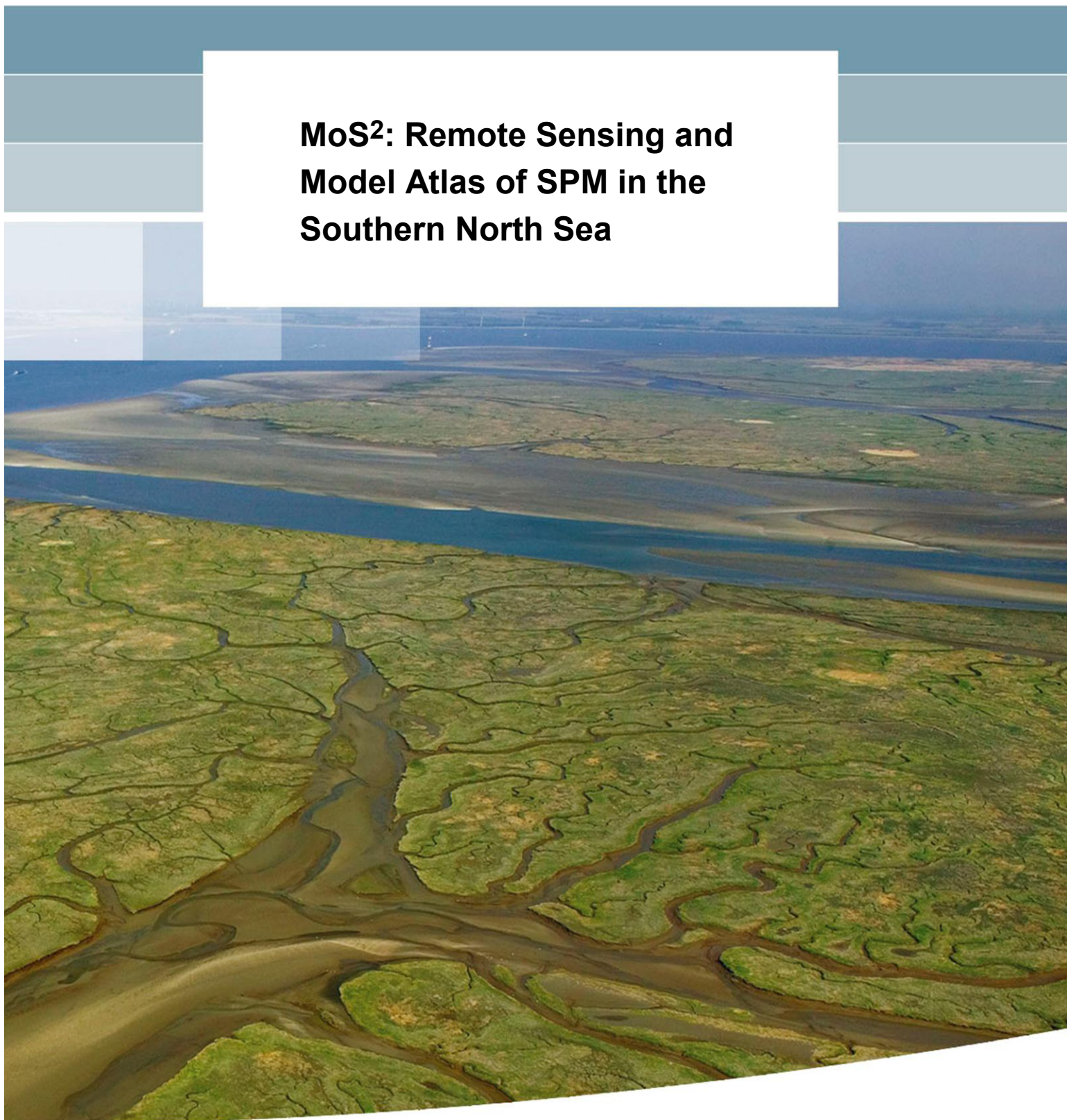


**MoS²: Remote Sensing and
Model Atlas of SPM in the
Southern North Sea**



MoS²: Remote Sensing and Model Atlas of SPM in the Southern North Sea

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1208242-004

Title

MoS²: Remote Sensing and Model Atlas of SPM in the Southern North Sea

Client

Havenbedrijf Rotterdam N.V. 1208242-004

Project**Reference**

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Keywords

SPM, Maasvlakte 2, southern North Sea, model-supported monitoring, remote sensing

Summary

This is the MoS² atlas of modeled and remotely sensed suspended particular matter (SPM) in the southern North Sea for the years 2003-2011. It summarizes the results of the MoS² project carried out for the Port of Rotterdam by Deltares (and in earlier stage also by VU-IVM) between 2008 and 2014. The results presented here replace the earlier 'Composite Atlas of SPM in the Southern North Sea 2007' by Blaas et al. from 2011.

References

This atlas is to be regarded in conjunction with the reports published from the MoS² project.

About this atlas

The Port of Rotterdam has expanded its facilities by construction of Maasvlakte 2 (MV2) over the period 2009-2013. The sand mining and construction activities for MV2 may have had an environmental impact through a temporary increase of concentrations of suspended particulate matter (SPM) in the Dutch coastal waters and in particular in the Voordelta (Natura 2000) area. This document presents an atlas of remotely sensed and modelled suspended particulate matter (SPM) in the southern North Sea for the years 2003-2011. As such this is one of the outcomes of the MoS² project, aimed at model-supported monitoring of SPM concentrations in the Dutch coastal waters in relation to the MV2 sand mining and construction activities for the period 2009-2011 (T₁) and the reference period 2003-2008 (T₀). The model-supported monitoring combines MERIS remote sensing data with numerical modelling as a complement to in situ monitoring.

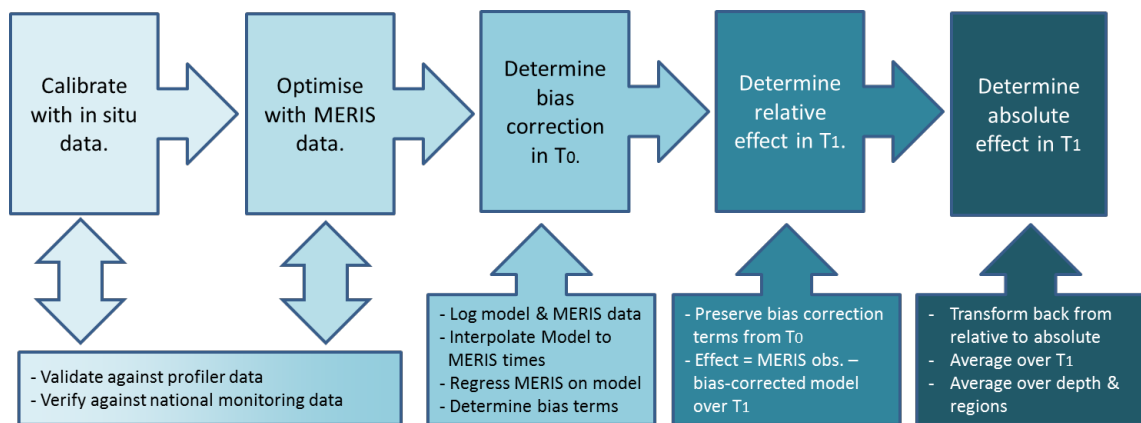
This atlas summarizes the end results of the MoS² project carried out for the Port of Rotterdam by Deltares (and in part by VU-IVM) between 2008 and 2014. The MoS² project (Model-Supported Monitoring of SPM) has been carried out in three stages. In 2011, the first stage of MoS² has resulted in an earlier version of this atlas: the 'Composite Atlas of SPM in the Southern North Sea 2007' by Blaas et al. The current version replaces the 2011 version, since it incorporates all modifications and extensions to the modelling and analysis of the remote sensing data accomplished during the second and third stages of MoS² over the more recent years. The reports mentioned in the list of references document the progress over the various stages and provide further background information on the project results.

The atlas shows the surface and bottom results of the Delft3D ZUNO-DD SPM transport model next to the MERIS remote sensing data aggregated on the same horizontal model grid. All results are considered over the fortnightly spring-neap tidal period (14.8 days). Differences between model and MERIS data are also shown, next to time series of the dominant external driving factors for resuspension and transport of SPM. Because estimates of the fortnightly mean of the remote sensing data at each individual grid location are based on differently distributed values over time, the maps of remote sensing are referred to as "composites".

In addition to this atlas, the remote sensing and model results have been provided to the Port of Rotterdam as digital files. Please note that these files contain more extended and extensive, higher resolution data than presented here in print.

The MoS² approach

The MoS² project aimed to provide the Port of Rotterdam with novel and improved means to monitor SPM in the Dutch coastal zone in relation to the construction of Maasvlakte-2 (MV2). The scheme below indicates the approach from model setup to trend assessment over the various project stages.



To start, the MoS² project focused on redesign and improvement of Delft3D transport model of the southern North Sea. The transport model (ZUNO-DD) has been set up with increased horizontal resolution in the Dutch coastal waters compared to its predecessors. Secondly, remote sensing data from the MERIS sensor on the Envisat spacecraft, have been analysed and processed with the HYDROPT retrieval algorithm by VU-IVM and Water Insight BV. These data have been aggregated onto the grid of the Delft3D transport model. The model prediction of SPM in the southern North Sea has been improved by means of simulated annealing optimisation, where the key model parameters have been varied over spatially distributed regions to reduce the difference between model and MERIS remote sensing data.

Subsequently, the model results have been applied as reference conditions during the impact period of the MV2 sandmining and construction (T_1)¹. The reference conditions represent the state of the coastal system without influence of MV2 sandmining and construction, against which the state observed with remote sensing can be compared. In order to achieve a minimal bias in the modelled reference conditions, a correction of systematic differences (bias) between optimised model and MERIS data has been carried out for the baseline period T_0 (2003-2008). With the presumption that the properties of the bias are preserved from T_0 to T_1 , the bias-corrected model has been applied to obtain the effect (trend) in remotely sensed SPM concentrations relative to the modelled reference during T_1 . The bias and trend have been analysed and discussed in the final MoS²-III report by Blaas et al. 2014.

¹) Because of unforeseen limitations in availability of MERIS data after 2011, the eventual T_1 - analysis had to be restricted to 2009-2011.

What is shown in this atlas?

This atlas shows the bias-corrected SPM model results during both the T_0 and T_1 periods along with the MERIS-based SPM. Each page refers to data averaged over an interval of 14 or 15 days. To average out short-term and spring-neap tidal variations and to obtain sufficient samples in the satellite data, the averaging intervals have been chosen to cover one spring-neap tidal period. The interval is indicated in the time series by a pink bar.

The upper left panel shows the MERIS-based concentrations at the surface layer on the model grid. The original 1x1 km HYDROPT MERIS SPM pixel data have been gridded and temporally averaged. The MERIS data are recorded during overpass of the Envisat satellite (nominally once per day between 10:00 and 12:00 AM UTC). SPM pixels rejected for technical or quality reasons (cloudiness, unreliable retrieval) have been removed and show up as white spots. Note that the number of successful pixels per grid cell shown in a composite may vary between zero (white spots) to tens of values. Note also that all SPM pixels in lakes, the Wadden Sea and the water bodies of the Zeeland and South-Holland delta have been removed because the retrieval model HYDROPT has not been calibrated for the optical properties of the surface waters in those areas.

The middle and right top row panels show the time-averaged, bias-corrected, optimised model results, based on 2-hourly model output data for the surface and near-bed layer (top and bottom 4% of the total water depth, respectively), respectively. Note that the domain shown in the maps is a zoom-in of the entire Delft3D transport model domain.

The differences between the MERIS-based SPM and the model are displayed in the second row of maps during each fortnightly period. On the lower left, the Root Mean Square difference is plotted, determined over the fortnightly interval. This RMS difference (in mg/l) provides insight in the spread of the model deviation compared to the matching MERIS SPM values in the surface layer. The lower middle and right panels show the mean relative difference and the mean difference (in mg/l) of the model results compared to the gridded MERIS data, respectively.

Below the maps, time series of sand mining volume, modelled water level at Noordwijk 10 (about 45 km north of the Maasvlakte), observed wind magnitude (blue) and direction (green) and significant wave height at the Euro platform (about 40 km west of the Maasvlakte) are shown. These forcing factors are important sources of variability in SPM concentrations in the coastal waters. Tidal currents determine vertical mixing and horizontal dispersion, wind magnitude and wave height drive vertical mixing. Wind direction is relevant to steer the distribution of the water masses through cross-shore up- and downwelling and alongshore wind-driven currents. The time series thus provide a view of the 'marine weather' conditions preceding and during the interval shown. (Note that by convention wind direction 0 degrees N refers to wind from the north, wind 270 degrees N refers to wind from the west, etc.)

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MoS2-I

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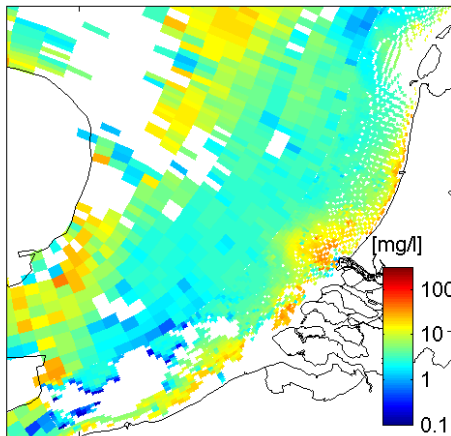
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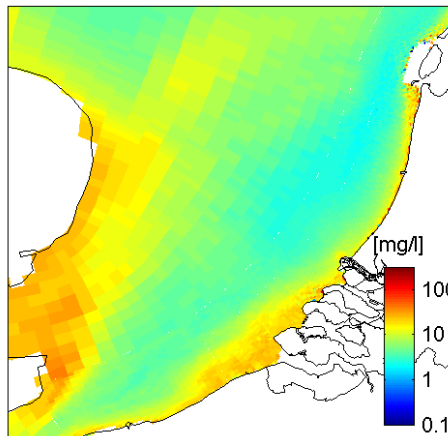
MoS2-III

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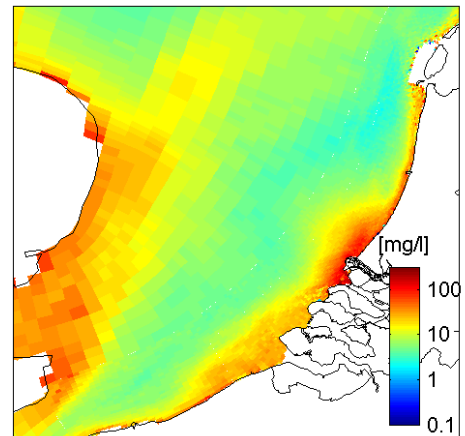
MERIS at surface layer



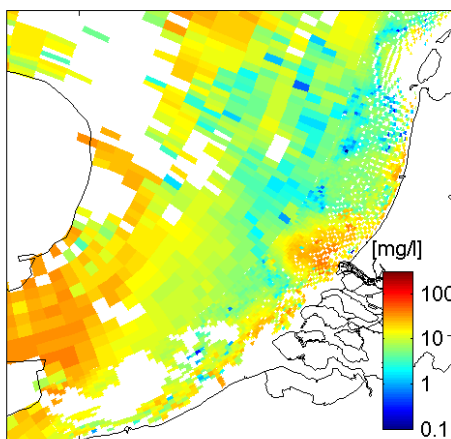
Model at surface layer



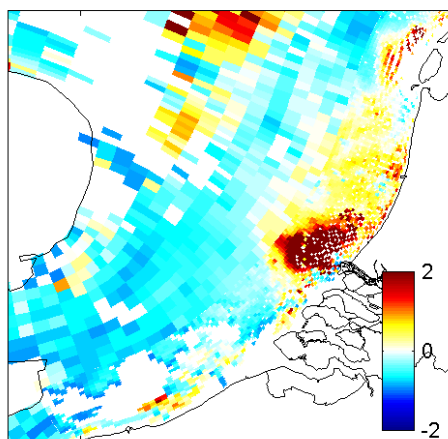
Model at bottom layer



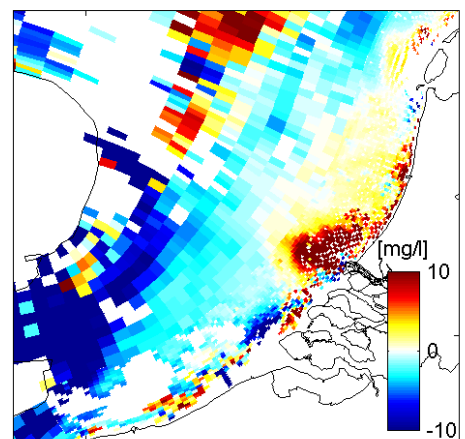
RMS difference



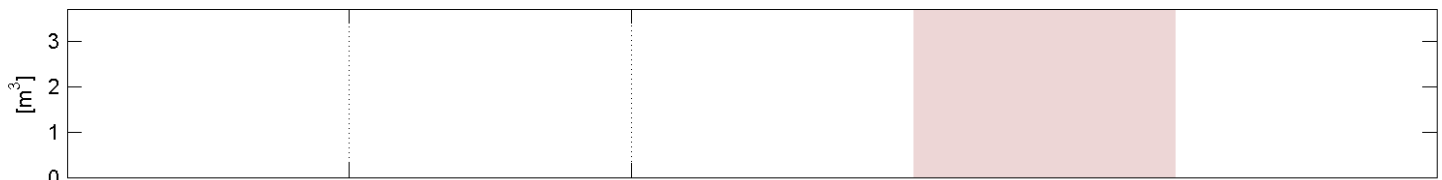
Relative difference [(MERIS-Model)/Model]



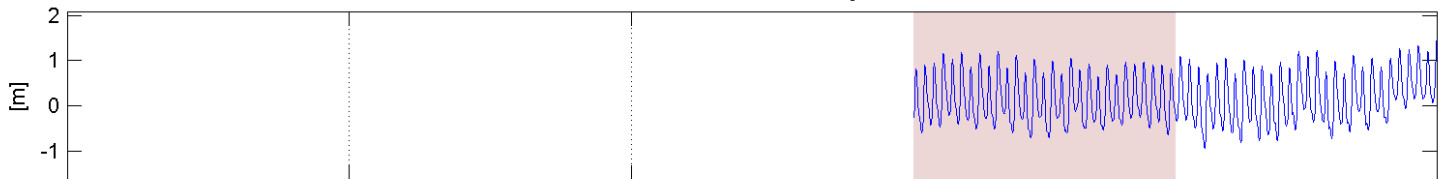
Mean difference [MERIS-Model]

 $\times 10^6$

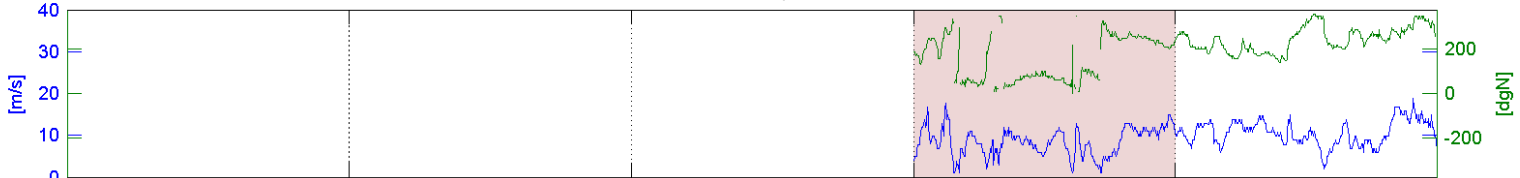
Sand mining volume for Maasvlakte 2



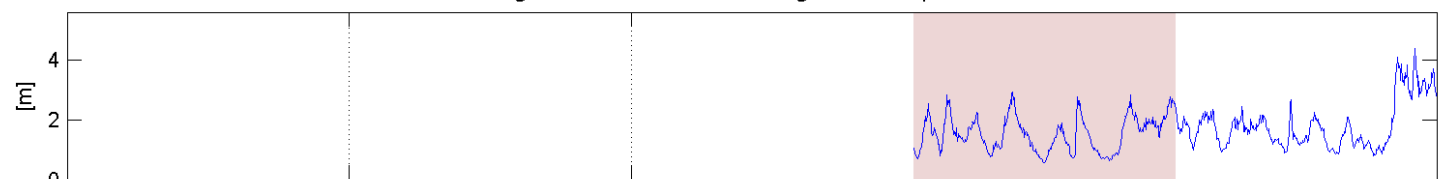
Water level at Noordwijk10



Wind at Euro platform

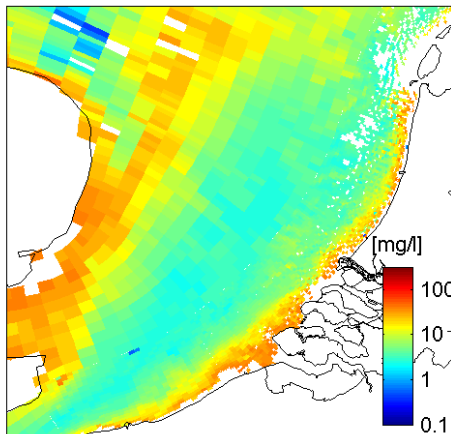


Significant surface wave height at Euro platform

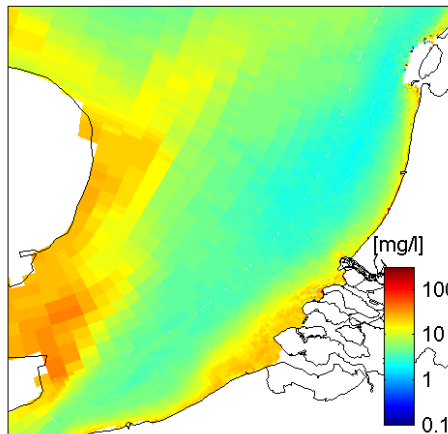


Nov-14 Nov-30 Dec-16 Jan-01 Jan-15 Jan-30

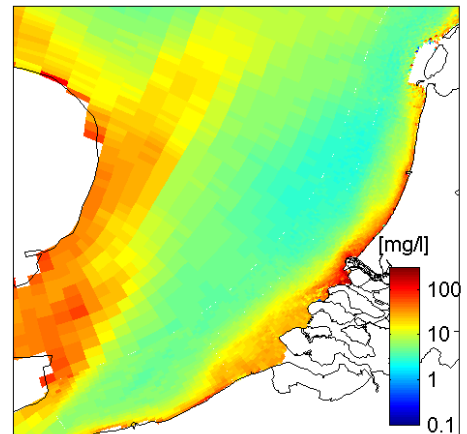
MERIS at surface layer



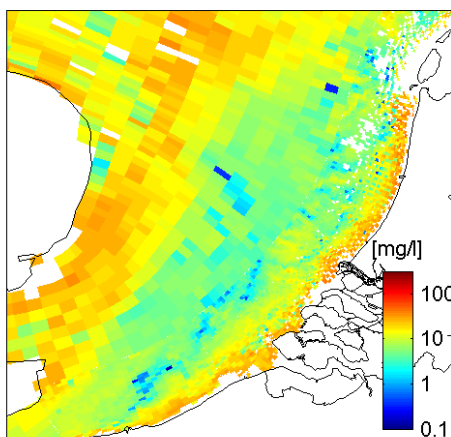
Model at surface layer



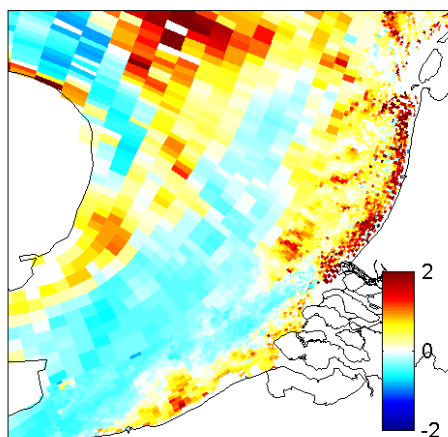
Model at bottom layer



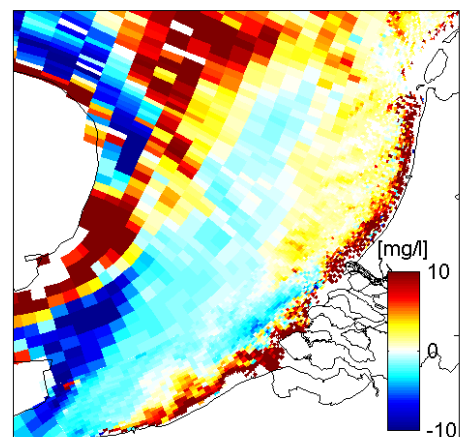
RMS difference



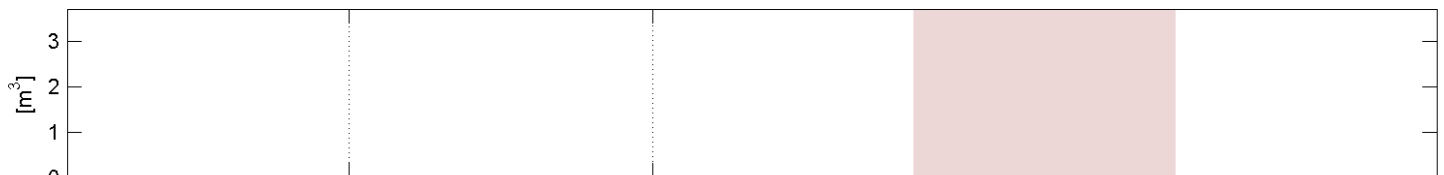
Relative difference [(MERIS-Model)/Model]



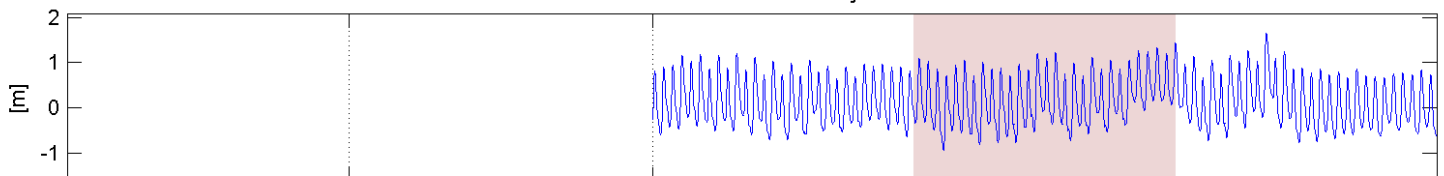
Mean difference [MERIS-Model]


 $\times 10^6$

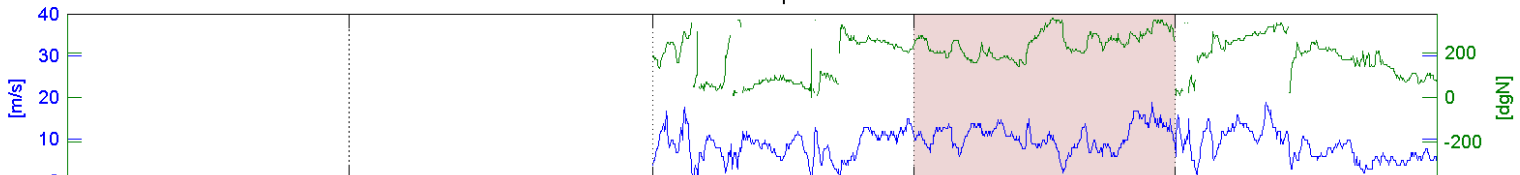
Sand mining volume for Maasvlakte 2



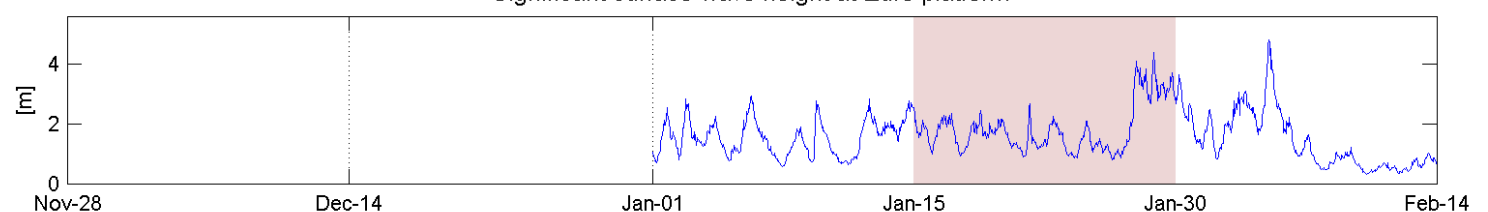
Water level at Noordwijk10



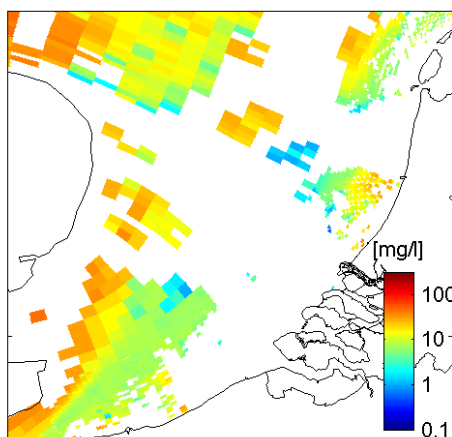
Wind at Euro platform



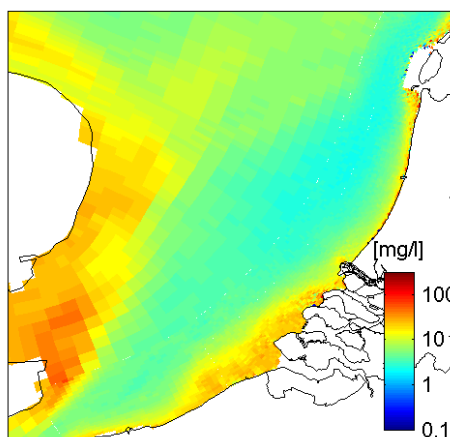
Significant surface wave height at Euro platform



