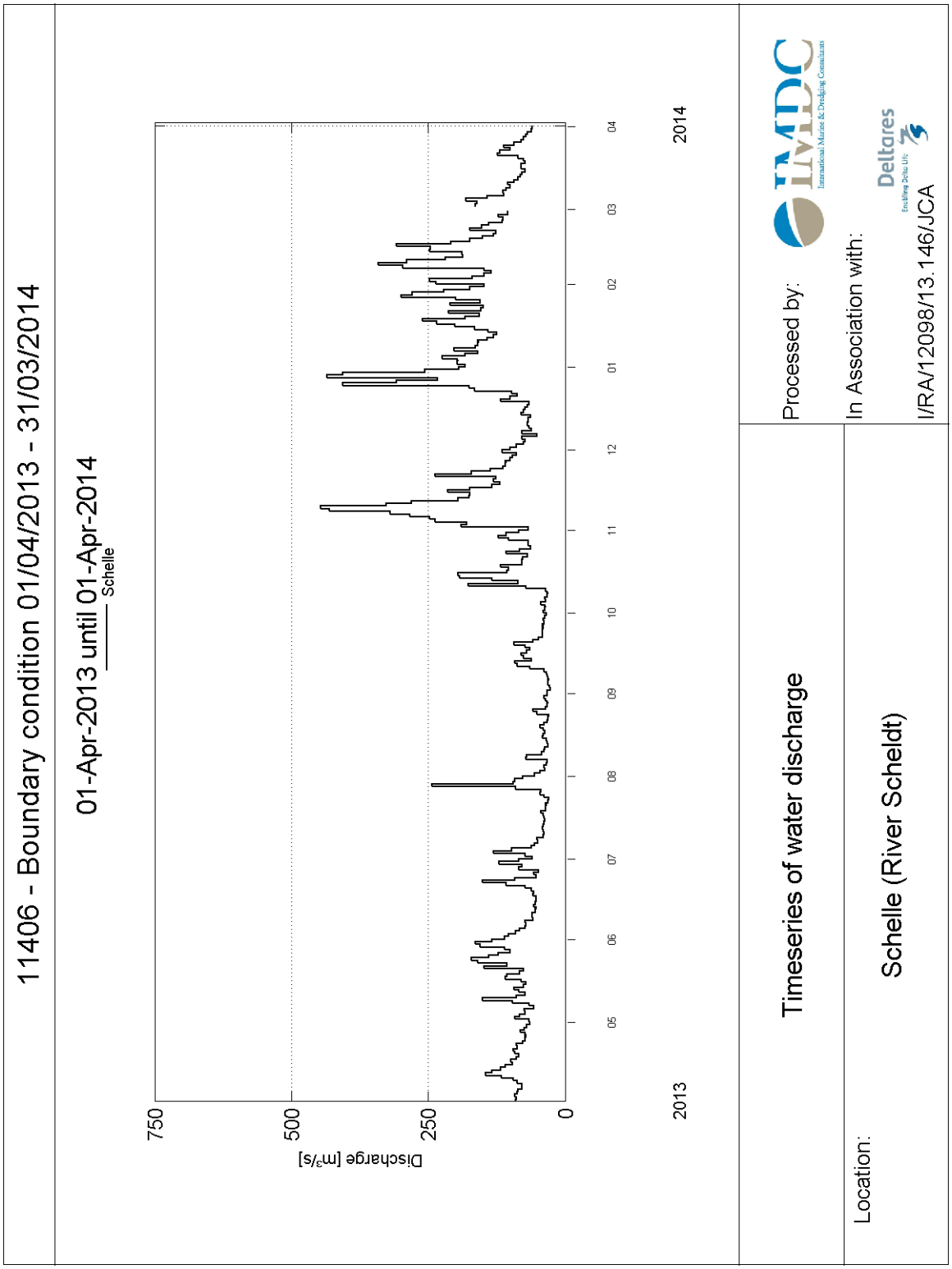
Averages for the whole deployment period of each instrument [April 2013 – March 2014]

Location	Depth [m TAW]	Velocity [m/s]			Temperature [°C]			SSC [mg/l]		
		Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
Oosterweel left bank	-2.0	0	1.6	0.64	4.6	23.9	13.2	19.3	1329.7	7.3
Oosterweel left bank	-5.5	0	1.6	0.52	4.6	23.9	13.7	24.8	1571.5	370.6
Liefkenshoek	-1.5	-	-	-	4.4	24.1	13.2	-	-	-
Buoy84 top	-6.0	0	1.5	0.48	4.2	24	12.8	21.5 *	952.9 *	156.4 *
Buoy84 bottom	-8.0	0	1.4	0.42	4.2	23.9	13.2	28.4 *	1299.5 *	270.7 *
Prosperpolder	-1.5	-	-	-	4.1	24.2	13.3	-	-	-

Location	Depth [m TAW]	Minimum salinity [ppt]		Maximum salinity [ppt]		Average salinity [ppt]	
		Slack HW	Slack LW	Slack HW	Slack LW	Slack HW	Slack LW
Oosterweel left bank	-2.0	1.6	0.3	12.1	4.6	6.1	1.2
Oosterweel left bank	-5.5	2	0.3	12.1	4.8	6.3	1.4
Liefkenshoek	-1.5	3.4	1.4	13.8	11.8	7.6	5.7
Buoy84 top	-6.0	4.8	2.3	15	12.7	8.8	6.2
Buoy84 bottom	-8.0	4.8	2.5	15	12.7	9	6.6
Prosperpolder	-1.5	6	3.5	16.8	13.8	10.6	7.7

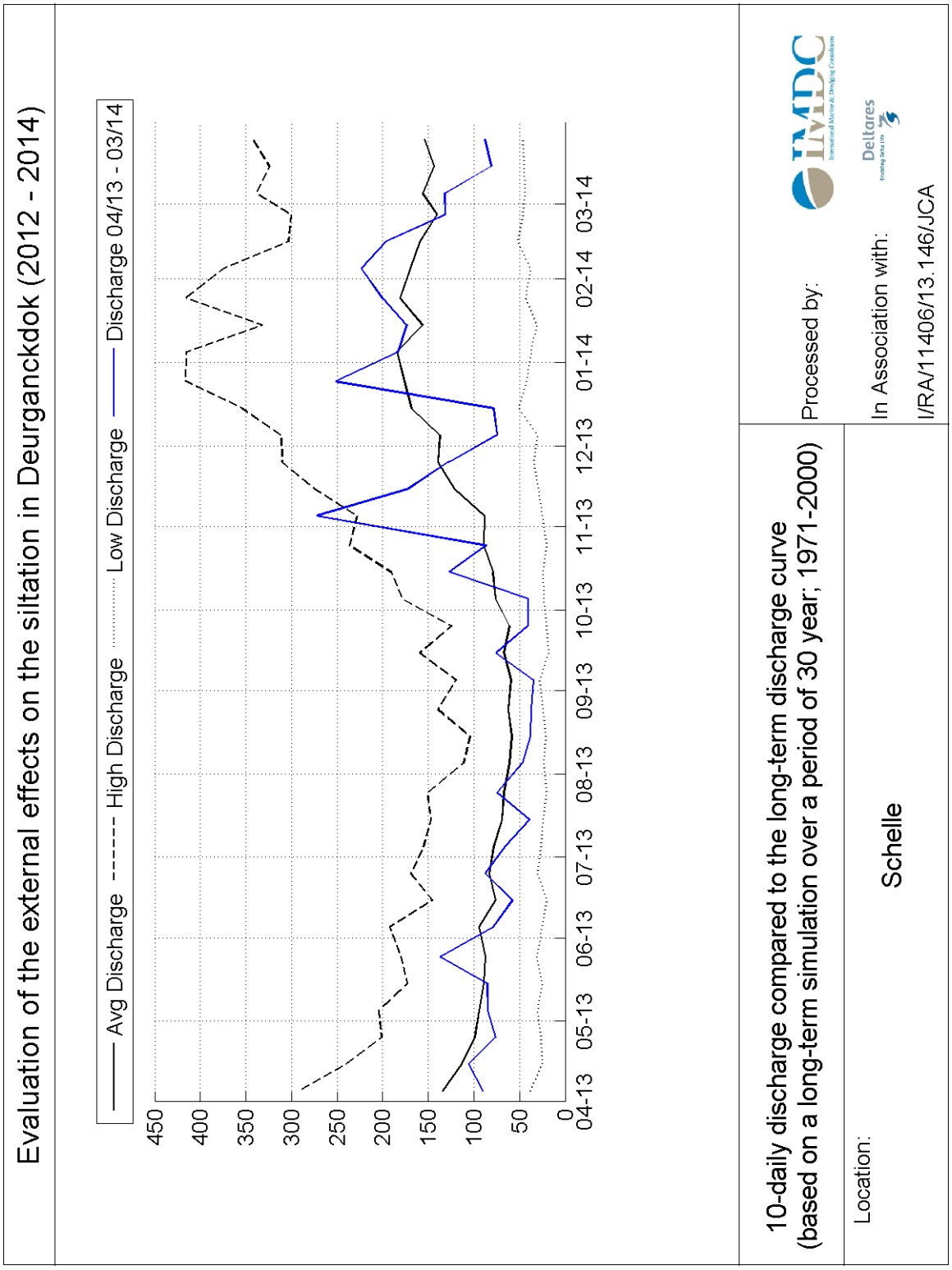
-: No data or less than 30% of the monthly data available.
*: Less than 70% of the monthly data available.

Annex C Fresh water discharge


11406 - Boundary condition 01/04/2013 - 31/03/2014
01-Apr-2013 until 01-Apr-2014
Schelle
Discharge [m³/s]
750
500
250
0
2013
2014
01
02
03
04
05
06
07
08
09
10
11
12
Timeseries of water discharge
Location:
Schelle (River Scheldt)
Processed by:
IMDC
International Marine & Dredging Consultants
In Association with:
Deltares
Enabling Delta Life
I/RA/12098/13.146/JCA

Monthly statistics of the fresh water discharge [m³/s] of the river Scheldt at Schelle between April 2013 and March 2014

Date	First Decade	Second Decade	Third Decade	Monthly average	Monthly minimum	Monthly maximum
April 2013	90	106	76	91	64	145
May 2013	85	85	137	103	56	170
June 2013	78	57	87	74	48	151
July 2013	65	39	74	60	30	244
August 2013	47	38	37	40	31	72
September 2013	35	76	40	50	26	94
October 2013	40	127	86	84	32	196
November 2013	273	172	127	191	67	446
December 2013	74	78	251	138	52	435
January 2014	183	173	200	186	124	299
February 2014	223	197	131	189	104	341
March 2014	132	81	88	99	60	182


Evaluation of the external effects on the siltation in Deurganckdok (2012 - 2014)
Avg Discharge
High Discharge
Low Discharge
Discharge 04/13 - 03/14
450
400
350
300
250
200
150
100
50
0
04-13
05-13
06-13
07-13
08-13
09-13
10-13
11-13
12-13
01-14
02-14
03-14
10-daily discharge compared to the long-term discharge curve
(based on a long-term simulation over a period of 30 year; 1971-2000)
Location:
Schelle
Processed by:
IMDC
In Association with:
Deltares
I/RA/11406/13.146/JCA

Annex D Monthly results meteorological measurements at Deurne

Terminology

Nederlands:	*English:*
Druk:	Pressure
Bewolking:	Cloudiness
Zon duur:	Duration of Sunshine
Temperaturen:	Temperatures
Lucht:	Air
Gras:	Grass
Minimum onder naakte grond:	Minimum under bare soil
Bewolking: 9 = bovenlucht niet zichtbaar	Cloudiness 9 = upper atmosphere invisible
Ontbrekend gegeven:	Missing data
Gem.:	Average
Min.:	Minimum
Max.:	Maximum
Rel. vocht:	Relative Humidity
Mist:	Fog
Duur in minuten:	Duration in minutes
Neerslag:	Precipitation
Dag met:	Day with
Wind:	Wind
Snelheid (km/h) en richting:	Velocity (km/h) and direction
* = Sneeuw:	* = Snow
▲ = Hagel:	▲ = Hail
:reewnO = ק	mrotsrednuht = ק
Neerslag te wijten aan mist of dauw:	Precipitation due to fog or dew

10

DEURNE(RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. april 2013

	Druk hPa	Bewolking Octas				Zon	Temperaturen °C									
						Duur	Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	1011.3	8	2	6	1	/	**3.0**	7.8	-2.0	**-3.1**	2.4	2.7	2.6	2.9	4.0	5.0
2	1012.5	0	1	1	0	/	3.4	8.7	-1.9	-2.6	2.6	2.9	2.8	3.1	4.1	5.0
3	1014.9	0	6	8	7	/	**3.0**	6.3	-0.8	-1.3	2.9	3.2	3.1	3.3	4.3	5.0
4	1011.5	8	7	4	7	/	3.9	7.4	1.6	1.5	3.4	3.6	3.5	3.7	4.3	5.1
5	1012.2	/	8	8	3	/	3.5	5.2	2.0	1.6	4.0	4.2	4.1	4.2	4.5	5.1
6	1020.8	8	8	7	6	/	4.8	8.1	1.9	1.1	4.0	4.2	4.1	4.2	4.7	5.2
7	1020.6	1	1	3	3	/	5.3	11.0	**-3.2**	-3.0	3.6	3.9	3.8	4.1	4.8	5.3
8	1006.5	0	0	7	6	/	5.7	10.9	-0.1	-0.8	4.8	5.0	5.0	5.1	5.2	5.4
9	999.5	0	5	7	6	/	5.7	9.8	-0.2	-0.7	4.9	5.1	5.0	5.2	5.5	5.5
10	1004.5	8	8	8	7	/	7.7	9.0	5.9	5.1	6.1	6.0	6.1	6.1	5.6	5.7
11	**998.8**	8	8	8	1	/	9.7	13.3	6.4	6.1	7.0	6.9	7.0	6.9	6.1	5.8
12	1001.4	/	6	7	7	/	10.0	13.5	4.8	4.7	7.2	7.2	7.2	7.2	6.5	6.0
13	1015.7	8	5	4	8	/	11.1	15.7	7.7	7.5	8.0	8.0	8.0	8.0	6.9	6.2
14	1018.6	8	7	5	4	/	**17.4**	24.4	12.3	10.9	9.4	9.1	9.2	9.1	7.4	6.4
15	1019.7	0	5	5	5	/	13.8	17.9	6.6	6.9	10.0	10.0	10.0	10.0	8.2	6.7
16	1019.4	4	6	7	7	/	12.4	17.1	6.2	6.0	9.7	9.7	9.7	9.8	8.8	7.1
17	1018.3	8	7	7	6	/	16.6	22.4	11.1	11.2	10.7	10.6	10.6	10.6	9.0	7.4
18	1016.6	0	6	3	4	/	13.4	19.3	8.5	8.1	11.3	11.2	11.2	11.2	9.5	7.7
19	1025.1	0	1	7	3	/	8.4	12.1	4.6	4.8	10.2	10.4	10.3	10.5	9.8	8.0
20	**1030.7**	0	1	1	1	/	7.4	12.5	2.3	2.4	9.0	9.3	9.2	9.5	9.5	8.3
21	1021.2	0	1	8	1	/	8.1	14.1	2.2	3.3	8.8	9.1	9.0	9.3	9.4	8.5
22	1018.0	0	1	3	7	/	9.1	15.5	0.5	1.9	8.6	9.0	8.9	9.1	9.4	8.6
23	1020.9	0	8	7	6	/	11.9	17.2	7.0	6.9	10.4	10.4	10.4	10.4	9.6	8.6
24	1025.0	0	2	1	5	/	14.1	21.4	5.0	5.1	10.0	10.2	10.1	10.3	9.9	8.8
25	1022.0	0	7	1	1	/	16.6	**24.5**	7.2	9.5	11.6	11.6	11.6	11.6	10.2	8.9
26	1012.3	0	8	8	8	/	9.6	15.0	5.6	5.7	11.1	11.4	11.3	11.5	10.9	9.1
27	1013.0	0	7	7	7	/	7.4	11.6	3.9	4.6	10.4	10.6	10.6	10.8	10.8	9.4
28	1016.9	8	5	6	1	/	8.1	13.5	3.0	4.1	9.8	10.1	10.0	10.2	10.6	9.6
29	1017.7	0	7	8	0	/	8.3	12.6	3.2	4.4	10.4	10.6	10.5	10.7	10.6	9.7
30	1023.1	0	7	4	6	/	9.4	15.6	0.9	2.8	9.5	9.8	9.7	10.0	10.5	9.8
M	1015.6					/	9.0	13.8	3.7							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

11

DEURNE(RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. april 2013

	Rel.Vocht.		Mist			Neerslag								Wind						
	é		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	é	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	55	31	-	-	-	-	-	-	/	/	-	-	-	18	47	ENE	ENE	ENE	ENE	ENE
2	48	28	-	-	-	-	-	-	/	/	-	-	-	18	47	ENE	NE	NE	ENE	NE
3	57	46	-	-	-	-	-	-	/	/	-	-	-	22	40	ENE	NE	ENE	NE	E
4	56	44	-	-	-	-	-	-	/	/	-	-	-	18	40	ENE	ENE	ENE	ENE	ENE
5	67	60	-	-	-	-	-	-	/	/	-	-	-	14	40	ENE	ENE	NE	NE	E
6	63	39	-	-	-	-	-	-	/	/	-	-	-	11	29	NE	NE	NNE	NE	N
7	54	30	-	-	-	-	-	-	/	/	-	-	-	7	25	ENE	NNE	-	SE	NE
8	53	38	-	-	-	-	-	-	/	/	-	-	-	11	40	ESE	ENE	ENE	E	E
9	85	77	-	-	-	1.7	3 57	16	/	/	-	-	-	11	32	S	E	E	SSE	E
10	85	74	-	-	-	3.1	5 15	22	/	/	-	-	-	11	29	WNW	SW	WSW	W	-
11	83	63	-	-	-	5.4	7 09	30	/	/	-	-	-	18	47	SW	E	SW	SW	N
12	75	53	-	-	-	3.4	3 52	16	/	/	-	-	-	18	65	WSW	-	SSW	SSW	WSW
13	73	40	-	-	-	1.3	7 56	33	/	/	-	-	-	18	40	SW	WSW	SW	SW	SSW
14	61	34	-	-	-	0.1	0 29	2	/	/	-	-	-	18	47	S	S	S	SSE	S
15	73	52	-	-	-	2.1	3 13	13	/	/	-	-	-	7	36	SW	SSW	SW	WSW	NW
16	77	46	-	-	-	0.4	4 54	20	/	/	-	-	-	14	43	SW	SE	SSW	WSW	WSW
17	66	34	-	-	-	0.7	2 06	9	/	/	-	-	-	11	40	SSW	SSW	S	SSW	S
18	53	34	-	-	-	-	-	-	/	/	-	-	-	29	68	WSW	SSW	WSW	W	WSW
19	77	57	-	-	-	0.7	2 35	11	/	/	-	-	-	14	47	NW	WSW	SW	W	N
20	63	37	-	-	-	-	-	-	/	/	-	-	-	14	40	NE	N	NNE	NE	NE
21	64	41	-	-	-	-	-	-	/	/	-	-	-	7	29	NW	NNE	NNE	VAR	NNW
22	64	36	-	-	-	-	-	-	/	/	-	-	-	11	32	WSW	WNW	WSW	SW	WSW
23	73	51	-	-	-	<0.1	1 13	5	/	/	-	-	-	14	32	SW	SW	SW	SW	NNW
24	70	46	-	-	-	-	-	-	/	/	-	-	-	11	40	WSW	WSW	SSW	WSW	WSW
25	66	37	-	-	-	-	-	-	/	/	-	-	-	11	32	SW	SW	SSE	W	NW
26	84	67	-	-	-	2.7	10 57	46	/	/	-	-	-	11	36	N	SE	NNW	NNW	NNW
27	69	44	-	-	-	<0.1	0 04	0	/	/	-	-	-	14	40	NNE	NNW	N	NNE	N
28	62	23	-	-	-	-	-	-	/	/	-	-	-	7	25	SW	N	ENE	VAR	SW
29	61	36	-	-	-	1.1	0 52	4	/	/	-	-	-	14	36	SW	SSW	SSW	W	NNW
30	64	36	-	-	-	-	-	-	/	/	-	-	-	11	36	NE	-	-	NNE	NE
M	67		0	0	0	22.7	54 32				0	0	0	14						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