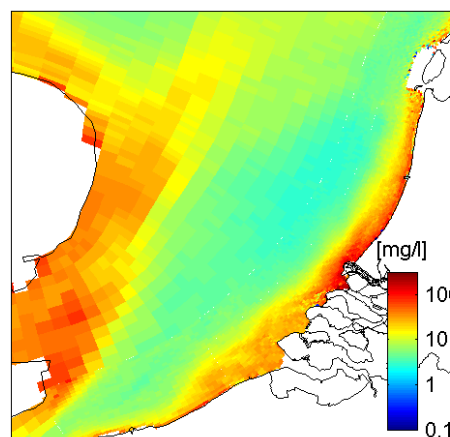
MERIS at surface layer



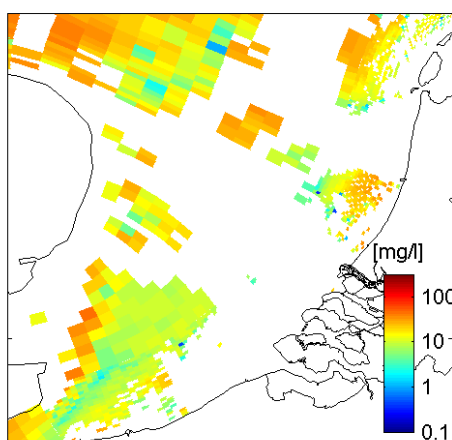
Model at surface layer



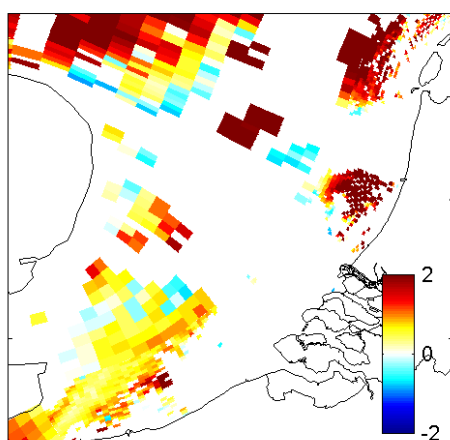
Model at bottom layer



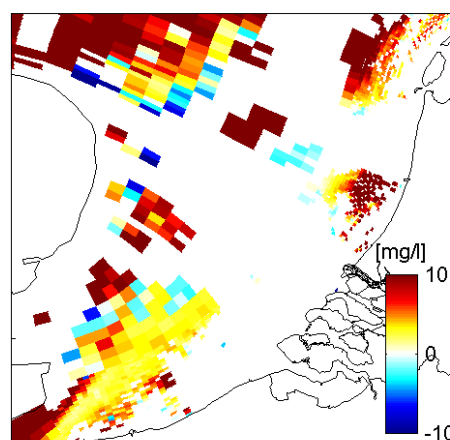
RMS difference



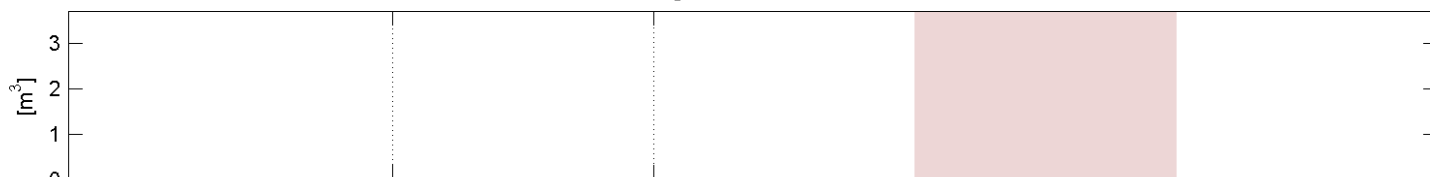
Relative difference [(MERIS-Model)/Model]



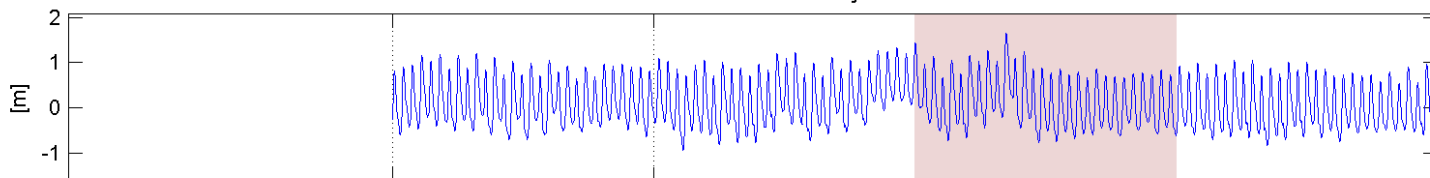
Mean difference [MERIS-Model]


 $\times 10^6$

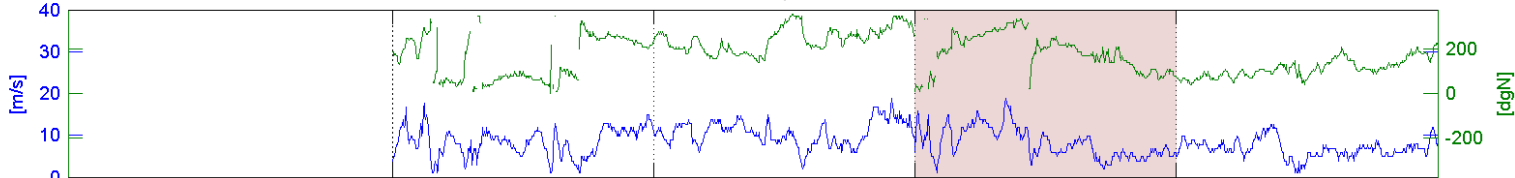
Sand mining volume for Maasvlakte 2



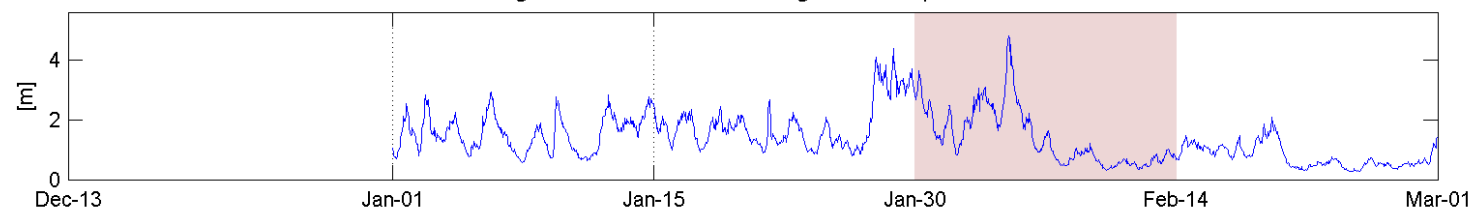
Water level at Noordwijk10



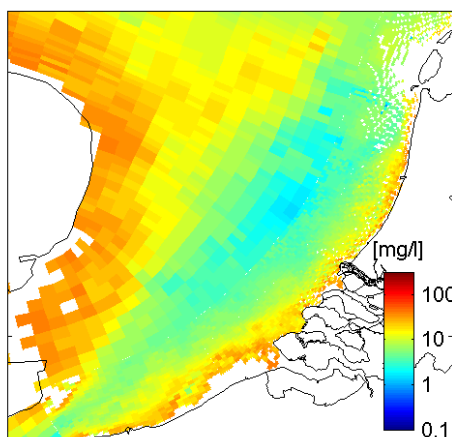
Wind at Euro platform



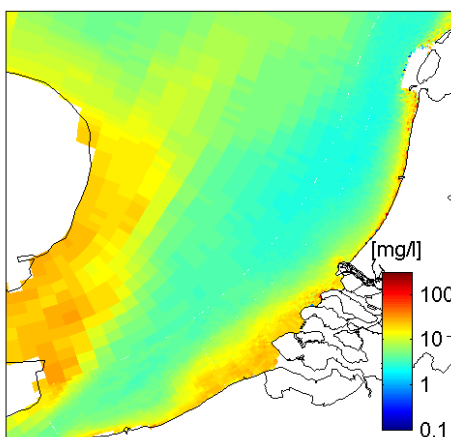
Significant surface wave height at Euro platform



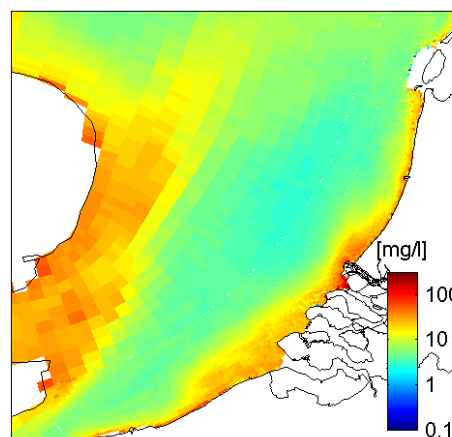
MERIS at surface layer



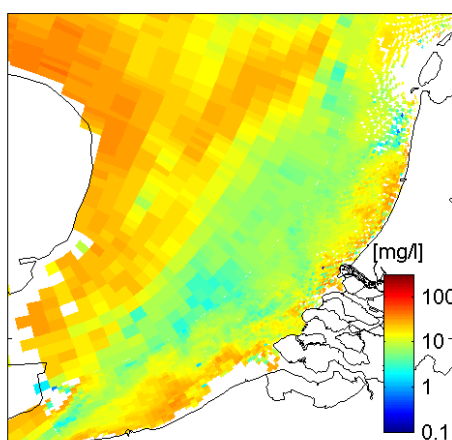
Model at surface layer



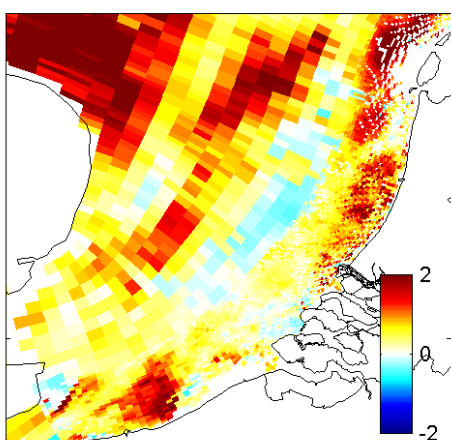
Model at bottom layer



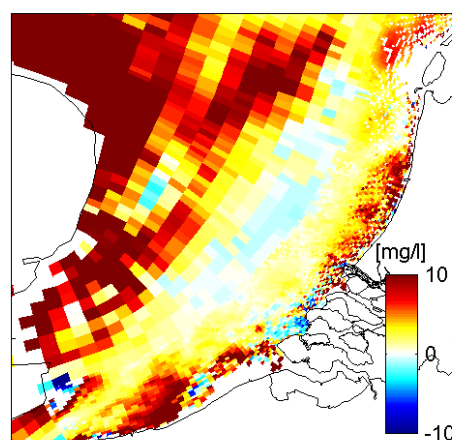
RMS difference



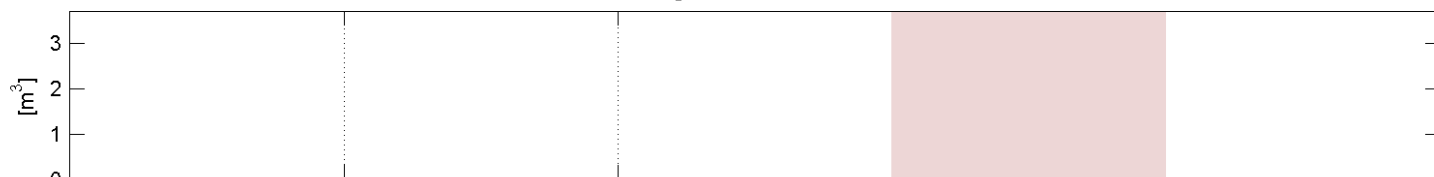
Relative difference [(MERIS-Model)/Model]



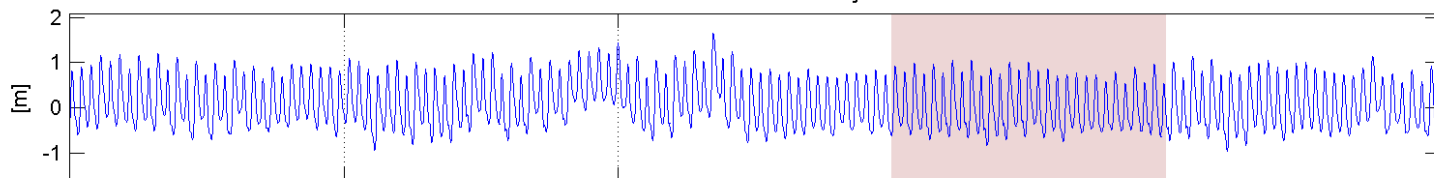
Mean difference [MERIS-Model]


 $\times 10^6$

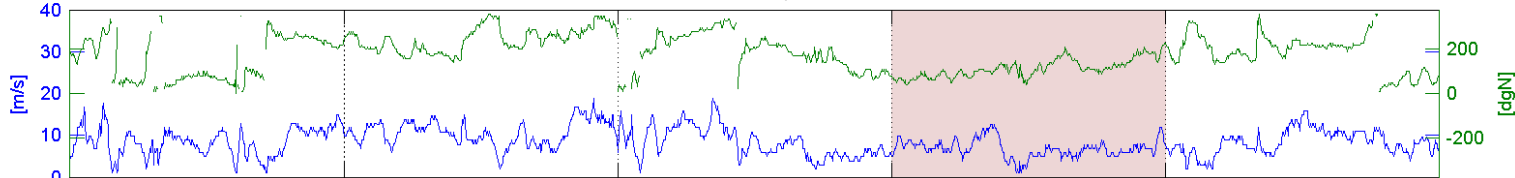
Sand mining volume for Maasvlakte 2



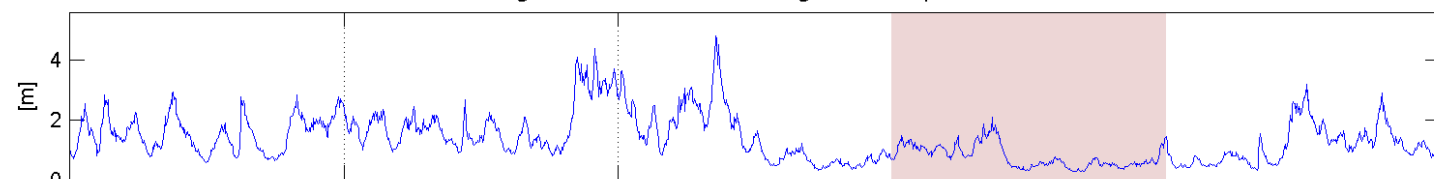
Water level at Noordwijk10



Wind at Euro platform

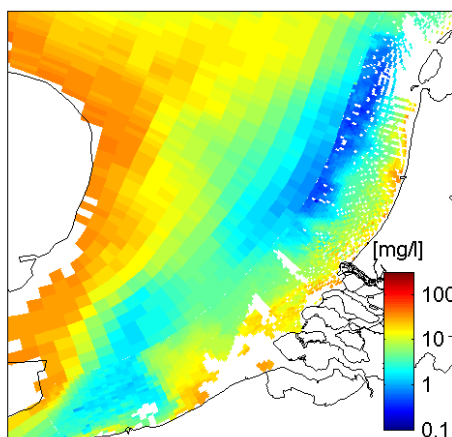


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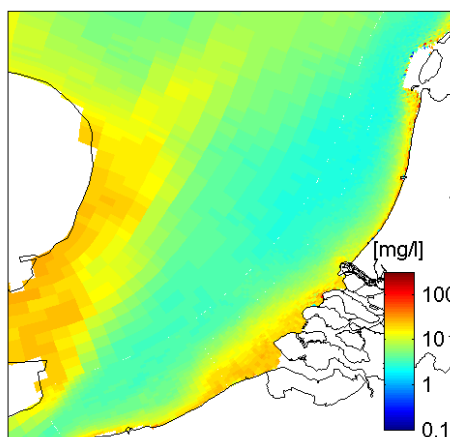


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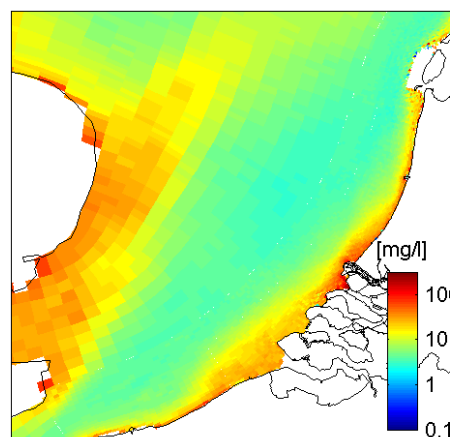
MERIS at surface layer



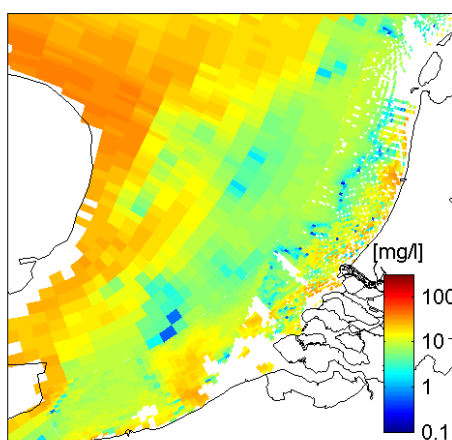
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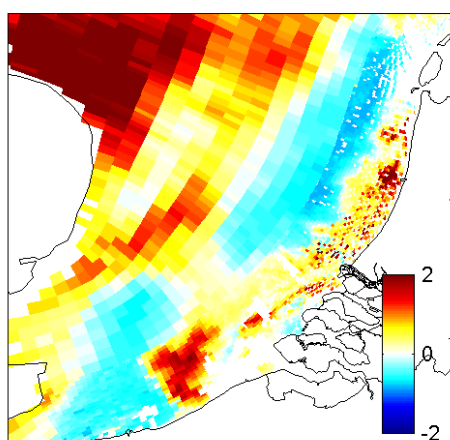
Model at bottom layer



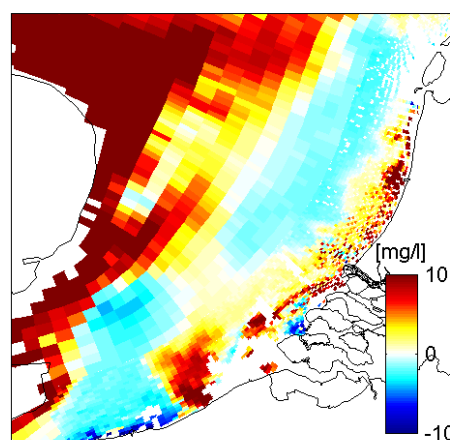
RMS difference



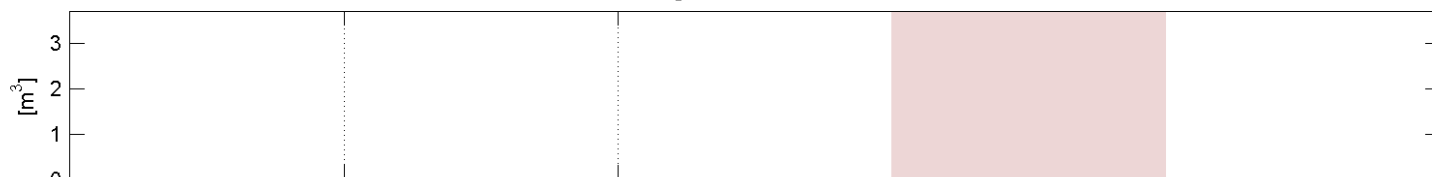
Relative difference [(MERIS-Model)/Model]



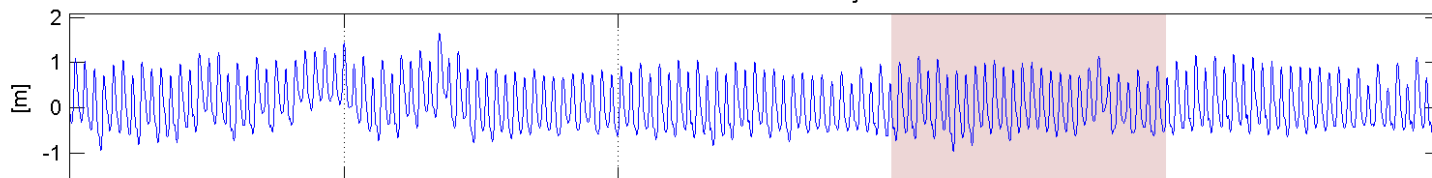
Mean difference [MERIS-Model]


x 10⁶

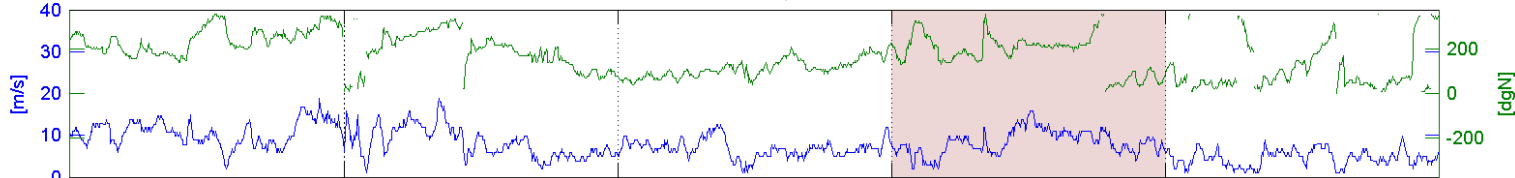
Sand mining volume for Maasvlakte 2



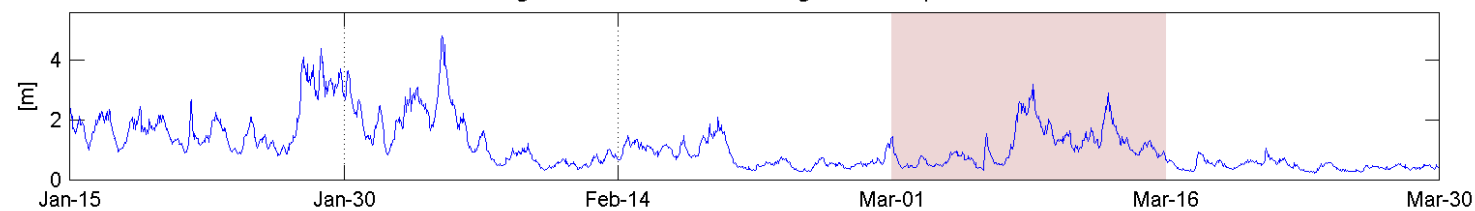
Water level at Noordwijk10



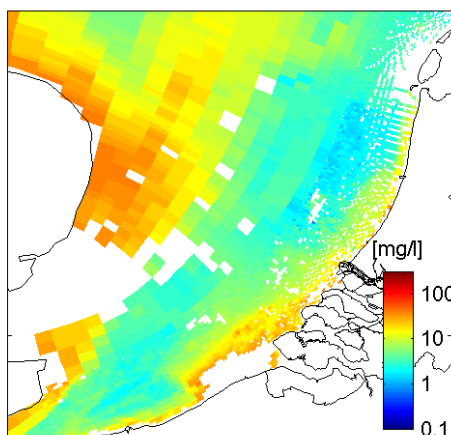
Wind at Euro platform



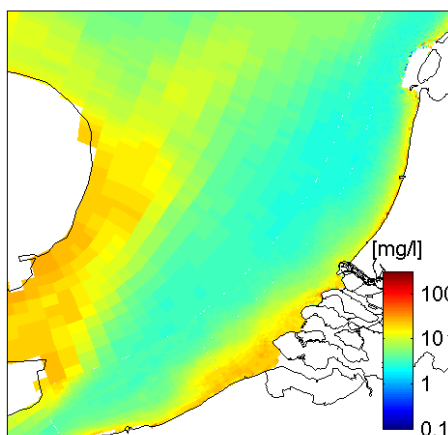
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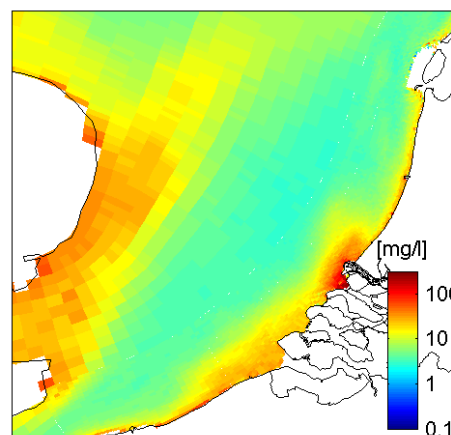
MERIS at surface layer



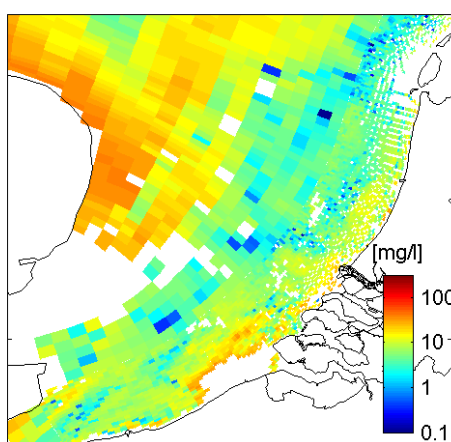
Model at surface layer



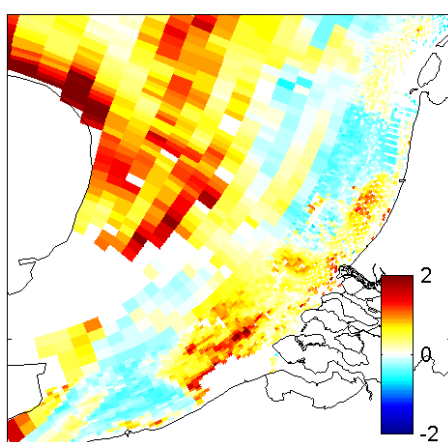
Model at bottom layer



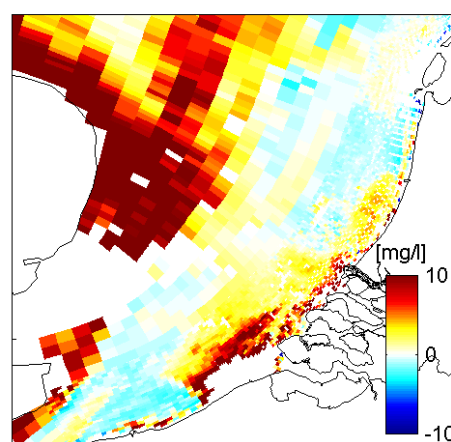
RMS difference



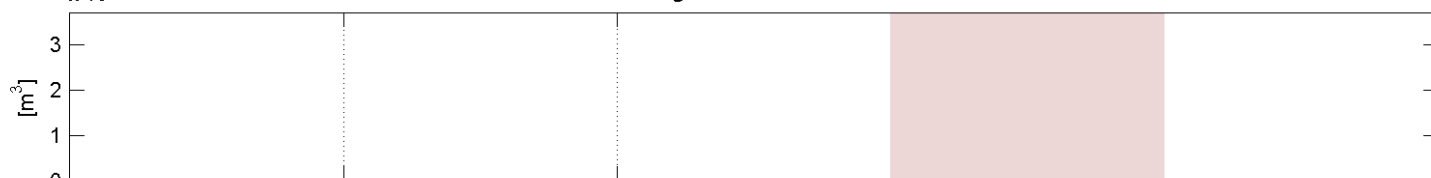
Relative difference [(MERIS-Model)/Model]