10

DEURNE(RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. mei 2013

	Druk hPa	Bewolking Octas				Zon Duur	Temperaturen °C									
							Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	1022.0	/	3	3	7	/	11.8	18.2	4.3	4.4	10.1	10.3	10.2	10.4	10.6	9.8
2	1019.8	8	7	5	2	/	12.3	17.5	7.6	8.6	11.4	11.4	11.4	11.5	10.8	9.9
3	1018.1	0	1	4	4	/	13.7	19.5	8.0	8.2	11.8	11.9	11.9	12.0	11.2	10.0
4	1019.2	8	1	3	6	/	12.4	16.9	7.6	6.6	11.9	12.1	12.0	12.2	11.6	10.1
5	**1022.8**	0	0	3	2	/	13.8	19.3	8.4	8.4	12.1	12.3	12.2	12.3	11.8	10.3
6	1020.2	0	0	1	7	/	14.9	21.1	6.6	6.8	12.3	12.5	12.4	12.6	12.0	10.5
7	1015.2	0	5	5	8	/	**16.1**	**24.1**	11.3	11.0	13.2	13.2	13.2	13.2	12.3	10.7
8	1010.3	8	2	7	5	/	15.0	20.4	9.6	11.4	14.0	14.0	14.0	14.0	12.7	10.9
9	1012.9	8	4	5	5	/	13.5	16.7	10.2	9.6	14.1	14.1	14.1	14.1	13.1	11.2
10	1014.0	8	7	7	5	/	12.5	15.4	9.7	9.4	13.4	13.5	13.5	13.6	13.1	11.4
11	1013.6	0	7	6	7	/	11.0	14.2	8.4	8.8	13.0	13.0	13.0	13.1	12.9	11.6
12	1015.2	7	4	7	8	/	9.5	12.9	6.9	6.7	12.5	12.6	12.5	12.7	12.7	11.7
13	1013.1	7	7	7	7	/	11.5	15.0	8.8	8.9	12.3	12.3	12.3	12.4	12.4	11.7
14	1007.8	/	7	7	7	/	10.1	12.8	8.7	8.7	11.9	12.1	12.0	12.2	12.3	11.7
15	**1000.1**	8	8	4	5	/	12.7	16.9	7.8	6.6	12.3	12.3	12.3	12.4	12.2	11.7
16	1000.6	8	7	7	8	/	9.0	10.2	7.6	6.8	11.9	12.0	12.0	12.2	12.3	11.7
17	1003.8	8	8	8	8	/	9.0	10.0	8.4	8.4	11.6	11.7	11.7	11.8	12.0	11.7
18	1008.7	8	8	8	2	/	10.3	13.4	7.6	6.9	11.4	11.5	11.5	11.6	11.9	11.6
19	1009.3	0	1	1	1	/	13.2	19.8	7.5	6.7	11.4	11.6	11.5	11.7	11.9	11.5
20	1009.1	8	8	8	8	/	11.0	12.7	9.0	9.9	12.9	12.9	12.9	13.0	12.1	11.5
21	1011.4	6	8	8	8	/	10.1	11.5	8.7	8.7	12.4	12.5	12.5	12.6	12.4	11.6
22	1015.5	8	7	6	7	/	9.7	12.5	7.4	7.6	11.9	12.0	12.0	12.1	12.2	11.7
23	1010.3	8	8	7	4	/	7.1	10.6	4.6	4.8	11.5	11.7	11.6	11.8	12.0	11.7
24	1011.4	/	7	7	7	/	**7.0**	10.2	4.1	**3.6**	11.1	11.3	11.3	11.5	11.9	11.6
25	1016.9	0	3	6	7	/	8.9	13.6	**4.0**	3.8	11.1	11.3	11.3	11.5	11.8	11.6
26	1014.9	8	8	7	6	/	10.4	13.4	7.7	7.6	11.9	12.0	12.0	12.1	11.9	11.5
27	1010.5	0	1	3	1	/	13.4	19.5	7.1	6.0	11.6	11.8	11.7	11.9	12.0	11.5
28	1003.0	0	1	5	7	/	14.0	22.1	5.4	5.2	12.4	12.5	12.5	12.7	12.2	11.5
29	1002.9	7	8	8	8	/	10.0	10.9	9.1	9.8	13.4	13.5	13.5	13.5	12.6	11.6
30	1007.7	8	8	8	7	/	12.2	16.5	10.4	8.8	13.2	13.2	13.2	13.2	12.8	11.8
31	1013.3	0	8	5	6	/	13.8	20.2	10.4	10.6	13.2	13.2	13.2	13.2	12.8	11.9
M	1012.1					/	11.6	15.7	7.8							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

11

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. mei 2013

	Rel.Vocht.		Mist			Neerslag								Wind						
	%		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	%	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	61	42	-	-	-	0.1	0 33	2	/	/	-	-	-	14	32	ENE	NE	ENE	E	NE
2	75	57	-	-	-	4.4	5 12	22	/	/	-	-	-	11	29	NE	NE	NNE	NNE	NNE
3	68	49	-	-	-	-	-	-	/	/	-	-	-	11	36	NW	NNE	NNE	NE	NW
4	65	45	-	-	-	<0.1	0 18	1	/	/	-	-	-	14	40	WSW	W	SW	SW	WSW
5	61	35	-	-	-	-	-	-	/	/	-	-	-	**7**	**22**	NNW	SSW	SSW	VAR	W
6	61	40	-	-	-	-	-	-	/	/	-	-	-	11	40	NW	NNE	-	NW	NW
7	73	32	92	57	42	6.1	1 18	5	/	/	-	-	X	**7**	36	NE	NNW	NNE	ENE	S
8	84	55	144	82	76	1.7	2 37	11	/	/	-	-	-	11	32	SW	SW	S	SSW	SW
9	61	39	-	-	-	0.1	0 46	3	/	/	-	-	-	18	43	SW	SSW	WSW	SW	SSW
10	65	53	-	-	-	<0.1	0 25	2	/	/	-	-	-	**22**	**54**	SW	SSW	SW	SW	WSW
11	76	53	-	-	-	2.3	4 45	20	/	/	-	-	-	18	**54**	WSW	S	SSW	SW	SW
12	79	51	-	-	-	4.0	8 04	34	/	/	-	-	-	18	43	W	SW	WSW	W	WSW
13	73	47	-	-	-	1.9	7 58	33	/	/	-	-	-	**22**	50	WSW	SSW	WSW	WSW	WSW
14	76	57	-	-	-	1.8	7 34	32	/	/	-	-	-	14	40	SSW	WSW	SW	SSW	SSE
15	64	39	-	-	-	1.0	4 51	20	/	/	-	-	-	14	47	SSW	SE	SSW	SSW	WSW
16	89	80	-	-	-	9.3	13 35	57	/	/	-	-	-	11	40	NW	ENE	ESE	N	NNW
17	90	86	-	-	-	5.8	8 08	34	/	/	-	-	-	14	32	NW	NNW	W	NW	NNW
18	81	62	-	-	-	0.2	2 10	9	/	/	-	-	-	11	**22**	SW	W	WSW	SSW	NE
19	73	49	-	-	-	-	-	-	/	/	-	-	-	14	32	NE	NNE	ENE	NNE	N
20	88	76	-	-	-	2.1	11 21	47	/	/	-	-	-	**7**	**22**	NNW	NNW	W	SW	S
21	**91**	87	-	-	-	**12.2**	17 52	74	/	/	-	-	-	14	40	NNW	S	WNW	NNW	NNW
22	77	60	-	-	-	6.1	6 18	26	/	/	-	-	-	18	47	NW	NNW	NNW	NNW	NW
23	79	51	-	-	-	11.5	7 38	32	/	/	X	X	-	14	43	NW	ESE	N	NNE	NW
24	78	62	-	-	-	2.4	5 50	24	/	/	-	-	-	11	40	SSW	W	S	SSE	ESE
25	74	53	-	-	-	2.3	3 17	14	/	/	-	-	-	18	50	NW	N	NNE	NW	NW
26	76	56	-	-	-	7.8	5 17	22	/	/	-	-	-	**22**	47	NW	WNW	NNW	NW	NW
27	**57**	**21**	-	-	-	-	-	-	/	/	-	-	-	11	36	WSW	WSW	W	WSW	S
28	69	35	-	-	-	5.2	6 14	26	/	/	-	-	-	11	43	WSW	-	E	ESE	NW
29	88	80	-	-	-	6.4	11 53	50	/	/	-	-	-	14	32	W	W	W	W	WSW
30	87	66	-	-	-	0.8	3 49	16	/	/	-	-	-	**7**	**22**	E	W	NW	E	E
31	82	54	-	-	-	-	-	-	/	/	-	-	-	**22**	50	NNW	NNW	NW	NW	NNW
M	75		236	139	118	95.5	147 43				1	1	1	14						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

10

DEURNE(RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. juni 2013

	Druk hPa	Bewolking Octas				Zon	Temperaturen °C									
						Duur	Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	1020.0	8	8	3	7	/	**11.3**	14.8	9.0	9.1	14.0	14.0	14.0	14.1	13.1	12.0
2	1026.8	8	0	1	2	/	12.9	18.3	8.6	7.6	13.4	13.5	13.5	13.7	13.3	12.1
3	**1029.6**	0	4	7	4	/	11.5	16.7	7.5	**7.4**	13.8	13.9	13.9	14.0	13.5	12.3
4	1024.3	0	7	3	2	/	13.9	21.6	7.2	**7.4**	13.5	13.7	13.6	13.7	13.5	12.4
5	1019.2	0	1	3	1	/	17.5	24.0	10.1	9.1	14.1	14.3	14.2	14.3	13.7	12.5
6	1019.5	1	1	1	0	/	19.5	27.1	11.9	11.6	15.3	15.3	15.3	15.3	14.1	12.6
7	1020.7	0	1	1	0	/	20.0	26.2	13.4	13.1	16.4	16.3	16.4	16.3	14.7	12.8
8	1017.9	0	0	0	2	/	16.5	23.3	10.8	10.7	16.6	16.7	16.7	16.8	15.4	13.1
9	1013.4	0	7	4	2	/	14.0	18.7	9.8	9.8	16.5	16.7	16.6	16.8	15.8	13.5
10	1015.0	0	7	7	2	/	12.6	17.3	8.6	8.8	16.4	16.5	16.5	16.6	16.0	13.8
11	1016.6	8	0	5	6	/	15.9	22.2	**5.5**	7.5	15.5	15.8	15.8	16.0	15.9	14.1
12	1015.8	8	7	7	8	/	19.2	23.1	14.7	15.3	17.0	17.0	17.0	17.0	16.0	14.2
13	1014.4	/	8	7	6	/	17.0	19.4	12.5	11.6	16.8	17.0	16.9	17.1	16.2	14.4
14	1018.7	1	3	7	3	/	14.9	19.3	10.7	10.4	16.2	16.4	16.3	16.5	16.2	14.5
15	1012.5	0	7	3	2	/	15.7	19.7	10.3	9.9	15.9	16.1	16.1	16.3	16.1	14.7
16	1015.7	0	5	7	5	/	15.4	19.6	11.8	11.2	16.0	16.2	16.1	16.3	16.1	14.7
17	1014.1	8	6	8	5	/	18.8	24.6	11.9	12.0	16.2	16.3	16.3	16.4	16.1	14.8
18	1014.5	/	3	5	7	/	**24.0**	**30.4**	15.7	15.7	17.2	17.1	17.2	17.2	16.2	14.8
19	1013.3	/	6	6	6	/	22.3	26.1	18.2	18.2	18.8	18.6	18.7	18.6	16.7	15.0
20	1012.0	/	8	8	6	/	21.3	25.4	18.0	18.0	18.8	18.7	18.8	18.8	17.2	15.2
21	1011.8	/	8	7	7	/	16.8	18.6	15.2	14.7	18.2	18.2	18.2	18.4	17.5	15.4
22	1012.1	8	7	8	8	/	16.0	20.1	13.3	12.4	17.6	17.7	17.6	17.8	17.4	15.6
23	**1011.3**	6	7	7	6	/	15.0	19.3	12.9	12.2	17.0	17.1	17.0	17.3	17.1	15.8
24	1021.1	4	7	7	8	/	12.9	14.8	11.7	12.9	16.0	16.2	16.1	16.4	16.7	15.8
25	1027.9	3	7	6	3	/	13.8	18.7	10.9	8.9	16.0	16.1	16.0	16.2	16.4	15.7
26	1029.0	0	1	7	6	/	14.4	19.1	8.6	8.2	15.4	15.6	15.5	15.8	16.2	15.6
27	1024.8	8	2	7	6	/	13.4	16.0	11.5	11.9	15.8	16.0	15.9	16.1	16.1	15.5
28	1019.3	8	8	8	8	/	14.1	17.0	12.3	12.9	15.7	15.8	15.8	16.0	16.0	15.5
29	1020.8	8	6	6	4	/	15.3	18.7	8.6	9.2	15.9	16.0	15.9	16.1	16.0	15.4
30	1022.4	8	7	5	3	/	17.1	22.4	8.4	9.4	15.6	15.8	15.7	15.9	16.0	15.4
M	1018.5					/	16.1	20.8	11.3							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. juni 2013

	Rel.Vocht.		Mist			Neerslag								Wind						
	é		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	é	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	81	64	-	-	-	-	-	-	/	/	-	-	-	**22**	47	NW	NNW	NNW	NW	NNW
2	69	41	-	-	-	-	-	-	/	/	-	-	-	18	40	NNW	NNW	NNW	N	NW
3	70	46	-	-	-	-	-	-	/	/	-	-	-	14	40	NNE	N	NNE	N	NNE
4	66	40	-	-	-	-	-	-	/	/	-	-	-	11	29	NNE	N	NE	NE	NE
5	**57**	33	-	-	-	-	-	-	/	/	-	-	-	11	32	NE	NNE	NNE	E	ENE
6	60	33	-	-	-	-	-	-	/	/	-	-	-	11	32	NNE	NNE	NE	VAR	NE
7	59	**29**	-	-	-	-	-	-	/	/	-	-	-	11	40	N	NE	NE	NE	NNE
8	68	45	-	-	-	-	-	-	/	/	-	-	-	18	36	NNE	NNE	NNE	NNE	N
9	69	51	-	-	-	-	-	-	/	/	-	-	-	14	32	NNE	NNE	NE	NNE	N
10	69	51	-	-	-	-	-	-	/	/	-	-	-	11	29	NW	N	NNE	NNE	NW
11	69	49	-	-	-	<0.1	0 29	2	/	/	-	-	-	**7**	29	SSE	NNE	SSE	SSE	SSW
12	75	52	-	-	-	0.3	2 14	9	/	/	-	-	-	18	40	SW	SSE	SSW	SW	SSW
13	74	56	-	-	-	1.2	3 34	15	/	/	-	-	-	**22**	50	WSW	SSW	SW	WSW	SW
14	64	36	-	-	-	-	-	-	/	/	-	-	-	11	40	WSW	WSW	SW	SSW	SE
15	58	34	-	-	-	0.4	0 36	3	/	/	-	-	-	**22**	54	SW	S	S	WSW	WSW
16	61	42	-	-	-	<0.1	1 19	5	/	/	-	-	-	11	47	W	WSW	SW	W	NNE
17	67	51	-	-	-	0.8	4 18	18	/	/	-	-	-	11	47	E	NE	ENE	NE	ENE
18	67	39	-	-	-	-	-	-	/	/	-	-	-	**7**	**22**	NNW	ESE	ESE	VAR	NNW
19	73	61	-	-	-	0.7	2 43	11	/	/	-	-	-	11	40	NW	NNW	E	NNW	NNE
20	78	/	-	-	-	0.8	6 15	26	/	/	-	-	-	11	40	/	NNE	E	SW	SE
21	81	70	-	-	-	**18.2**	6 24	27	/	/	-	-	-	18	43	SW	WSW	W	WSW	WSW
22	81	62	-	-	-	1.0	6 10	26	/	/	-	-	-	**22**	**58**	SSW	SW	SSW	SW	SSW
23	74	52	-	-	-	1.2	7 16	30	/	/	-	-	-	**22**	54	WSW	SSW	SW	SW	WSW
24	83	69	-	-	-	14.2	8 23	35	/	/	-	-	-	14	36	W	WSW	W	W	W
25	74	44	-	-	-	1.1	2 46	12	/	/	-	-	-	**7**	32	NW	N	N	SW	NNW
26	69	45	33	21	2	10.8	2 42	11	/	/	-	-	-	11	36	NW	N	W	NNW	NW
27	72	53	-	-	-	0.2	1 56	8	/	/	-	-	-	14	43	WNW	VAR	N	NW	NW
28	**85**	70	-	-	-	9.5	11 12	47	/	/	-	-	-	14	29	WSW	SW	WSW	W	WSW
29	76	54	-	-	-	5.0	4 33	19	/	/	-	-	-	14	43	W	W	NW	N	NNW
30	72	56	-	-	-	-	-	-	/	/	-	-	-	14	32	WSW	WSW	SSW	W	WSW
M	71		33	21	2	65.4	72 50				0	0	0	14						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

10

DEURNE(RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. juli 2013

	Druk hPa	Bewolking Octas				Zon Duur	Temperaturen °C									
							Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	1017.8	0	7	5	5	/	16.2	20.2	12.5	12.9	16.4	16.5	16.4	16.5	16.0	15.4
2	1013.6	8	5	7	6	/	16.9	22.1	11.3	**10.9**	16.2	16.4	16.3	16.5	16.3	15.4
3	1010.1	7	8	8	7	/	16.7	18.5	14.9	15.3	17.5	17.5	17.5	17.5	16.5	15.5
4	1021.2	8	6	5	8	/	17.5	21.4	15.2	15.1	17.4	17.4	17.4	17.4	16.8	15.5
5	1028.9	8	8	7	4	/	17.6	21.3	14.9	14.2	17.8	17.8	17.8	17.8	17.0	15.7
6	1029.6	0	1	5	1	/	20.5	26.5	13.4	13.1	17.4	17.5	17.5	17.6	17.2	15.8
7	**1030.5**	0	1	1	1	/	21.5	27.2	15.1	14.5	18.4	18.5	18.5	18.5	17.4	15.9
8	1030.3	0	1	1	1	/	21.3	27.1	15.5	15.3	19.2	19.2	19.3	19.3	17.9	16.1
9	1026.0	0	1	1	1	/	20.3	26.6	14.2	13.9	19.5	19.6	19.7	19.7	18.5	16.3
10	1023.1	0	1	7	3	/	18.2	23.6	14.1	13.8	19.6	19.7	19.7	19.8	18.9	16.6
11	1023.4	8	7	4	3	/	16.2	20.8	12.9	12.6	19.1	19.2	19.3	19.3	18.9	16.9
12	1024.1	0	5	7	7	/	**15.2**	18.8	**10.9**	**10.9**	18.6	18.8	18.9	19.0	18.9	17.1
13	1024.0	0	7	2	3	/	17.7	23.2	12.6	12.5	18.6	18.7	18.7	18.9	18.8	17.2
14	1024.1	0	2	7	6	/	19.5	25.6	13.1	13.3	18.9	19.0	19.1	19.2	18.9	17.3
15	1023.1	4	3	2	1	/	21.1	26.7	13.3	14.2	19.6	19.8	19.7	19.8	19.1	17.4
16	1023.5	0	4	5	6	/	21.4	27.1	13.0	14.0	19.8	20.0	20.0	20.1	19.4	17.5
17	1023.9	/	6	5	5	/	22.2	27.6	17.1	16.9	20.6	20.6	20.7	20.7	19.8	17.7
18	1024.2	0	3	1	1	/	23.5	29.2	18.2	17.9	21.0	21.0	21.0	21.0	20.1	17.9
19	1023.8	0	0	1	1	/	21.9	27.8	16.2	16.0	21.1	21.2	21.2	21.3	20.4	18.2
20	1022.3	0	3	7	1	/	18.6	21.6	15.4	15.3	20.9	21.1	21.1	21.2	20.6	18.4
21	1019.0	0	1	2	0	/	23.8	31.0	14.9	14.9	20.3	20.5	20.5	20.7	20.5	18.6
22	1016.2	0	4	1	4	/	**26.3**	**33.1**	17.6	17.8	21.5	21.6	21.6	21.7	20.7	18.7
23	1013.4	0	2	6	5	/	26.0	31.9	18.2	18.3	22.0	22.1	22.1	22.2	21.1	18.9
24	1015.1	/	8	6	2	/	22.7	27.3	17.4	17.9	22.6	22.6	22.6	22.6	21.5	19.1
25	1014.8	/	5	4	3	/	22.6	29.3	16.0	16.4	21.9	22.0	22.0	22.1	21.7	19.3
26	1012.8	/	7	6	5	/	22.8	28.4	19.4	19.8	22.6	22.7	22.7	22.7	21.8	19.5
27	**1008.1**	0	6	7	5	/	21.5	25.8	18.1	18.5	22.2	22.5	22.4	22.6	21.9	19.7
28	1010.6	8	2	7	1	/	20.2	24.6	15.9	16.5	21.9	22.0	22.0	22.1	21.8	19.9
29	1014.8	8	4	4	3	/	20.4	24.0	16.0	16.3	21.7	21.8	21.8	21.9	21.6	20.1
30	1016.7	0	4	7	8	/	18.0	20.9	15.3	14.9	21.4	21.5	21.5	21.6	21.4	20.1
31	1017.5	8	7	7	7	/	20.5	25.0	17.5	17.2	21.2	21.2	21.2	21.4	21.2	20.0
M	1020.2					/	20.3	25.3	15.2							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

11

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. juli 2013

	Rel.Vocht.		Mist			Neerslag								Wind						
	%		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	%	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	77	58	-	-	-	-	-	-	/	/	-	-	-	11	29	SW	SW	W	WSW	NW
2	72	44	-	-	-	8.7	2 18	10	/	/	-	-	-	7	50	S	SSW	SW	S	SSE
3	**87**	75	-	-	-	4.1	8 15	34	/	/	-	-	-	14	36	WSW	SSE	WSW	SW	WSW
4	78	59	-	-	-	1.0	1 30	6	/	/	-	-	-	14	40	SW	SW	SW	SW	SW
5	79	66	-	-	-	-	-	-	/	/	-	-	-	7	**22**	W	SW	W	W	SSE
6	70	44	6	-	-	-	-	-	/	/	-	-	-	7	25	E	NNE	ENE	E	ENE
7	63	34	-	-	-	-	-	-	/	/	-	-	-	11	29	NE	ENE	ENE	NE	NNE
8	69	43	-	-	-	-	-	-	/	/	-	-	-	14	32	NE	NNE	NE	ENE	NNE
9	58	31	-	-	-	-	-	-	/	/	-	-	-	14	29	NNE	NE	NE	N	N
10	67	50	-	-	-	-	-	-	/	/	-	-	-	14	40	NNE	NNE	-	N	N
11	63	47	-	-	-	-	-	-	/	/	-	-	-	11	32	NE	NNE	NE	NE	NNE
12	76	59	-	-	-	-	-	-	/	/	-	-	-	11	25	N	N	NNE	NNE	N
13	72	47	-	-	-	-	-	-	/	/	-	-	-	11	29	WNW	N	NNE	NE	NNW
14	71	49	-	-	-	-	-	-	/	/	-	-	-	**4**	25	N	NNE	NNE	VAR	ENE
15	61	**26**	-	-	-	-	-	-	/	/	-	-	-	7	32	WNW	-	NNW	NW	NW
16	59	34	-	-	-	-	-	-	/	/	-	-	-	7	25	NNE	N	-	VAR	NNE
17	63	39	-	-	-	-	-	-	/	/	-	-	-	7	25	NNE	NNE	NE	NNE	NNE
18	65	39	-	-	-	-	-	-	/	/	-	-	-	14	32	NNE	NNE	NE	ENE	N
19	61	41	-	-	-	-	-	-	/	/	-	-	-	**18**	36	NE	NE	ENE	NE	NNE
20	74	62	-	-	-	-	-	-	/	/	-	-	-	11	25	NE	NNE	ENE	NE	NE
21	61	35	-	-	-	-	-	-	/	/	-	-	-	7	**22**	SE	NE	E	E	W
22	**57**	30	-	-	-	-	-	-	/	/	-	-	-	7	29	NW	-	-	SW	NW
23	**57**	36	-	-	-	-	-	-	/	/	-	-	-	7	29	NW	NNW	WNW	N	NW
24	62	38	-	-	-	-	-	-	/	/	-	-	X	11	32	WNW	W	W	WSW	NNW
25	68	41	-	-	-	5.5	0 49	3	/	/	-	-	-	7	32	WSW	ESE	-	SSW	NNW
26	77	53	84	19	2	5.6	1 29	6	/	/	-	-	X	7	29	SSW	NNE	ENE	SSE	W
27	85	62	176	153	86	**49.5**	4 33	19	/	/	-	-	X	7	**58**	SSW	ESE	E	S	E
28	72	48	-	-	-	-	-	-	/	/	-	-	-	11	32	WSW	SE	SW	SSW	SW
29	70	48	-	-	-	1.9	1 20	6	/	/	-	-	-	14	36	WSW	ESE	SSW	SW	WSW
30	82	60	-	-	-	2.2	6 23	27	/	/	-	-	-	**18**	47	SW	SW	SW	SW	S
31	75	56	-	-	-	<0.1	0 25	2	/	/	-	-	-	14	40	WSW	WSW	WSW	WSW	SW
M	69		266	172	88	78.5	27 02				0	0	3	11						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