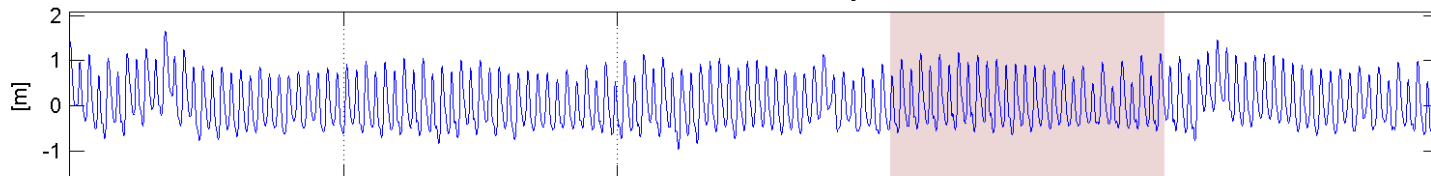
Mean difference [MERIS-Model]


x 10⁶

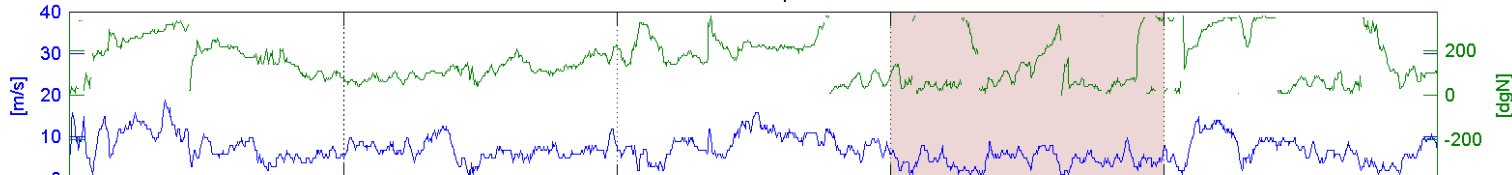
Sand mining volume for Maasvlakte 2



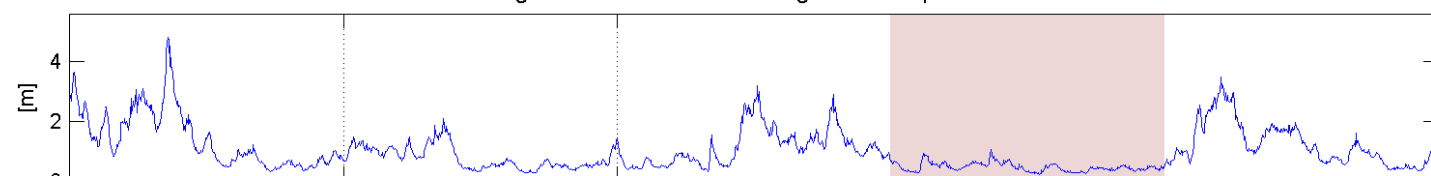
Water level at Noordwijk10



Wind at Euro platform

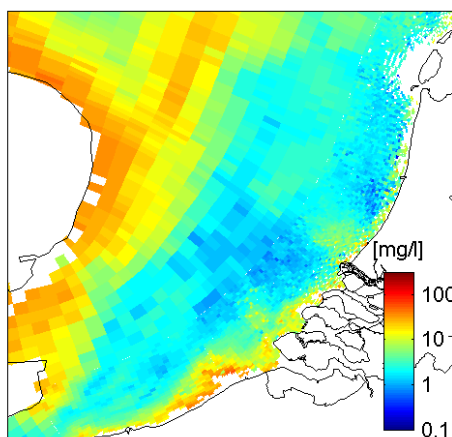


Significant surface wave height at Euro platform

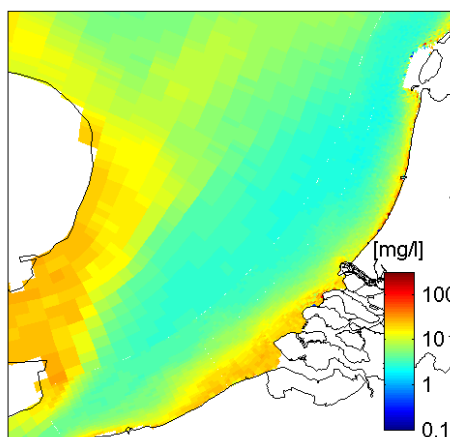


Jan-30 Feb-14 Mar-01 Mar-16 Mar-30 Apr-14

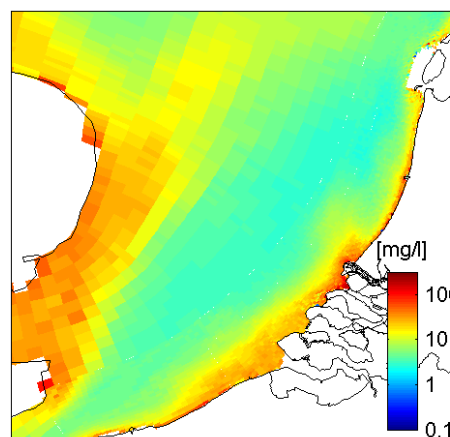
MERIS at surface layer



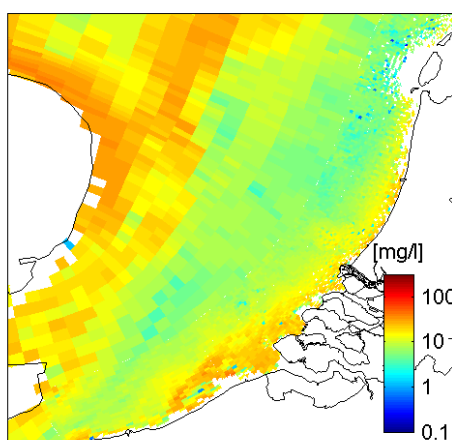
Model at surface layer



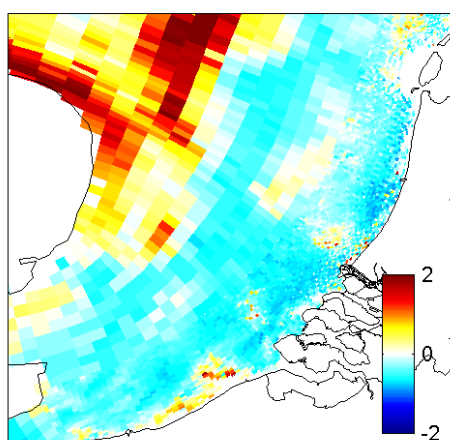
Model at bottom layer



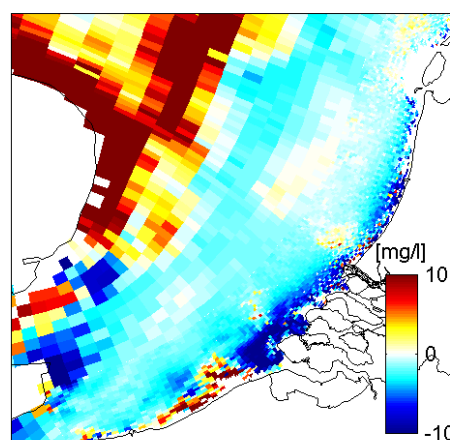
RMS difference



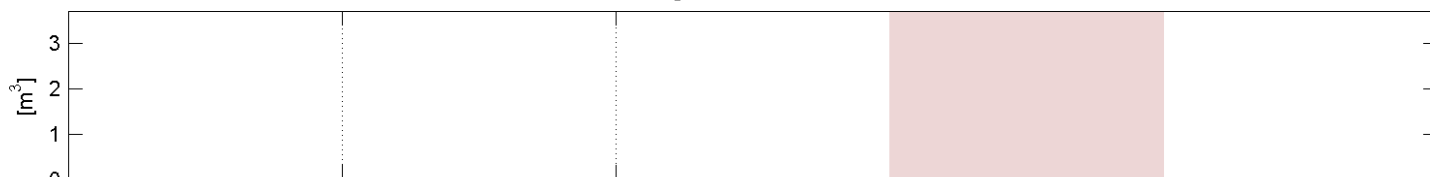
Relative difference [(MERIS-Model)/Model]



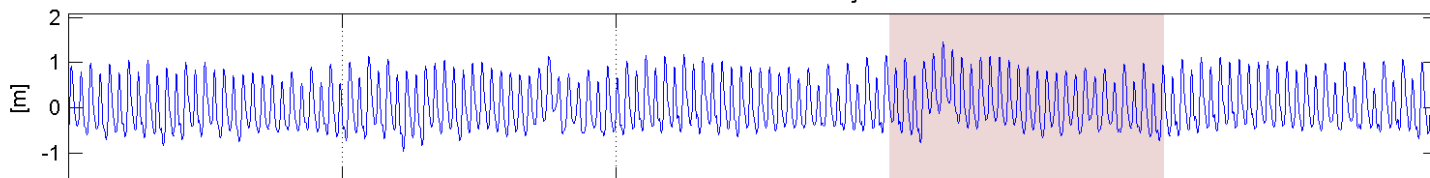
Mean difference [MERIS-Model]


 $\times 10^6$

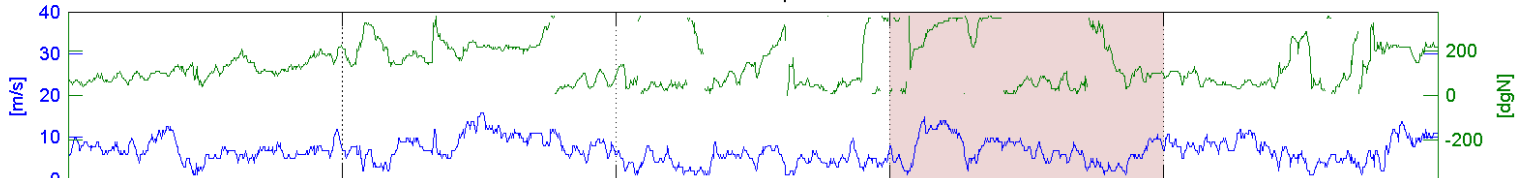
Sand mining volume for Maasvlakte 2



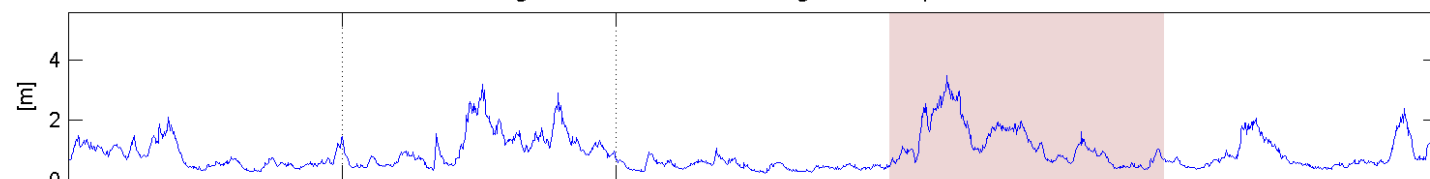
Water level at Noordwijk10



Wind at Euro platform

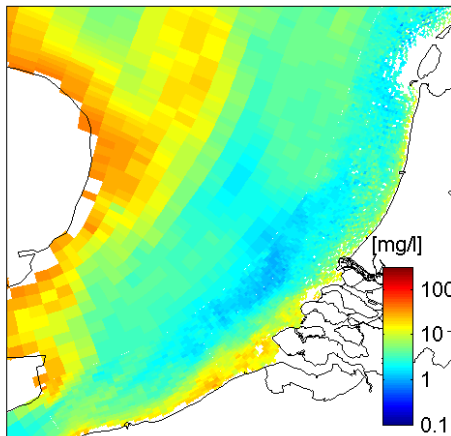


Significant surface wave height at Euro platform

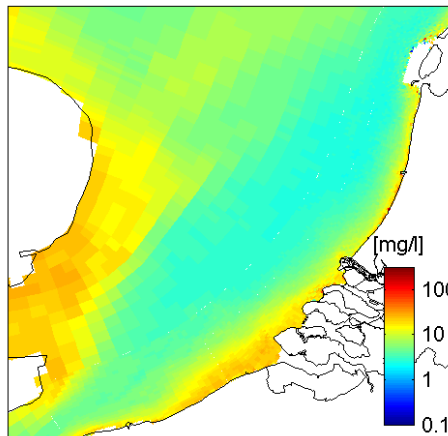


Feb-14 Mar-01 Mar-16 Mar-30 Apr-14 Apr-29

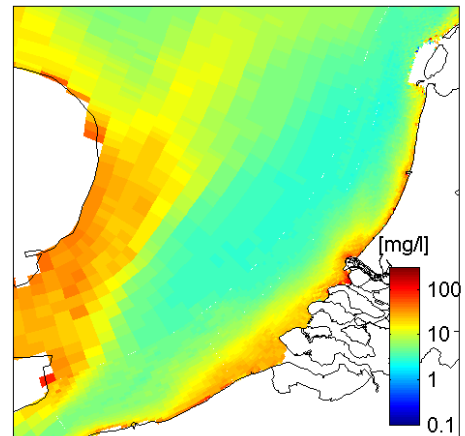
MERIS at surface layer



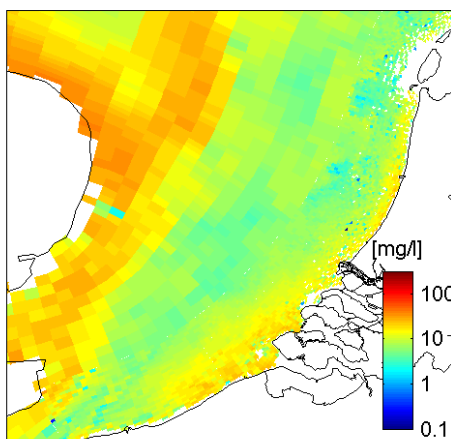
Model at surface layer



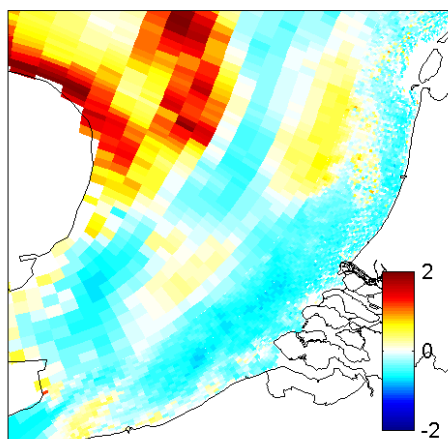
Model at bottom layer



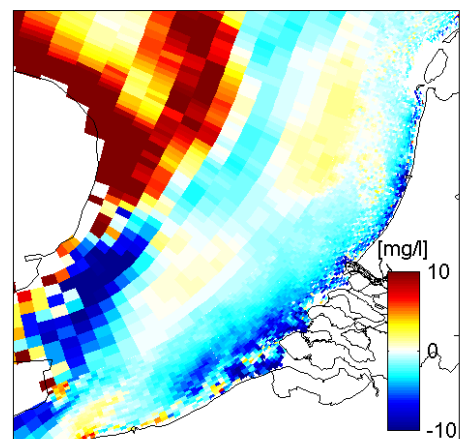
RMS difference



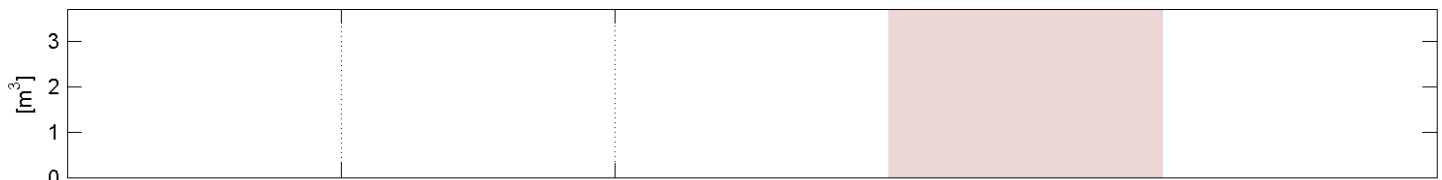
Relative difference [(MERIS-Model)/Model]



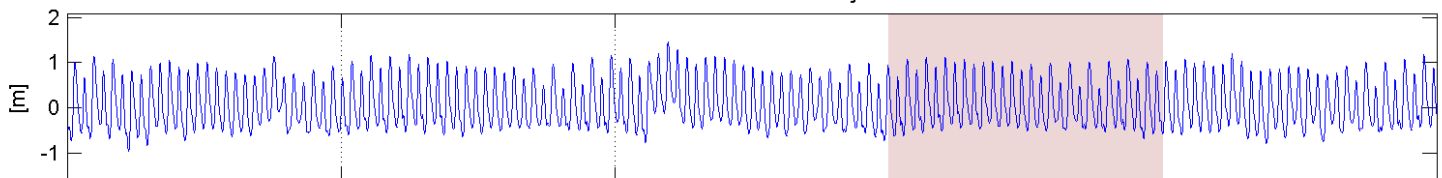
Mean difference [MERIS-Model]

 $\times 10^6$

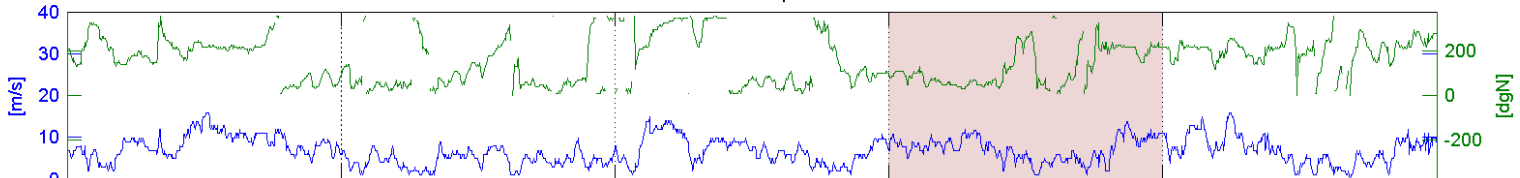
Sand mining volume for Maasvlakte 2



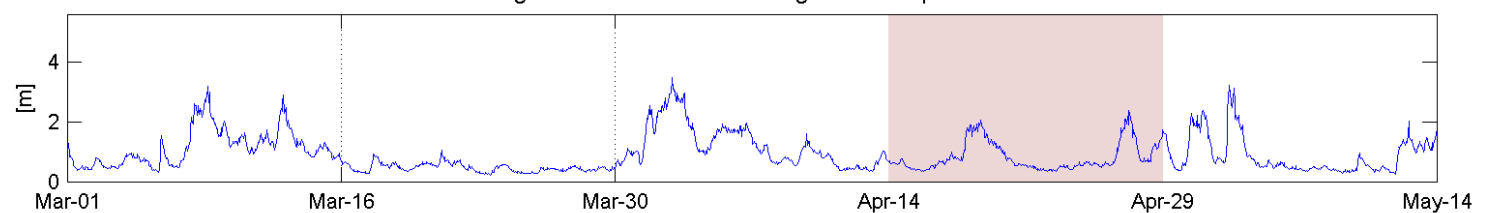
Water level at Noordwijk10



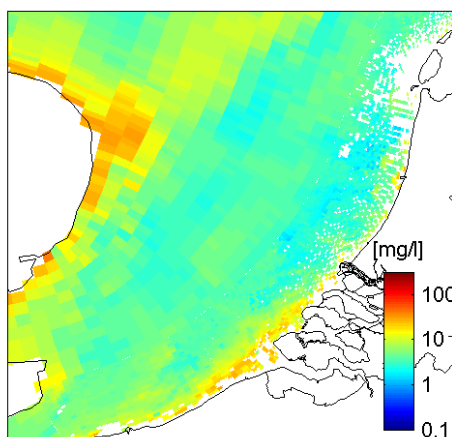
Wind at Euro platform



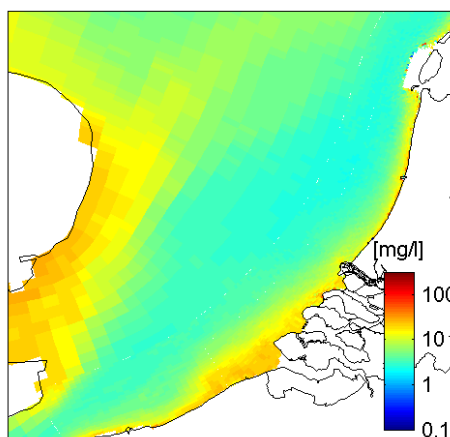
Significant surface wave height at Euro platform



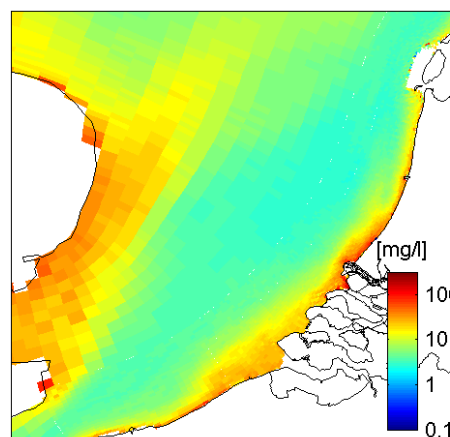
MERIS at surface layer



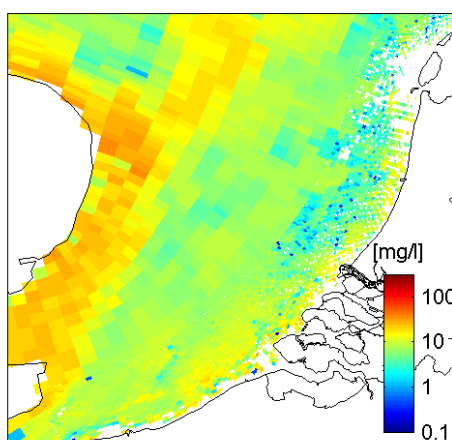
Model at surface layer



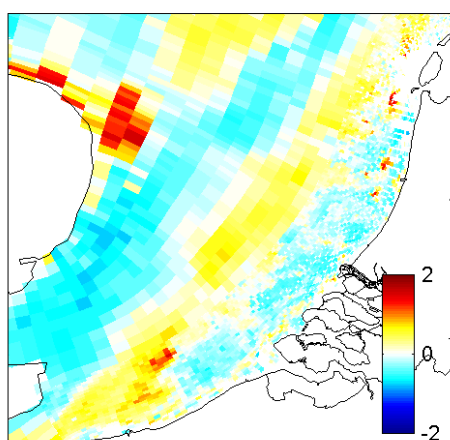
Model at bottom layer



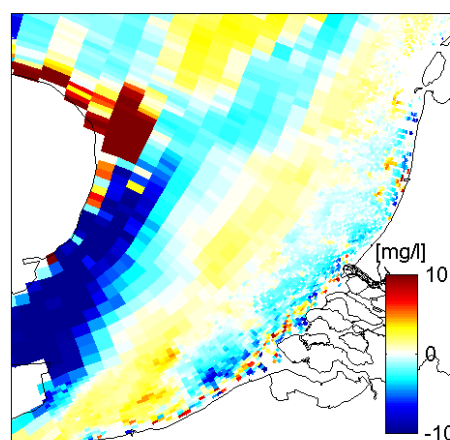
RMS difference



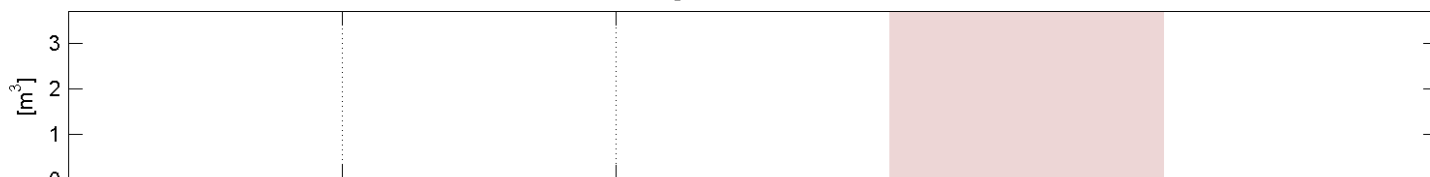
Relative difference [(MERIS-Model)/Model]



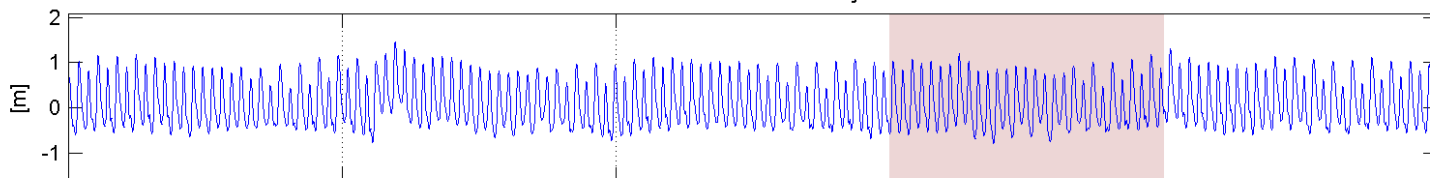
Mean difference [MERIS-Model]


 $\times 10^6$

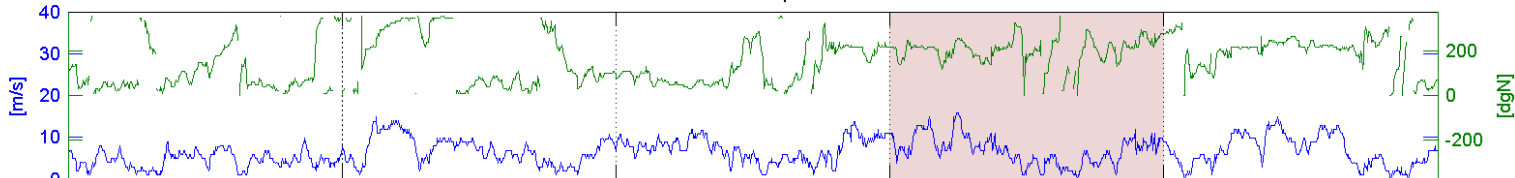
Sand mining volume for Maasvlakte 2



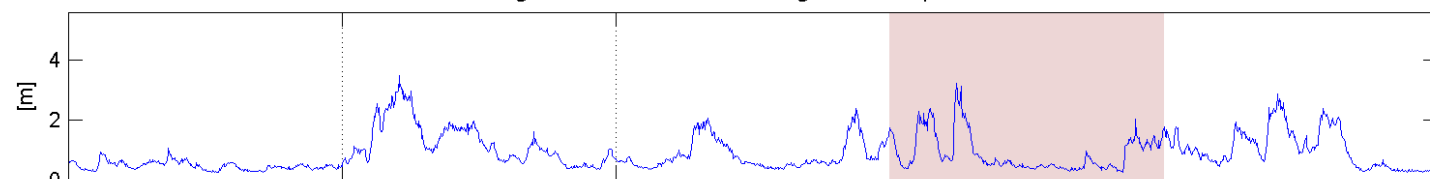
Water level at Noordwijk10



Wind at Euro platform

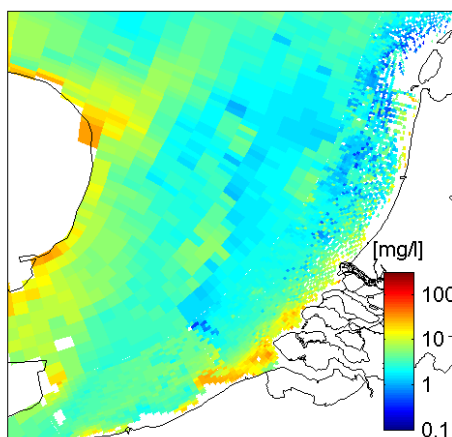


Significant surface wave height at Euro platform

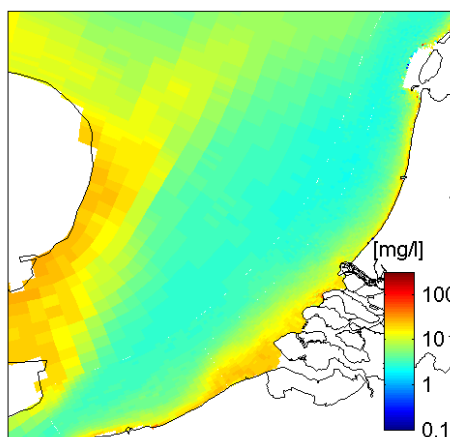


Mar-16 Mar-30 Apr-14 Apr-29 May-14 May-29

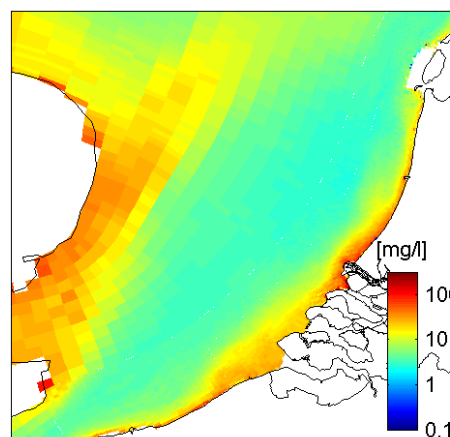
MERIS at surface layer



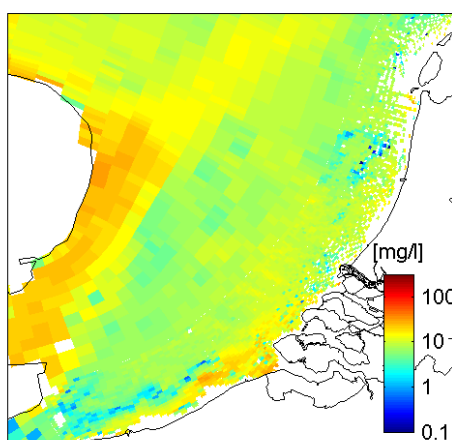
Model at surface layer



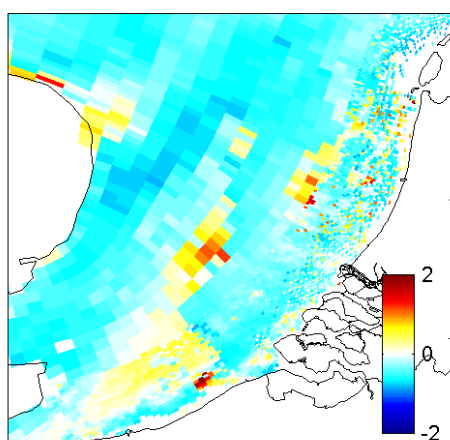
Model at bottom layer



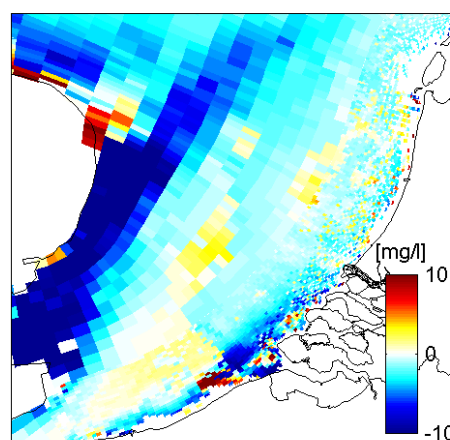
RMS difference



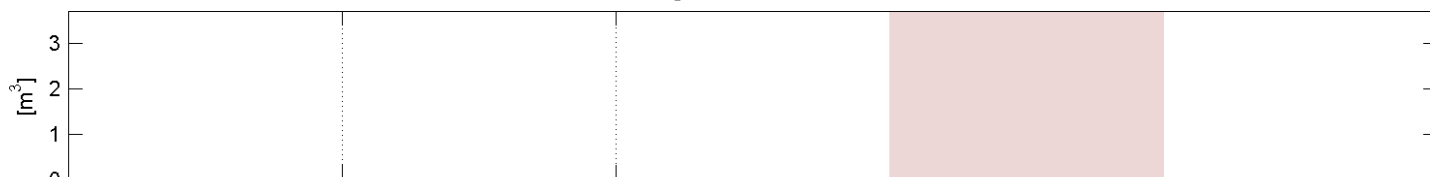
Relative difference [(MERIS-Model)/Model]



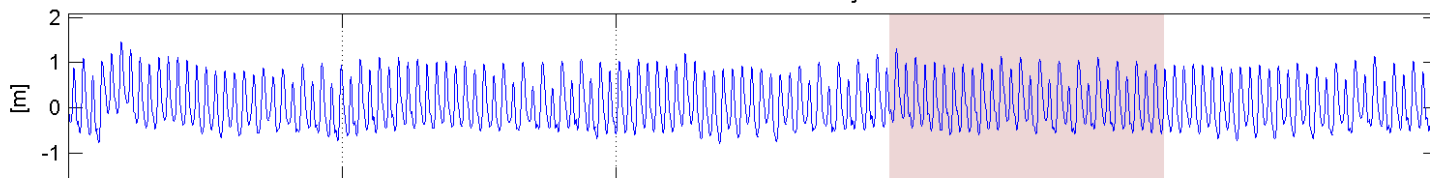
Mean difference [MERIS-Model]


x 10⁶

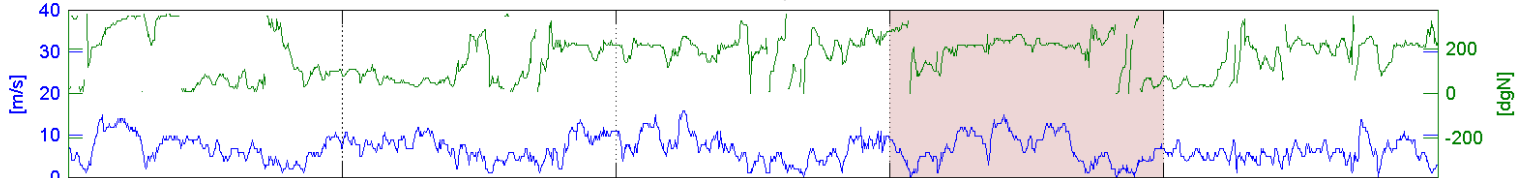
Sand mining volume for Maasvlakte 2



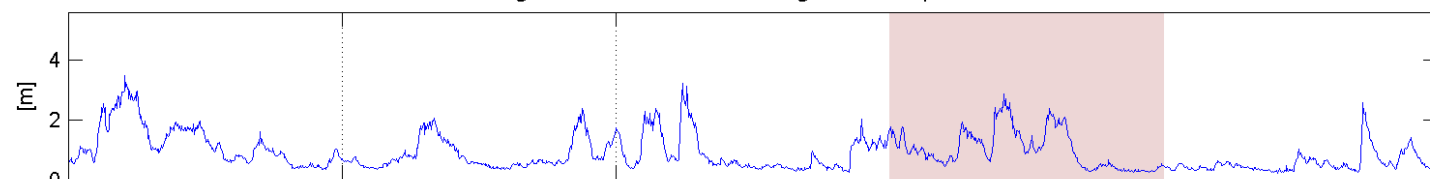
Water level at Noordwijk10



Wind at Euro platform

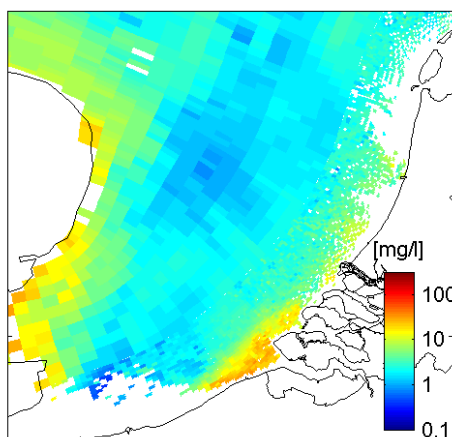


Significant surface wave height at Euro platform

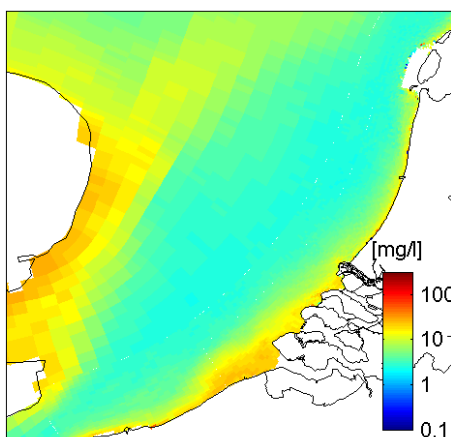


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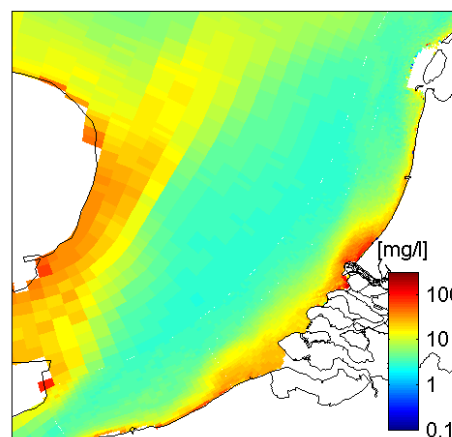
MERIS at surface layer



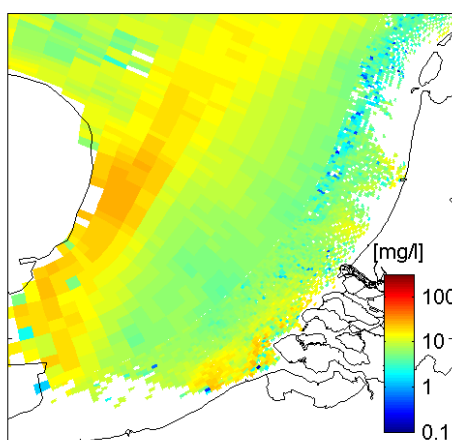
Model at surface layer



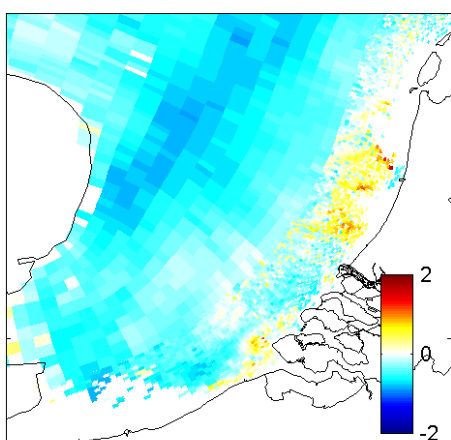
Model at bottom layer



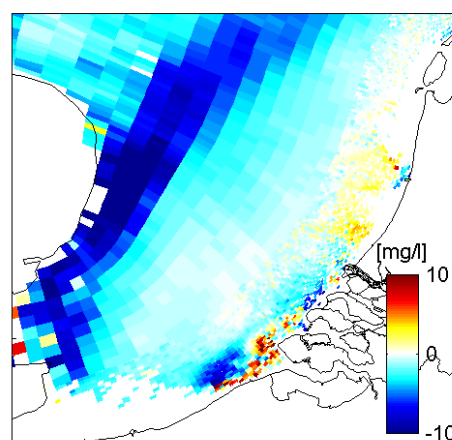
RMS difference



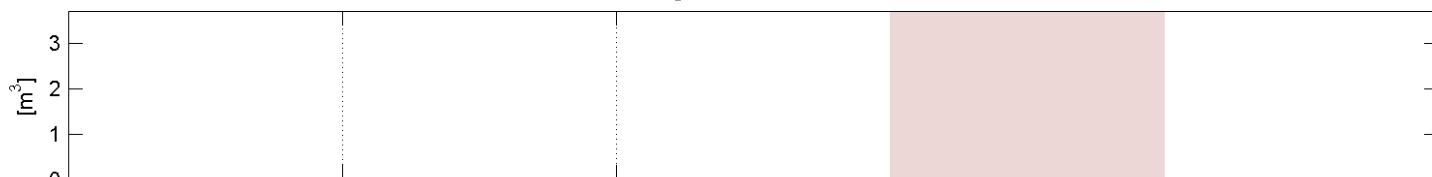
Relative difference [(MERIS-Model)/Model]



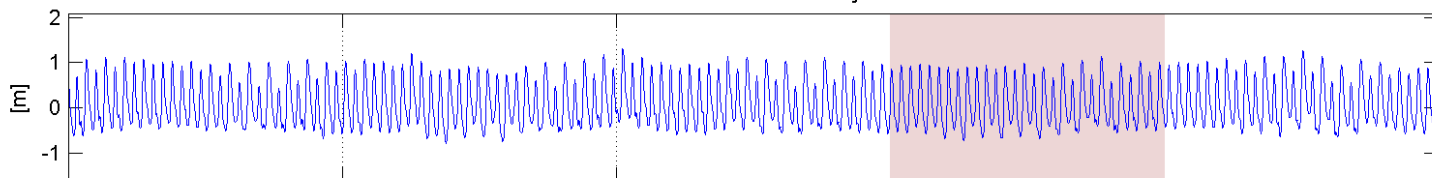
Mean difference [MERIS-Model]


 $\times 10^6$

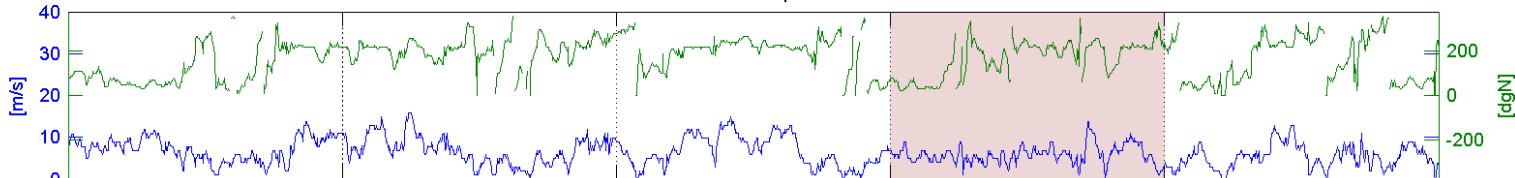
Sand mining volume for Maasvlakte 2



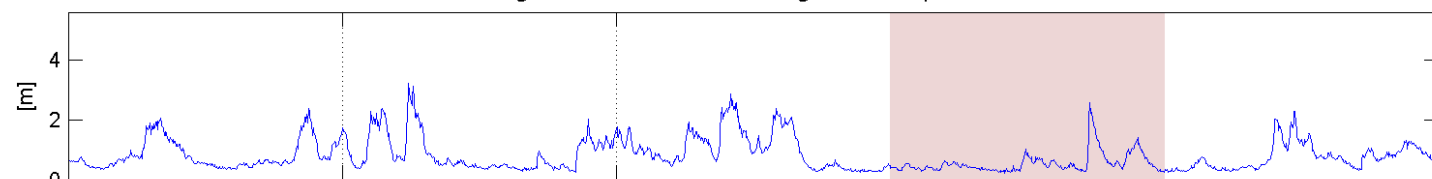
Water level at Noordwijk10



Wind at Euro platform

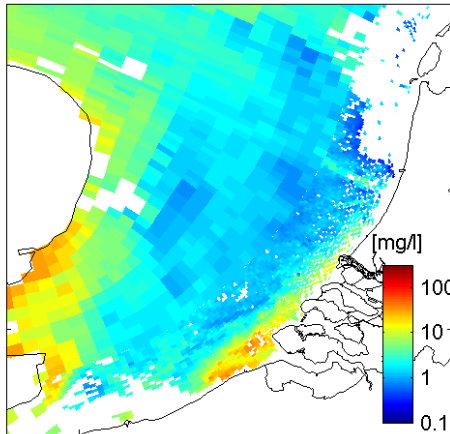


Significant surface wave height at Euro platform

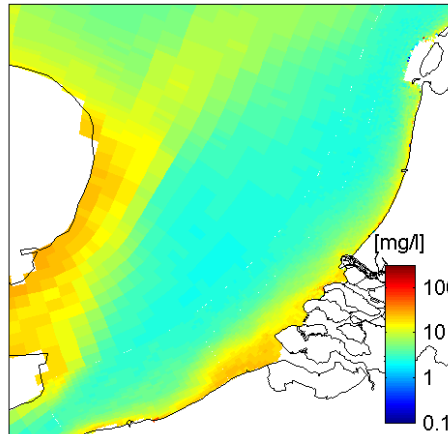


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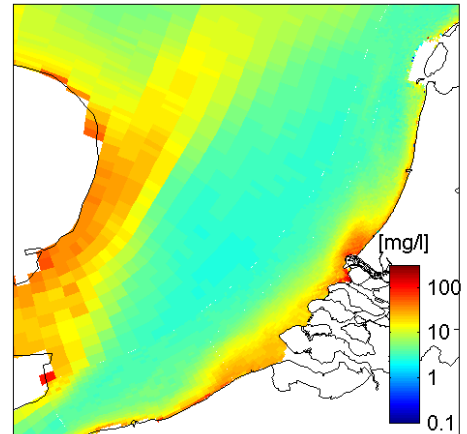
MERIS at surface layer



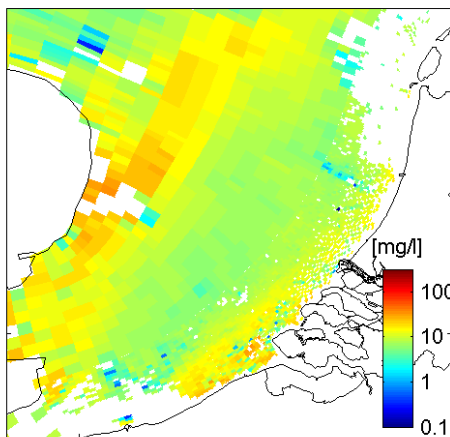
Model at surface layer



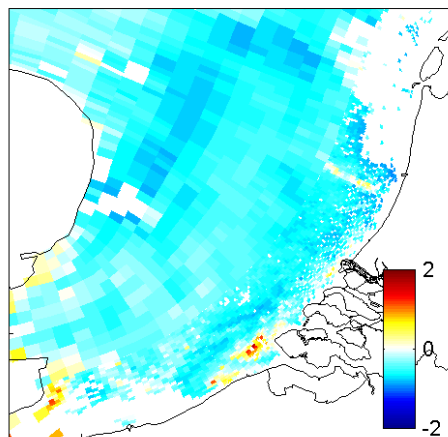
Model at bottom layer



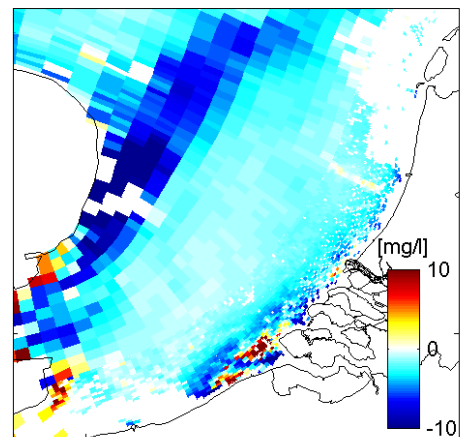
RMS difference



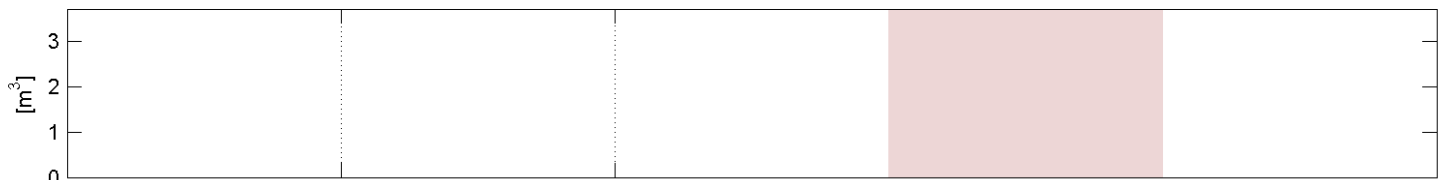
Relative difference [(MERIS-Model)/Model]



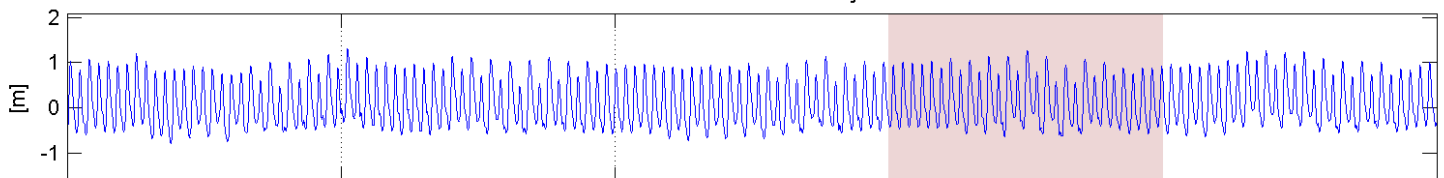
Mean difference [MERIS-Model]

 $\times 10^6$

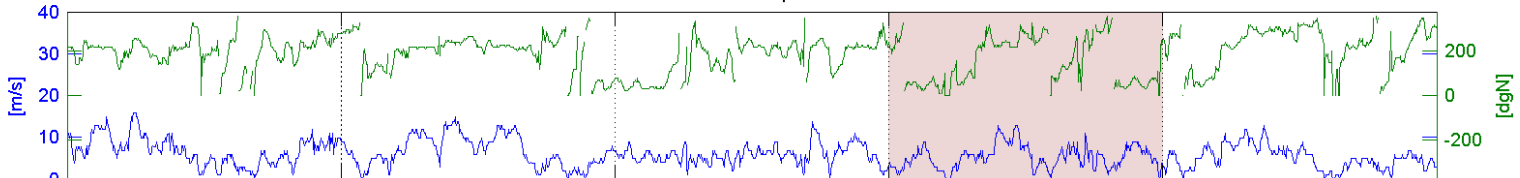
Sand mining volume for Maasvlakte 2



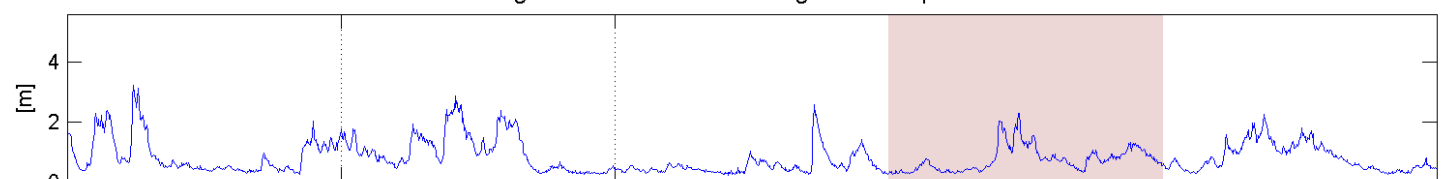
Water level at Noordwijk10



Wind at Euro platform

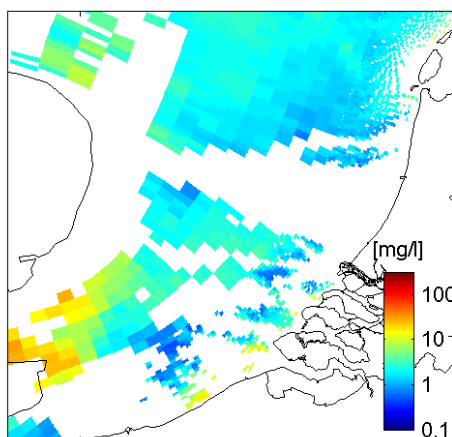


Significant surface wave height at Euro platform

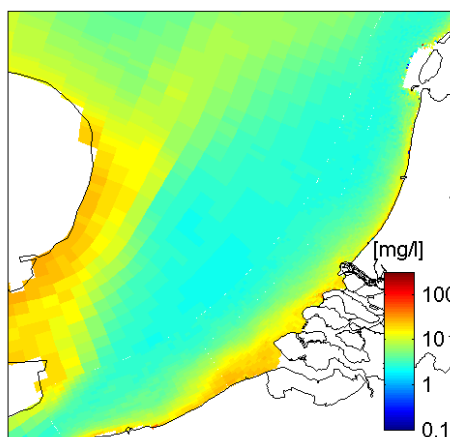


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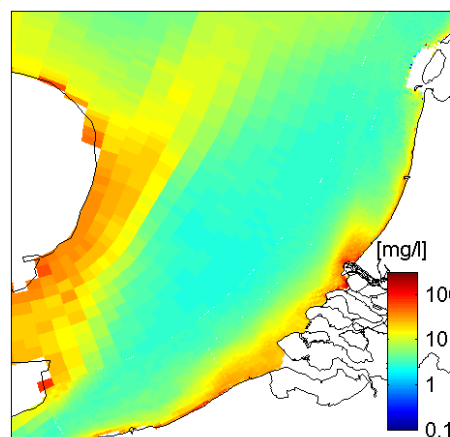
MERIS at surface layer



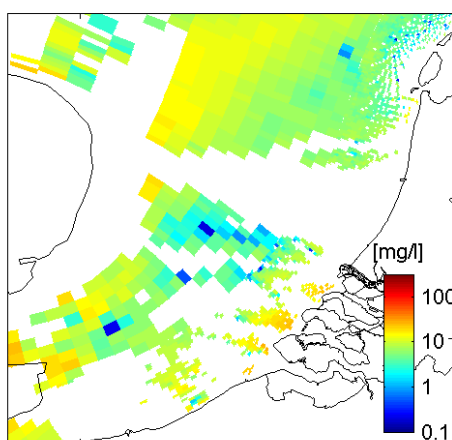
Model at surface layer



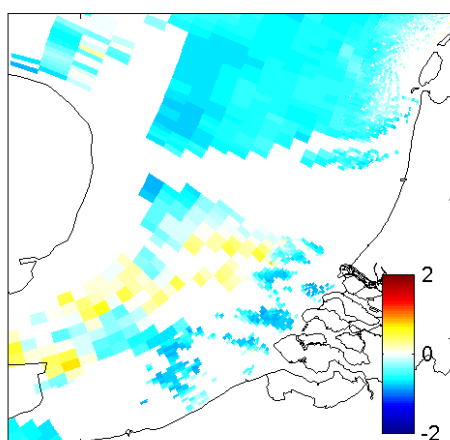
Model at bottom layer



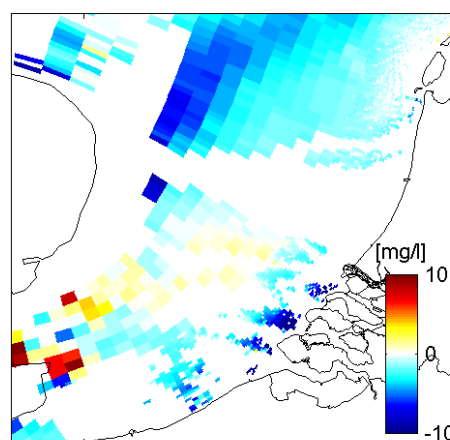
RMS difference



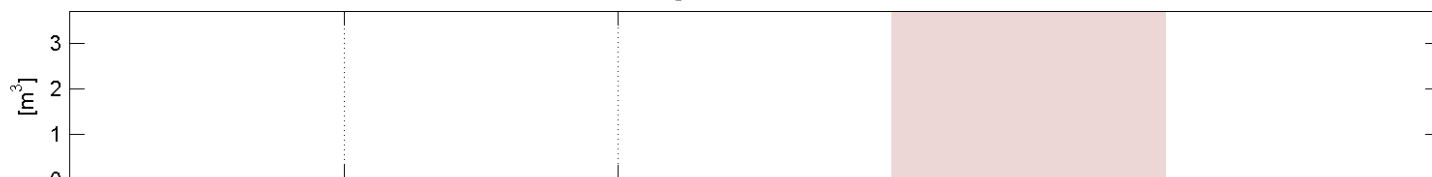
Relative difference [(MERIS-Model)/Model]



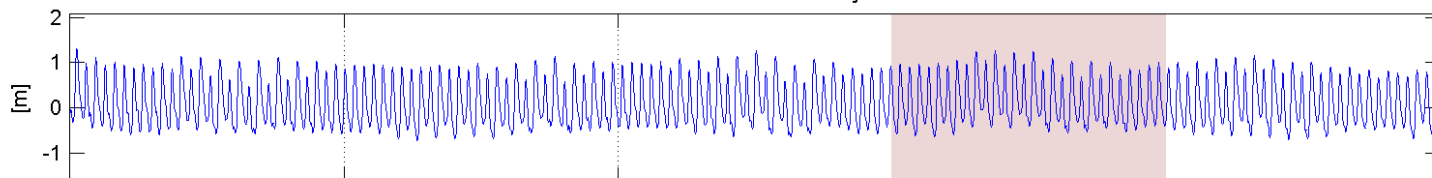
Mean difference [MERIS-Model]