10

DEURNE(RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. augustus 2013

	Druk hPa	Bewolking Octas				Zon	Temperaturen °C									
						Duur	Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	1013.7	0	1	1	0	/	24.4	31.4	16.2	17.4	21.2	21.3	21.2	21.4	21.1	19.9
2	**1009.9**	0	1	0	0	/	**26.2**	**35.1**	18.5	18.5	21.7	21.9	21.8	21.9	21.3	19.9
3	1017.7	0	4	5	3	/	21.3	24.8	14.1	15.7	22.1	22.4	22.3	22.5	21.6	20.0
4	1020.7	0	4	3	2	/	21.3	27.5	13.4	15.3	21.4	21.6	21.6	21.8	21.7	20.1
5	1014.7	0	2	4	5	/	22.2	29.9	12.8	14.7	21.5	21.7	21.7	21.9	21.8	20.2
6	1015.6	0	7	7	7	/	19.0	22.1	15.9	15.5	21.9	22.1	22.0	22.2	21.9	20.2
7	1012.5	0	7	8	8	/	**15.9**	17.2	14.7	14.5	20.5	20.7	20.7	20.9	21.5	20.3
8	1018.9	/	7	4	5	/	17.9	22.3	12.3	13.6	19.9	20.2	20.1	20.4	21.0	20.3
9	1020.5	0	3	8	3	/	17.4	22.7	10.7	12.6	19.7	20.0	19.9	20.2	20.8	20.2
10	1021.4	0	7	7	7	/	17.1	19.9	14.4	14.4	20.2	20.4	20.3	20.5	20.7	20.1
11	1018.9	7	4	6	5	/	17.1	22.0	13.4	13.0	19.6	19.9	19.8	20.1	20.5	19.9
12	1016.2	0	7	7	5	/	16.8	20.2	13.6	13.5	19.7	20.0	19.9	20.1	20.4	19.9
13	1020.4	7	2	3	1	/	16.4	20.5	12.8	13.0	19.4	19.6	19.6	19.8	20.2	19.8
14	1023.3	0	5	4	4	/	16.6	22.1	12.0	12.3	19.0	19.3	19.2	19.4	20.0	19.7
15	1021.1	8	5	7	5	/	17.5	23.7	12.2	13.6	19.1	19.4	19.3	19.5	19.9	19.5
16	1017.0	0	5	1	7	/	20.1	28.2	13.9	14.7	19.3	19.4	19.4	19.6	19.9	19.5
17	1014.9	/	7	6	7	/	20.2	25.1	16.7	17.5	20.2	20.2	20.2	20.3	20.0	19.4
18	1011.6	8	8	5	6	/	20.0	24.2	17.0	15.4	20.5	20.5	20.5	20.6	20.2	19.4
19	1018.6	0	8	3	1	/	18.0	21.7	12.8	13.8	20.0	20.2	20.2	20.4	20.2	19.5
20	**1028.0**	8	7	7	5	/	17.9	23.1	12.9	13.8	19.6	19.8	19.7	19.9	20.1	19.5
21	1024.9	0	3	4	2	/	18.1	25.0	10.3	11.9	19.1	19.4	19.3	19.6	20.0	19.4
22	1020.6	0	3	7	7	/	17.2	22.3	11.8	13.2	19.3	19.5	19.5	19.7	20.0	19.4
23	1016.4	8	7	0	2	/	20.5	26.3	14.8	14.5	19.4	19.5	19.5	19.7	20.0	19.4
24	1010.9	8	7	8	8	/	17.0	19.5	13.3	13.1	19.6	19.8	19.8	19.9	20.0	19.4
25	1012.4	0	3	6	7	/	17.0	21.5	11.7	11.3	18.9	19.1	19.1	19.3	19.8	19.4
26	1016.3	/	4	6	7	/	18.7	23.6	13.6	12.8	18.9	19.1	19.1	19.3	19.7	19.3
27	1016.2	8	7	5	1	/	19.7	24.4	15.4	14.1	19.1	19.2	19.3	19.3	19.7	19.3
28	1020.5	0	7	4	2	/	18.6	23.8	13.8	12.1	18.7	18.9	18.9	19.1	19.7	19.3
29	1022.2	0	2	6	1	/	18.1	24.1	**10.1**	**10.8**	18.6	18.8	18.8	19.0	19.6	19.2
30	1020.6	0	1	5	1	/	17.9	22.6	11.2	11.4	18.6	18.9	18.9	19.1	19.7	19.2
31	1022.9	8	8	5	1	/	17.6	21.4	12.5	11.2	19.1	19.4	19.3	19.6	19.7	19.2
M	1018.0					/	18.8	23.8	13.5							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

11

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. augustus 2013

	Rel.Vocht.		Mist			Neerslag								Wind						
	%		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	%	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	67	38	-	-	-	-	-	-	/	/	-	-	-	11	29	SSE	SSE	SSE	SSE	SSE
2	62	32	-	-	-	-	-	-	/	/	-	-	-	11	43	WSW	ESE	SE	SSE	SSW
3	62	39	-	-	-	<0.1	0 17	1	/	/	-	-	-	14	43	WSW	W	W	SW	SW
4	61	37	-	-	-	<0.1	0 53	4	/	/	-	-	-	7	29	NNW	SSE	SE	SSW	WSW
5	62	37	-	-	-	-	-	-	/	/	-	-	-	11	54	WNW	NNW	ESE	S	ESE
6	74	55	-	-	-	-	-	-	/	/	-	-	-	11	40	SW	WSW	SW	W	N
7	89	81	-	-	-	18.4	9 50	41	/	/	-	-	-	11	29	N	NE	NE	N	N
8	70	47	-	-	-	-	-	-	/	/	-	-	-	7	29	NW	NNW	N	NNW	NNW
9	76	54	-	-	-	<0.1	2 15	9	/	/	-	-	-	11	29	SW	S	VAR	SW	W
10	65	41	-	-	-	-	-	-	/	/	-	-	-	14	36	WNW	SW	W	W	WNW
11	76	55	-	-	-	3.7	2 27	10	/	/	-	-	-	14	47	SW	SW	SW	SW	SSW
12	73	47	-	-	-	<0.1	0 08	1	/	/	-	-	-	11	32	W	SW	SW	WSW	NW
13	66	41	-	-	-	0.6	1 10	5	/	/	-	-	-	14	40	W	W	WSW	W	WNW
14	70	50	-	-	-	-	-	-	/	/	-	-	-	7	25	WSW	SW	SSW	WSW	WNW
15	78	58	-	-	-	0.1	0 40	3	/	/	-	-	-	11	25	WSW	SE	SSW	SW	SSW
16	67	35	-	-	-	0.8	3 45	16	/	/	-	-	-	11	43	WSW	VAR	SE	SW	SW
17	72	49	-	-	-	0.3	1 38	7	/	/	-	-	-	11	40	SSW	S	SSW	SW	SSW
18	73	46	-	-	-	3.0	5 04	21	/	/	-	-	-	14	36	WSW	SW	SSW	W	W
19	68	43	-	-	-	0.1	0 09	1	/	/	-	-	-	18	50	WNW	WSW	WSW	NW	NW
20	69	42	-	-	-	-	-	-	/	/	-	-	-	7	22	SW	WSW	S	SW	E
21	66	38	-	-	-	-	-	-	/	/	-	-	-	7	22	SSE	ESE	ESE	VAR	SSW
22	82	46	64	35	18	1.4	3 01	13	/	/	-	-	-	7	25	NW	-	-	NNW	NNE
23	70	45	105	42	-	<0.1	0 54	4	/	/	-	-	-	7	22	E	N	N	ESE	E
24	86	76	-	-	-	2.0	6 46	28	/	/	-	-	-	7	29	S	ESE	E	ESE	S
25	83	62	58	24	8	1.2	2 21	10	/	/	-	-	-	7	25	SE	ESE	ESE	ESE	E
26	66	40	32	32	29	-	-	-	/	/	-	-	-	11	36	NE	-	NE	ENE	NE
27	56	34	-	-	-	<0.1	0 18	1	/	/	-	-	-	7	25	NNE	NNE	ENE	ENE	NNE
28	64	36	-	-	-	-	-	-	/	/	-	-	-	7	29	NNE	NNE	N	VAR	N
29	68	40	61	22	1	-	-	-	/	/	-	-	-	7	29	SSW	-	SE	W	SW
30	76	60	4	2	-	-	-	-	/	/	-	-	-	11	29	WSW	-	SW	WSW	WSW
31	73	50	-	-	-	<0.1	0 24	2	/	/	-	-	-	18	36	NW	SW	W	NNW	NNW
M	71		324	157	56	31.6	42 00				0	0	0	10						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

10

DEURNE(RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. september 2013

	Druk hPa	Bewolking Octas				Zon	Temperaturen °C									
						Duur	Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	1026.0	0	6	8	6	/	14.8	18.5	8.2	8.3	18.2	18.5	18.5	18.8	19.5	19.2
2	1025.9	8	2	6	0	/	17.5	23.5	12.6	11.8	18.2	18.5	18.4	18.6	19.3	19.1
3	1027.1	0	1	3	1	/	19.0	25.5	13.7	13.1	18.4	18.6	18.6	18.8	19.3	19.1
4	1021.9	0	0	0	0	/	20.7	28.1	14.0	13.3	18.8	19.0	19.0	19.1	19.4	19.0
5	1012.7	0	0	1	0	/	**23.1**	**32.4**	14.0	13.8	19.1	19.3	19.3	19.5	19.6	19.0
6	1009.5	0	2	7	4	/	20.0	25.8	15.3	14.8	19.7	19.9	19.9	20.0	19.9	19.1
7	1017.2	8	8	7	6	/	17.6	20.9	13.8	14.4	19.7	19.9	19.9	20.1	20.0	19.2
8	1019.1	/	8	4	6	/	16.4	21.7	12.0	12.6	19.3	19.4	19.4	19.6	19.9	19.3
9	1016.7	8	1	7	7	/	13.1	17.8	10.0	9.4	17.6	18.0	17.9	18.4	19.6	19.3
10	1014.5	4	6	7	8	/	12.2	15.8	9.9	9.4	17.4	17.7	17.6	17.9	19.0	19.2
11	1014.7	8	7	7	7	/	15.1	18.8	12.3	11.8	17.1	17.4	17.3	17.6	18.5	19.0
12	1018.1	8	7	7	7	/	15.1	17.5	13.3	12.4	17.4	17.6	17.5	17.7	18.4	18.7
13	1019.1	7	5	7	8	/	14.5	16.5	9.5	10.0	17.1	17.3	17.2	17.4	18.2	18.6
14	1013.0	8	8	8	7	/	15.6	17.0	12.8	11.6	17.3	17.5	17.5	17.7	18.1	18.4
15	1010.9	8	7	5	7	/	14.0	17.2	9.6	10.0	16.9	17.1	17.0	17.2	17.9	18.3
16	1002.1	7	5	4	5	/	12.5	16.4	8.7	8.0	16.5	16.8	16.6	16.9	17.7	18.1
17	**1001.3**	4	2	7	8	/	**10.7**	14.3	7.6	6.9	15.8	16.1	16.0	16.3	17.3	18.0
18	1001.5	8	7	7	7	/	12.1	15.0	10.8	10.2	15.8	15.9	15.9	16.1	16.9	17.7
19	1011.3	5	4	7	8	/	12.5	15.6	9.3	8.3	15.3	15.6	15.5	15.8	16.7	17.6
20	1017.1	7	7	7	7	/	14.7	17.5	12.0	11.5	15.6	15.8	15.7	15.9	16.6	17.4
21	1026.0	8	6	5	5	/	14.0	17.8	7.9	8.2	15.4	15.6	15.5	15.8	16.5	17.2
22	**1028.1**	8	8	7	7	/	16.6	19.6	14.3	14.0	16.2	16.2	16.2	16.3	16.6	17.1
23	1025.4	8	8	7	8	/	17.1	20.9	10.3	10.7	16.9	16.9	16.9	16.9	16.7	17.0
24	1017.1	1	/	3	3	/	15.1	21.1	9.1	10.4	16.5	16.6	16.6	16.8	17.0	17.0
25	1011.8	/	4	4	6	/	15.0	20.2	9.3	10.2	16.5	16.6	16.6	16.8	17.1	17.1
26	1015.9	8	8	4	5	/	14.6	18.6	8.4	8.2	16.7	16.9	16.8	17.0	17.1	17.1
27	1017.1	0	3	2	6	/	11.0	16.8	**6.1**	6.3	15.7	16.0	15.9	16.2	17.0	17.1
28	1011.9	0	5	5	5	/	12.4	18.0	6.6	6.8	15.2	15.5	15.4	15.7	16.6	17.0
29	1007.9	0	3	1	4	/	13.6	19.2	9.0	8.4	14.9	15.2	15.1	15.3	16.3	16.9
30	1009.0	0	1	0	3	/	11.7	17.1	7.2	**6.2**	14.9	15.2	15.1	15.3	16.3	16.9
M	1015.7					/	15.1	19.5	10.6							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

11

DEURNE(RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. september 2013

	Rel.Vocht.		Mist			Neerslag								Wind						
	%		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	%	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	69	50	-	-	-	-	-	-	/	/	-	-	-	14	36	WNW	N	SW	WNW	W
2	73	49	-	-	-	-	-	-	/	/	-	-	-	14	36	W	WSW	WSW	W	WNW
3	75	54	33	23	8	-	-	-	/	/	-	-	-	7	18	ENE	W	WSW	NNW	ENE
4	73	46	115	55	15	-	-	-	/	/	-	-	-	7	22	E	-	ESE	E	E
5	**63**	**27**	-	-	-	-	-	-	/	/	-	-	-	7	22	SW	ESE	E	SSW	ESE
6	69	33	-	-	-	1.8	1 22	6	/	/	-	-	X	7	40	WNW	E	SW	WNW	SW
7	67	42	-	-	-	0.1	1 01	4	/	/	-	-	-	7	29	SSW	W	SSE	WSW	SW
8	68	31	-	-	-	2.8	8 33	36	/	/	-	-	-	7	40	WNW	E	NNE	SSW	SE
9	81	55	-	-	-	**22.1**	6 48	28	/	/	-	-	-	11	40	N	ESE	SSW	WSW	ENE
10	**89**	70	-	-	-	18.3	14 25	60	/	/	-	-	-	**18**	**65**	W	W	WSW	W	W
11	83	60	-	-	-	3.7	4 47	20	/	/	-	-	-	**18**	50	NW	WSW	NW	WNW	NW
12	79	60	-	-	-	0.2	0 55	4	/	/	-	-	-	14	36	WNW	NW	W	WNW	W
13	87	76	-	-	-	3.0	6 55	29	/	/	-	-	-	11	29	SSW	WSW	-	SSW	S
14	83	64	-	-	-	11.0	8 48	37	/	/	-	-	-	14	43	NW	SSW	SSW	NNW	N
15	74	47	-	-	-	4.2	6 49	28	/	/	-	-	-	14	50	SW	NNW	WSW	SW	SSW
16	71	40	-	-	-	2.3	4 10	17	/	/	-	-	-	**18**	47	SW	SW	WSW	W	W
17	80	51	-	-	-	7.0	7 03	29	/	/	-	-	-	14	40	WSW	SSW	SW	WSW	S
18	86	63	-	-	-	4.3	9 40	40	/	/	-	-	-	11	36	WNW	W	NNE	W	W
19	79	50	-	-	-	1.5	6 22	27	/	/	-	-	-	14	40	SW	SW	SW	SW	SW
20	78	59	-	-	-	0.3	0 26	2	/	/	-	-	-	14	40	W	SW	W	W	WNW
21	77	57	10	-	-	-	-	-	/	/	-	-	-	7	22	SW	SW	SSW	SSW	S
22	87	76	-	-	-	-	-	-	/	/	-	-	-	7	18	WNW	SSW	SW	WSW	NW
23	83	61	156	149	113	-	-	-	/	/	-	-	-	**4**	**14**	WNW	WNW	SSW	WNW	NNW
24	84	57	439	439	329	-	-	-	/	/	-	-	-	**4**	22	E	-	SE	VAR	ENE
25	86	59	303	292	239	-	-	-	/	/	-	-	-	**4**	18	WSW	E	ESE	VAR	SSW
26	78	51	31	11	2	<0.1	1 28	6	/	/	-	-	-	11	25	NE	WNW	WNW	NNE	NE
27	83	61	46	-	-	-	-	-	/	/	-	-	-	7	22	ESE	NE	E	ESE	ENE
28	72	51	-	-	-	-	-	-	/	/	-	-	-	14	32	E	E	E	E	E
29	67	47	-	-	-	-	-	-	/	/	-	-	-	**18**	36	E	ENE	E	E	E
30	72	51	-	-	-	-	-	-	/	/	-	-	-	14	32	E	E	E	E	ENE
M	77		1133	969	706	82.6	89 32				0	0	1	11						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

10

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. oktober 2013

	Druk hPa	Bewolking Octas				Zon	Temperaturen °C									
						Duur	Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	1012.5	0	1	1	1	/	11.5	18.1	5.5	4.9	13.9	14.3	14.2	14.5	15.9	16.6
2	1015.5	0	5	4	2	/	11.7	18.9	5.7	5.3	13.9	14.2	14.1	14.4	15.6	16.5
3	1014.4	0	3	4	7	/	13.5	19.6	7.3	6.8	14.1	14.4	14.3	14.5	15.5	16.3
4	1014.0	/	4	5	6	/	**17.5**	21.5	12.8	12.2	15.0	15.0	15.0	15.1	15.5	16.2
5	1019.2	0	7	7	5	/	15.8	19.1	11.5	11.6	15.3	15.5	15.4	15.6	15.8	16.2
6	1025.8	8	7	6	1	/	14.0	18.4	7.1	6.8	15.1	15.3	15.3	15.5	16.0	16.2
7	**1026.5**	0	4	3	5	/	11.6	19.2	5.5	6.0	14.1	14.4	14.3	14.6	15.7	16.2
8	1025.2	7	7	4	5	/	14.0	18.7	7.0	7.8	14.2	14.5	14.4	14.6	15.6	16.1
9	1017.5	8	8	7	7	/	14.3	16.0	10.1	8.7	15.3	15.3	15.3	15.4	15.6	16.0
10	1009.7	/	7	6	6	/	9.6	13.1	7.2	6.7	14.1	14.4	14.3	14.6	15.5	16.0
11	1015.2	8	6	8	8	/	8.0	9.6	6.3	6.2	13.4	13.7	13.6	13.8	15.1	15.9
12	1018.2	8	3	3	6	/	**7.8**	11.5	3.3	**3.3**	12.5	12.9	12.8	13.1	14.6	15.7
13	1011.6	8	8	8	8	/	8.7	9.9	7.8	7.6	12.1	12.3	12.2	12.4	14.0	15.4
14	1011.2	8	8	8	8	/	10.4	11.8	9.4	8.9	12.0	12.2	12.1	12.4	13.6	15.1
15	1008.3	7	7	8	8	/	10.5	11.7	9.3	9.1	12.2	12.3	12.3	12.4	13.5	14.8
16	1012.7	1	1	8	8	/	9.3	12.1	**3.1**	3.6	11.5	11.8	11.7	12.0	13.3	14.6
17	1013.9	0	4	7	3	/	13.2	16.4	9.0	8.5	12.0	12.2	12.1	12.3	13.2	14.5
18	1017.2	/	8	5	5	/	12.4	16.2	9.4	9.0	12.2	12.4	12.4	12.6	13.3	14.3
19	1009.6	/	6	7	5	/	13.3	17.7	6.9	6.3	12.2	12.4	12.3	12.6	13.4	14.3
20	1010.8	0	5	7	8	/	15.4	18.8	12.7	11.3	12.9	13.0	13.0	13.1	13.5	14.3
21	1011.8	0	8	8	5	/	15.7	18.5	12.9	12.0	13.3	13.4	13.4	13.5	13.7	14.3
22	1004.3	0	3	4	7	/	**17.5**	**22.9**	13.8	12.5	13.6	13.7	13.7	13.8	13.9	14.3
23	1004.3	0	4	7	2	/	15.9	18.6	11.8	10.9	14.2	14.3	14.3	14.5	14.1	14.3
24	1016.4	0	1	3	3	/	11.9	16.5	9.1	8.2	13.4	13.6	13.6	13.7	14.2	14.4
25	1010.5	0	8	8	7	/	15.2	19.6	10.4	10.1	13.4	13.5	13.5	13.6	14.1	14.4
26	1009.9	/	6	4	0	/	17.2	20.4	15.6	14.6	14.2	14.2	14.2	14.3	14.2	14.4
27	1003.0	0	7	4	4	/	14.9	16.4	12.8	12.4	14.2	14.2	14.2	14.3	14.3	14.4
28	**998.0**	8	8	6	6	/	14.2	17.1	10.6	9.7	13.7	13.8	13.8	13.9	14.3	14.5
29	1011.3	3	5	4	4	/	10.5	13.1	7.6	6.4	12.9	13.0	13.0	13.2	14.0	14.5
30	1022.5	0	2	1	2	/	9.2	13.3	6.1	5.3	12.0	12.2	12.1	12.4	13.5	14.4
31	1021.4	0	4	6	7	/	10.6	14.2	7.2	6.2	11.4	11.7	11.6	11.9	13.1	14.2
M	1013.6					/	12.8	16.4	8.9							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