 $\times 10^6$

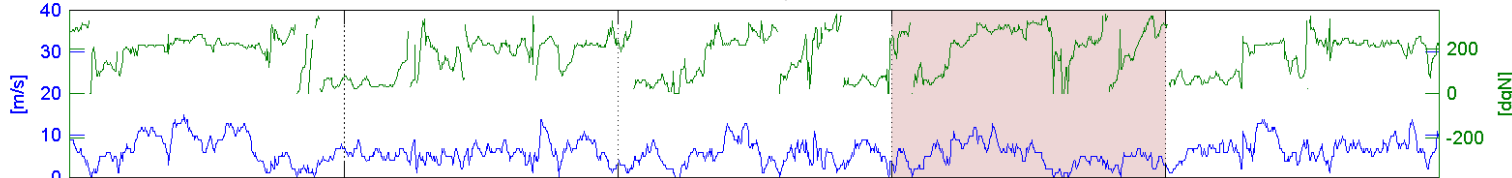
Sand mining volume for Maasvlakte 2



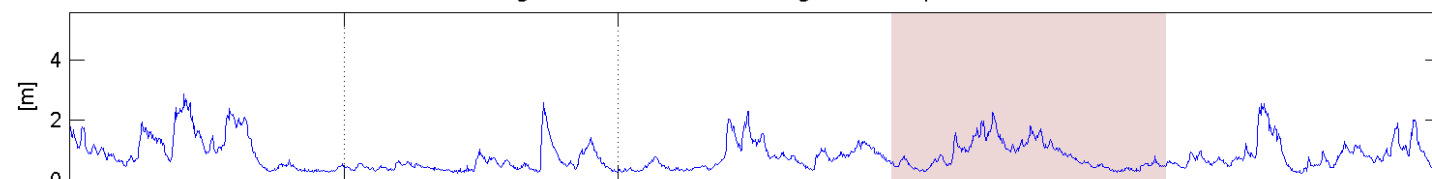
Water level at Noordwijk10



Wind at Euro platform

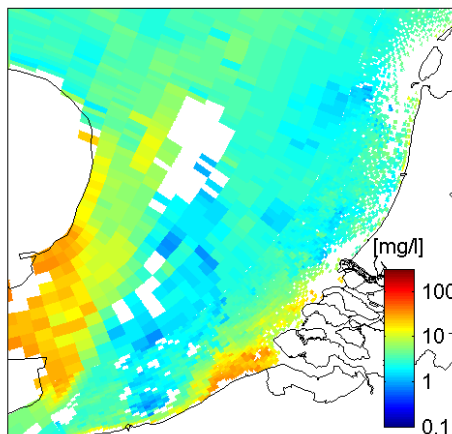


Significant surface wave height at Euro platform

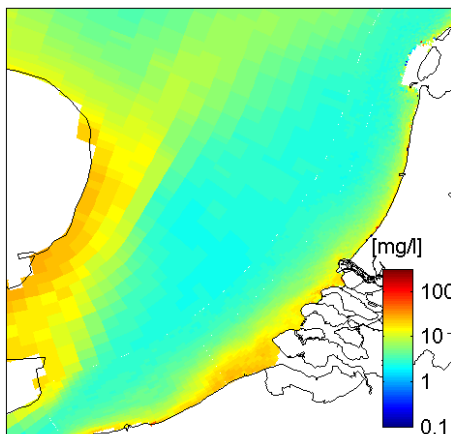


May-14 May-29 Jun-12 Jun-27 Jul-12 Jul-27

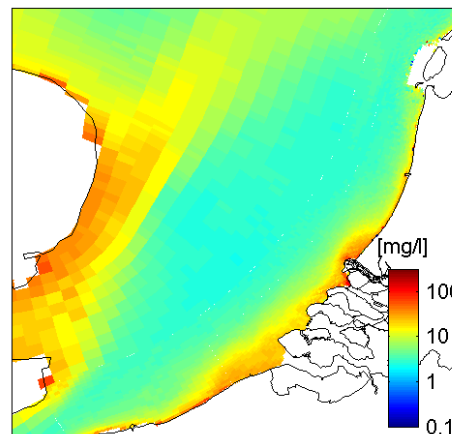
MERIS at surface layer



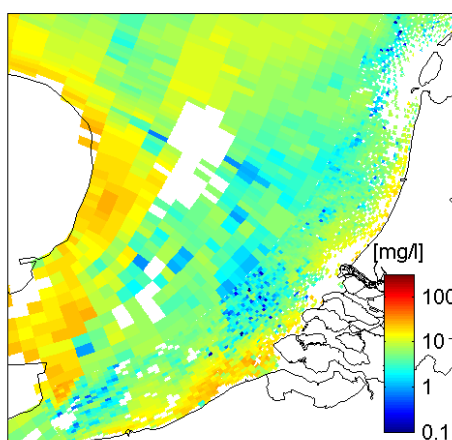
Model at surface layer



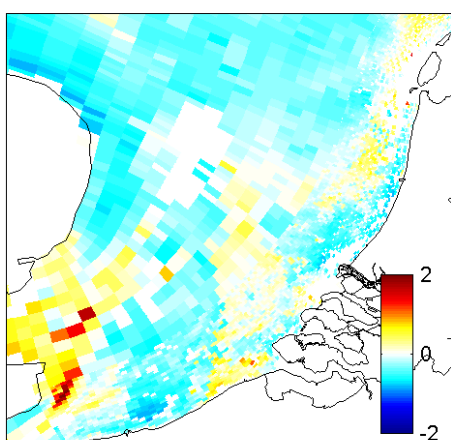
Model at bottom layer



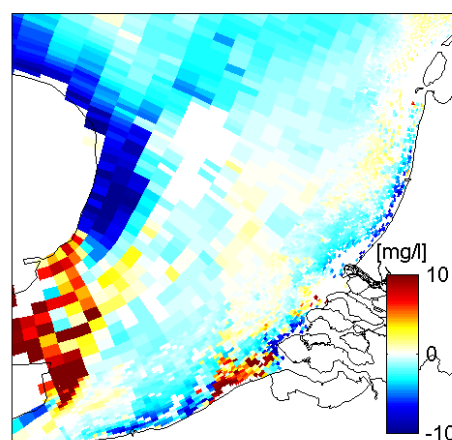
RMS difference



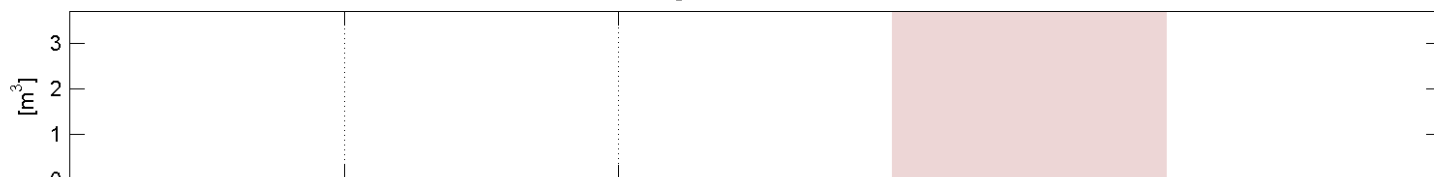
Relative difference [(MERIS-Model)/Model]



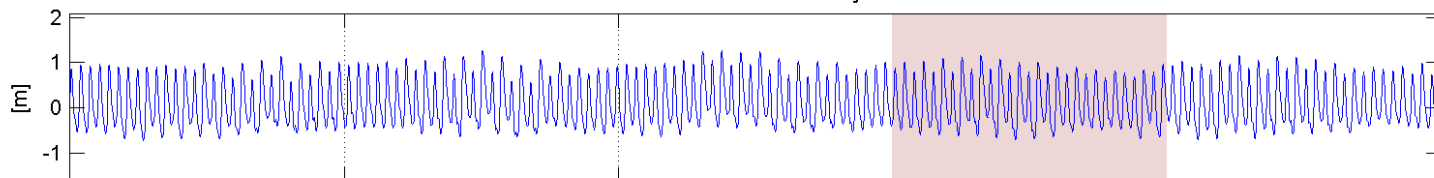
Mean difference [MERIS-Model]


 $\times 10^6$

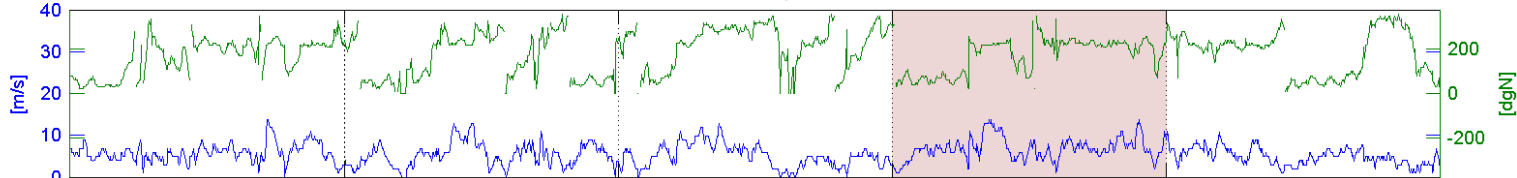
Sand mining volume for Maasvlakte 2



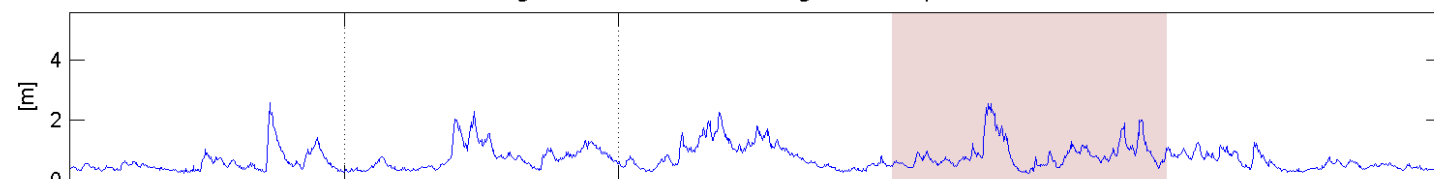
Water level at Noordwijk10



Wind at Euro platform

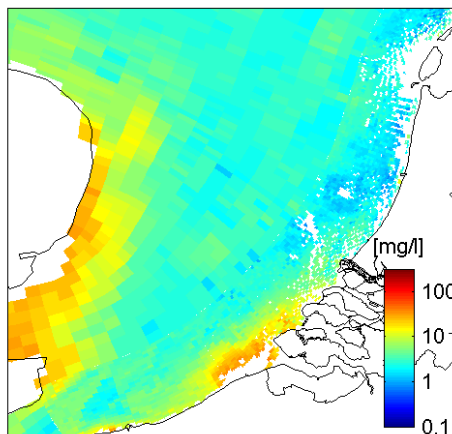


Significant surface wave height at Euro platform

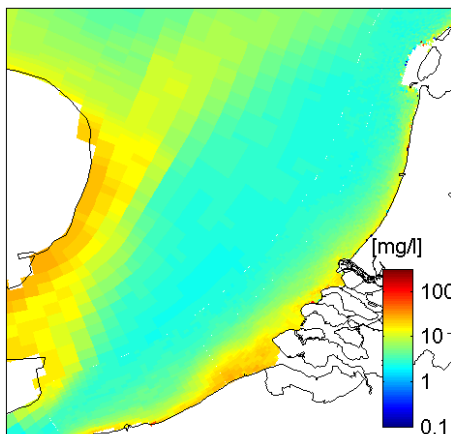


May-29 Jun-12 Jun-27 Jul-12 Jul-27 Aug-11

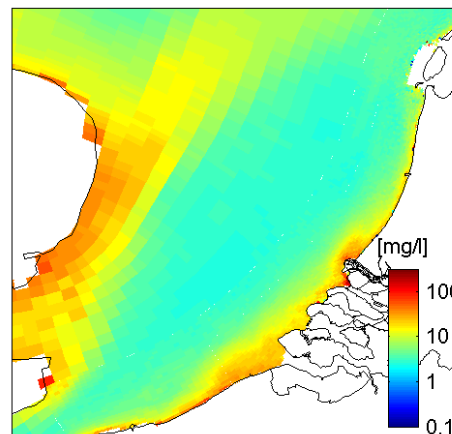
MERIS at surface layer



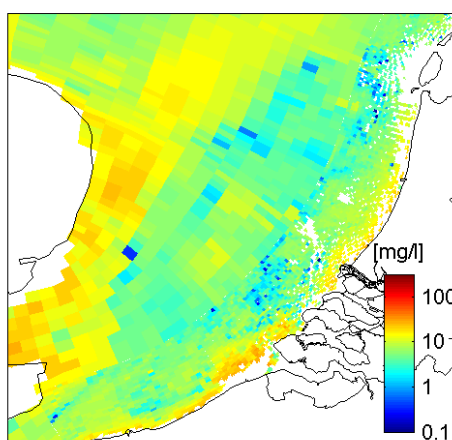
Model at surface layer



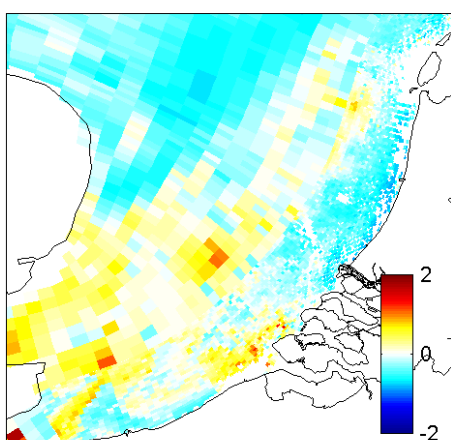
Model at bottom layer



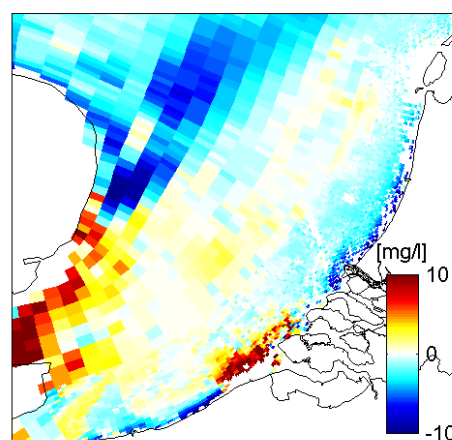
RMS difference



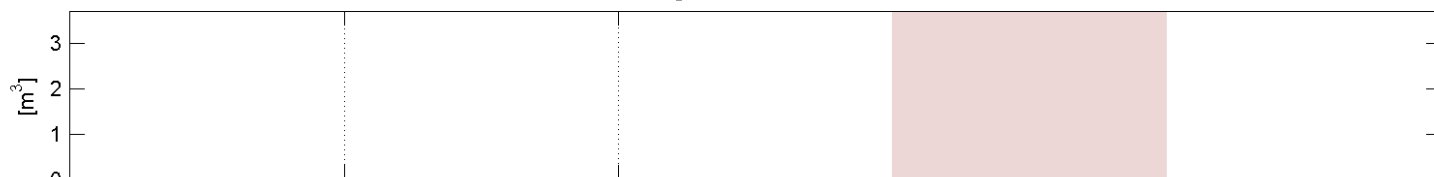
Relative difference [(MERIS-Model)/Model]



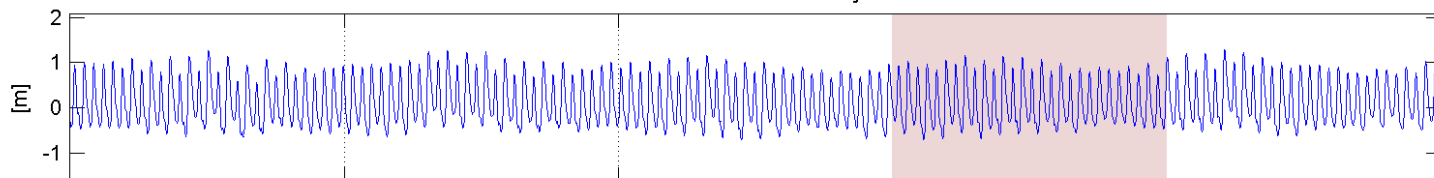
Mean difference [MERIS-Model]


 $\times 10^6$

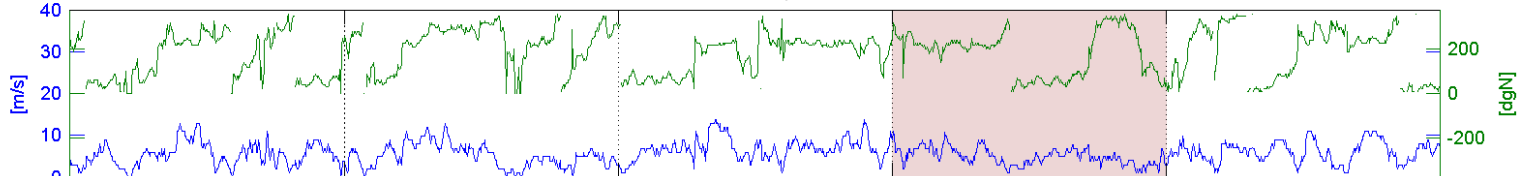
Sand mining volume for Maasvlakte 2



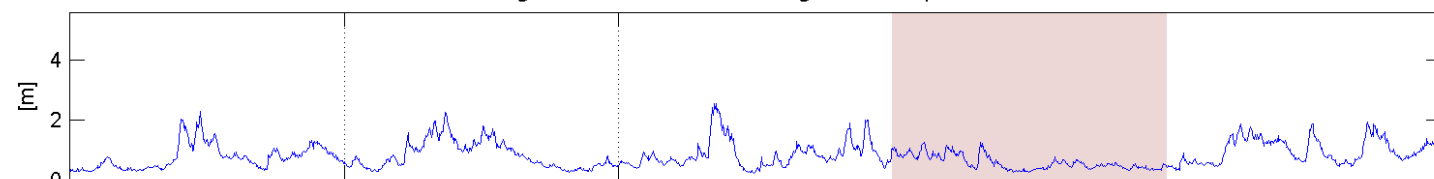
Water level at Noordwijk10



Wind at Euro platform

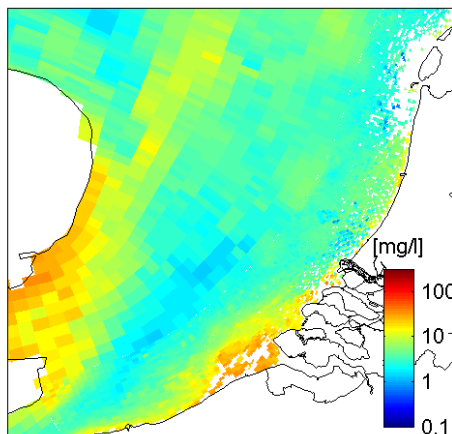


Significant surface wave height at Euro platform

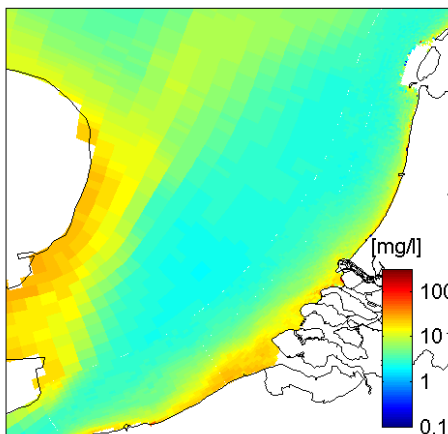


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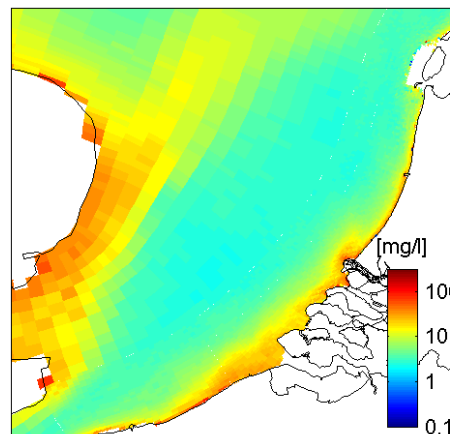
MERIS at surface layer



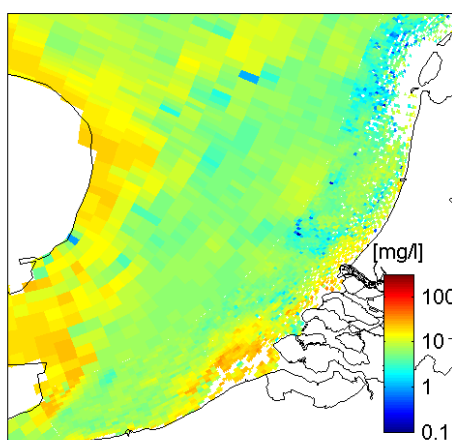
Model at surface layer



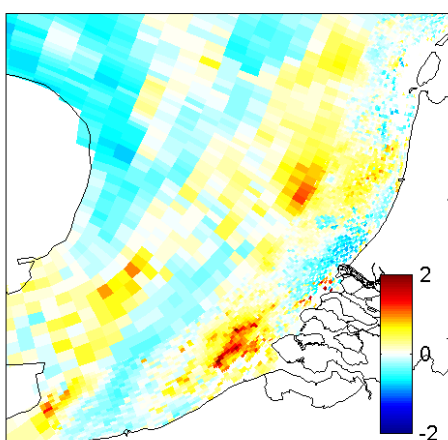
Model at bottom layer



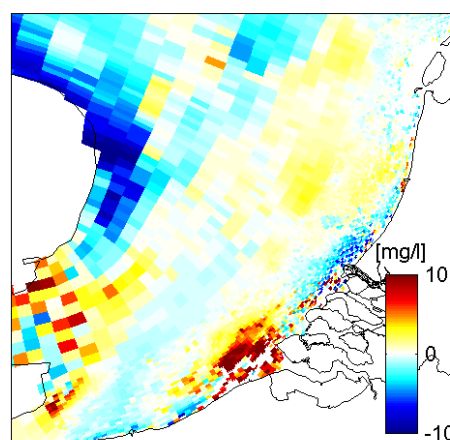
RMS difference



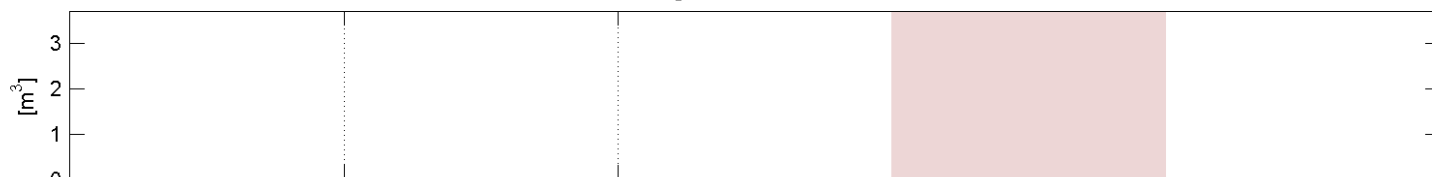
Relative difference [(MERIS-Model)/Model]



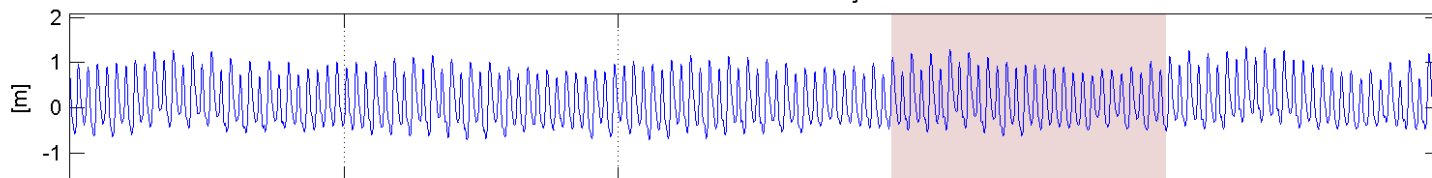
Mean difference [MERIS-Model]


 $\times 10^6$

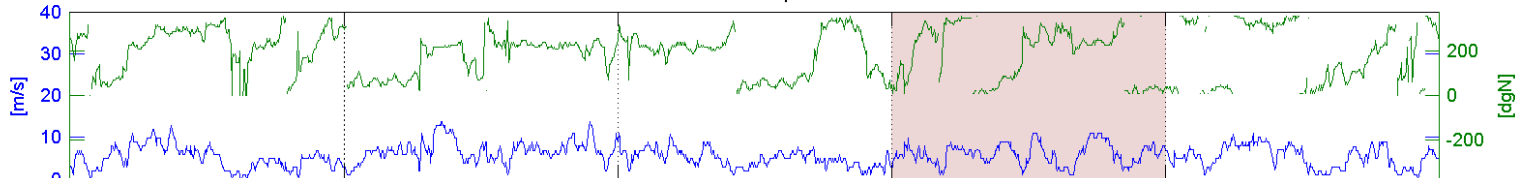
Sand mining volume for Maasvlakte 2



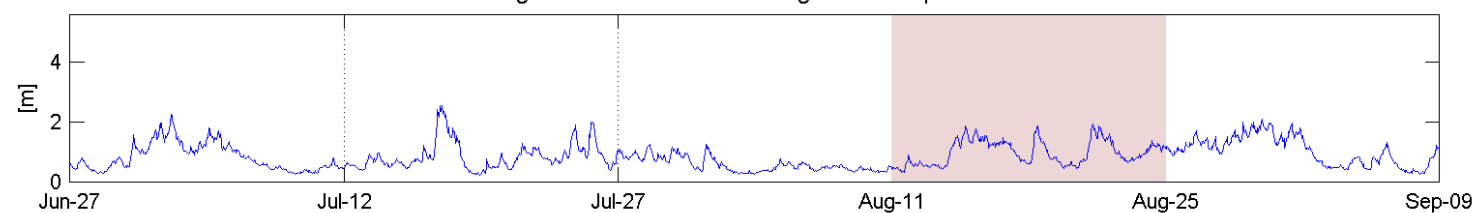
Water level at Noordwijk10



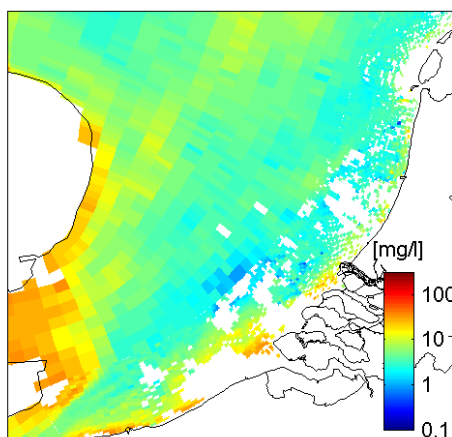
Wind at Euro platform



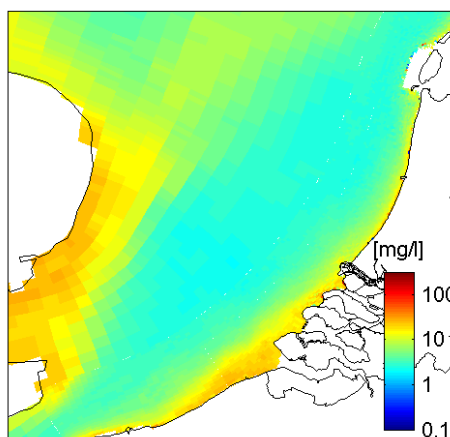
Significant surface wave height at Euro platform



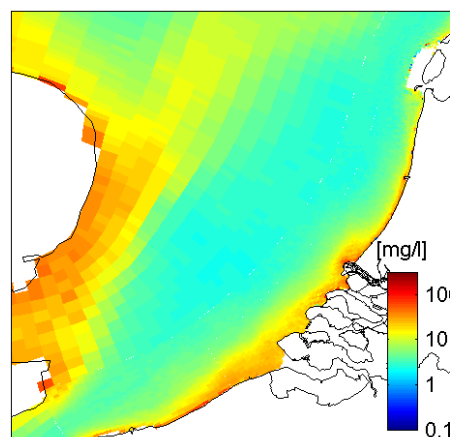
MERIS at surface layer



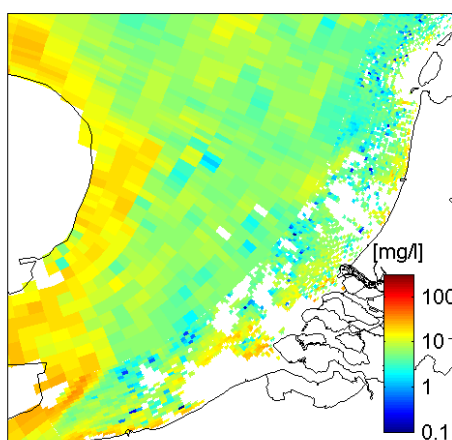
Model at surface layer



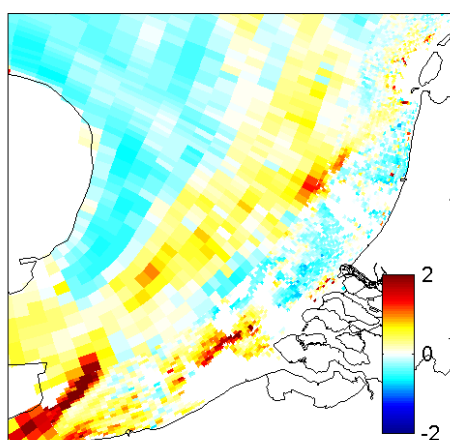
Model at bottom layer



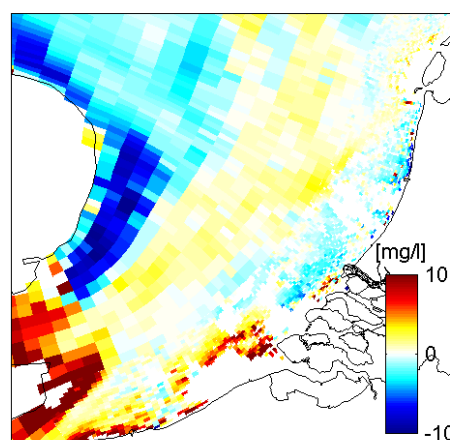
RMS difference



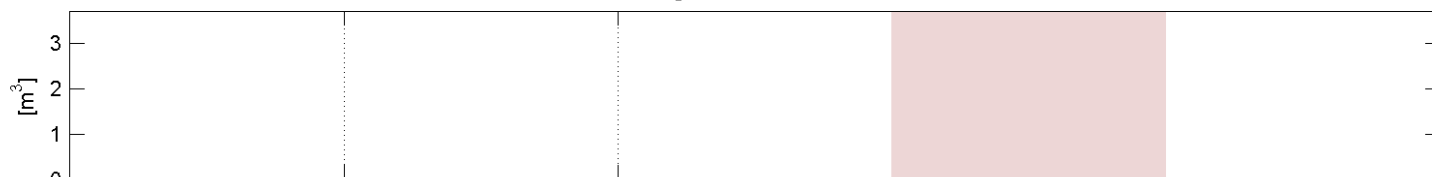
Relative difference [(MERIS-Model)/Model]



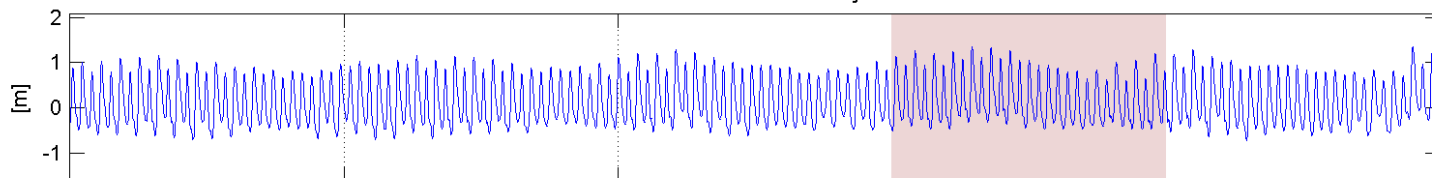
Mean difference [MERIS-Model]


 $\times 10^6$

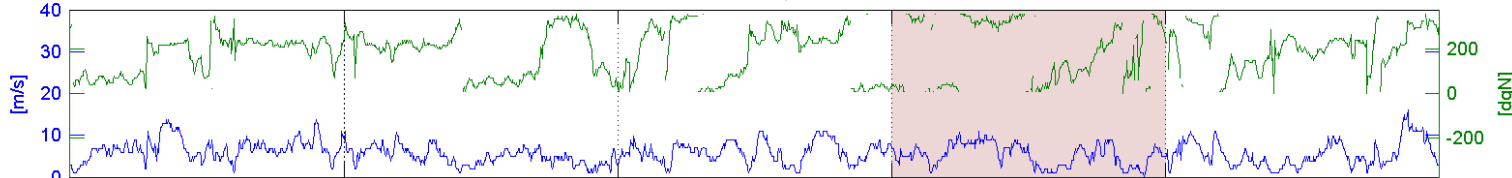
Sand mining volume for Maasvlakte 2



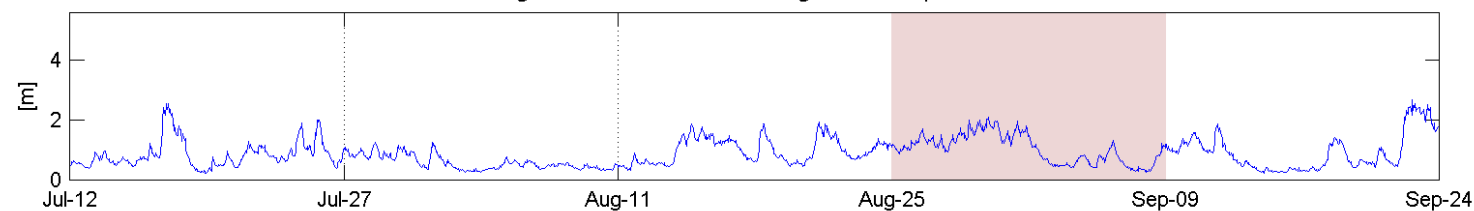
Water level at Noordwijk10



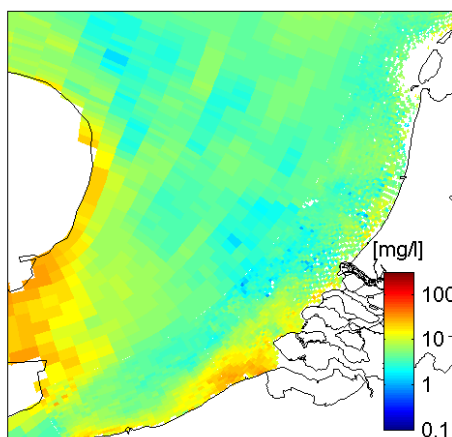
Wind at Euro platform



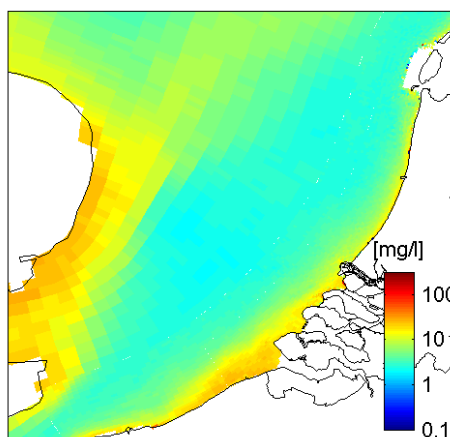
Significant surface wave height at Euro platform



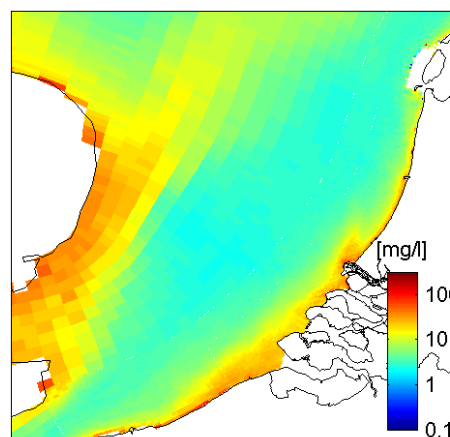
MERIS at surface layer



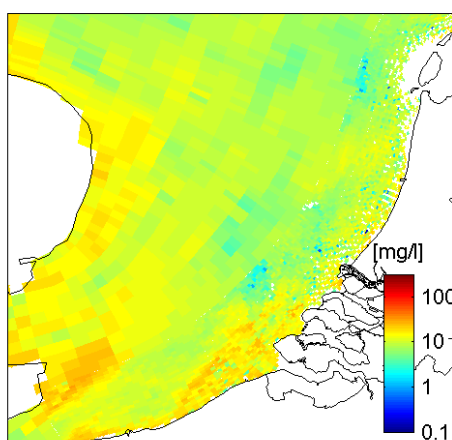
Model at surface layer



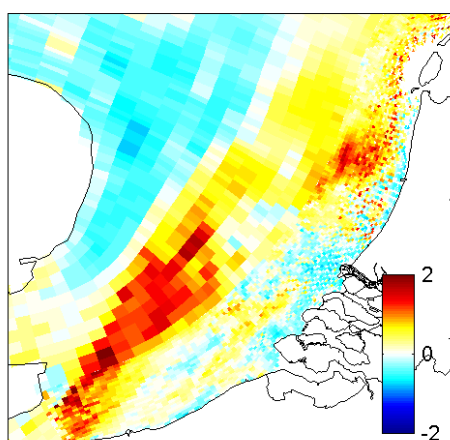
Model at bottom layer



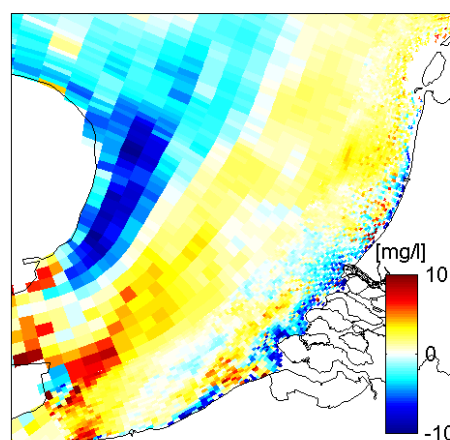
RMS difference



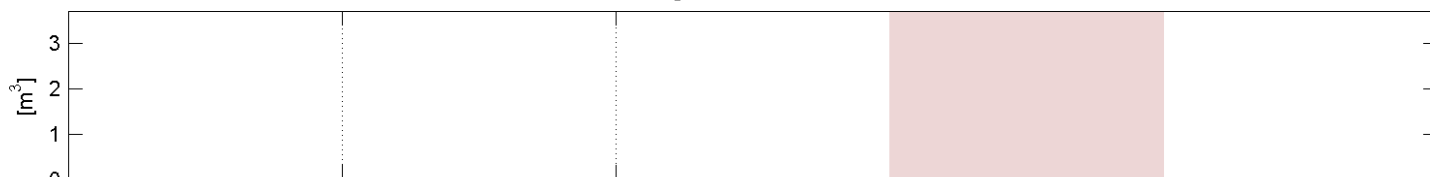
Relative difference [(MERIS-Model)/Model]



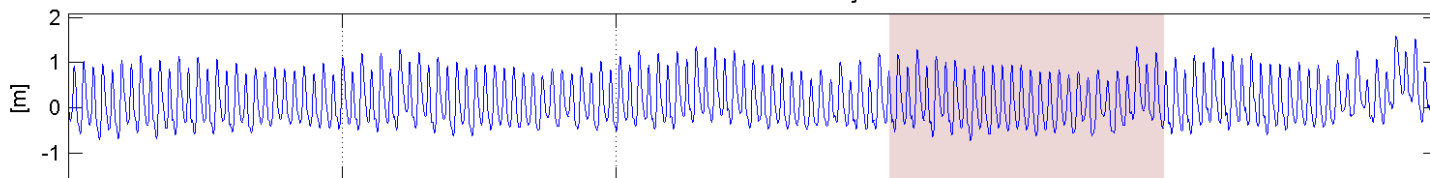
Mean difference [MERIS-Model]


 $\times 10^6$

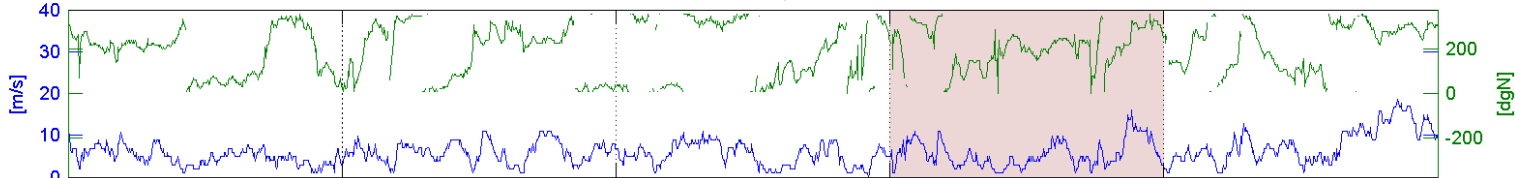
Sand mining volume for Maasvlakte 2



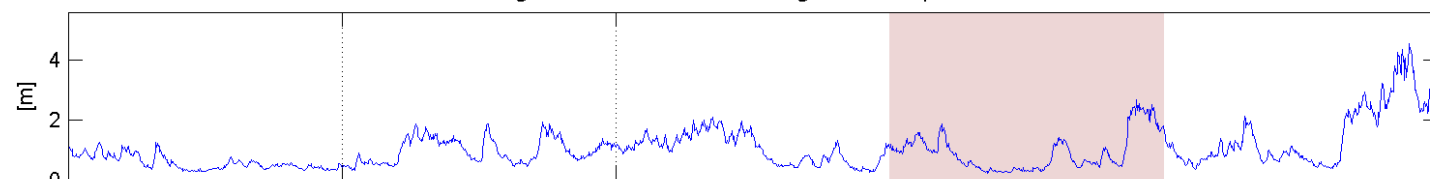
Water level at Noordwijk10



Wind at Euro platform

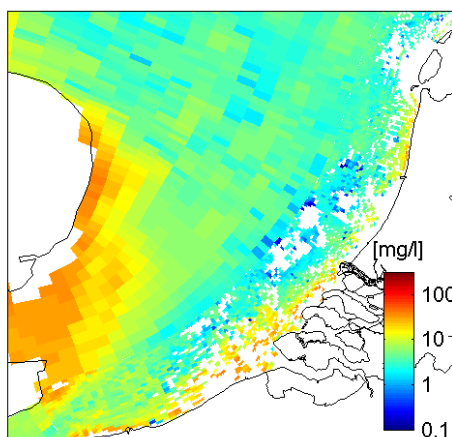


Significant surface wave height at Euro platform

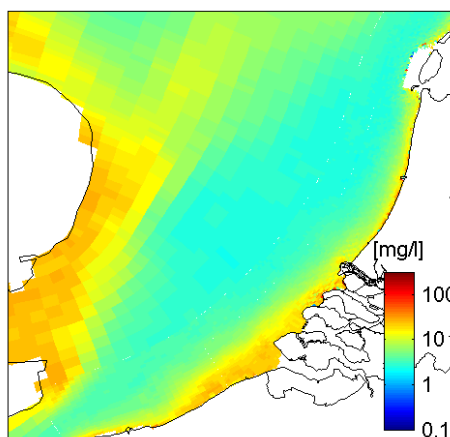


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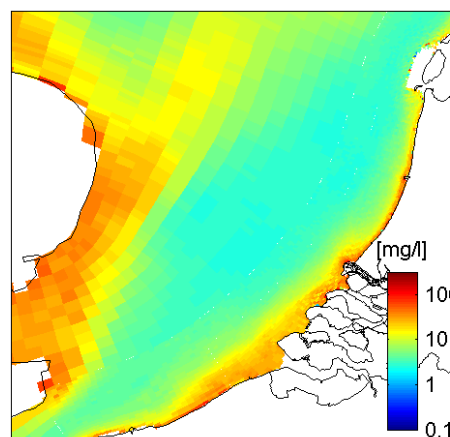
MERIS at surface layer



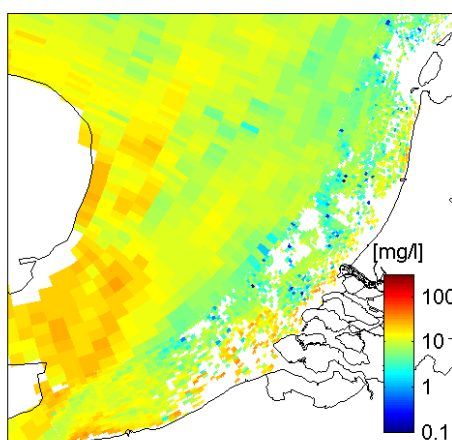
Model at surface layer



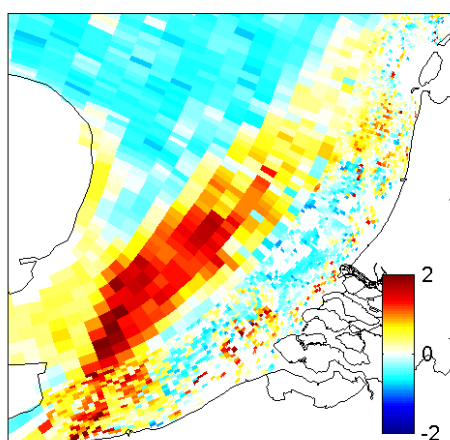
Model at bottom layer



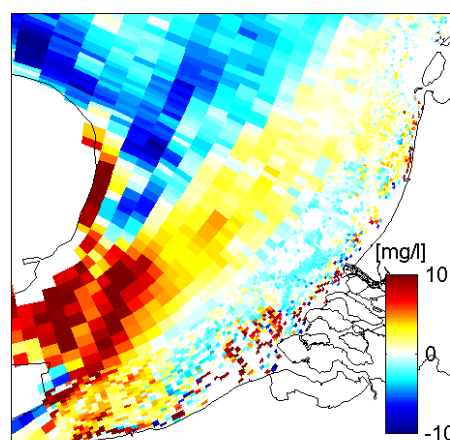
RMS difference



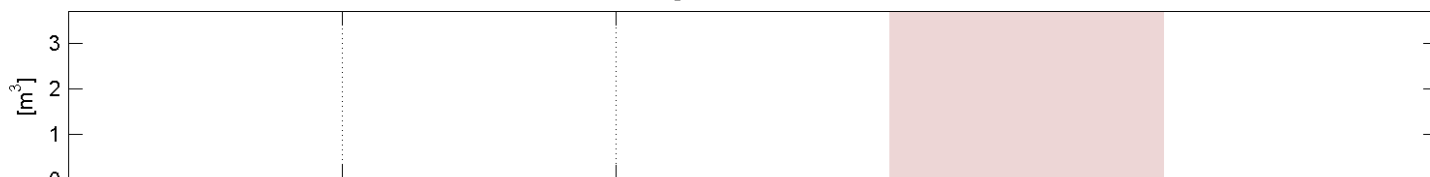
Relative difference [(MERIS-Model)/Model]



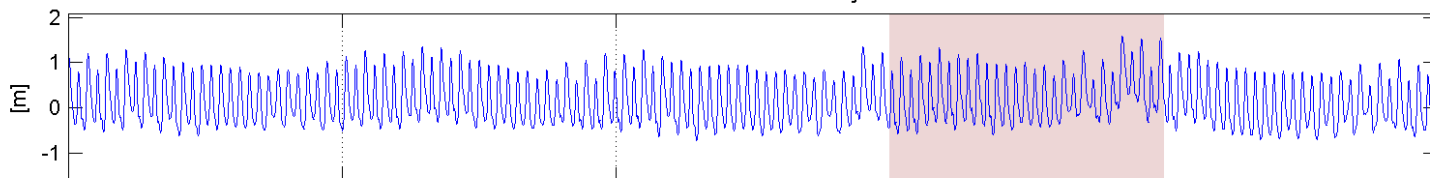
Mean difference [MERIS-Model]


 $\times 10^6$

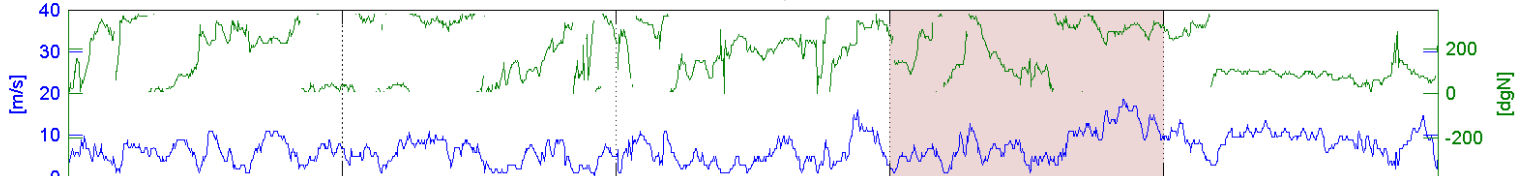
Sand mining volume for Maasvlakte 2



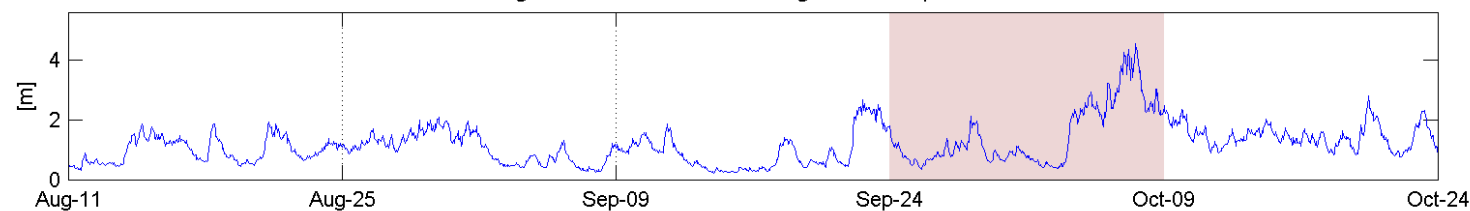
Water level at Noordwijk10



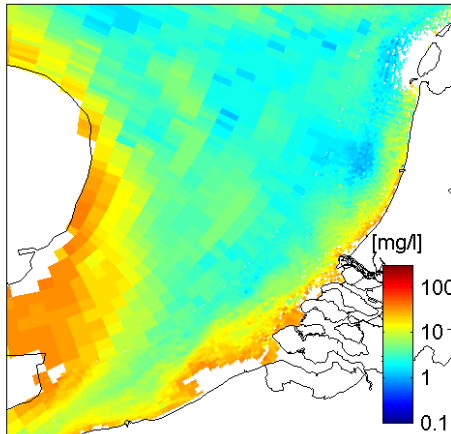
Wind at Euro platform



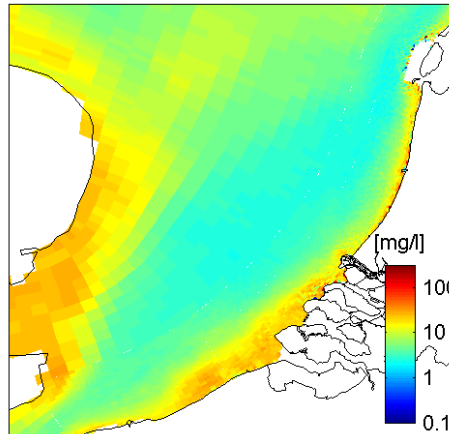
Significant surface wave height at Euro platform



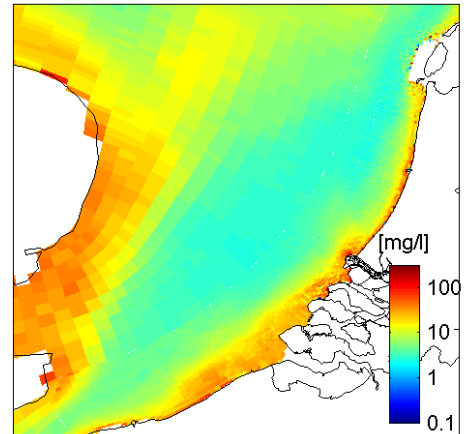
MERIS at surface layer



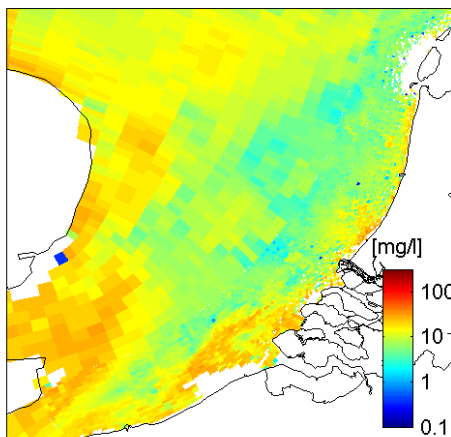
Model at surface layer



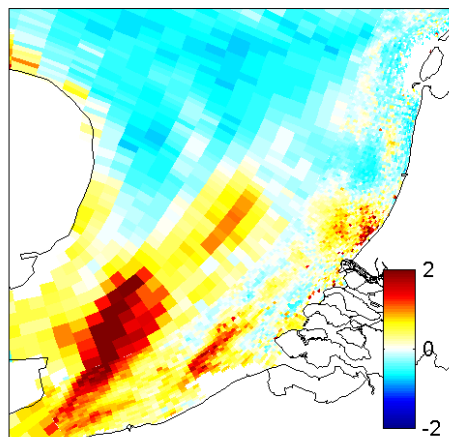
Model at bottom layer



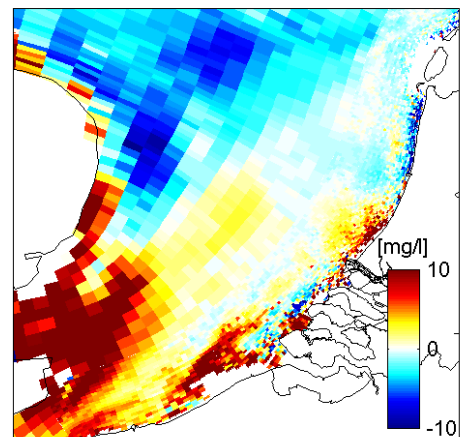
RMS difference



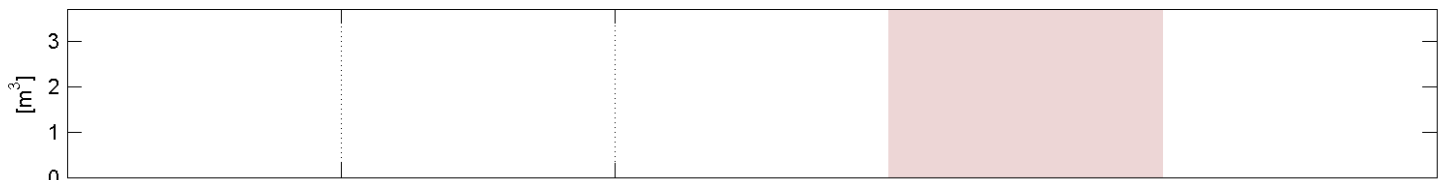
Relative difference [(MERIS-Model)/Model]



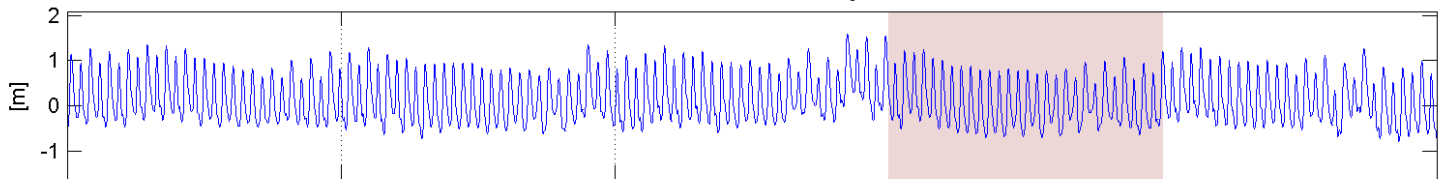
Mean difference [MERIS-Model]