11

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. oktober 2013

	Rel.Vocht.		Mist			Neerslag								Wind						
	%		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	%	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	73	**48**	-	-	-	-	-	-	/	/	-	-	-	11	32	E	E	ENE	E	ENE
2	**72**	52	-	-	-	-	-	-	/	/	-	-	-	14	32	ESE	E	E	SE	E
3	75	52	-	-	-	3.1	2 26	10	/	/	-	-	-	14	32	ESE	E	ESE	ESE	ESE
4	84	69	20	8	1	1.2	2 08	9	/	/	-	-	-	14	40	SSW	SSE	SSE	SSW	SSW
5	87	68	48	21	-	-	-	-	/	/	-	-	-	11	29	NNW	SSW	W	WNW	NNW
6	87	54	196	166	51	-	-	-	/	/	-	-	-	**4**	22	WNW	N	-	NE	WNW
7	85	57	377	229	80	-	-	-	/	/	-	-	-	**4**	**14**	SSE	SE	ESE	S	-
8	84	61	93	85	65	<0.1	0 21	1	/	/	-	-	-	7	18	SW	-	WSW	SSW	SSW
9	83	62	-	-	-	7.9	4 09	17	/	/	-	-	-	14	40	NW	SW	SW	WNW	SW
10	81	62	-	-	-	4.4	5 47	24	/	/	-	-	-	14	40	W	WNW	W	NNW	WSW
11	92	72	-	-	-	5.3	10 19	43	/	/	-	-	-	7	25	ESE	SE	NE	NE	-
12	88	67	-	-	-	7.5	2 56	12	/	/	-	-	-	7	22	SW	ESE	NE	E	NNE
13	89	82	-	-	-	**33.5**	20 45	86	/	/	-	-	-	22	72	S	SW	SSW	S	S
14	90	81	-	-	-	8.2	13 27	56	/	/	-	-	-	14	32	S	S	S	S	S
15	90	82	-	-	-	4.6	7 55	33	/	/	-	-	-	14	40	WSW	S	SW	WSW	WSW
16	**95**	83	392	291	133	1.8	3 41	15	/	/	-	-	-	11	29	SSE	N	SSE	SSE	SSE
17	89	71	-	-	-	3.9	2 03	9	/	/	-	-	-	14	40	SW	WSW	SW	WSW	W
18	93	77	377	216	-	-	-	-	/	/	-	-	-	7	22	ESE	SW	SSW	SE	ESE
19	87	72	-	-	-	0.1	1 03	4	/	/	-	-	-	11	32	SW	E	ESE	S	SW
20	84	65	-	-	-	0.3	0 49	3	/	/	-	-	X	14	50	SW	SW	S	SSW	S
21	82	68	-	-	-	0.1	2 15	9	/	/	-	-	-	14	40	SSW	SSW	SSW	SSW	S
22	81	54	-	-	-	4.6	2 44	11	/	/	-	-	X	14	40	SSW	SSE	SSE	SSE	SE
23	82	64	-	-	-	2.9	0 10	1	/	/	-	-	-	18	61	SSW	S	S	SSW	SW
24	92	73	132	84	-	-	-	-	/	/	-	-	-	7	18	SE	SW	SW	S	E
25	86	71	-	-	-	0.6	2 58	12	/	/	-	-	-	14	40	SSW	ESE	ESE	SSW	SSW
26	80	60	-	-	-	-	-	-	/	/	-	-	-	18	40	SW	SSW	SSW	SW	SSW
27	74	57	-	-	-	6.5	6 30	27	/	/	-	-	-	29	68	SW	SSW	S	SW	SSW
28	74	59	-	-	-	5.0	6 20	26	/	/	-	-	-	**32**	**90**	SSW	S	SSW	W	SW
29	76	61	-	-	-	0.4	2 15	9	/	/	-	-	-	22	47	WSW	SW	SW	SW	SW
30	78	55	-	-	-	-	-	-	/	/	-	-	-	14	29	SW	SW	SW	WSW	SSW
31	75	59	-	-	-	-	-	-	/	/	-	-	-	18	50	SSW	S	S	SSW	SSW
M	83		1635	1100	330	101.9	101 01				0	0	2	14						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

10

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" I 14m Periode 00-24 h W.T. november 2013

	Druk hPa	Bewolking Octas				Zon	Temperaturen °C									
						Duur	Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	1013.5	4	7	5	8	/	11.3	13.7	8.6	8.8	11.8	11.9	11.9	12.0	13.0	14.0
2	1001.3	8	7	7	5	/	11.4	13.9	8.6	8.8	11.7	11.9	11.8	12.0	12.9	13.9
3	1001.6	0	3	5	4	/	9.3	10.7	7.9	7.2	11.1	11.3	11.3	11.5	12.8	13.7
4	**989.6**	8	8	8	5	/	9.6	13.5	7.1	6.2	10.8	11.0	10.9	11.2	12.5	13.6
5	995.9	8	7	8	7	/	7.2	9.8	4.6	4.2	10.1	10.3	10.2	10.4	12.0	13.4
6	1001.5	7	8	8	6	/	10.9	**14.6**	8.5	7.4	10.0	10.1	10.1	10.3	11.7	13.2
7	1006.7	8	8	8	8	/	**12.1**	**14.6**	10.0	10.0	11.1	11.0	11.1	11.1	11.7	13.0
8	1007.0	8	1	6	8	/	9.1	11.1	5.1	5.8	10.8	11.0	11.0	11.1	12.0	12.9
9	1007.0	8	0	3	8	/	8.7	10.4	6.8	5.9	10.3	10.5	10.4	10.6	11.7	12.8
10	1012.2	5	8	5	1	/	6.8	9.5	4.6	3.3	9.2	9.6	9.5	9.8	11.4	12.6
11	1027.9	0	1	7	7	/	6.7	10.7	0.8	1.3	8.3	8.7	8.6	9.0	10.9	12.5
12	1025.6	8	8	8	7	/	8.2	10.0	6.6	6.4	9.1	9.2	9.2	9.4	10.7	12.3
13	1031.5	0	0	2	1	/	6.6	11.7	0.5	1.4	8.3	8.6	8.5	8.8	10.5	12.1
14	1020.9	7	8	8	7	/	7.1	10.2	4.7	4.0	8.3	8.5	8.5	8.7	10.3	11.9
15	1028.6	3	0	4	1	/	6.8	10.2	1.3	2.1	8.0	8.3	8.3	8.5	10.1	11.8
16	1031.7	8	8	8	8	/	**2.4**	4.8	0.5	1.6	7.6	7.9	7.8	8.1	9.8	11.6
17	1024.6	8	8	8	8	/	4.8	6.1	3.0	3.7	8.0	8.1	8.1	8.3	9.7	11.4
18	1011.8	8	7	7	7	/	5.1	6.8	3.9	4.3	8.0	8.1	8.1	8.3	9.6	11.3
19	1008.9	8	7	7	7	/	6.2	8.1	4.8	3.7	8.0	8.1	8.2	8.3	9.5	11.2
20	1004.2	0	5	7	8	/	3.5	5.3	0.2	**0.6**	6.9	7.2	7.1	7.4	9.3	11.0
21	1002.0	8	8	7	7	/	2.7	5.2	0.3	0.7	6.4	6.8	6.7	7.0	8.9	10.9
22	1013.2	/	7	8	7	/	3.9	5.7	1.3	**0.6**	6.1	6.4	6.3	6.6	8.5	10.6
23	1020.5	8	8	8	7	/	5.2	6.9	1.9	1.0	6.5	6.7	6.7	6.9	8.4	10.4
24	1025.8	8	8	7	7	/	6.2	8.9	2.9	2.0	6.3	6.5	6.5	6.7	8.3	10.2
25	1032.8	8	7	7	4	/	5.9	7.5	4.7	3.8	6.7	6.9	6.9	7.0	8.3	10.1
26	**1035.6**	8	7	7	7	/	6.2	8.1	2.0	1.9	6.7	6.8	6.8	7.0	8.3	10.0
27	1033.8	0	5	7	7	/	5.0	7.9	**-0.3**	**0.6**	6.2	6.5	6.4	6.7	8.2	9.9
28	1033.3	8	8	8	8	/	7.7	9.7	5.8	4.5	7.1	7.2	7.1	7.3	8.2	9.8
29	1023.7	8	8	8	1	/	7.3	9.0	5.6	4.6	7.3	7.5	7.4	7.6	8.3	9.8
30	1022.0	7	5	4	7	/	/	9.5	4.4	3.8	7.0	7.1	7.1	7.3	8.4	9.8
M	1016.5					/	7.0/	9.5	4.2							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

11

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. november 2013

	Rel.Vocht.		Mist			Neerslag								Wind						
	%		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	%	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	82	70	-	-	-	4.5	2 55	12	/	/	-	-	-	18	40	SSW	SSW	SSW	SSW	S
2	92	79	-	-	-	12.1	8 15	34	/	/	-	-	-	14	58	SW	SSE	SW	W	SSW
3	80	68	-	-	-	0.7	2 44	11	/	/	-	-	-	**25**	**61**	SW	SSW	SW	SW	SW
4	84	63	-	-	-	11.3	10 18	43	/	/	-	-	-	22	54	SSW	S	SSW	N	W
5	86	68	-	-	-	8.3	9 21	39	/	/	-	-	-	18	43	SSW	SW	SSW	S	WSW
6	87	77	-	-	-	6.3	7 14	30	/	/	-	-	-	18	47	SW	WSW	SW	SW	WSW
7	92	80	-	-	-	**14.5**	19 33	81	/	/	-	-	-	14	54	SW	SW	WSW	W	S
8	93	82	3	1	-	13.0	3 41	15	/	/	-	-	-	11	43	WSW	W	SW	SE	WSW
9	82	67	-	-	-	1.2	4 43	20	/	/	-	-	-	22	54	WSW	WSW	SW	SSW	SSW
10	84	70	-	-	-	6.1	5 30	23	/	/	-	-	-	11	36	NW	W	W	N	W
11	78	59	-	-	-	-	-	-	/	/	-	-	-	11	36	S	WSW	SW	S	S
12	84	63	-	-	-	1.8	9 15	39	/	/	-	-	-	14	36	SSW	S	SSW	SW	NNW
13	84	**58**	66	20	-	-	-	-	/	/	-	-	-	**4**	14	WSW	NNW	-	W	SSE
14	87	77	-	-	-	2.4	6 05	25	/	/	-	-	-	14	40	NW	SSW	SSW	WSW	NNW
15	90	78	118	100	27	-	-	-	/	/	-	-	-	7	25	NE	NNW	NNE	NE	ENE
16	**98**	94	1332	1305	1050	<0.1	1 24	6	/	/	X	-	-	**4**	**11**	SSE	-	S	SE	SSE
17	92	87	-	-	-	-	-	-	/	/	-	-	-	7	14	NE	SSE	SE	ENE	ENE
18	85	73	-	-	-	-	-	-	/	/	-	-	-	11	29	SSW	E	-	SW	SSW
19	85	76	-	-	-	1.4	5 25	23	/	/	-	-	-	11	36	NNW	SSW	WSW	NNW	N
20	82	61	-	-	-	9.6	9 10	38	/	/	X	X	-	14	43	S	NNW	W	SSW	S
21	88	76	-	-	-	0.1	3 10	13	/	/	X	-	-	11	32	ENE	SE	E	ENE	NE
22	84	76	-	-	-	-	-	-	/	/	-	-	-	14	32	NNE	NNE	N	NNE	NNE
23	82	69	-	-	-	-	-	-	/	/	-	-	-	11	25	NNE	NNE	N	NNE	NNE
24	80	64	-	-	-	0.1	0 55	4	/	/	-	-	-	11	36	NNE	N	N	N	N
25	**77**	68	-	-	-	-	-	-	/	/	-	-	-	11	29	NNW	N	NNW	N	NNW
26	82	73	-	-	-	<0.1	0 20	1	/	/	-	-	-	7	25	NNW	N	N	NNW	NW
27	87	75	49	15	-	-	-	-	/	/	-	-	-	7	22	WSW	S	S	SW	WSW
28	92	86	75	-	-	0.4	2 35	11	/	/	-	-	-	7	22	W	W	W	W	N
29	83	70	-	-	-	3.0	4 53	20	/	/	-	-	-	14	**61**	WNW	W	SW	WSW	WNW
30	87	74	-	-	-	4.4	5 06	21	/	/	-	-	-	11	50	NW	W	W	NNW	NNW
M	86		1643	1441	1077	101.2	122 32				3	1	0	12						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

10

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. december 2013

	Druk hPa	Bewolking Octas				Zon	Temperaturen °C									
						Duur	Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	1031.1	8	5	2	7	/	7.6	9.6	5.0	3.7	7.0	7.1	7.1	7.3	8.3	9.7
2	1033.3	8	8	3	7	/	5.9	8.7	0.5	0.9	6.6	6.9	6.9	7.1	8.3	9.7
3	1029.3	0	0	5	2	/	1.3	6.1	-2.6	-1.5	5.3	5.7	5.6	5.9	8.0	9.6
4	1027.4	0	8	7	3	/	5.4	8.3	1.7	1.1	5.2	5.5	5.4	5.7	7.6	9.5
5	1021.5	0	3	7	7	/	5.0	9.7	2.2	1.1	5.2	5.5	5.4	5.6	7.4	9.3
6	1023.7	6	3	1	4	/	4.7	5.9	3.4	2.4	5.1	5.3	5.3	5.5	7.2	9.1
7	1026.2	8	8	7	7	/	6.3	8.7	3.2	2.0	5.0	5.3	5.2	5.4	7.0	9.0
8	1025.8	8	8	7	7	/	8.1	10.0	6.3	5.4	6.0	6.1	6.1	6.2	7.1	8.9
9	1030.0	0	6	5	5	/	7.5	10.3	0.8	0.9	6.4	6.5	6.5	6.6	7.3	8.8
10	**1034.2**	0	2	1	1	/	2.0	9.4	-2.5	-2.2	4.8	5.2	5.1	5.5	7.3	8.8
11	1032.7	0	0	0	0	/	0.3	7.2	**-5.0**	**-3.7**	4.0	4.4	4.3	4.5	6.7	8.8
12	1028.6	/	0	3	3	/	**-0.5**	4.1	-3.5	-3.6	3.4	3.8	3.7	4.0	6.3	8.6
13	1023.8	8	8	3	3	/	2.2	5.9	-2.8	-1.7	3.4	3.6	3.6	3.8	5.9	8.3
14	1025.8	8	7	2	1	/	6.4	8.5	4.2	4.0	3.9	4.0	4.0	4.2	5.9	8.1
15	1025.6	8	7	5	7	/	8.0	9.2	6.7	5.8	4.9	5.0	5.0	5.1	6.0	8.0
16	1022.8	8	7	5	7	/	**10.2**	**12.9**	8.3	7.0	5.7	5.7	5.7	5.8	6.3	8.0
17	1022.7	0	5	7	7	/	7.4	9.6	3.8	3.9	6.1	6.2	6.2	6.3	6.7	8.0
18	1015.2	7	8	7	6	/	8.5	10.9	6.4	4.9	6.1	6.2	6.2	6.3	6.9	8.0
19	1005.4	6	7	5	1	/	8.2	10.7	3.0	1.9	6.2	6.4	6.3	6.5	7.0	8.1
20	1022.3	0	7	0	1	/	6.0	8.5	4.0	3.0	5.7	5.9	5.9	6.0	7.1	8.1
21	1021.6	8	7	8	8	/	6.9	7.9	5.8	5.1	5.7	5.9	5.8	6.0	7.0	8.2
22	1014.0	8	8	4	6	/	8.4	11.3	6.3	5.5	6.2	6.2	6.2	6.3	7.0	8.2
23	1009.0	8	7	8	7	/	9.0	12.3	5.8	4.6	6.2	6.3	6.3	6.5	7.1	8.1
24	**988.7**	8	8	8	/	/	**10.2**	12.2	7.2	6.7	7.1	7.0	7.0	7.1	7.2	8.2
25	989.0	8	0	0	/	/	6.9	9.3	0.4	0.8	6.4	6.7	6.7	6.9	7.5	8.2
26	997.3	0	7	7	6	/	4.9	8.0	0.2	0.9	5.9	6.1	6.1	6.3	7.4	8.2
27	995.7	0	8	8	8	/	8.0	9.7	4.7	3.5	5.8	6.0	5.9	6.1	7.2	8.2
28	1000.1	8	8	6	4	/	7.3	9.0	5.5	4.4	6.5	6.7	6.6	6.8	7.2	8.2
29	1015.9	8	6	2	0	/	5.5	7.9	3.8	2.4	5.7	6.0	5.9	6.2	7.3	8.2
30	1019.9	0	0	6	7	/	5.7	7.6	2.8	1.8	5.2	5.5	5.4	5.6	6.9	8.1
31	1012.1	8	6	5	8	/	7.5	9.7	6.1	5.1	5.7	5.8	5.8	6.0	6.8	8.0
M	1018.4					/	6.2	9.0	3.0							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

11

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. december 2013

	Rel.Vocht.		Mist			Neerslag								Wind						
	%		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	%	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	85	67	-	-	-	-	-	-	/	/	-	-	-	7	25	NW	NNW	SW	WNW	N
2	83	65	-	-	-	-	-	-	/	/	-	-	-	7	29	ENE	NNE	NNE	E	NE
3	89	70	335	181	18	-	-	-	/	/	-	-	-	**4**	18	WSW	ENE	-	W	S
4	86	73	-	-	-	1.4	2 33	11	/	/	-	-	-	11	32	WNW	SSW	SW	WSW	NNW
5	78	47	-	-	-	1.6	1 12	5	/	/	-	-	-	25	83	NW	WSW	SW	SW	WNW
6	**59**	51	-	-	-	-	-	-	/	/	-	-	-	25	58	WNW	W	WNW	WNW	WNW
7	84	66	-	-	-	0.2	3 34	15	/	/	-	-	-	14	32	W	W	SW	W	WSW
8	86	77	-	-	-	<0.1	1 43	7	/	/	-	-	-	18	36	SW	WSW	SW	WSW	WSW
9	85	77	-	-	-	-	-	-	/	/	-	-	-	14	40	WSW	SW	WSW	W	SW
10	87	56	256	97	3	-	-	-	/	/	-	-	-	**4**	14	SSW	ESE	ESE	S	S
11	92	77	501	420	154	-	-	-	/	/	-	-	-	**4**	**11**	ESE	SSE	SSE	ESE	E
12	**93**	80	351	236	32	-	-	-	/	/	-	-	-	7	22	SW	ESE	ESE	SSE	SE
13	89	76	258	152	-	0.2	1 13	5	/	/	-	-	-	11	25	SSW	SSW	SSW	S	SSW
14	85	68	-	-	-	3.5	3 18	14	/	/	-	-	-	14	36	SSW	SSW	WSW	WSW	S
15	75	63	-	-	-	0.3	1 50	8	/	/	-	-	-	22	50	SSW	SSW	SW	SSW	S
16	65	**44**	-	-	-	-	-	-	/	/	-	-	-	22	47	SSW	SSW	SSW	SSW	SSW
17	76	58	-	-	-	-	-	-	/	/	-	-	-	11	36	SW	SSW	SW	WSW	ESE
18	78	69	-	-	-	<0.1	0 43	3	/	/	-	-	-	18	47	S	SSE	SSW	SSW	SSE
19	82	64	-	-	-	4.9	6 19	26	/	/	-	-	-	18	54	SSW	S	SSW	W	SSW
20	82	66	-	-	-	<0.1	0 48	3	/	/	-	-	-	18	47	SSW	SSW	WSW	SW	SSW
21	76	70	-	-	-	2.3	6 28	27	/	/	-	-	-	29	58	SSW	SSW	SSW	SSW	SSW
22	83	74	-	-	-	1.4	3 01	13	/	/	-	-	-	22	61	SW	SSW	SW	SSW	WSW
23	76	62	-	-	-	<0.1	4 53	20	/	/	-	-	-	29	83	SSW	WSW	SSW	S	SSW
24	78	58	-	-	-	**20.0**	18 54	79	/	/	-	-	-	**36**	**97**	SSW	SSW	SSW	S	SSW
25	83	70	-	-	-	2.7	2 06	9	/	/	-	-	-	14	50	WSW	SE	SW	SSW	SSE
26	89	77	-	-	-	<0.1	0 15	1	/	/	-	-	-	11	25	SSW	SE	SE	SW	SW
27	84	68	-	-	-	7.1	11 27	48	/	/	-	-	-	22	65	SSW	S	S	S	SSW
28	88	78	-	-	-	9.1	5 21	22	/	/	-	-	-	11	32	SW	WSW	SSW	SW	SSW
29	86	74	-	-	-	1.0	2 24	10	/	/	-	-	-	14	29	SW	SSW	SW	SW	SW
30	82	71	-	-	-	0.4	2 04	9	/	/	-	-	-	22	50	SSW	SSW	S	S	SSW
31	71	49	-	-	-	1.7	5 03	21	/	/	-	-	-	18	36	SSE	SSW	S	SSE	SSE
M	82		1701	1086	207	57.8	85 09				0	0	0	16						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