 $\times 10^6$

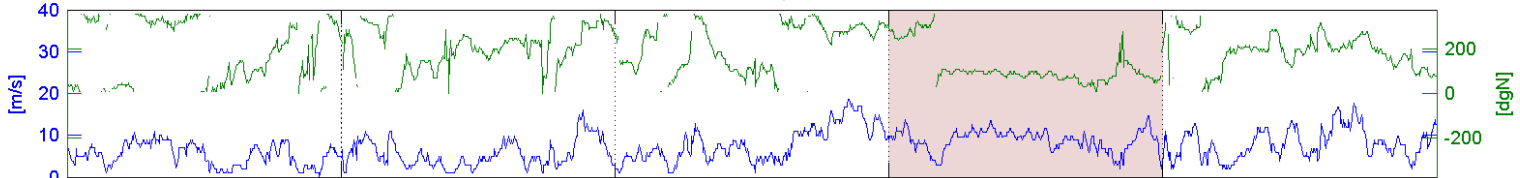
Sand mining volume for Maasvlakte 2



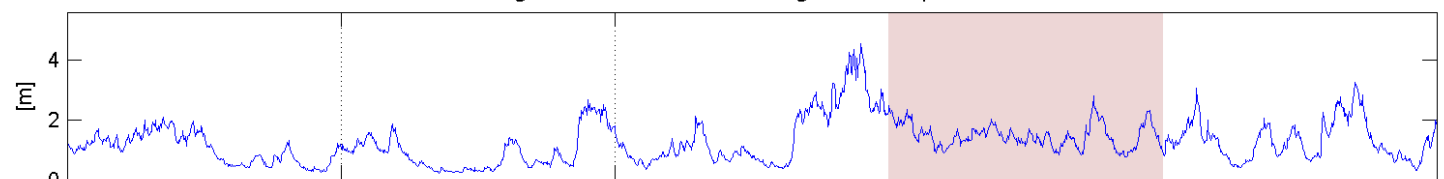
Water level at Noordwijk10



Wind at Euro platform

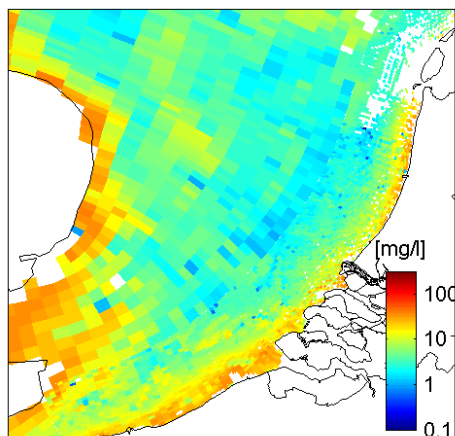


Significant surface wave height at Euro platform

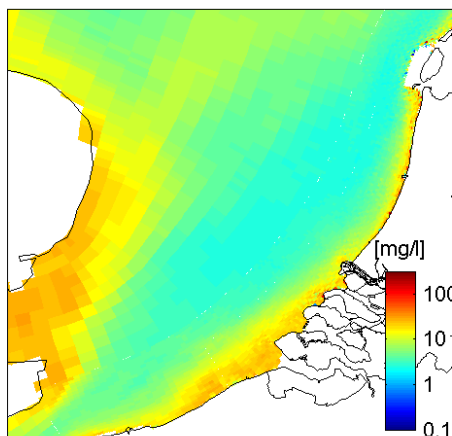


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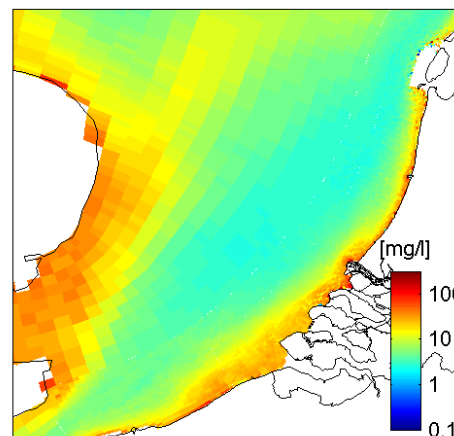
MERIS at surface layer



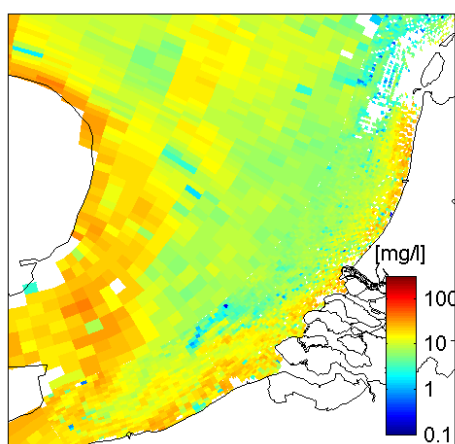
Model at surface layer



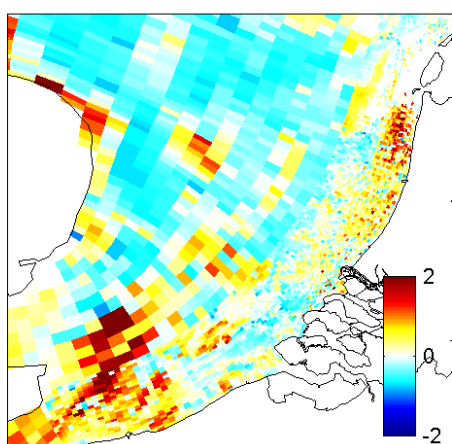
Model at bottom layer



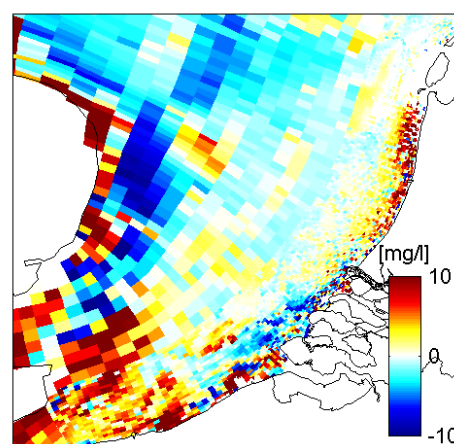
RMS difference



Relative difference [(MERIS-Model)/Model]



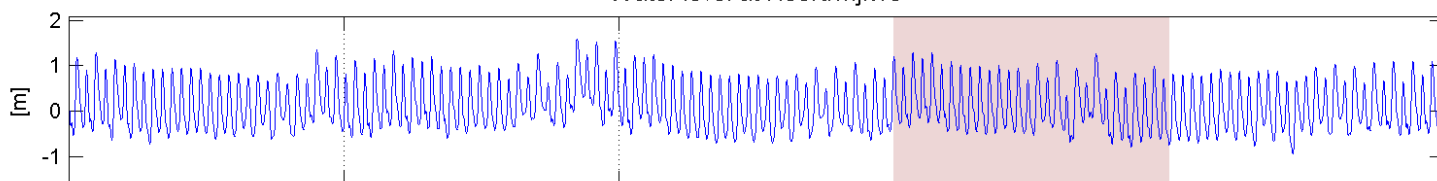
Mean difference [MERIS-Model]

 $\times 10^6$

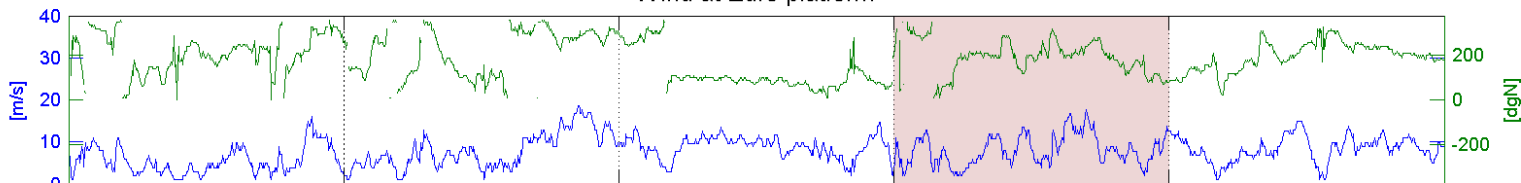
Sand mining volume for Maasvlakte 2



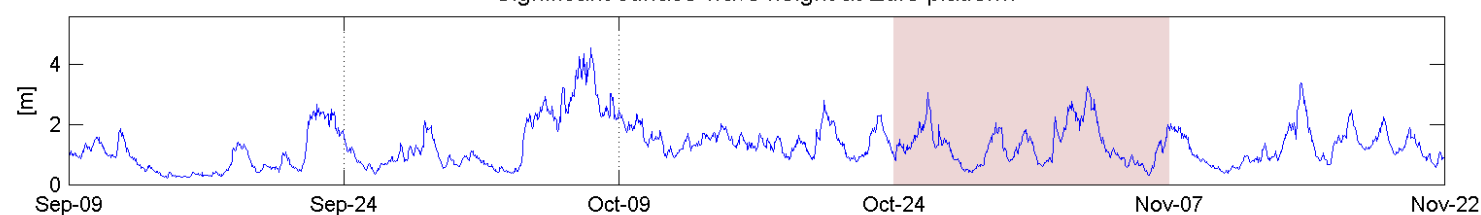
Water level at Noordwijk10



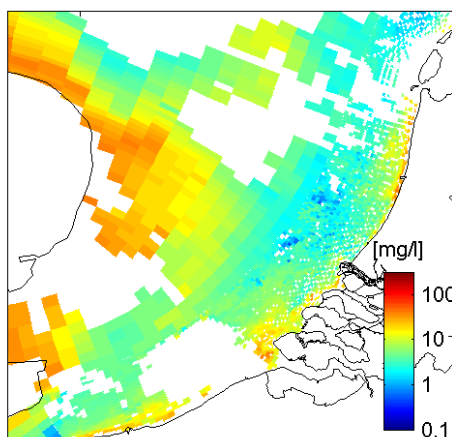
Wind at Euro platform



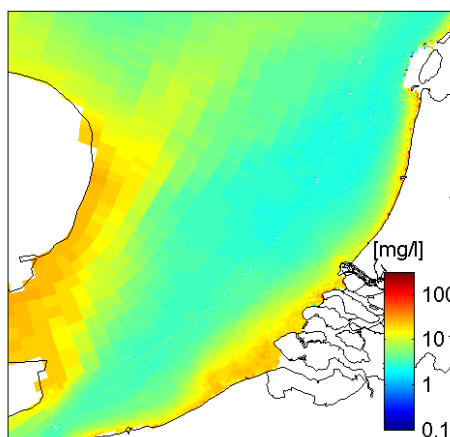
Significant surface wave height at Euro platform



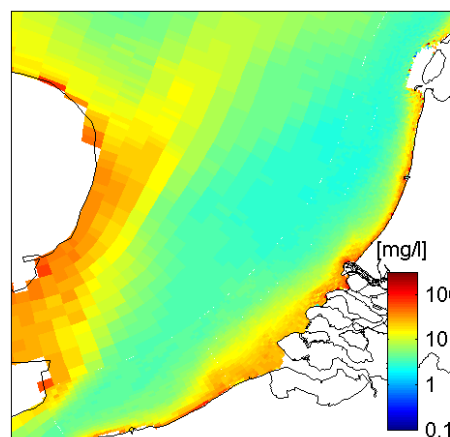
MERIS at surface layer



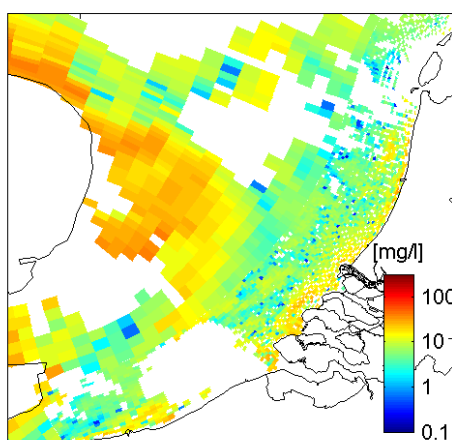
Model at surface layer



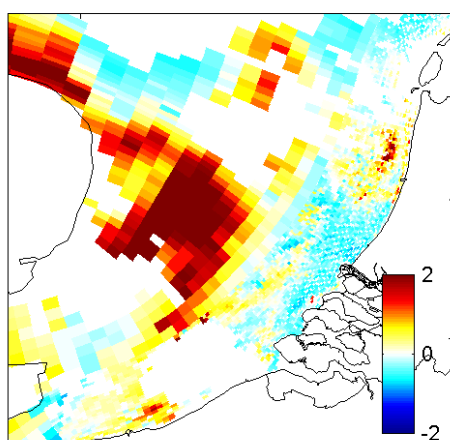
Model at bottom layer



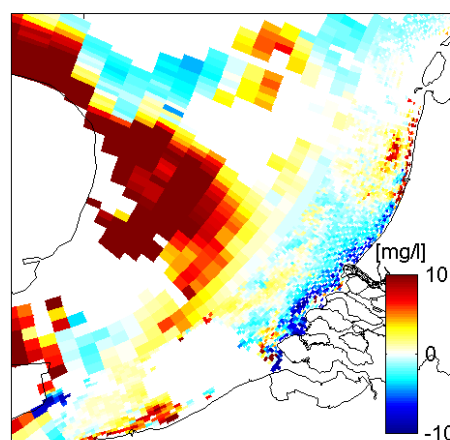
RMS difference



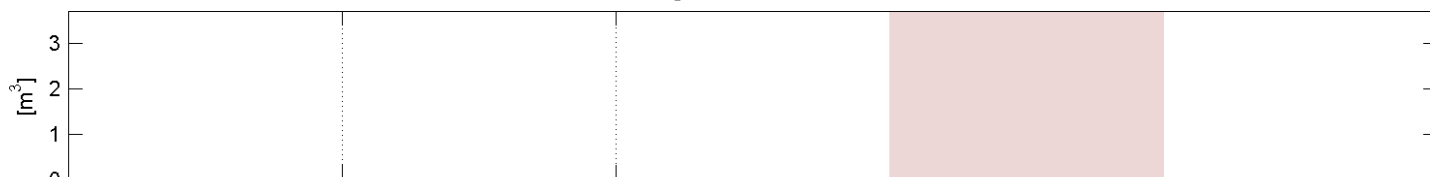
Relative difference [(MERIS-Model)/Model]



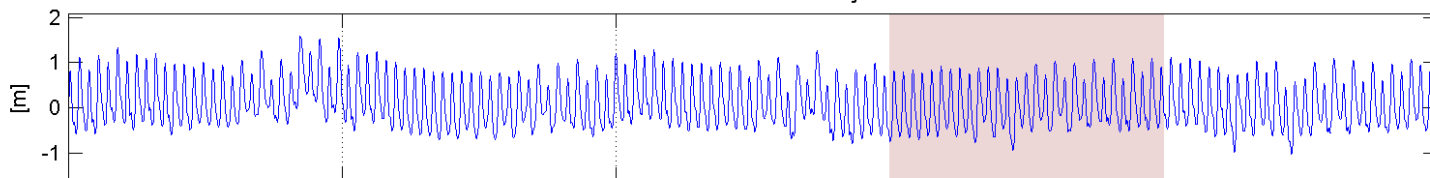
Mean difference [MERIS-Model]


 $\times 10^6$

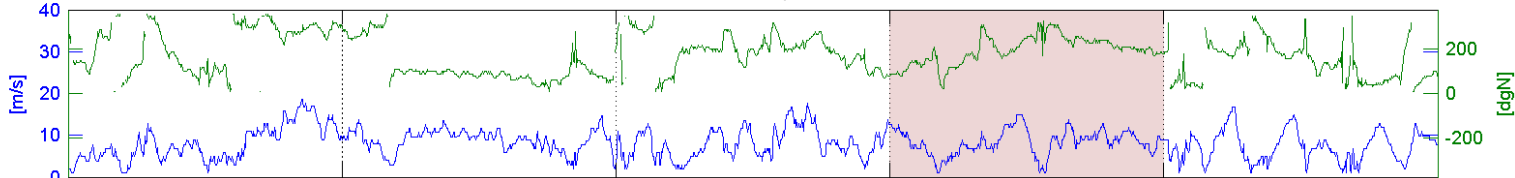
Sand mining volume for Maasvlakte 2



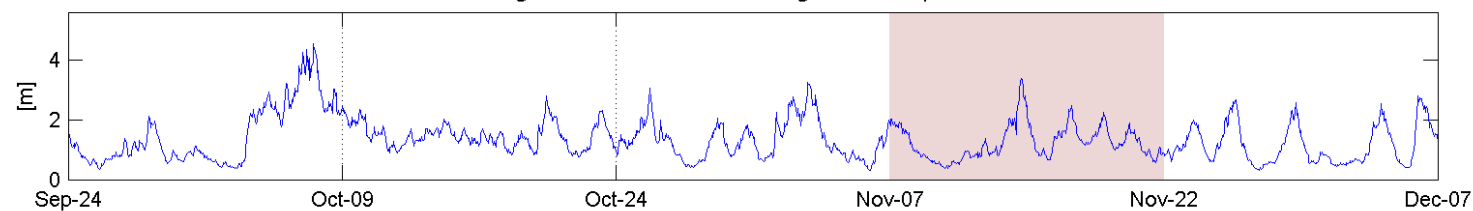
Water level at Noordwijk10



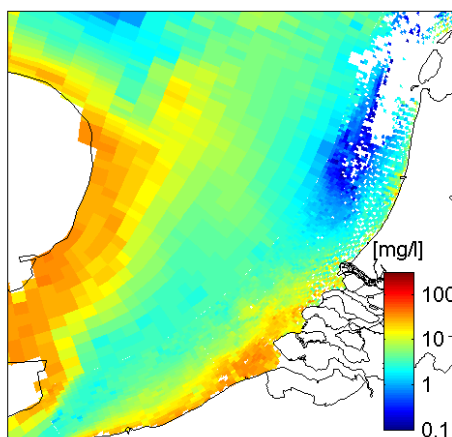
Wind at Euro platform



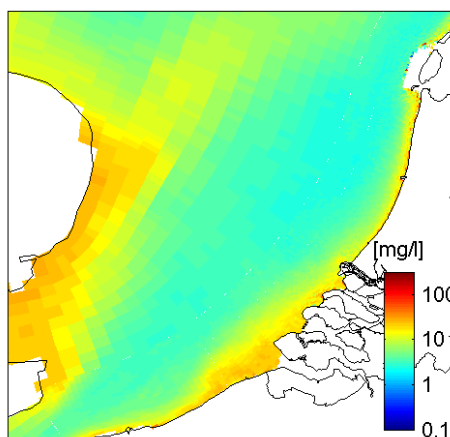
Significant surface wave height at Euro platform



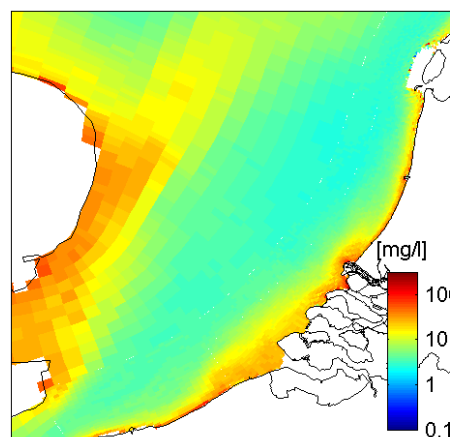
MERIS at surface layer



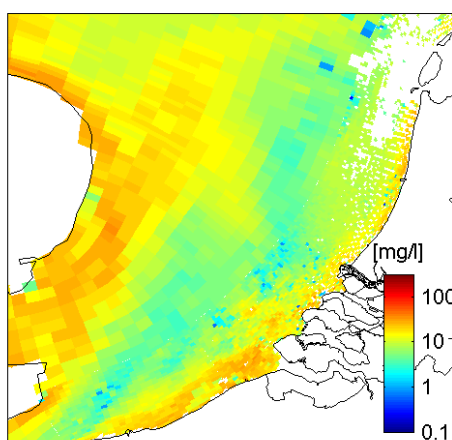
Model at surface layer



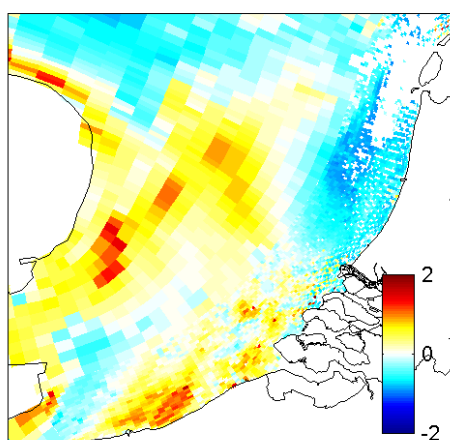
Model at bottom layer



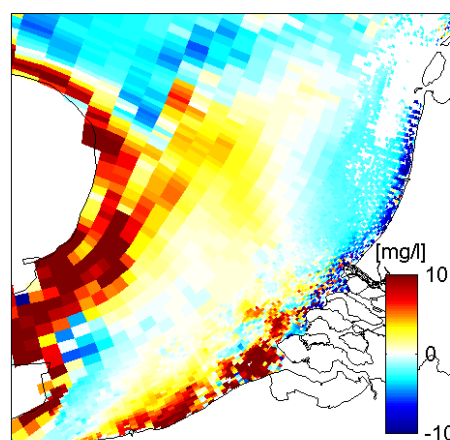
RMS difference



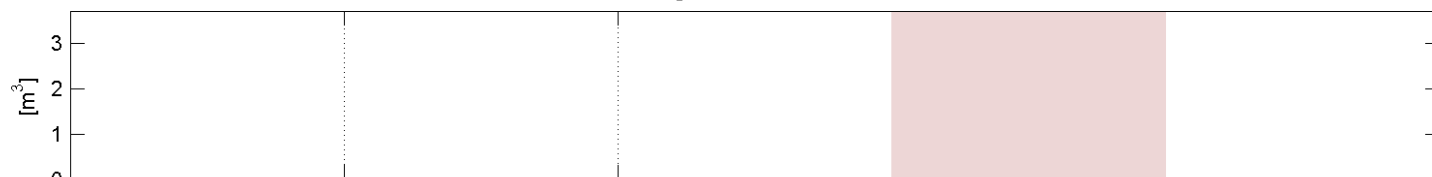
Relative difference [(MERIS-Model)/Model]



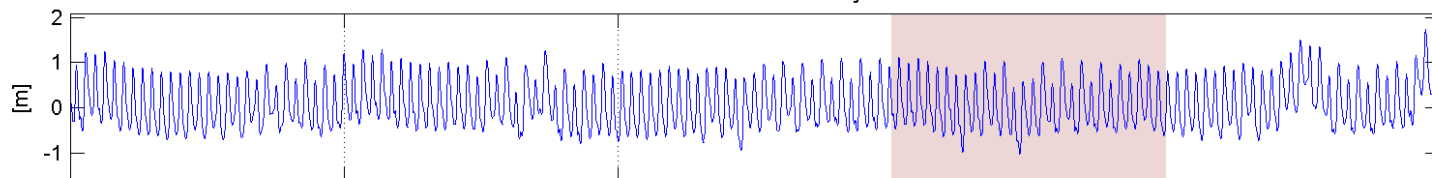
Mean difference [MERIS-Model]


 $\times 10^6$

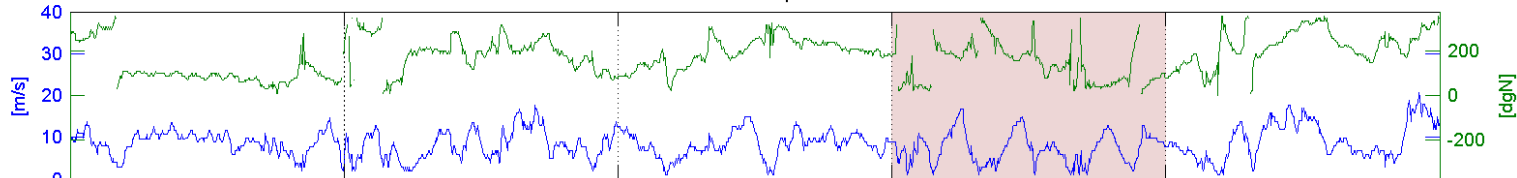
Sand mining volume for Maasvlakte 2



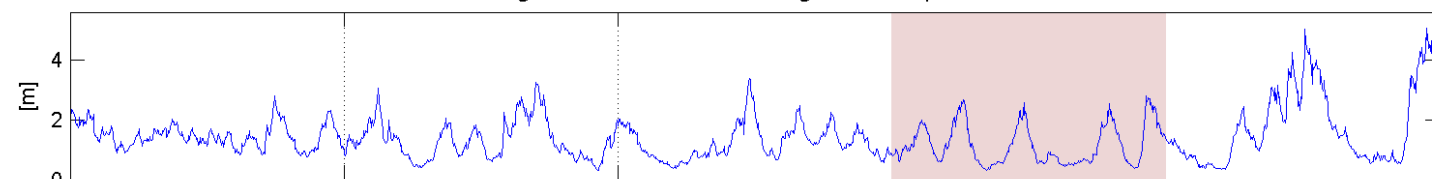
Water level at Noordwijk10



Wind at Euro platform

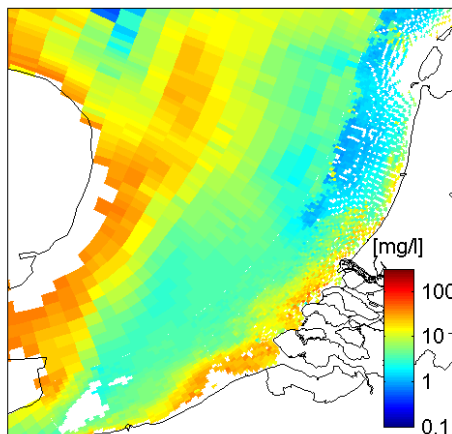


Significant surface wave height at Euro platform

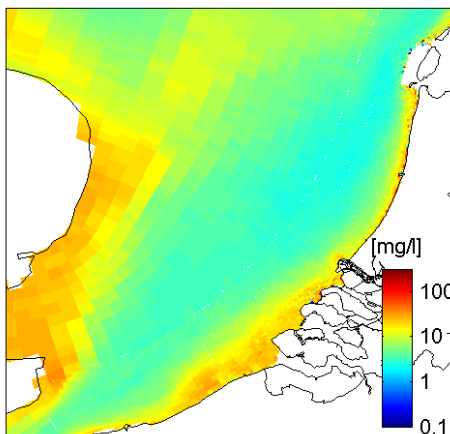


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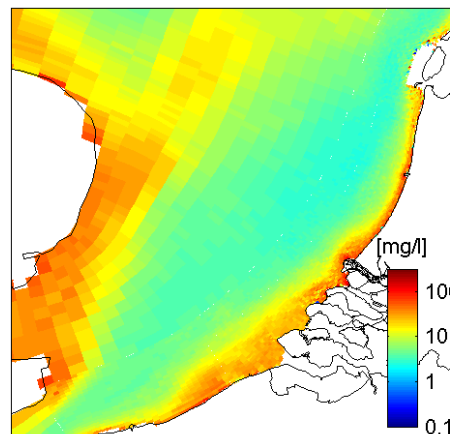
MERIS at surface layer



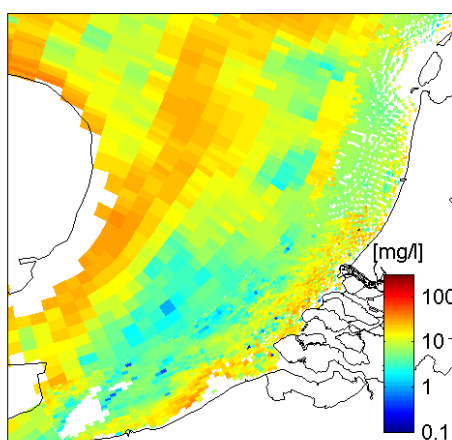
Model at surface layer



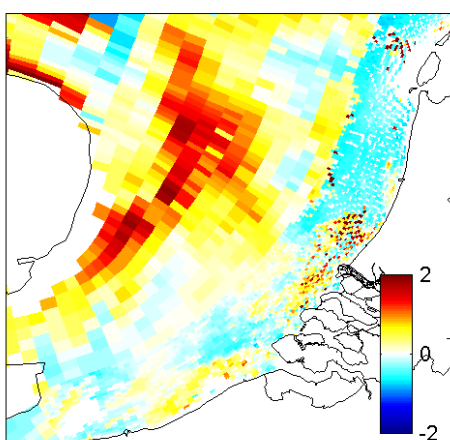
Model at bottom layer



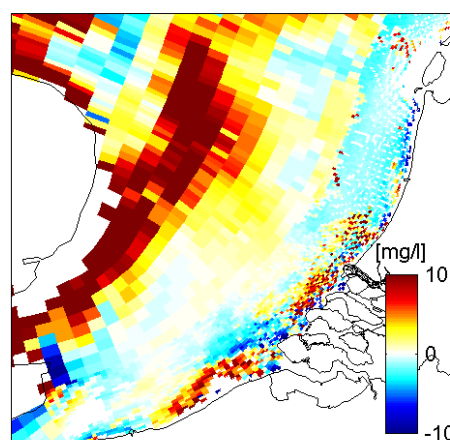
RMS difference



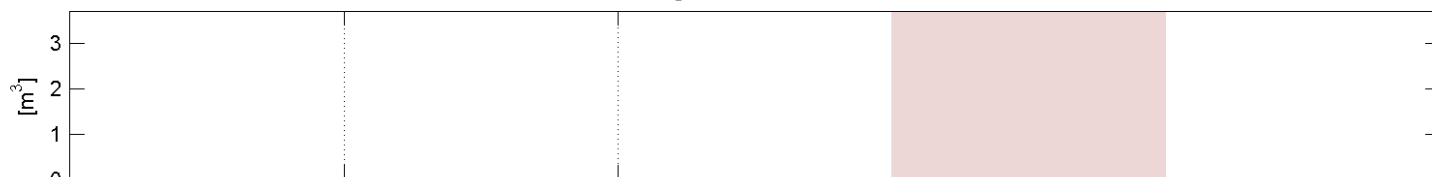
Relative difference [(MERIS-Model)/Model]