10

DEURNE(RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. januari 2014

	Druk hPa	Bewolking Octas				Zon	Temperaturen °C									
						Duur	Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	1004.4	8	0	8	7	/	8.0	10.6	5.8	4.4	5.8	6.0	5.9	6.1	6.9	8.0
2	998.8	8	7	5	2	/	9.5	10.9	7.4	6.1	6.7	6.6	6.6	6.6	6.9	8.0
3	1002.1	/	8	8	7	/	9.7	13.0	4.6	3.8	6.6	6.7	6.7	6.8	7.2	8.0
4	1000.4	0	2	7	5	/	8.4	10.5	6.2	5.2	6.5	6.6	6.6	6.7	7.4	8.0
5	1005.2	8	2	2	5	/	6.2	9.1	3.8	3.0	6.3	6.4	6.4	6.6	7.3	8.0
6	1002.8	8	7	5	7	/	**12.0**	**14.8**	9.1	8.2	6.4	6.5	6.4	6.6	7.2	8.1
7	1010.1	1	1	6	1	/	11.2	13.1	9.9	8.5	7.5	7.5	7.5	7.6	7.4	8.1
8	1016.0	8	1	7	6	/	9.2	11.5	4.6	4.3	7.6	7.6	7.6	7.7	7.7	8.1
9	1008.1	0	5	8	8	/	10.0	12.3	5.4	4.4	7.5	7.6	7.6	7.7	7.9	8.2
10	1016.5	0	1	1	7	/	5.8	9.2	4.3	3.3	6.6	6.8	6.8	7.0	7.8	8.3
11	1018.5	8	8	8	0	/	5.2	8.5	3.1	1.5	6.1	6.4	6.3	6.5	7.6	8.3
12	**1021.4**	0	2	6	1	/	**2.0**	6.4	**-2.9**	-2.1	4.8	5.2	5.1	5.4	7.1	8.3
13	1010.0	8	5	3	0	/	6.8	9.9	1.9	2.1	4.8	5.1	5.0	5.3	6.8	8.1
14	1005.4	/	5	7	7	/	5.1	6.5	1.9	1.9	5.0	5.3	5.2	5.4	6.7	8.0
15	1005.7	/	8	8	8	/	5.0	8.3	2.9	2.0	5.2	5.4	5.3	5.5	6.6	7.8
16	998.0	8	8	8	2	/	8.3	9.3	4.6	3.4	5.8	5.8	5.8	5.9	6.6	7.8
17	997.8	4	5	7	8	/	8.0	9.4	6.5	6.2	6.1	6.2	6.1	6.3	6.8	7.7
18	998.4	8	7	7	6	/	5.5	8.8	1.9	1.0	5.7	6.0	5.9	6.1	6.9	7.7
19	998.2	0	8	7	7	/	7.2	10.2	3.5	3.0	5.6	5.8	5.7	5.9	6.8	7.7
20	1006.1	8	8	8	8	/	6.4	7.4	3.9	3.7	6.3	6.3	6.3	6.4	6.8	7.7
21	1012.5	8	7	7	8	/	4.8	6.7	3.8	3.7	6.2	6.3	6.3	6.4	6.9	7.7
22	1012.2	8	7	4	5	/	3.3	5.4	1.7	1.1	5.5	5.7	5.7	5.8	6.8	7.7
23	1012.0	/	7	8	7	/	4.6	6.9	2.0	2.1	5.4	5.5	5.5	5.6	6.6	7.7
24	1016.0	0	1	5	1	/	3.8	7.5	-1.1	-1.1	4.6	4.9	4.8	5.1	6.4	7.6
25	1014.9	0	8	8	8	/	3.4	6.7	-1.5	-1.1	4.1	4.4	4.3	4.6	6.1	7.5
26	1004.4	8	8	8	8	/	5.8	8.1	4.1	3.2	5.0	5.1	5.0	5.2	6.1	7.3
27	**993.7**	8	0	7	7	/	4.0	6.5	2.6	1.7	4.7	4.9	4.8	5.0	6.1	7.3
28	994.7	5	5	7	7	/	4.6	6.1	2.8	1.8	4.4	4.5	4.5	4.7	5.9	7.2
29	998.2	2	7	5	6	/	2.7	4.5	0.7	0.2	4.1	4.3	4.3	4.4	5.7	7.1
30	1004.7	8	7	7	7	/	3.7	6.8	0.6	0.4	4.0	4.2	4.2	4.3	5.6	7.0
31	1005.4	0	0	1	7	/	3.8	8.1	-2.8	**-3.0**	3.5	3.8	3.7	4.0	5.5	6.9
M	1006.2					/	6.3	8.8	3.3							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. januari 2014

	Rel.Vocht.		Mist			Neerslag								Wind						
	ê		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	ê	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	80	67	-	-	-	1.3	6 48	28	/	/	-	-	-	22	58	S	SSW	S	S	SSE
2	79	66	-	-	-	0.4	3 22	14	/	/	-	-	-	22	50	S	S	S	WSW	SSW
3	78	63	-	-	-	6.0	5 12	22	/	/	-	X	X	22	**94**	WSW	SSE	S	SSW	SW
4	81	70	-	-	-	0.4	1 09	5	/	/	-	-	-	18	36	SW	SW	S	SE	S
5	81	73	-	-	-	-	-	-	/	/	-	-	-	18	40	S	WSW	SW	SSW	S
6	78	68	-	-	-	1.4	3 52	16	/	/	-	-	-	**29**	58	SW	S	S	SSW	SSW
7	**74**	63	-	-	-	-	-	-	/	/	-	-	-	25	58	SSW	SW	SSW	SSW	SSW
8	85	72	-	-	-	2.6	2 29	10	/	/	-	-	-	14	43	WSW	SSW	SW	SW	SSE
9	78	64	-	-	-	1.4	2 56	12	/	/	-	-	-	25	68	WSW	S	SSW	WSW	W
10	84	72	-	-	-	-	-	-	/	/	-	-	-	18	36	SW	WSW	SW	SW	SW
11	83	64	-	-	-	0.8	1 18	5	/	/	-	-	-	14	40	WNW	SW	SW	W	W
12	85	66	80	-	-	-	-	-	/	/	-	-	-	**7**	**22**	SE	WSW	SE	SE	SE
13	84	68	-	-	-	<0.1	0 51	4	/	/	-	-	-	14	40	SSW	ESE	SW	SW	S
14	**90**	78	-	-	-	2.7	6 40	28	/	/	-	-	-	11	29	W	S	ESE	S	W
15	88	79	-	-	-	5.8	10 30	44	/	/	-	-	-	18	36	S	SSW	SSW	S	S
16	86	79	-	-	-	3.2	6 46	28	/	/	-	-	-	18	36	S	S	S	S	S
17	81	70	-	-	-	9.8	8 49	37	/	/	-	-	-	18	47	S	S	S	S	ESE
18	85	70	-	-	-	<0.1	0 19	1	/	/	-	-	-	11	25	SE	S	SE	SE	ESE
19	81	70	-	-	-	0.1	2 04	9	/	/	-	-	-	11	29	WSW	E	ESE	SSE	SW
20	**90**	83	-	-	-	**11.5**	17 48	74	/	/	-	-	-	11	29	NW	NW	NNW	NNW	NW
21	88	77	-	-	-	0.1	1 33	6	/	/	-	-	-	**7**	25	SW	N	SSE	WSW	SSW
22	79	67	-	-	-	-	-	-	/	/	-	-	-	14	29	SSE	S	S	SSE	SSE
23	88	71	-	-	-	4.2	7 13	30	/	/	-	-	-	11	36	SW	SE	S	SW	SW
24	78	**58**	-	-	-	-	-	-	/	/	-	-	-	**7**	**22**	W	W	WSW	W	S
25	81	70	-	-	-	4.0	2 51	12	/	/	-	-	-	14	61	WNW	S	SE	SSW	S
26	81	70	-	-	-	6.7	6 09	26	/	/	-	-	-	22	58	WNW	WNW	W	SSE	S
27	82	75	-	-	-	0.4	2 22	10	/	/	-	-	-	22	40	SSW	W	SW	SSW	SSW
28	79	70	-	-	-	<0.1	1 53	8	/	/	-	-	-	22	47	SSE	S	S	S	SSE
29	77	65	-	-	-	0.1	1 22	6	/	/	X	X	-	18	36	E	SE	E	E	E
30	82	74	-	-	-	0.1	0 58	4	/	/	-	-	-	11	**22**	ESE	E	ESE	ESE	E
31	79	63	104	86	9	6.1	2 06	9	/	/	-	-	-	14	61	S	E	SSE	SSW	SSE
M	82		184	86	9	69.1	107 20				1	2	1	16						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

10

DEURNE(RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. februari 2014

	Druk hPa	Bewolking Octas				Zon Duur	Temperaturen °C									
							Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	997.4	/	8	8	7	/	7.0	8.5	5.1	3.6	4.5	4.5	4.6	4.6	5.5	6.8
2	1010.8	0	1	1	3	/	5.3	8.6	0.5	-0.7	4.3	4.5	4.5	4.6	5.7	6.8
3	1010.1	0	0	0	0	/	**3.0**	8.4	**-2.5**	**-2.7**	3.5	3.8	3.7	4.0	5.5	6.7
4	1004.8	0	7	2	0	/	6.0	10.1	0.5	-0.2	3.9	4.0	4.0	4.2	5.4	6.7
5	993.9	0	8	4	6	/	7.8	10.6	3.7	2.6	4.4	4.5	4.5	4.6	5.4	6.6
6	998.2	6	0	8	8	/	7.6	10.4	5.0	4.8	5.2	5.3	5.2	5.3	5.6	6.6
7	992.1	6	7	8	3	/	8.4	12.0	5.4	3.9	5.7	5.8	5.8	5.8	5.9	6.7
8	**989.3**	0	8	8	5	/	7.7	9.2	5.9	4.6	5.6	5.7	5.7	5.8	6.2	6.7
9	991.5	8	2	7	0	/	6.1	7.7	4.8	3.4	5.4	5.6	5.5	5.7	6.2	6.8
10	995.0	/	7	7	7	/	5.3	7.7	2.6	2.2	5.0	5.2	5.2	5.3	6.1	6.8
11	1000.8	8	4	3	7	/	6.2	8.7	3.9	3.0	5.3	5.4	5.4	5.5	6.1	6.8
12	1002.1	0	6	5	8	/	6.1	9.8	3.4	2.6	5.0	5.2	5.2	5.3	6.1	6.8
13	995.5	0	2	8	3	/	5.3	6.8	3.7	2.6	5.1	5.3	5.3	5.5	6.1	6.8
14	999.7	0	7	8	7	/	5.8	**14.3**	3.0	1.7	4.5	4.7	4.7	4.9	5.9	6.8
15	995.1	/	5	5	4	/	**10.6**	14.0	6.6	5.9	5.5	5.4	5.4	5.4	5.9	6.7
16	1008.4	7	4	4	2	/	7.1	10.3	3.0	1.6	5.8	5.8	5.8	5.9	6.2	6.7
17	1012.8	5	7	5	7	/	6.6	11.1	1.4	1.3	5.4	5.6	5.5	5.7	6.3	6.8
18	1012.5	0	7	8	8	/	5.7	8.3	1.4	1.1	5.2	5.4	5.3	5.5	6.3	6.9
19	1013.0	7	8	6	7	/	7.8	10.2	6.2	5.4	5.8	5.8	5.8	5.9	6.3	6.9
20	1007.3	8	6	8	8	/	8.9	10.6	7.2	6.4	6.4	6.4	6.4	6.5	6.4	6.9
21	1006.3	/	5	5	1	/	7.4	10.2	5.3	4.1	6.6	6.8	6.7	6.9	6.6	6.9
22	1012.5	0	7	4	3	/	7.0	10.3	5.0	3.9	6.1	6.2	6.2	6.3	6.8	7.0
23	**1017.7**	7	1	5	4	/	7.9	12.9	2.2	0.8	5.8	6.0	5.9	6.1	6.8	7.1
24	1011.7	0	3	6	4	/	7.6	13.9	0.3	-0.1	5.5	5.8	5.7	5.9	6.7	7.1
25	1007.4	0	2	8	7	/	9.3	12.7	5.9	3.7	6.1	6.2	6.1	6.3	6.7	7.2
26	1015.6	3	7	4	5	/	7.5	11.1	5.1	4.0	6.2	6.3	6.3	6.4	6.8	7.2
27	1012.5	0	2	8	5	/	5.3	7.3	2.7	1.7	5.9	6.1	6.0	6.2	6.8	7.2
28	1001.3	0	3	8	8	/	5.5	7.2	2.1	1.6	5.6	5.8	5.7	5.9	6.7	7.3
M	1004.1					/	6.9	10.1	3.6							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. februari 2014

	Rel.Vocht.		Mist			Neerslag								Wind						
	ê		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	ê	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	78	64	-	-	-	4.3	10 02	42	/	/	-	-	-	22	61	S	S	S	SW	SSW
2	77	66	-	-	-	-	-	-	/	/	-	-	-	14	36	SSW	S	SSW	SSW	SSW
3	83	58	30	8	-	-	-	-	/	/	-	-	-	11	**25**	E	S	ESE	ESE	E
4	73	55	-	-	-	-	-	-	/	/	-	-	-	18	47	S	SE	SSE	S	S
5	71	59	-	-	-	1.3	5 24	23	/	/	-	-	-	25	61	SSW	SE	SSE	S	S
6	77	65	-	-	-	8.7	7 52	33	/	/	-	-	-	22	54	S	SSW	SSW	SSW	SE
7	78	62	-	-	-	3.6	11 21	47	/	/	-	-	-	25	72	SSW	S	S	WSW	SW
8	76	61	-	-	-	3.1	9 36	40	/	/	-	-	-	25	61	SSW	S	S	SSW	SSW
9	71	59	-	-	-	<0.1	3 28	14	/	/	-	-	-	29	68	SSW	SSW	SSW	SW	SSW
10	81	62	-	-	-	0.5	4 05	17	/	/	-	-	-	**7**	**25**	WSW	S	ESE	ENE	WSW
11	78	51	-	-	-	2.0	3 48	16	/	/	-	-	-	22	61	SSW	WSW	WSW	SSW	SW
12	74	**43**	-	-	-	3.5	4 18	18	/	/	-	-	-	25	61	SSW	SW	SSW	SSW	S
13	82	72	-	-	-	7.3	5 27	23	/	/	-	-	-	18	54	SW	SW	SSW	SW	WSW
14	83	61	-	-	-	**9.9**	4 27	19	/	/	-	-	-	22	68	SSW	SSW	SSW	S	SSE
15	**61**	51	-	-	-	1.2	1 59	8	/	/	-	-	-	**32**	**86**	SW	SSW	SSW	SW	SSW
16	75	52	-	-	-	<0.1	0 28	2	/	/	-	-	-	18	47	WSW	SW	SW	WSW	SW
17	80	62	-	-	-	0.3	2 19	10	/	/	-	-	-	11	32	SSW	S	S	S	SSE
18	80	66	-	-	-	1.3	2 54	12	/	/	-	-	-	11	29	SW	SE	SSE	S	S
19	83	66	-	-	-	0.1	1 09	5	/	/	-	-	-	11	29	SW	SW	SW	SSW	SSW
20	87	80	-	-	-	5.2	6 48	28	/	/	-	-	-	18	50	SSW	SSW	SSE	SSW	S
21	77	53	-	-	-	0.7	3 52	16	/	/	-	-	-	18	54	SW	SW	SW	W	SW
22	76	60	-	-	-	0.1	0 45	3	/	/	-	-	-	18	40	SW	SSW	SSW	SW	SSW
23	77	59	-	-	-	-	-	-	/	/	-	-	-	14	40	SSW	S	SSE	SSW	S
24	71	45	-	-	-	-	-	-	/	/	-	-	-	14	36	S	SE	SE	S	S
25	73	58	-	-	-	6.1	4 05	17	/	/	-	-	-	18	58	SSW	SSE	SSE	S	S
26	79	57	-	-	-	-	-	-	/	/	-	-	-	11	29	SW	S	SSW	SW	SW
27	85	67	-	-	-	1.7	3 35	15	/	/	-	-	-	18	61	SSW	SSW	SSE	SSW	SSW
28	**88**	76	-	-	-	4.5	10 59	46	/	/	-	-	-	14	29	SE	SSW	SE	SE	ENE
M	78		30	8	0	65.4	108 41				0	0	0	18						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

DEURNE(RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. maart 2014

	Druk hPa	Bewolking Octas				Zon	Temperaturen °C									
						Duur	Lucht			Gras	Minimum onder naakte grond					
	Gem.	0h	6	12	18	h min	Gem.	Max.	Min.	Min.	-2cm	-5cm	-10cm	-20cm	-50cm	-100cm
1	1000.7	8	8	7	8	/	5.5	7.9	1.6	1.4	5.9	6.0	6.0	6.1	6.7	7.2
2	1001.0	0	0	1	7	/	5.5	9.8	1.7	1.1	5.4	5.6	5.6	5.8	6.6	7.2
3	**989.7**	2	8	7	6	/	6.5	9.7	4.5	4.1	5.8	5.9	5.9	6.0	6.6	7.2
4	1003.4	0	6	7	3	/	5.3	9.0	-0.3	-0.2	5.4	5.7	5.6	5.8	6.6	7.2
5	1020.1	0	1	3	2	/	**5.2**	12.4	**-2.1**	**-1.7**	4.8	5.1	5.0	5.3	6.5	7.2
6	1027.8	0	2	2	1	/	5.9	14.0	-1.8	-1.6	4.6	4.9	4.8	5.1	6.3	7.1
7	1026.1	0	3	7	7	/	8.1	13.4	0.0	-1.2	4.9	5.2	5.2	5.4	6.4	7.1
8	1029.3	7	/	1	5	/	9.5	17.2	3.3	1.9	6.3	6.3	6.3	6.4	6.5	7.1
9	1026.5	0	1	1	1	/	10.4	21.3	0.0	-0.9	5.9	6.2	6.1	6.3	6.9	7.1
10	1026.0	0	0	1	2	/	10.0	19.1	0.8	0.0	6.1	6.4	6.3	6.5	7.1	7.2
11	**1031.4**	8	7	3	0	/	9.9	14.7	7.2	5.5	7.8	7.8	7.8	7.8	7.3	7.3
12	**1031.4**	0	0	0	0	/	9.7	17.8	3.7	1.2	7.2	7.4	7.4	7.5	7.7	7.5
13	1029.0	0	0	0	0	/	10.1	18.7	0.2	0.0	7.0	7.2	7.2	7.4	7.9	7.6
14	1026.7	0	1	1	0	/	9.5	15.9	3.1	1.2	7.3	7.5	7.4	7.6	8.0	7.8
15	1023.3	0	7	5	7	/	9.8	11.5	7.8	7.1	8.5	8.4	8.5	8.5	8.2	7.9
16	1021.5	8	4	2	1	/	11.4	15.1	8.1	6.7	8.4	8.4	8.5	8.5	8.4	8.0
17	1021.2	0	8	8	7	/	10.8	12.5	8.6	6.5	8.8	8.8	8.8	8.8	8.6	8.2
18	1016.4	4	7	8	8	/	9.9	11.4	8.9	8.4	9.2	9.2	9.2	9.3	8.8	8.3
19	1022.6	8	4	4	5	/	12.4	16.8	8.7	7.6	9.0	9.0	9.0	9.1	8.9	8.4
20	1013.6	0	2	1	5	/	14.5	**22.3**	7.7	5.9	9.1	9.2	9.2	9.3	9.1	8.6
21	1008.1	0	8	7	2	/	9.4	12.9	5.3	3.8	9.4	9.7	9.6	9.8	9.3	8.7
22	1002.9	4	3	7	2	/	7.3	10.1	4.6	2.9	8.5	8.8	8.7	8.9	9.3	8.8
23	1006.5	6	6	5	4	/	6.0	9.1	2.8	2.8	8.0	8.2	8.2	8.3	9.0	9.0
24	1013.5	7	4	5	1	/	6.2	10.3	0.6	-0.2	7.8	8.0	7.9	8.1	8.8	8.9
25	1011.1	0	0	2	3	/	5.4	11.2	-1.6	-1.6	6.7	7.1	7.0	7.3	8.5	8.9
26	1014.8	0	5	6	5	/	5.4	9.9	1.9	0.2	6.9	7.2	7.1	7.3	8.4	8.8
27	1013.3	0	8	8	7	/	6.0	11.8	0.0	-0.8	6.6	6.9	6.9	7.1	8.3	8.8
28	1016.0	4	2	3	6	/	10.4	17.3	3.2	1.8	7.3	7.5	7.4	7.6	8.3	8.7
29	1017.5	0	1	5	7	/	12.0	19.7	3.9	2.6	8.0	8.1	8.1	8.3	8.5	8.7
30	1015.7	0	5	7	4	/	13.0	20.3	4.5	2.8	8.5	8.6	8.7	8.8	8.9	8.8
31	1013.6	8	5	3	6	/	**15.2**	21.4	7.7	6.6	9.9	9.9	9.9	10.0	9.2	8.8
M	1016.8					/	8.9	14.3	3.4							

Bewolking : 9 = Bovenlucht niet zichtbaar / = Ontbrekend gegeven

DEURNE (RLW) 4° 27' 11" E 51° 11' 32" N 14m Periode 00-24 h W.T. maart 2014

	Rel.Vocht.		Mist			Neerslag								Wind						
	è		Duur in minuten				Duur		* (cm)		Dag met			Snelheid (km/h) en richting						
	Gem.	Min.	<1000m	<500m	<200m	l/m²	h min	è	6h	18h	*	^	R	Gem.	Max.		0h	6h	12h	18h
1	**85**	66	-	-	-	1.0	0 44	3	/	/	-	-	-	11	25	S	SSW	SE	S	SW
2	73	55	-	-	-	-	-	-	/	/	-	-	-	18	36	S	SW	SSW	SW	S
3	76	57	-	-	-	1.5	4 15	18	/	/	-	-	-	14	36	S	SSE	S	SSW	SE
4	82	61	123	83	29	-	-	-	/	/	-	-	-	7	29	SW	S	SSW	SW	SSW
5	78	43	315	289	205	-	-	-	/	/	-	-	-	**4**	25	NW	WSW	W	WNW	N
6	73	41	18	6	-	-	-	-	/	/	-	-	-	7	29	SSW	SSE	SE	SSW	SSW
7	71	46	-	-	-	-	-	-	/	/	-	-	-	11	36	WNW	S	S	SW	NW
8	76	46	451	433	342	-	-	-	/	/	-	-	-	11	29	SSE	N	ESE	SE	E
9	60	**23**	-	-	-	-	-	-	/	/	-	-	-	7	25	S	SE	ESE	S	SSE
10	71	38	-	-	-	-	-	-	/	/	-	-	-	11	29	NE	ESE	ESE	N	NNW
11	79	56	-	-	-	-	-	-	/	/	-	-	-	14	29	NE	NNE	NE	NE	NE
12	76	43	-	-	-	-	-	-	/	/	-	-	-	7	18	NNE	ENE	ENE	ESE	NNE
13	70	36	159	103	47	-	-	-	/	/	-	-	-	**4**	18	NW	-	-	NE	NNW
14	69	27	-	-	-	-	-	-	/	/	-	-	-	7	32	WSW	NNE	-	VAR	WNW
15	74	64	-	-	-	0.3	0 43	3	/	/	-	-	-	**22**	**58**	NW	W	WNW	NW	W
16	71	52	-	-	-	-	-	-	/	/	-	-	-	18	40	WNW	WNW	W	W	W
17	74	59	-	-	-	-	-	-	/	/	-	-	-	14	36	WNW	W	W	WNW	W
18	81	65	-	-	-	0.4	0 57	4	/	/	-	-	-	18	50	WSW	WSW	SW	W	WSW
19	67	50	-	-	-	-	-	-	/	/	-	-	-	**22**	47	W	W	WSW	WSW	SW
20	**54**	25	-	-	-	-	-	-	/	/	-	-	-	18	50	SSW	SW	S	S	SSW
21	74	47	-	-	-	**9.4**	8 23	35	/	/	-	-	-	14	47	WNW	WSW	S	W	SW
22	71	54	-	-	-	0.5	1 20	6	/	/	-	-	-	14	47	WSW	S	SSW	SW	SW
23	77	55	-	-	-	0.1	1 37	7	/	/	-	-	-	11	36	WSW	SSW	SW	SW	SW
24	68	41	-	-	-	0.4	1 20	6	/	/	-	-	-	7	32	NNW	WNW	NNW	WNW	NE
25	68	41	-	-	-	-	-	-	/	/	-	-	-	11	29	ESE	E	E	E	NE
26	74	48	-	-	-	-	-	-	/	/	-	-	-	7	29	NW	NNE	N	NW	NE
27	79	53	-	-	-	0.1	2 07	9	/	/	-	-	-	7	22	WNW	NNE	ENE	SW	NW
28	67	42	-	-	-	-	-	-	/	/	-	-	-	7	29	E	NNW	NE	SE	E
29	60	34	-	-	-	-	-	-	/	/	-	-	-	11	32	E	E	ESE	E	E
30	61	34	-	-	-	-	-	-	/	/	-	-	-	7	18	ESE	ESE	E	SE	E
31	59	36	-	-	-	-	-	-	/	/	-	-	-	**4**	**14**	SW	E	ESE	SSE	ENE
M	72		1066	914	623	13.7	21 26				0	0	0	11						

* = Sneeuw ^ = Hagel R = Onweer <0.1 : Neerslag te wijten aan mist of dauw

Annex E Overview of maintenance - dredging activities

Dredging and disposal volumes [10^3 m^3] from April '13 till March '14

Dredging locations	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20
Deurganckdok	31,271						19,369
Drempel van Bath					110,632	114,257	21,158
Drempel van Borssele	67,033	66,486	75,020	115,828	4,710		
Drempel van De Parel			42,700				
Drempel van Frederik				63,230	114,605	126,673	41,203
Drempel van Hansweert	19,551			79,777	97,812	245,145	119,396
Drempel van Krankeloon		18,876					
Drempel van Lillo			13,103	30,256	1,790		
Drempel van Valkenisse		53,281	160,659	11,938	38,710		
Drempel van Vlissingen						7,852	
Drempel van Zandvliet	4,279					70,872	16,384
Gat van Ossenisse	171,798	197,752	1,213				24,408
Kallosluis	39,486						58,810
Overloop van Hansweert							
Overloop van Valkenisse	54,379						128,049
Pas van Terneuzen							
Plaat van Lillo		20,967	58,133				
Put van Terneuzen							64,412
Toegang Boudewijn- en Van Cauwelaertsluis	10,598	35,122					
Toegang Zandvliet- en Berendrechtsluis							
Vaarwater boven Bath							
Wielingen				106,393	39,344		
Noordzeeterminal							
Haven Linkeroever							
Walsoorden							
Grand total	**398,395**	**392,484**	**350,828**	**407,422**	**407,603**	**564,799**	**493,189**

Dredging locations	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26	Week 27
Deurganckdok	42,729	42,171	24,832				
Drempel van Bath	15,851	9,627	7,151				
Drempel van Borssele						50,655	67,567
Drempel van De Parel			15,921	21,728	12,375		
Drempel van Frederik						23,644	16,162
Drempel van Hansweert					120,358	48,267	130,997
Drempel van Krankeloon							
Drempel van Lillo				55,724	12,964		
Drempel van Valkenisse					27,737	138,750	55,492
Drempel van Vlissingen					105,792	37,225	
Drempel van Zandvliet		57,626	66,949			1,716	
Gat van Ossenisse		26,508	42,094				
Kallosluis			17,227				
Overloop van Hansweert							
Overloop van Valkenisse	110,311	103,394					
Pas van Terneuzen							
Plaat van Lillo							
Put van Terneuzen	108,030						
Toegang Boudewijn- en Van Cauwelaertsluis							
Toegang Zandvliet- en Berendrechtsluis	11,765		27,378	67,570	49,009		
Vaarwater boven Bath							
Wielingen							
Noordzeeterminal							
Haven Linkeroever							
Walsoorden							
Grand total	**288,686**	**239,326**	**201,552**	**145,022**	**328,235**	**300,257**	**270,218**

Dredging locations	Week 28	Week 29	Week 30	Week 31	Week 32	Week 33	Week 34
Deurganckdok			45,912				
Drempel van Bath					102,575	33,257	
Drempel van Borssele	68,364	70,287	63,045	73,450		91,961	60,298
Drempel van De Parel							
Drempel van Frederik	18,762	34,908	22,497	76,300	5,830		
Drempel van Hansweert	189,187						
Drempel van Krankeloon							
Drempel van Lillo							
Drempel van Valkenisse				7,932	131,507	79,716	
Drempel van Vlissingen							
Drempel van Zandvliet						55,904	101,491
Gat van Ossenisse		20,138	151,037	39,386			
Kallosluis							
Overloop van Hansweert							27,241
Overloop van Valkenisse	24,031	144,855					
Pas van Terneuzen							77,376
Plaat van Lillo					80,469	28,713	
Put van Terneuzen							
Toegang Boudewijn- en Van Cauwelaertsluis							
Toegang Zandvliet- en Berendrechtsluis							
Vaarwater boven Bath							5,382
Wielingen							
Noordzeeterminal							
Haven Linkeroever							
Walsoorden							
Grand total	**300,344**	**270,188**	**282,491**	**197,068**	**320,381**	**289,551**	**271,788**

Dredging locations	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	Week 41
Deurganckdok		35,514	23,119	32,012			28,008
Drempel van Bath					49,615		
Drempel van Borssele						11,338	48,790
Drempel van De Parel							
Drempel van Frederik				19,879	18,936	59,953	76,185
Drempel van Hansweert	122,904	79,315			76,796	151,574	
Drempel van Krankeloon		22,967					
Drempel van Lillo							
Drempel van Valkenisse			42,756	35,091			
Drempel van Vlissingen							
Drempel van Zandvliet	11,156						
Gat van Ossenisse			16,256	134,915			
Kallosluis	31,961	28,958	51,468	12,140			
Overloop van Hansweert				110,641			
Overloop van Valkenisse		32,446	83,684				
Pas van Terneuzen	54,167						
Plaat van Lillo							
Put van Terneuzen							
Toegang Boudewijn- en Van Cauwelaertsluis					41,451	5,783	
Toegang Zandvliet- en Berendrechtsluis		39,484	20,899	32,303	8,077	27,346	1,985
Vaarwater boven Bath				39,947	20,221		
Wielingen							
Noordzeeterminal							
Haven Linkeroever							
Walsoorden							
Grand total	**220,188**	**238,684**	**238,182**	**416,928**	**215,096**	**255,994**	**154,968**

Dredging locations	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48
Deurganckdok	30,964	14,916				17,595	63,751
Drempel van Bath			18,220	2,598		81,887	6,461
Drempel van Borssele	92,165	38,207				105,845	37,542
Drempel van De Parel							
Drempel van Frederik	46,903	57,664	46,269	17,933			
Drempel van Hansweert		48,270					
Drempel van Krankeloon							
Drempel van Lillo							
Drempel van Valkenisse							
Drempel van Vlissingen							
Drempel van Zandvliet				35,203	66,597	59,127	
Gat van Ossenisse						10,006	
Kallosluis			14,673				
Overloop van Hansweert							
Overloop van Valkenisse				64,336	155,323	36,082	
Pas van Terneuzen		31,931	91,599	30,157			
Plaat van Lillo		32,048	46,165	16,156			
Put van Terneuzen							146,491
Toegang Boudewijn- en Van Cauwelaertsluis							
Toegang Zandvliet- en Berendrechtsluis			29,839				
Vaarwater boven Bath							
Wielingen							
Noordzeeterminal							
Haven Linkeroever							
Walsoorden							
Grand total	**170,032**	**223,036**	**246,765**	**166,383**	**221,920**	**310,542**	**254,245**

Dredging locations	Week 49	Week 50	Week 51	Week 52	Week 01	Week 02	Week 03
Deurganckdok	80,598	62,889		59,075			
Drempel van Bath		38,741	93,399	2,700			
Drempel van Borssele		45,297	50,809			12,301	
Drempel van De Parel		44,325					
Drempel van Frederik						24,011	
Drempel van Hansweert	56,683		157,588	26,904		177,276	241,295
Drempel van Krankeloon	18,205						
Drempel van Lillo	13,586	33,796					
Drempel van Valkenisse		61,196	152,343	7,948			
Drempel van Vlissingen							
Drempel van Zandvliet	2,090						
Gat van Ossenisse							
Kallosluis		19,175	42,319				
Overloop van Hansweert	191,919	187,241					
Overloop van Valkenisse							
Pas van Terneuzen							
Plaat van Lillo	39,830						
Put van Terneuzen	48,597						
Toegang Boudewijn- en Van Cauwelaertsluis							
Toegang Zandvliet- en Berendrechtsluis			37,441	2,678		36,284	45,924
Vaarwater boven Bath							
Wielingen							
Noordzeeterminal							
Haven Linkeroever							
Walsoorden							
Grand total	**451,508**	**492,660**	**533,899**	**99,305**		**249,872**	**287,219**

Dredging locations	Week 04	Week 05	Week 06	Week 07	Week 08	Week 09	Week 10
Deurganckdok						21,015	62,037
Drempel van Bath							
Drempel van Borssele				42,579	16,968		
Drempel van De Parel							
Drempel van Frederik	27,849	97,850	98,116	68,855	56,135	4,222	
Drempel van Hansweert	133,790			153,810	226,943	12,249	
Drempel van Krankeloon							
Drempel van Lillo							
Drempel van Valkenisse	19,917						7,996
Drempel van Vlissingen							
Drempel van Zandvliet		49,506	100,258	55,397			
Gat van Ossenisse						221,450	120,018
Kallosluis	8,148						3,793
Overloop van Hansweert							
Overloop van Valkenisse		47,937					
Pas van Terneuzen				47,313			
Plaat van Lillo						63,211	
Put van Terneuzen							
Toegang Boudewijn- en Van Cauwelaertsluis							
Toegang Zandvliet- en Berendrechtsluis	41,281	11,467			13,370	35,445	53,265
Vaarwater boven Bath							
Wielingen							
Noordzeeterminal			15,575	7,331			
Haven Linkeroever	15,104						11,673
Walsoorden							
Grand total	**246,089**	**206,760**	**213,949**	**375,285**	**313,416**	**357,592**	**258,782**

Dredging locations	***Week 11***	***Week 12***	***Week 13***
Deurganckdok	29,686	2,797	
Drempel van Bath		109,332	100,912
Drempel van Borssele			
Drempel van De Parel	56,774		
Drempel van Frederik			
Drempel van Hansweert		52,463	68,500
Drempel van Krankeloon	23,940		
Drempel van Lillo			31,610
Drempel van Valkenisse	106,914	53,606	21,663
Drempel van Vlissingen			
Drempel van Zandvliet	20,364		
Gat van Ossenisse			
Kallosluis	2,659		
Overloop van Hansweert			
Overloop van Valkenisse	40,213	80,469	72,349
Pas van Terneuzen			
Plaat van Lillo			
Put van Terneuzen			
Toegang Boudewijn- en Van Cauwelaertsluis			
Toegang Zandvliet- en Berendrechtsluis	3,458		7,608
Vaarwater boven Bath			
Wielingen			
Noordzeeterminal			
Haven Linkeroever	2,225		
Walsoorden	27,991	24,032	
Grand total	**314,224**	**322,699**	**302,642**

Disposal locations	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20
Oosterweel	41,662	22,863	2,327	28,067	51,316	58,959	38,675
Punt van Melsele	43,972	33,226	3,472	35,163	55,328	58,702	47,683
Schaar Ouden Doel		18,876	108,137	30,256	9,751	79,884	49,408
Waaslandhaven							
Onderwatercel Rechteroever				17,492			11,734
Hooge Platen West							
SN11	67,033	66,486	75,020	115,828	4,710	7,852	
SN31			1,213				88,820
SH41	202,894	213,376	50,600	39,959	109,776	245,145	183,527
Plaat van Walsoorden							
SH51	42,834	11,146	47,352	47,766	35,564	24,987	73,181
SH 61		26,511	62,707	3,990	101,814	89,270	11,895
Wielingen W2				106,393	39,344		
Grand total	**398,395**	**392,484**	**350,828**	**407,422**	**407,603**	**564,799**	**493,189**

Disposal locations	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26	Week 27
Oosterweel	28,663	34,235	46,140	36,441	25,889	12,476	9,392
Punt van Melsele	25,831	30,025	52,252	31,129	23,120	12,884	6,770
Schaar Ouden Doel		35,537	53,915	77,452	25,339		
Waaslandhaven							
Onderwatercel Rechteroever	1,332		15,864	2,261		25,880	
Hooge Platen West					105,792	37,225	
SN11						50,655	67,567
SN31	108,030	26,508	42,094				
SH41	51,188	59,778			148,095	187,017	186,489
Plaat van Walsoorden							
SH51	74,974	53,243					
SH 61							
Wielingen W2							
Grand total	**288,686**	**239,326**	**201,552**	**145,022**	**328,235**	**300,257**	**270,218**

Disposal locations	Week 28	Week 29	Week 30	Week 31	Week 32	Week 33	Week 34
Oosterweel	9,584	15,964	37,558	35,566	19,452	13,114	17,988
Punt van Melsele	9,178	18,944	30,851	40,734	22,548	8,655	12,777
Schaar Ouden Doel					44,299	62,848	70,726
Waaslandhaven							
Onderwatercel Rechteroever				25,892	875	31,643	34,222
Hooge Platen West							
SN11	68,364	70,287	63,045	73,450		91,961	60,298
SN31		20,138	151,037	39,386			77,376
SH41	213,218	144,855		7,932	131,507	79,716	27,241
Plaat van Walsoorden							
SH51					26,233	11,553	979
SH 61					76,342	21,704	4,403
Wielingen W2							
Grand total	**300,344**	**270,188**	**282,491**	**197,068**	**320,381**	**289,551**	**271,788**

Disposal locations	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	Week 41
Oosterweel	17,089	53,522	44,816	39,138	24,037	40,362	51,694
Punt van Melsele	21,387	50,434	50,670	46,388	34,931	36,140	54,484
Schaar Ouden Doel	4,641	22,967		10,808	9,496	16,580	
Waaslandhaven							
Onderwatercel Rechteroever	14,355	11,653	20,950	35,840	13,380	34,384	16,747
Hooge Platen West							
SN11						11,338	48,790
SN31	77,602	13,252	16,256	134,915			
SH41	2,712	10,735	36,654	121,440	18,335	42,725	
Plaat van Walsoorden	96,757	85,208	87,123	42,207	109,607	108,849	
SH51		2,566		8,280	13,202		
SH 61				13,752	5,488		
Wielingen W2							
Grand total	**220,188**	**238,684**	**238,182**	**416,928**	**215,096**	**255,994**	**154,968**

Disposal locations	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48
Oosterweel	42,075	22,972	25,437	17,442	21,302	15,862	31,423
Punt van Melsele	34,477	26,669	19,075	17,761	14,079	19,989	32,328
Schaar Ouden Doel	1,315	54,987	92,434	34,089	31,216	40,871	
Waaslandhaven							
Onderwatercel Rechteroever	34,910	34,772	10,447	28,807	32,976	1,868	25,256
Hooge Platen West							
SN11	92,165	70,138	91,599	30,157			
SN31						105,845	184,033
SH41		22,642		64,336	155,323	46,088	
Plaat van Walsoorden		25,628					
SH51			7,862	1,299		34,800	5,162
SH 61			10,358	1,299		47,087	1,299
Wielingen W2							
Grand total	**170,032**	**223,036**	**246,765**	**166,383**	**221,920**	**310,542**	**254,245**

Disposal locations	Week 49	Week 50	Week 51	Week 52	Week 01	Week 02	Week 03
Oosterweel	49,570	42,003	41,108	26,078			
Punt van Melsele	43,857	43,566	38,652	35,675			
Schaar Ouden Doel	60,882	67,643		92			
Waaslandhaven		68,169	209,194	26,812			
Onderwatercel Rechteroever	35,523	16,788				23,374	32,828
Hooge Platen West							
SN11							
SN31	48,597	45,297	50,809	45,297			
SH41	248,602	187,241	100,737	7,948			
Plaat van Walsoorden							
SH51		17,498	50,587	2,700			
SH 61		21,243	42,812				
Wielingen W2							
Grand total	**451,508**	**492,660**	**533,899**	**99,305**		**23,374**	**32,828**

Disposal locations	Week 04	Week 05	Week 06	Week 07	Week 08	Week 09	Week 10
Oosterweel							
Punt van Melsele							
Schaar Ouden Doel							
Waaslandhaven							
Onderwatercel Rechteroever	2,488	26,411	27,441	2,292	21,729	17,032	
Hooge Platen West							
SN11							
SN31							
SH41							
Plaat van Walsoorden							
SH51							
SH 61							
Wielingen W2							
Grand total	**2,488**	**26,411**	**27,441**	**2,292**	**21,729**	**17,032**	**0**

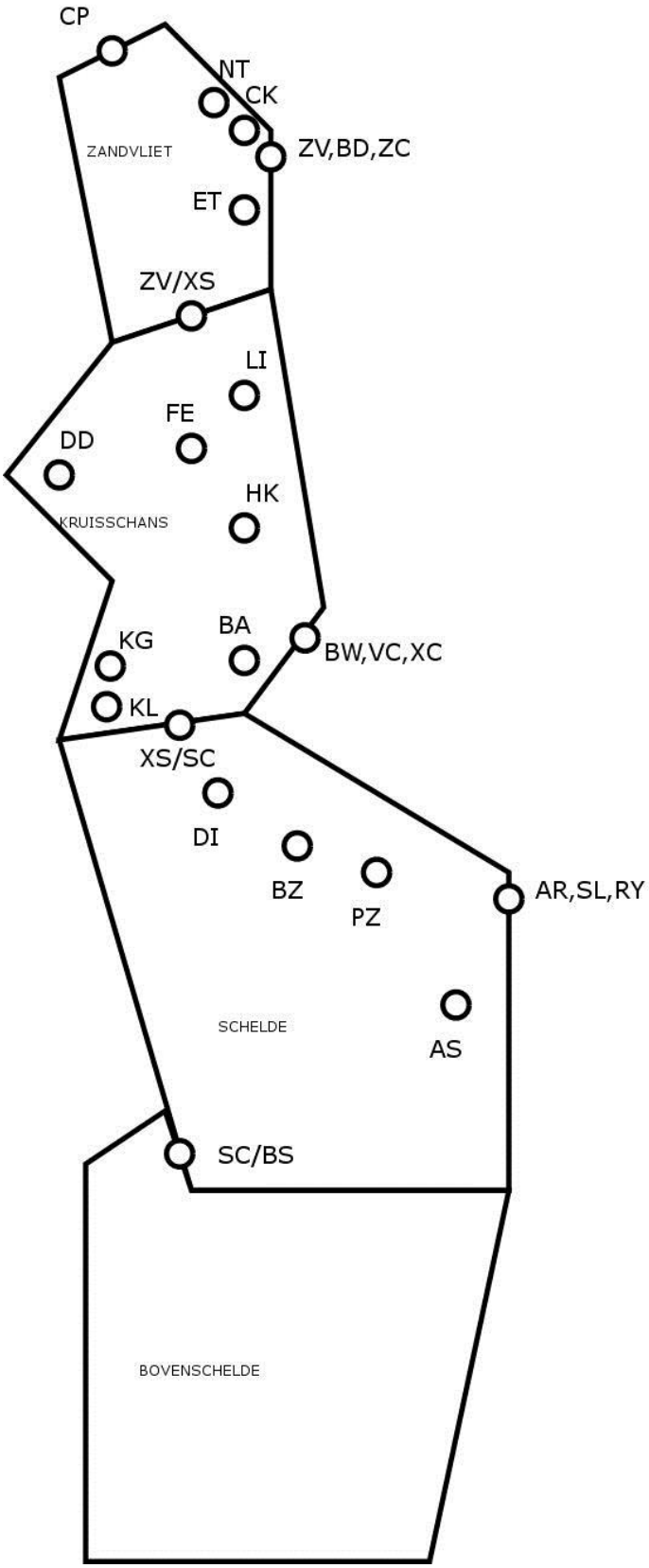
Disposal locations	Week 11	Week 12	Week 13
Oosterweel			
Punt van Melsele			
Schaar Ouden Doel			
Waaslandhaven			
Onderwatercel Rechteroever		19,733	12,059
Hooge Platen West			
SN11			
SN31			
SH41			
Plaat van Walsoorden			
SH51			
SH 61			
Wielingen W2			
Grand total		**19,733**	**12,059**

Annex F **Navigation**

F.1 Description of the areas

Area	*Global description*	*Detailed description*
1	Belgian border → Locks of Zandvliet – Berendrecht	Transit point CP → exit/entry point ZC. BD. ZV. NT. CK. ET or transit point ZV/XS
2	Locks of Zandvliet – Berendrecht → Deurganckdok	Transit point CP or entry/exit point ZC. BD. ZV. NT. CK. ET → transit point ZV/XS
3	Deurganckdok → Lock of Kallo	Transit point ZV/XS or entry/exit point DD → exit/entry point BA. BW. FE. HK. KG. KL. LI. VC. XC or transit point XS/SC
4	Lock of Kallo → Lock of Royers	Transit point XS/SC or entry/exit point DD. BA. BW. FE. HK. KG. KL. LI. VC. XC → entry/exit point AR. AS. BZ. DI. KT. PZ. RY. SL or transit point SC/BS

	CID	MEANING	TYPE
GA	GEBIED ANTWERPEN		
SA	Saeftinge		
	CP	Coordinatiepunt (blokgrens SA/ZV)	P
	CP2	Coordinatiepunt (blokgrens SA/ZV)	P
SC	Schelde		
	AR	Antwerpen Rede	E
	AS	Antwerpen Scheldekade/steiger	E
	AX	Antwerpen zonder detaillering	E
	BZ	BP Zwijndrecht	E
	DI	Haven Dredging International	E
	PZ	Polysar Zwijndrecht	E
	RY	Royerssluis	E
	SC/BS	Blokgrens SC/BS (boveneinde rede Antwerpen)	P
	SL	Sluizen Antwerpen Rechteroever	E
XS	Kruisschans		
	BA	Bayer Kallo	E
	BW	Boudewijnsluis	E
	DD	Deurganckdok	E
	FE	Steiger Fenol	E
	HK	Steiger Haltermann	E
	KG	Kallo geul	E
	KL	Kallosluis	E
	LI	Steiger Lillo	E
	VC	Van Cauwelaertsluis	E
	XC	Kruisschanssluiscomplex	E
	XS/SC	Blokgrens Kruisschans / Schelde	P
	XS/SC2	Blokgrens Kruisschans / Schelde	P
ZV	Zandvliet		
	BD	Berendrechtsluis	E
	CK	Containerkade Antwerpen	E
	ET	Europaterminal	E
	NT	Noordzeeterminal	E
	ZC	Zandvliet / Berendrecht sluiszencomplex	E
	ZV	Zandvliet sluis	E
	ZV/XS	Blokgrens Zandvliet / Kruisschans	P
	ZV/XS2	Blokgrens Zandvliet / Kruisschans	P



Sketch of the different areas of navigation

F.2 Weekly data

Week 14 (01/04/2013 – 07/04/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	21	21	0	5	15
	0 – 8 m	927	592	334	459	462
	8 – 12 m	182	0	182	73	109
	> 12 m	40	0	40	11	29
2	Unknown	21	21	0	5	15
	0 – 8 m	682	494	187	387	291
	8 – 12 m	87	0	87	52	35
	> 12 m	16	0	16	9	7
3	Unknown	21	21	0	5	15
	0 – 8 m	654	475	179	370	280
	8 – 12 m	54	0	54	34	20
	> 12 m	2	0	2	2	0
4	Unknown	5	5	0	1	4
	0 – 8 m	160	125	35	116	44
	8 – 12 m	4	0	4	3	1
	> 12 m	0	0	0	0	0
Week 15 (08/04/2013 – 14/04/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	12	12	0	2	10
	0 – 8 m	981	652	329	496	478
	8 – 12 m	201	0	201	75	126
	> 12 m	36	1	35	8	28
2	Unknown	10	10	0	2	8
	0 – 8 m	758	553	205	428	325
	8 – 12 m	100	0	100	53	47
	> 12 m	17	1	16	8	9
3	Unknown	10	10	0	2	8
	0 – 8 m	727	533	194	407	315
	8 – 12 m	68	0	68	36	32
	> 12 m	1	1	0	1	0
4	Unknown	6	5	1	3	3
	0 – 8 m	171	143	28	141	29
	8 – 12 m	3	0	3	3	0
	> 12 m	0	0	0	0	0

Week 16 (15/04/2013 – 21/04/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	14	13	0	4	9
	0 – 8 m	932	588	344	422	498
	8 – 12 m	210	0	210	76	134
	> 12 m	39	0	39	10	29
2	Unknown	10	9	0	4	5
	0 – 8 m	705	505	200	374	324
	8 – 12 m	92	0	92	50	42
	> 12 m	16	0	16	8	8
3	Unknown	10	9	0	4	5
	0 – 8 m	677	487	190	357	312
	8 – 12 m	57	0	57	33	24
	> 12 m	2	0	2	2	0
4	Unknown	1	1	0	1	0
	0 – 8 m	148	113	35	122	26
	8 – 12 m	4	0	4	4	0
	> 12 m	2	0	2	2	0
Week 17 (22/04/2013 – 28/04/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	12	12	0	0	12
	0 – 8 m	967	609	358	461	496
	8 – 12 m	202	0	202	71	131
	> 12 m	45	0	45	10	35
2	Unknown	7	7	0	0	7
	0 – 8 m	666	469	197	388	271
	8 – 12 m	87	0	87	44	43
	> 12 m	17	0	17	7	10
3	Unknown	7	7	0	0	7
	0 – 8 m	649	460	189	376	266
	8 – 12 m	56	0	56	27	29
	> 12 m	0	0	0	0	0
4	Unknown	3	3	0	0	3
	0 – 8 m	175	125	50	135	39
	8 – 12 m	1	0	1	1	0
	> 12 m	0	0	0	0	0

Week 18 (29/04/2013 – 05/05/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	11	11	0	4	7
	0 – 8 m	1026	696	330	479	541
	8 – 12 m	170	1	169	53	117
	> 12 m	37	0	37	10	27
2	Unknown	11	11	0	4	7
	0 – 8 m	681	514	167	387	292
	8 – 12 m	70	0	70	37	33
	> 12 m	17	0	17	8	9
3	Unknown	11	11	0	4	7
	0 – 8 m	645	487	158	364	279
	8 – 12 m	34	0	34	18	16
	> 12 m	1	0	1	1	0
4	Unknown	3	3	0	3	0
	0 – 8 m	171	143	28	137	34
	8 – 12 m	2	0	2	2	0
	> 12 m	0	0	0	0	0
Week 19 (06/05/2013 – 12/05/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	5	5	0	1	4
	0 – 8 m	903	585	318	412	483
	8 – 12 m	193	0	193	63	130
	> 12 m	45	0	45	9	36
2	Unknown	5	5	0	1	4
	0 – 8 m	653	469	184	347	302
	8 – 12 m	91	0	91	43	48
	> 12 m	16	0	16	7	9
3	Unknown	5	5	0	1	4
	0 – 8 m	632	453	179	334	293
	8 – 12 m	58	0	58	27	31
	> 12 m	1	0	1	1	0
4	Unknown	2	2	0	1	1
	0 – 8 m	155	125	30	130	25
	8 – 12 m	3	0	3	3	0
	> 12 m	0	0	0	0	0

Week 20 (13/05/2013 – 19/05/13)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	11	10	1	1	9
	0 – 8 m	969	654	313	484	459
	8 – 12 m	200	0	200	83	117
	> 12 m	35	0	35	6	29
2	Unknown	10	9	1	1	8
	0 – 8 m	786	566	218	435	329
	8 – 12 m	106	0	106	57	49
	> 12 m	14	0	14	6	8
3	Unknown	9	8	1	1	7
	0 – 8 m	751	546	203	413	316
	8 – 12 m	70	0	70	39	31
	> 12 m	2	0	2	2	0
4	Unknown	6	5	1	2	4
	0 – 8 m	174	139	35	142	32
	8 – 12 m	4	0	4	4	0
	> 12 m	2	0	2	2	0
Week 21 (20/05/2013 – 26/05/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	11	10	1	2	8
	0 – 8 m	963	628	335	461	487
	8 – 12 m	191	0	191	70	121
	> 12 m	35	0	35	5	30
2	Unknown	11	10	1	2	8
	0 – 8 m	698	506	192	381	310
	8 – 12 m	87	0	87	47	40
	> 12 m	16	0	16	6	10
3	Unknown	10	9	1	2	7
	0 – 8 m	669	488	181	362	300
	8 – 12 m	51	0	51	26	25
	> 12 m	1	0	1	0	1
4	Unknown	2	1	1	0	2
	0 – 8 m	176	150	26	140	36
	8 – 12 m	1	0	1	1	0
	> 12 m	0	0	0	0	0

Week 22 (27/05/2013 – 02/06/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	12	12	0	2	10
	0 – 8 m	1028	675	353	525	492
	8 – 12 m	226	0	226	77	149
	> 12 m	32	0	32	6	26
2	Unknown	12	12	0	2	10
	0 – 8 m	807	586	221	462	336
	8 – 12 m	101	0	101	52	49
	> 12 m	13	0	13	5	8
3	Unknown	12	12	0	3	9
	0 – 8 m	780	569	211	447	324
	8 – 12 m	68	0	68	35	33
	> 12 m	0	0	0	0	0
4	Unknown	3	3	0	0	3
	0 – 8 m	183	153	30	148	33
	8 – 12 m	0	0	0	0	0
	> 12 m	0	0	0	0	0
Week 23 (03/06/2013 – 09/06/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	13	13	0	6	6
	0 – 8 m	1024	669	354	487	529
	8 – 12 m	187	0	187	60	127
	> 12 m	45	0	45	10	35
2	Unknown	13	12	1	7	6
	0 – 8 m	770	558	211	412	350
	8 – 12 m	87	0	87	37	50
	> 12 m	18	0	18	9	9
3	Unknown	13	12	1	7	6
	0 – 8 m	729	534	194	394	327
	8 – 12 m	50	0	50	19	31
	> 12 m	2	0	2	2	0
4	Unknown	3	3	0	2	1
	0 – 8 m	150	117	32	123	27
	8 – 12 m	0	0	0	0	0
	> 12 m	0	0	0	0	0

Week 24 (10/06/2013 – 16/06/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	18	18	0	5	13
	0 – 8 m	1048	690	357	505	534
	8 – 12 m	221	0	221	76	144
	> 12 m	34	0	34	6	28
2	Unknown	18	18	0	5	13
	0 – 8 m	761	558	202	421	331
	8 – 12 m	93	0	93	48	45
	> 12 m	12	0	12	5	7
3	Unknown	18	18	0	6	12
	0 – 8 m	731	536	194	403	319
	8 – 12 m	57	0	57	32	25
	> 12 m	0	0	0	0	0
4	Unknown	5	5	0	3	2
	0 – 8 m	170	131	39	141	29
	8 – 12 m	1	0	1	1	0
	> 12 m	0	0	0	0	0
Week 25 (17/06/2013 – 23/06/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	12	12	0	4	7
	0 – 8 m	1068	686	382	509	552
	8 – 12 m	187	0	187	61	126
	> 12 m	42	0	42	9	33
2	Unknown	12	12	0	4	7
	0 – 8 m	819	590	229	453	361
	8 – 12 m	78	0	78	48	30
	> 12 m	20	0	20	8	12
3	Unknown	11	11	0	4	6
	0 – 8 m	791	576	215	437	349
	8 – 12 m	50	0	50	30	20
	> 12 m	2	0	2	2	0
4	Unknown	2	2	0	2	0
	0 – 8 m	186	143	43	156	29
	8 – 12 m	5	0	5	5	0
	> 12 m	2	0	2	2	0

Week 26 (24/06/2013 – 30/06/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	5	4	1	1	4
	0 – 8 m	944	642	299	470	463
	8 – 12 m	191	0	191	67	124
	> 12 m	37	1	36	8	29
2	Unknown	5	4	1	1	4
	0 – 8 m	744	563	178	416	319
	8 – 12 m	87	0	87	44	43
	> 12 m	15	1	14	7	8
3	Unknown	5	4	1	1	4
	0 – 8 m	714	545	168	397	308
	8 – 12 m	52	0	52	26	26
	> 12 m	2	1	1	2	0
4	Unknown	2	1	1	0	2
	0 – 8 m	166	134	32	139	26
	8 – 12 m	1	0	1	1	0
	> 12 m	1	1	0	1	0
Week 27 (01/07/2013 – 07/07/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	6	5	1	1	5
	0 – 8 m	966	670	296	494	465
	8 – 12 m	212	0	212	78	134
	> 12 m	43	0	43	7	36
2	Unknown	6	5	1	1	5
	0 – 8 m	769	596	173	441	324
	8 – 12 m	108	0	108	54	54
	> 12 m	16	0	16	7	9
3	Unknown	5	4	1	1	4
	0 – 8 m	745	577	168	426	315
	8 – 12 m	72	0	72	36	36
	> 12 m	3	0	3	2	1
4	Unknown	1	1	0	0	1
	0 – 8 m	174	147	27	149	25
	8 – 12 m	3	0	3	3	0
	> 12 m	1	0	1	1	0

Week 28 (08/07/2013 – 14/07/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	10	10	0	3	7
	0 – 8 m	921	590	330	484	429
	8 – 12 m	169	0	169	62	106
	> 12 m	42	1	41	11	31
2	Unknown	8	8	0	2	6
	0 – 8 m	722	502	219	419	298
	8 – 12 m	69	0	69	38	30
	> 12 m	17	1	16	9	8
3	Unknown	7	7	0	1	6
	0 – 8 m	685	478	206	396	284
	8 – 12 m	40	0	40	23	16
	> 12 m	1	1	0	1	0
4	Unknown	0	0	0	0	0
	0 – 8 m	170	126	43	131	38
	8 – 12 m	2	0	2	2	0
	> 12 m	1	1	0	1	0
Week 29 (15/07/2013 – 21/07/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	4	4	0	0	4
	0 – 8 m	829	527	302	381	440
	8 – 12 m	212	0	212	81	131
	> 12 m	39	0	39	6	33
2	Unknown	4	4	0	0	4
	0 – 8 m	590	415	175	318	267
	8 – 12 m	100	0	100	52	48
	> 12 m	14	0	14	6	8
3	Unknown	3	3	0	0	3
	0 – 8 m	558	394	164	299	254
	8 – 12 m	62	0	62	33	29
	> 12 m	0	0	0	0	0
4	Unknown	0	0	0	0	0
	0 – 8 m	125	96	29	95	29
	8 – 12 m	3	0	3	3	0
	> 12 m	0	0	0	0	0

Week 30 (22/07/2013 – 28/07/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	4	4	0	1	3
	0 – 8 m	797	494	299	400	389
	8 – 12 m	188	0	188	74	114
	> 12 m	29	0	29	6	23
2	Unknown	4	4	0	1	3
	0 – 8 m	588	413	173	331	251
	8 – 12 m	80	0	80	46	34
	> 12 m	15	0	15	7	8
3	Unknown	3	3	0	0	3
	0 – 8 m	552	386	164	309	237
	8 – 12 m	50	0	50	31	19
	> 12 m	0	0	0	0	0
4	Unknown	1	1	0	0	1
	0 – 8 m	127	106	20	103	24
	8 – 12 m	3	0	3	3	0
	> 12 m	0	0	0	0	0
Week 31 (29/07/2013 – 04/08/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	14	13	1	6	8
	0 – 8 m	884	559	324	430	449
	8 – 12 m	201	0	201	69	132
	> 12 m	35	0	35	8	27
2	Unknown	14	13	1	6	8
	0 – 8 m	662	466	195	373	286
	8 – 12 m	94	0	94	45	49
	> 12 m	15	0	15	7	8
3	Unknown	14	13	1	6	8
	0 – 8 m	632	445	186	357	272
	8 – 12 m	59	0	59	27	32
	> 12 m	0	0	0	0	0
4	Unknown	8	8	0	4	4
	0 – 8 m	148	112	36	115	33
	8 – 12 m	2	0	2	2	0
	> 12 m	0	0	0	0	0

Week 32 (05/08/2013 – 11/08/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	17	16	1	3	14
	0 – 8 m	898	595	303	456	439
	8 – 12 m	211	0	211	73	138
	> 12 m	32	0	32	7	25
2	Unknown	14	13	1	2	12
	0 – 8 m	709	519	190	398	309
	8 – 12 m	96	0	96	50	46
	> 12 m	13	0	13	6	7
3	Unknown	14	14	0	1	12
	0 – 8 m	675	497	178	374	299
	8 – 12 m	61	0	61	34	27
	> 12 m	0	0	0	0	0
4	Unknown	3	3	0	0	3
	0 – 8 m	171	138	33	137	34
	8 – 12 m	6	0	6	6	0
	> 12 m	0	0	0	0	0
Week 33 (12/08/2013 – 18/08/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	10	9	0	2	8
	0 – 8 m	865	535	330	431	427
	8 – 12 m	199	0	199	74	125
	> 12 m	33	0	33	8	25
2	Unknown	9	8	0	2	7
	0 – 8 m	635	455	180	351	277
	8 – 12 m	95	0	95	49	46
	> 12 m	12	0	12	5	7
3	Unknown	9	8	0	2	7
	0 – 8 m	606	437	169	333	266
	8 – 12 m	61	0	61	31	30
	> 12 m	2	0	2	2	0
4	Unknown	1	1	0	1	0
	0 – 8 m	112	91	21	94	17
	8 – 12 m	4	0	4	4	0
	> 12 m	0	0	0	0	0

Week 34 (19/08/2013 – 25/08/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	7	7	0	2	5
	0 – 8 m	997	652	345	473	509
	8 – 12 m	195	0	195	72	123
	> 12 m	30	0	30	7	23
2	Unknown	6	6	0	1	5
	0 – 8 m	745	543	202	396	340
	8 – 12 m	88	0	88	51	37
	> 12 m	14	0	14	5	9
3	Unknown	6	6	0	1	5
	0 – 8 m	705	516	189	374	322
	8 – 12 m	50	0	50	30	20
	> 12 m	1	0	1	0	1
4	Unknown	1	1	0	0	1
	0 – 8 m	170	143	27	145	25
	8 – 12 m	2	0	2	2	0
	> 12 m	0	0	0	0	0
Week 35 (26/08/2013 – 01/09/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	9	9	0	1	8
	0 – 8 m	956	636	319	452	493
	8 – 12 m	187	0	187	64	123
	> 12 m	30	0	30	6	24
2	Unknown	9	9	0	1	8
	0 – 8 m	742	543	197	400	334
	8 – 12 m	91	0	91	50	41
	> 12 m	13	0	13	5	8
3	Unknown	9	9	0	1	8
	0 – 8 m	702	518	182	377	316
	8 – 12 m	55	0	55	30	25
	> 12 m	1	0	1	1	0
4	Unknown	1	1	0	1	0
	0 – 8 m	184	147	37	141	42
	8 – 12 m	7	0	7	7	0
	> 12 m	1	0	1	1	0

Week 36 (02/09/2013 – 08/09/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	10	8	2	3	7
	0 – 8 m	930	648	282	460	465
	8 – 12 m	214	0	214	70	143
	> 12 m	21	0	21	5	16
2	Unknown	9	7	2	2	7
	0 – 8 m	733	555	178	407	322
	8 – 12 m	92	0	92	46	45
	> 12 m	12	0	12	5	7
3	Unknown	9	7	2	2	7
	0 – 8 m	705	537	168	388	313
	8 – 12 m	60	0	60	32	28
	> 12 m	0	0	0	0	0
4	Unknown	3	1	2	1	2
	0 – 8 m	198	166	32	155	43
	8 – 12 m	2	0	2	2	0
	> 12 m	0	0	0	0	0
Week 37 (09/09/2013 – 15/09/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	2	2	0	0	2
	0 – 8 m	989	626	363	509	474
	8 – 12 m	183	0	183	68	115
	> 12 m	28	0	28	5	23
2	Unknown	2	2	0	0	2
	0 – 8 m	745	532	213	421	319
	8 – 12 m	87	0	87	48	39
	> 12 m	10	0	10	4	6
3	Unknown	2	2	0	0	2
	0 – 8 m	709	513	196	400	304
	8 – 12 m	49	0	49	29	20
	> 12 m	1	0	1	0	1
4	Unknown	1	1	0	0	1
	0 – 8 m	191	154	37	152	39
	8 – 12 m	5	0	5	5	0
	> 12 m	0	0	0	0	0

Week 38 (16/09/2013 – 22/09/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	8	7	0	4	4
	0 – 8 m	970	616	353	457	507
	8 – 12 m	191	0	191	71	120
	> 12 m	27	0	27	7	20
2	Unknown	7	6	0	3	4
	0 – 8 m	723	509	214	385	332
	8 – 12 m	82	0	82	43	39
	> 12 m	14	0	14	5	9
3	Unknown	9	8	0	5	4
	0 – 8 m	691	486	205	365	319
	8 – 12 m	50	0	50	25	25
	> 12 m	0	0	0	0	0
4	Unknown	0	0	0	0	0
	0 – 8 m	154	119	35	118	36
	8 – 12 m	0	0	0	0	0
	> 12 m	0	0	0	0	0
Week 39 (23/09/2013 – 29/09/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	4	4	0	2	1
	0 – 8 m	1018	662	352	521	494
	8 – 12 m	206	0	206	74	132
	> 12 m	31	0	31	4	27
2	Unknown	3	3	0	1	1
	0 – 8 m	756	549	203	440	313
	8 – 12 m	91	0	91	52	39
	> 12 m	14	0	14	5	9
3	Unknown	3	3	0	1	1
	0 – 8 m	718	524	190	413	302
	8 – 12 m	54	0	54	30	24
	> 12 m	1	0	1	1	0
4	Unknown	0	0	0	0	0
	0 – 8 m	167	141	26	142	25
	8 – 12 m	6	0	6	5	1
	> 12 m	0	0	0	0	0

Week 40 (30/09/2013 – 06/10/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	9	9	0	4	5
	0 – 8 m	944	638	306	503	432
	8 – 12 m	195	0	195	68	127
	> 12 m	27	0	27	5	22
2	Unknown	8	8	0	3	5
	0 – 8 m	734	565	169	444	284
	8 – 12 m	84	0	84	44	40
	> 12 m	13	0	13	4	9
3	Unknown	8	8	0	3	5
	0 – 8 m	703	544	159	424	273
	8 – 12 m	51	0	51	27	24
	> 12 m	0	0	0	0	0
4	Unknown	1	1	0	0	1
	0 – 8 m	183	165	18	164	18
	8 – 12 m	3	0	3	3	0
	> 12 m	0	0	0	0	0
Week 41 (07/10/2013 – 13/10/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	10	10	0	7	3
	0 – 8 m	885	620	265	431	445
	8 – 12 m	199	0	199	73	126
	> 12 m	33	0	33	8	25
2	Unknown	9	9	0	6	3
	0 – 8 m	706	537	169	384	314
	8 – 12 m	99	0	99	53	46
	> 12 m	18	0	18	8	10
3	Unknown	8	8	0	6	2
	0 – 8 m	676	516	160	364	303
	8 – 12 m	62	0	62	33	29
	> 12 m	1	0	1	1	0
4	Unknown	1	1	0	1	0
	0 – 8 m	151	121	30	134	16
	8 – 12 m	4	0	4	4	0
	> 12 m	1	0	1	1	0

Week 42 (14/10/2013 – 20/10/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	8	8	0	1	7
	0 – 8 m	987	652	333	496	483
	8 – 12 m	216	0	216	81	135
	> 12 m	32	1	31	9	23
2	Unknown	7	7	0	1	6
	0 – 8 m	753	556	197	433	313
	8 – 12 m	104	0	104	56	48
	> 12 m	15	1	14	7	8
3	Unknown	6	6	0	1	5
	0 – 8 m	703	524	179	409	287
	8 – 12 m	68	0	68	36	32
	> 12 m	1	1	0	1	0
4	Unknown	1	1	0	0	1
	0 – 8 m	163	144	19	148	15
	8 – 12 m	1	0	1	1	0
	> 12 m	1	1	0	1	0
Week 43 (21/10/2013 – 27/10/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	12	8	4	3	9
	0 – 8 m	945	616	328	462	471
	8 – 12 m	221	0	221	76	145
	> 12 m	41	0	41	11	30
2	Unknown	8	7	1	3	5
	0 – 8 m	701	508	192	406	284
	8 – 12 m	106	0	106	52	54
	> 12 m	21	0	21	10	11
3	Unknown	7	6	1	3	4
	0 – 8 m	647	471	175	373	263
	8 – 12 m	65	0	65	31	34
	> 12 m	1	0	1	1	0
4	Unknown	1	1	0	1	0
	0 – 8 m	146	120	26	123	22
	8 – 12 m	2	0	2	2	0
	> 12 m	0	0	0	0	0

Week 44 (28/10/2013 – 03/11/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	5	5	0	3	2
	0 – 8 m	883	586	297	430	445
	8 – 12 m	202	0	202	68	134
	> 12 m	39	0	39	11	28
2	Unknown	2	2	0	1	1
	0 – 8 m	639	477	162	363	269
	8 – 12 m	86	0	86	46	40
	> 12 m	23	0	23	11	12
3	Unknown	2	2	0	1	1
	0 – 8 m	604	452	152	342	254
	8 – 12 m	53	0	53	30	23
	> 12 m	1	0	1	1	0
4	Unknown	0	0	0	0	0
	0 – 8 m	151	125	26	137	14
	8 – 12 m	4	0	4	4	0
	> 12 m	0	0	0	0	0
Week 45 (04/11/2013 – 10/11/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	8	7	0	2	6
	0 – 8 m	895	588	306	443	444
	8 – 12 m	193	0	193	60	133
	> 12 m	33	0	33	11	21
2	Unknown	8	7	0	2	6
	0 – 8 m	671	484	186	382	282
	8 – 12 m	79	0	79	35	44
	> 12 m	18	0	18	9	8
3	Unknown	8	7	0	2	5
	0 – 8 m	634	458	175	360	268
	8 – 12 m	46	0	46	19	27
	> 12 m	2	0	2	2	0
4	Unknown	1	0	0	1	0
	0 – 8 m	159	123	36	133	26
	8 – 12 m	0	0	0	0	0
	> 12 m	0	0	0	0	0

Week 46 (11/11/2013 – 17/11/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	8	6	1	3	4
	0 – 8 m	905	557	346	433	465
	8 – 12 m	192	1	191	73	119
	> 12 m	27	0	27	7	20
2	Unknown	7	5	1	2	4
	0 – 8 m	647	454	192	364	278
	8 – 12 m	85	1	84	49	36
	> 12 m	14	0	14	6	8
3	Unknown	8	6	1	3	4
	0 – 8 m	613	430	182	342	266
	8 – 12 m	55	1	54	32	23
	> 12 m	1	0	1	1	0
4	Unknown	3	3	0	1	2
	0 – 8 m	143	106	36	114	29
	8 – 12 m	2	0	2	2	0
	> 12 m	1	0	1	1	0
Week 47 (18/11/2013 – 24/11/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	13	12	1	2	10
	0 – 8 m	960	668	292	463	491
	8 – 12 m	191	0	191	77	114
	> 12 m	39	1	38	8	31
2	Unknown	12	11	1	2	9
	0 – 8 m	673	502	171	385	284
	8 – 12 m	94	0	94	51	43
	> 12 m	16	1	15	7	9
3	Unknown	11	10	1	2	8
	0 – 8 m	642	477	165	366	272
	8 – 12 m	66	0	66	36	30
	> 12 m	2	1	1	1	1
4	Unknown	2	2	0	1	1
	0 – 8 m	175	137	38	145	30
	8 – 12 m	3	0	3	3	0
	> 12 m	1	0	1	1	0

Week 48 (25/11/2013 – 01/12/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	12	12	0	2	10
	0 – 8 m	892	598	293	422	455
	8 – 12 m	179	0	179	62	117
	> 12 m	36	0	36	8	28
2	Unknown	10	10	0	2	8
	0 – 8 m	651	478	172	352	287
	8 – 12 m	75	0	75	34	41
	> 12 m	16	0	16	7	9
3	Unknown	9	9	0	2	7
	0 – 8 m	627	462	164	333	282
	8 – 12 m	45	0	45	19	26
	> 12 m	0	0	0	0	0
4	Unknown	4	4	0	1	3
	0 – 8 m	157	127	30	128	28
	8 – 12 m	2	0	2	2	0
	> 12 m	0	0	0	0	0
Week 49 (02/12/2013 – 08/12/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	6	6	0	2	4
	0 – 8 m	835	541	292	413	413
	8 – 12 m	170	0	170	64	106
	> 12 m	39	0	39	11	28
2	Unknown	6	6	0	2	4
	0 – 8 m	634	459	173	369	258
	8 – 12 m	81	0	81	46	35
	> 12 m	19	0	19	9	10
3	Unknown	6	6	0	2	4
	0 – 8 m	615	447	167	361	247
	8 – 12 m	56	0	56	32	24
	> 12 m	0	0	0	0	0
4	Unknown	0	0	0	0	0
	0 – 8 m	172	145	27	145	27
	8 – 12 m	2	0	2	2	0
	> 12 m	0	0	0	0	0

Week 50 (09/12/2013 – 15/12/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	14	12	2	2	11
	0 – 8 m	1014	674	340	513	489
	8 – 12 m	218	0	218	70	148
	> 12 m	36	0	36	10	26
2	Unknown	11	11	0	2	8
	0 – 8 m	786	577	209	449	327
	8 – 12 m	99	0	99	45	54
	> 12 m	19	0	19	9	10
3	Unknown	10	10	0	2	7
	0 – 8 m	751	553	198	426	315
	8 – 12 m	54	0	54	24	30
	> 12 m	1	0	1	1	0
4	Unknown	1	1	0	1	0
	0 – 8 m	172	143	29	145	27
	8 – 12 m	2	0	2	2	0
	> 12 m	0	0	0	0	0
Week 51 (16/12/2013 – 22/12/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	11	7	3	4	6
	0 – 8 m	931	619	311	425	497
	8 – 12 m	197	0	197	63	134
	> 12 m	35	1	34	8	27
2	Unknown	9	6	2	3	5
	0 – 8 m	671	488	181	360	305
	8 – 12 m	84	0	84	40	44
	> 12 m	18	1	17	7	11
3	Unknown	7	5	2	3	4
	0 – 8 m	643	467	175	342	295
	8 – 12 m	56	0	56	25	31
	> 12 m	2	1	1	1	1
4	Unknown	2	0	2	2	0
	0 – 8 m	151	132	19	123	28
	8 – 12 m	2	0	2	1	1
	> 12 m	0	0	0	0	0

Week 52 (23/12/2013 – 29/12/2013)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	3	2	1	1	2
	0 – 8 m	645	385	260	338	304
	8 – 12 m	174	0	174	61	113
	> 12 m	30	2	28	7	23
2	Unknown	3	2	1	1	2
	0 – 8 m	476	325	151	291	182
	8 – 12 m	72	0	72	37	35
	> 12 m	16	1	15	5	11
3	Unknown	3	2	1	1	2
	0 – 8 m	457	312	145	278	176
	8 – 12 m	47	0	47	22	25
	> 12 m	1	1	0	0	1
4	Unknown	0	0	0	0	0
	0 – 8 m	117	98	19	100	17
	8 – 12 m	1	0	1	1	0
	> 12 m	0	0	0	0	0
Week 01 (30/12/2013 – 05/01/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	2	2	0	0	2
	0 – 8 m	646	366	280	308	331
	8 – 12 m	176	0	176	72	104
	> 12 m	21	0	21	4	17
2	Unknown	1	1	0	0	1
	0 – 8 m	465	301	164	259	202
	8 – 12 m	79	0	79	46	33
	> 12 m	10	0	10	3	7
3	Unknown	1	1	0	0	1
	0 – 8 m	448	291	157	252	192
	8 – 12 m	47	0	47	28	19
	> 12 m	0	0	0	0	0
4	Unknown	0	0	0	0	0
	0 – 8 m	119	85	34	97	21
	8 – 12 m	1	0	1	1	0
	> 12 m	0	0	0	0	0

Week 02 (06/01/2014 – 12/01/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	10	9	1	2	7
	0 – 8 m	870	551	319	430	432
	8 – 12 m	193	0	193	65	128
	> 12 m	22	0	22	6	16
2	Unknown	9	8	1	2	6
	0 – 8 m	662	461	201	374	281
	8 – 12 m	84	0	84	43	41
	> 12 m	12	0	12	6	6
3	Unknown	9	8	1	2	6
	0 – 8 m	635	438	197	354	274
	8 – 12 m	48	0	48	23	25
	> 12 m	2	0	2	2	0
4	Unknown	2	1	1	1	1
	0 – 8 m	143	113	30	117	26
	8 – 12 m	3	0	3	3	0
	> 12 m	1	0	1	1	0
Week 03 (13/01/2014 – 19/01/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	8	8	0	4	4
	0 – 8 m	960	616	343	460	489
	8 – 12 m	210	0	210	79	131
	> 12 m	32	0	32	8	24
2	Unknown	7	7	0	3	4
	0 – 8 m	724	526	197	397	321
	8 – 12 m	101	0	101	54	47
	> 12 m	13	0	13	5	8
3	Unknown	7	7	0	3	4
	0 – 8 m	697	507	189	374	317
	8 – 12 m	63	0	63	35	28
	> 12 m	0	0	0	0	0
4	Unknown	2	2	0	1	1
	0 – 8 m	179	141	38	140	36
	8 – 12 m	2	0	2	1	1
	> 12 m	0	0	0	0	0

Week 04 (20/01/2014 – 26/01/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	9	9	0	2	7
	0 – 8 m	923	606	316	419	495
	8 – 12 m	185	0	185	69	116
	> 12 m	33	0	33	10	23
2	Unknown	6	6	0	3	3
	0 – 8 m	684	496	187	361	316
	8 – 12 m	85	0	85	46	39
	> 12 m	16	0	16	7	9
3	Unknown	6	6	0	3	3
	0 – 8 m	661	479	181	343	311
	8 – 12 m	55	0	55	30	25
	> 12 m	0	0	0	0	0
4	Unknown	1	1	0	0	1
	0 – 8 m	175	143	32	129	45
	8 – 12 m	2	0	2	2	0
	> 12 m	0	0	0	0	0
Week 05 (27/01/2014 – 02/02/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	10	8	2	3	7
	0 – 8 m	914	597	314	461	437
	8 – 12 m	200	0	200	65	135
	> 12 m	35	0	35	7	28
2	Unknown	8	6	2	3	5
	0 – 8 m	698	504	191	401	284
	8 – 12 m	86	0	86	44	42
	> 12 m	18	0	18	7	11
3	Unknown	8	6	2	3	5
	0 – 8 m	668	480	185	382	273
	8 – 12 m	53	0	53	29	24
	> 12 m	1	0	1	0	1
4	Unknown	2	0	2	0	2
	0 – 8 m	166	132	32	137	29
	8 – 12 m	3	0	3	3	0
	> 12 m	0	0	0	0	0

Week 06 (03/02/2014 – 09/02/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	4	3	1	2	1
	0 – 8 m	818	564	253	382	427
	8 – 12 m	165	0	165	60	105
	> 12 m	37	0	37	12	25
2	Unknown	3	3	0	2	0
	0 – 8 m	612	453	158	321	285
	8 – 12 m	67	0	67	33	34
	> 12 m	17	0	17	9	8
3	Unknown	3	3	0	2	0
	0 – 8 m	587	432	154	306	275
	8 – 12 m	38	0	38	18	20
	> 12 m	0	0	0	0	0
4	Unknown	1	1	0	1	0
	0 – 8 m	134	100	34	105	29
	8 – 12 m	1	0	1	1	0
	> 12 m	0	0	0	0	0
Week 07 (10/02/2014 – 16/02/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	5	4	1	4	1
	0 – 8 m	869	572	297	439	426
	8 – 12 m	175	0	175	60	115
	> 12 m	42	0	42	10	32
2	Unknown	5	4	1	4	1
	0 – 8 m	687	494	193	388	296
	8 – 12 m	74	0	74	40	34
	> 12 m	18	0	18	8	10
3	Unknown	4	3	1	3	1
	0 – 8 m	653	469	184	367	283
	8 – 12 m	46	0	46	27	19
	> 12 m	0	0	0	0	0
4	Unknown	0	0	0	0	0
	0 – 8 m	157	115	42	121	36
	8 – 12 m	2	0	2	2	0
	> 12 m	0	0	0	0	0

Week 08 (17/02/2014 – 02/03/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	10	10	0	4	6
	0 – 8 m	948	611	334	469	472
	8 – 12 m	205	0	205	71	134
	> 12 m	34	0	34	10	24
2	Unknown	10	10	0	4	6
	0 – 8 m	722	517	203	413	302
	8 – 12 m	102	0	102	52	50
	> 12 m	16	0	16	7	9
3	Unknown	10	10	0	4	6
	0 – 8 m	686	489	195	389	291
	8 – 12 m	73	0	73	36	37
	> 12 m	1	0	1	1	0
4	Unknown	1	1	0	1	0
	0 – 8 m	167	122	44	144	23
	8 – 12 m	5	0	5	5	0
	> 12 m	0	0	0	0	0
Week 09 (24/02/2014 – 02/03/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	13	11	2	4	8
	0 – 8 m	917	557	359	465	448
	8 – 12 m	205	1	204	69	136
	> 12 m	49	0	49	13	36
2	Unknown	11	9	2	4	6
	0 – 8 m	691	474	216	399	291
	8 – 12 m	96	1	95	44	52
	> 12 m	20	0	20	11	9
3	Unknown	10	8	2	4	5
	0 – 8 m	667	457	209	386	280
	8 – 12 m	66	1	65	29	37
	> 12 m	1	0	1	1	0
4	Unknown	5	2	3	3	2
	0 – 8 m	161	125	36	129	32
	8 – 12 m	1	0	1	1	0
	> 12 m	0	0	0	0	0

Week 10 (03/03/2014 – 09/03/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	4	3	1	2	2
	0 – 8 m	1011	652	357	493	512
	8 – 12 m	214	0	214	79	135
	> 12 m	44	0	44	15	29
2	Unknown	4	3	1	2	2
	0 – 8 m	750	537	211	417	328
	8 – 12 m	107	0	107	60	47
	> 12 m	21	0	21	10	11
3	Unknown	4	3	1	2	2
	0 – 8 m	727	523	202	400	322
	8 – 12 m	71	0	71	41	30
	> 12 m	1	0	1	1	0
4	Unknown	2	1	1	1	1
	0 – 8 m	207	160	47	160	47
	8 – 12 m	8	0	8	8	0
	> 12 m	0	0	0	0	0
Week 11 (10/03/2014 – 16/03/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	7	5	2	2	5
	0 – 8 m	977	623	353	477	494
	8 – 12 m	185	0	185	65	120
	> 12 m	44	0	44	11	33
2	Unknown	7	5	2	2	5
	0 – 8 m	755	536	218	414	336
	8 – 12 m	86	0	86	45	41
	> 12 m	19	0	19	10	9
3	Unknown	6	4	2	1	5
	0 – 8 m	726	516	209	397	323
	8 – 12 m	60	0	60	34	26
	> 12 m	0	0	0	0	0
4	Unknown	3	2	1	1	2
	0 – 8 m	149	112	37	125	24
	8 – 12 m	1	0	1	1	0
	> 12 m	0	0	0	0	0

Week 12 (17/03/2014 – 23/03/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	18	18	0	9	9
	0 – 8 m	968	637	329	489	472
	8 – 12 m	186	0	186	66	120
	> 12 m	50	0	50	14	36
2	Unknown	15	15	0	9	6
	0 – 8 m	752	559	191	426	321
	8 – 12 m	79	0	79	39	40
	> 12 m	19	0	19	10	9
3	Unknown	13	13	0	8	5
	0 – 8 m	720	540	178	404	311
	8 – 12 m	48	0	48	24	24
	> 12 m	1	0	1	1	0
4	Unknown	5	5	0	3	2
	0 – 8 m	167	138	28	124	42
	8 – 12 m	4	0	4	4	0
	> 12 m	0	0	0	0	0
Week 13 (24/03/2014 – 30/03/2014)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	20	16	3	9	11
	0 – 8 m	967	625	340	484	475
	8 – 12 m	207	0	207	74	133
	> 12 m	37	0	37	9	28
2	Unknown	19	15	3	8	11
	0 – 8 m	747	542	203	418	325
	8 – 12 m	100	0	100	57	43
	> 12 m	14	0	14	5	9
3	Unknown	19	15	3	8	11
	0 – 8 m	714	515	197	395	315
	8 – 12 m	74	0	74	43	31
	> 12 m	2	0	2	1	1
4	Unknown	2	2	0	1	1
	0 – 8 m	160	115	44	124	35
	8 – 12 m	7	0	7	7	0
	> 12 m	0	0	0	0	0

Week 14 (31/03/2014 – 06/04/2012)						
Area	***Draught***	***Total***	***Inland navigation***	***Seagoing***	***Arrival***	***Departure***
1	Unknown	7	6	1	4	3
	0 – 8 m	765	517	247	381	374
	8 – 12 m	146	0	146	48	98
	> 12 m	30	0	30	9	21
2	Unknown	5	5	0	4	1
	0 – 8 m	603	444	158	341	254
	8 – 12 m	62	0	62	31	31
	> 12 m	15	0	15	7	8
3	Unknown	5	5	0	4	1
	0 – 8 m	576	423	152	321	246
	8 – 12 m	40	0	40	21	19
	> 12 m	2	2	0	1	1
4	Unknown					
	0 – 8 m	164	118	46	123	41
	8 – 12 m	4	0	4	4	0
	> 12 m	0	0	0	0	0

Annex G UNESCO PSS-78 formula for calculating salinity

Practical Salinity Scale (PPS 78) Salinity in the range of 2 to 42

Constants from the 19th Edition of Standard Methods

R cond.ratio	0.0117	$R = \frac{C}{42.914 mS/cm}$
C Cond at t	**0.5**	**Input conductivity in mS/cm of sample**
t deg. C	**22.00**	**Input temperature of sample solution**
P dBar	**20**	**Input pressure at which sample is measured in decibars**
Rp	1.0020845	$R_p = 1 + \frac{p(e_1 + e_2 p + e_3 p^2)}{1 + d_1 t + d_2 t^2 + (d_3 + d_4 t)R}$
rt	1.1641102	$r_t = c_0 + c_1 t + c_2 t^2 + c_3 t^3 + c_4 t^4$
Rt	0.0099879	$R_t = \frac{R}{R_p \times r_t}$
Delta S	-0.0010	$\text{Delta } S = \frac{(t-15)}{1+k(t-15)}(b_0 + b_1 R_t^{1/2} + b_2 R_t + b_3 R_t^{3/2} + b_4 R_t^2 + b_5 R_t^{5/2})$
S = Salinity	**0.257**	$S = a_0 + a_1 R_t^{1/2} + a_2 R_t + a_3 R_t^{3/2} + a_4 R_t^2 + a_5 R_t^{5/2} + \text{delta } S$

a0	0.0080	b0	0.0005	c0	0.6766097	d1	3.426E-02	e1	2.070E-04
a1	-0.1692	b1	-0.0056	c1	2.00564E-02	d2	4.464E-04	e2	-6.370E-08
a2	25.3851	b2	-0.0066	c2	1.104259E-04	d3	4.215E-01	e3	3.989E-12
a3	14.0941	b3	-0.0375	c3	-6.9698E-07	d4	-3.107E-03		
a4	-7.0261	b4	0.0636	c4	1.0031E-09				
a5	2.7081	b5	-0.0144						
		k	0.0162						

R = ratio of measured conductivity to the conductivity of the Standard Seawater Solution

Conductivity Ratio R is a function of salinity, temperature, and hydraulic pressure. So that we can factor R into three parts i.e.

R = Rt x Rp x rt

R = C(S,t,p)/C(35,15,0)

C = 42.914 mS/cm at 15 deg C and 0 dbar pressure ie C(35,15,0) where 35 is the salinity

Ocean pressure is usually measured in decibars. 1 dbar = 10^-1 bar = 10^5 dyne/cm^2 = 10^4 Pascal.

Annex H Calibration curve of 2500 FTU turbidity sensor of RCM Seaguard

H.1 Buoy 84 and Oosterweel