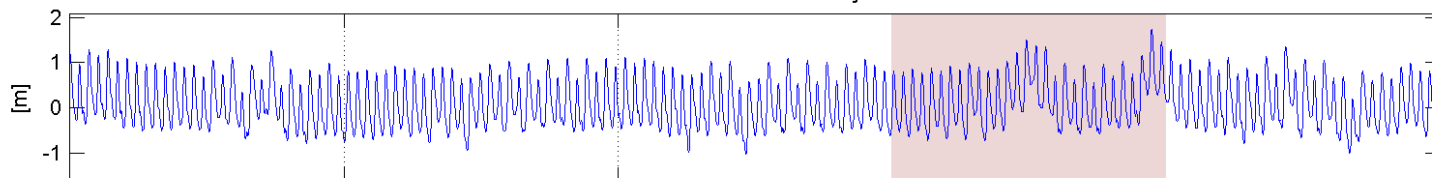
Mean difference [MERIS-Model]

 $\times 10^6$

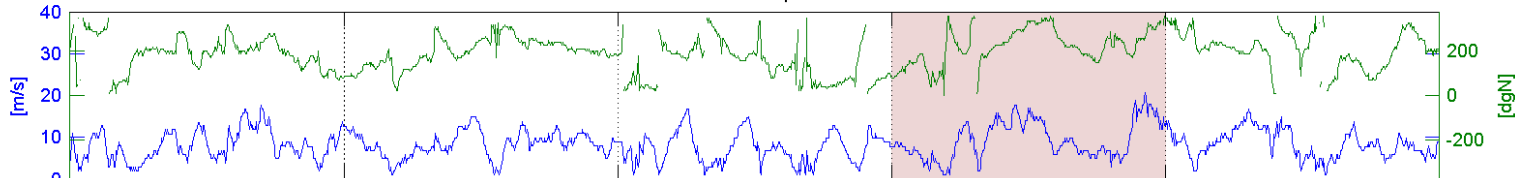
Sand mining volume for Maasvlakte 2



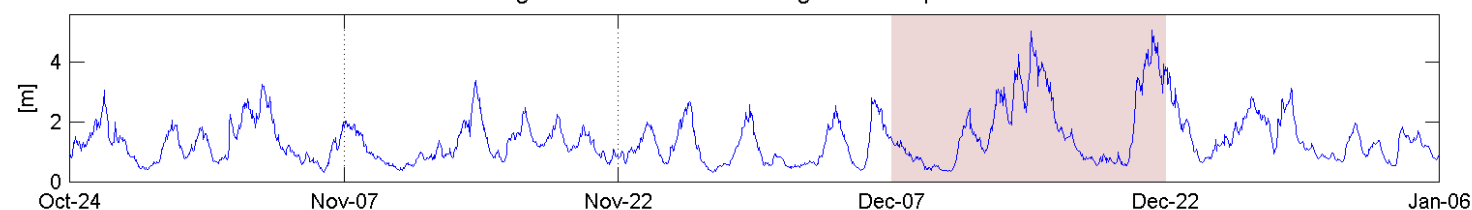
Water level at Noordwijk10



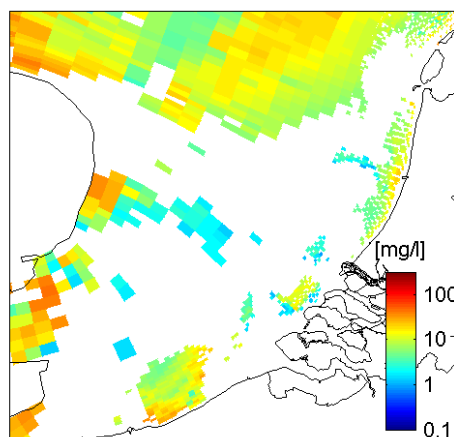
Wind at Euro platform



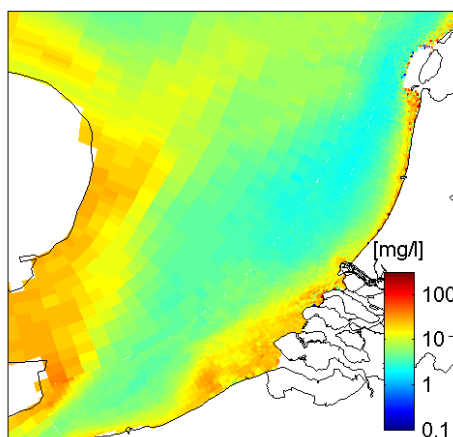
Significant surface wave height at Euro platform



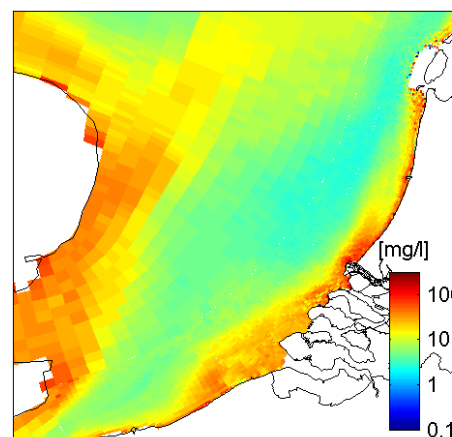
MERIS at surface layer



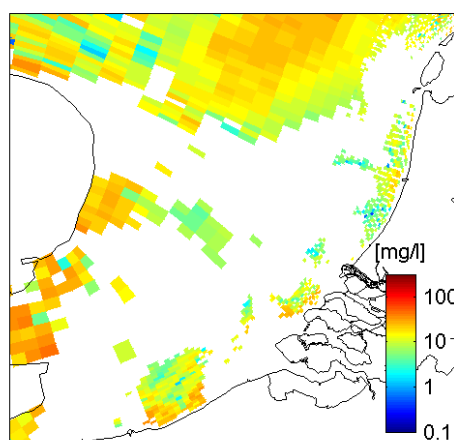
Model at surface layer



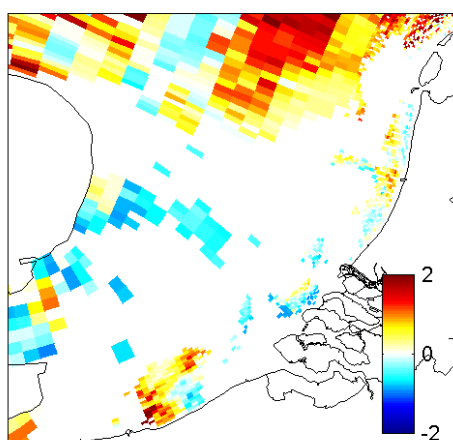
Model at bottom layer



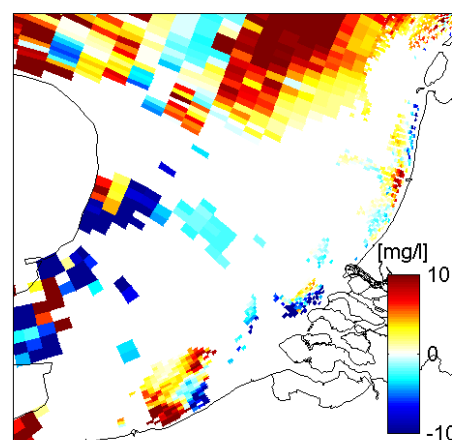
RMS difference



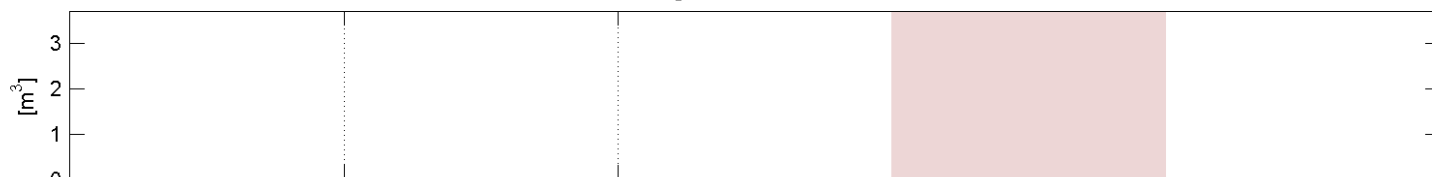
Relative difference [(MERIS-Model)/Model]



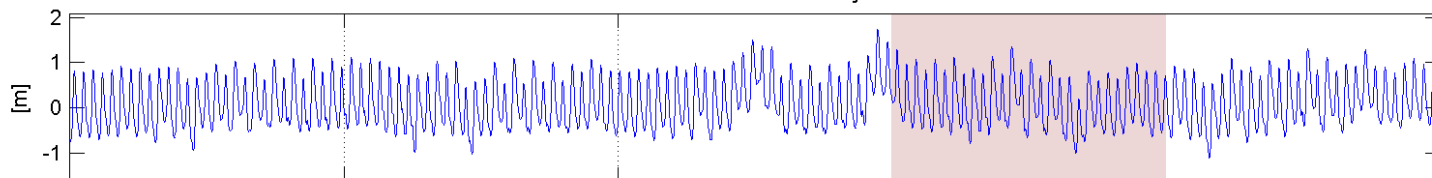
Mean difference [MERIS-Model]


 $\times 10^6$

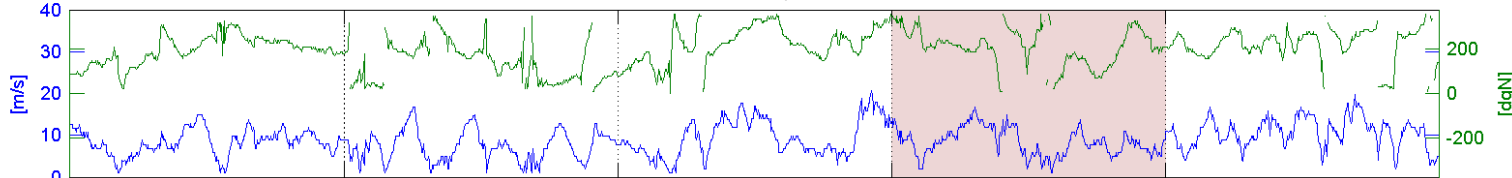
Sand mining volume for Maasvlakte 2



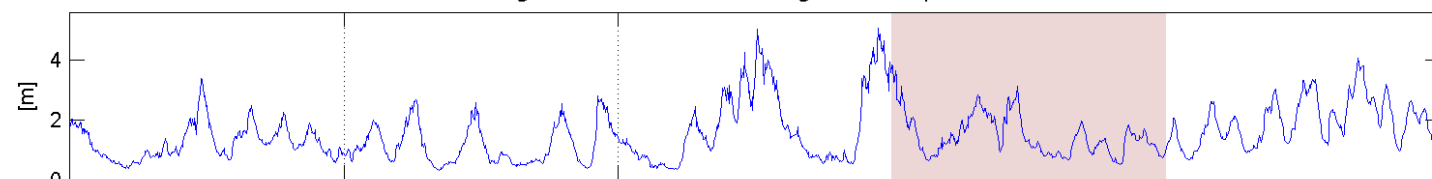
Water level at Noordwijk10



Wind at Euro platform

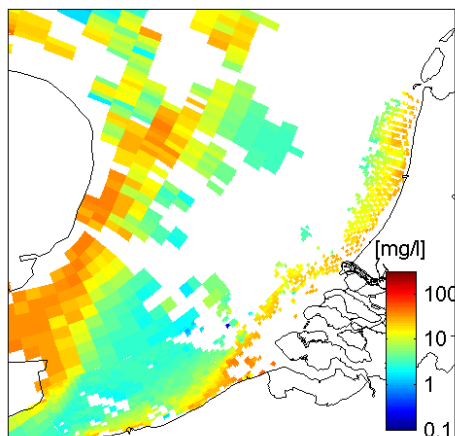


Significant surface wave height at Euro platform

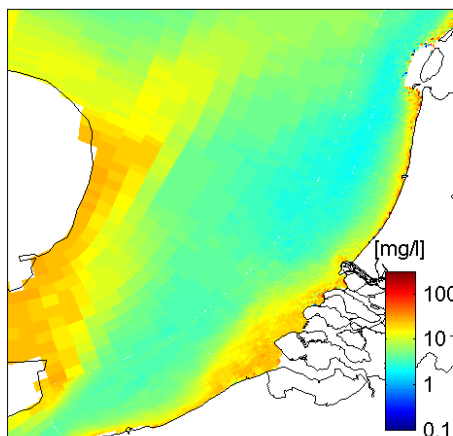


Nov-07 Nov-22 Dec-07 Dec-22 Jan-06 Jan-20

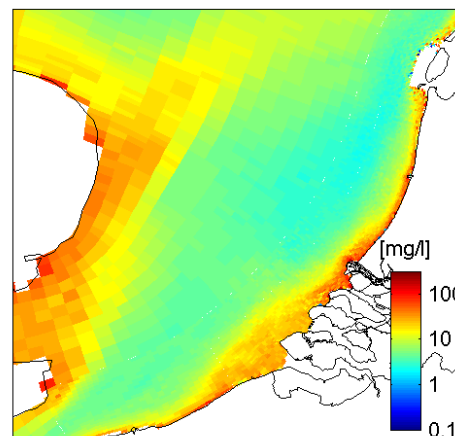
MERIS at surface layer



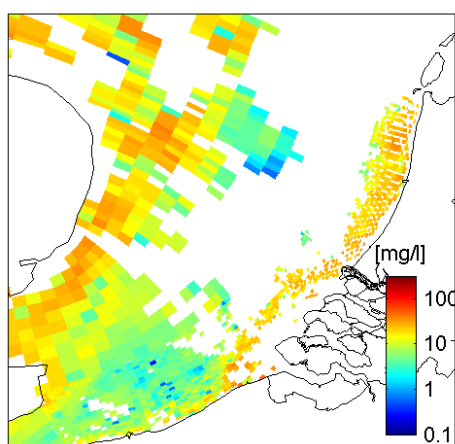
Model at surface layer



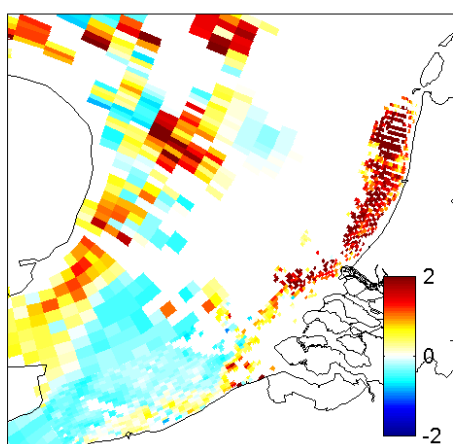
Model at bottom layer



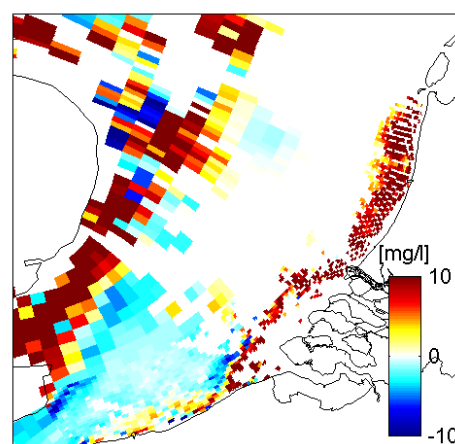
RMS difference



Relative difference [(MERIS-Model)/Model]



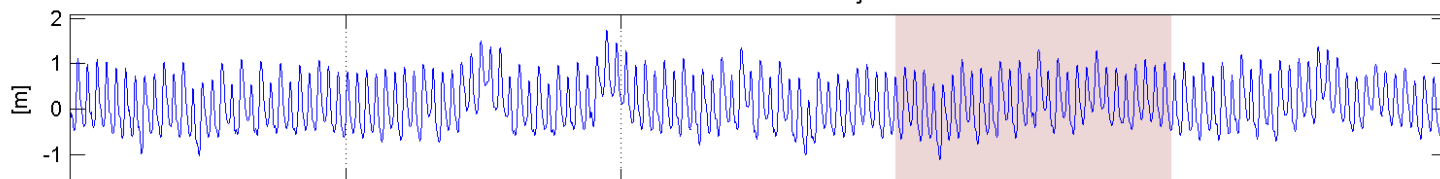
Mean difference [MERIS-Model]


x 10⁶

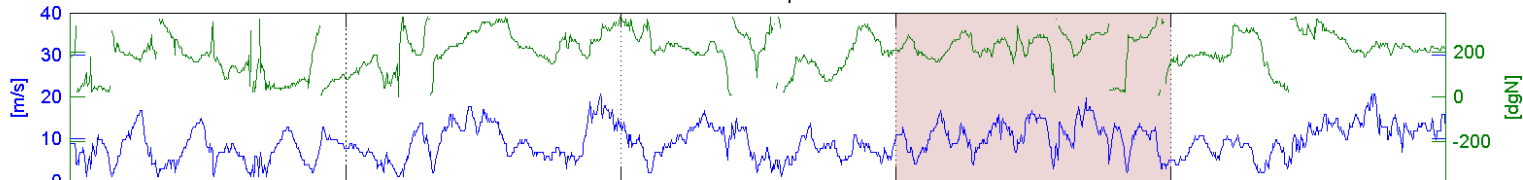
Sand mining volume for Maasvlakte 2



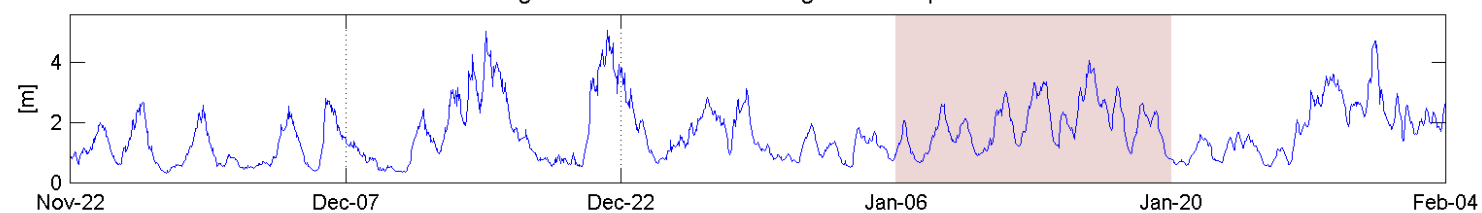
Water level at Noordwijk10



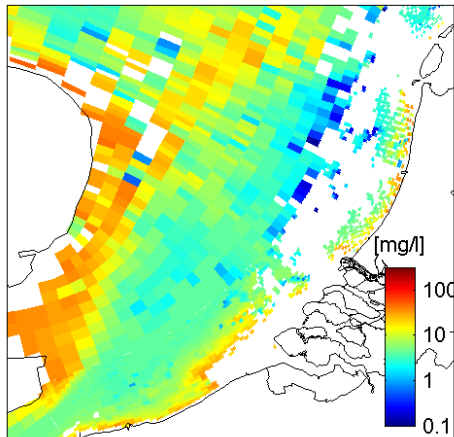
Wind at Euro platform



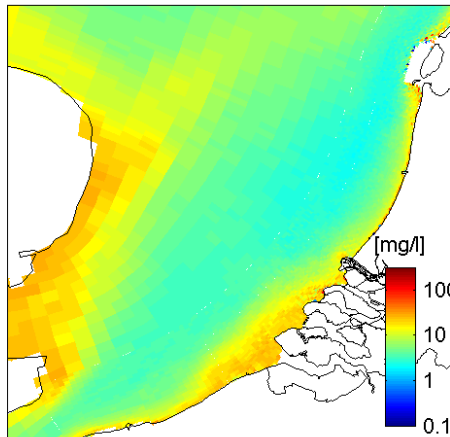
Significant surface wave height at Euro platform



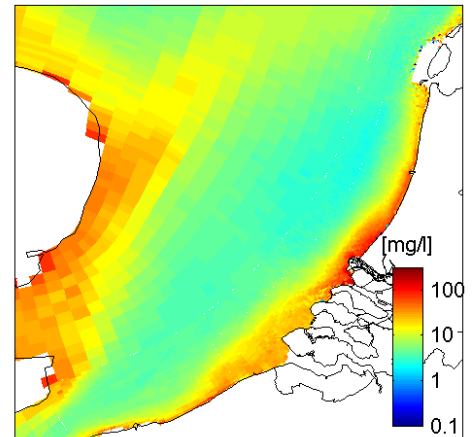
MERIS at surface layer



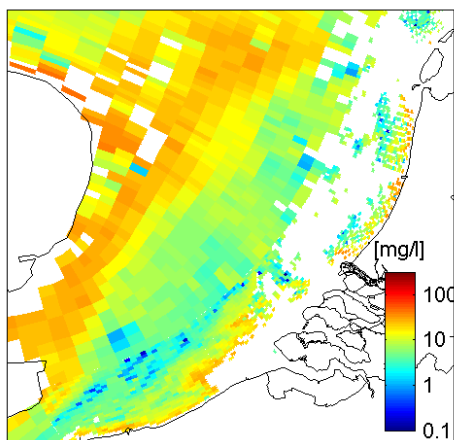
Model at surface layer



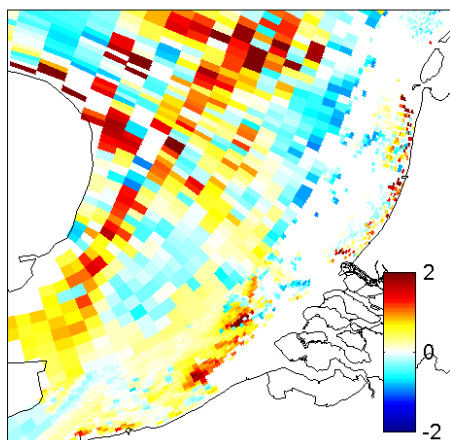
Model at bottom layer



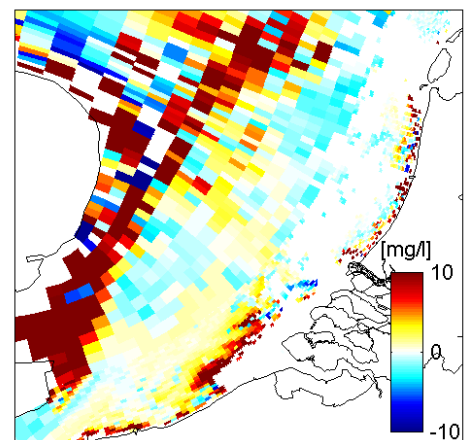
RMS difference



Relative difference [(MERIS-Model)/Model]



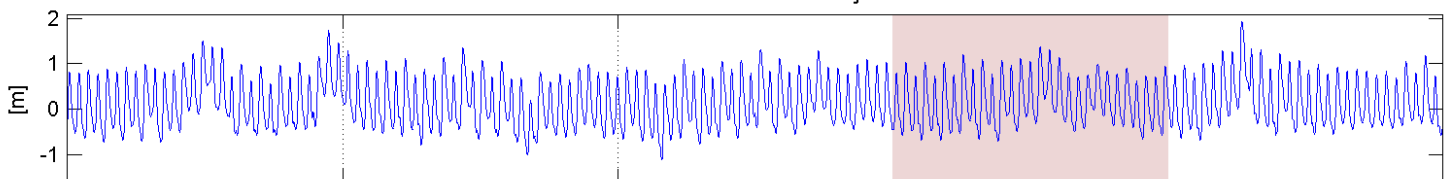
Mean difference [MERIS-Model]

 $\times 10^6$

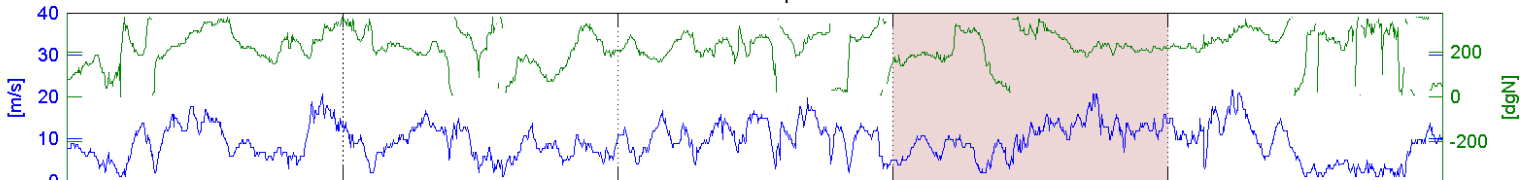
Sand mining volume for Maasvlakte 2



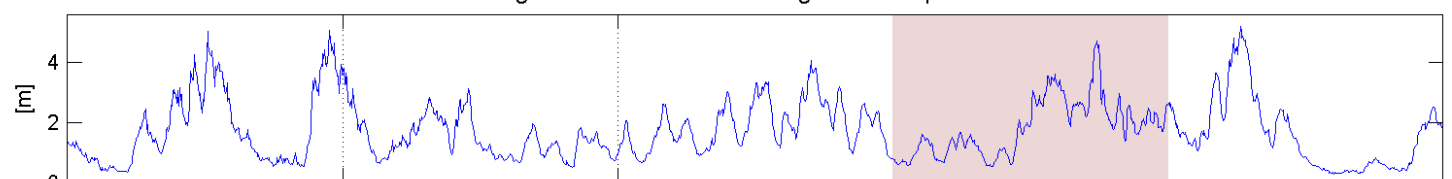
Water level at Noordwijk10



Wind at Euro platform

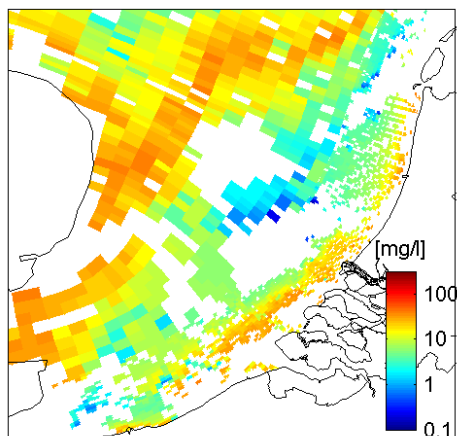


Significant surface wave height at Euro platform

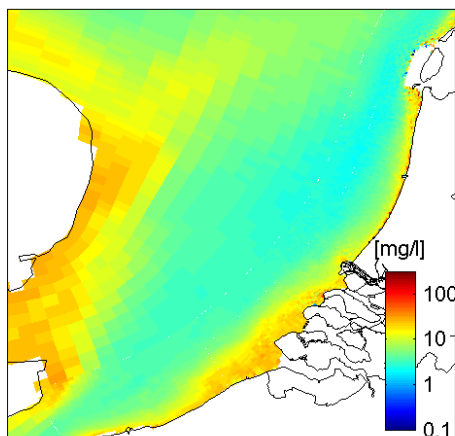


Dec-07 Dec-22 Jan-06 Jan-20 Feb-04 Feb-19

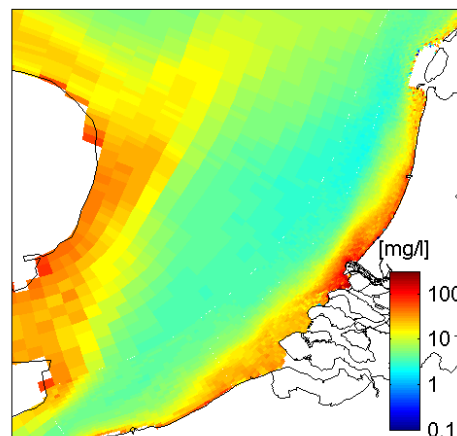
MERIS at surface layer



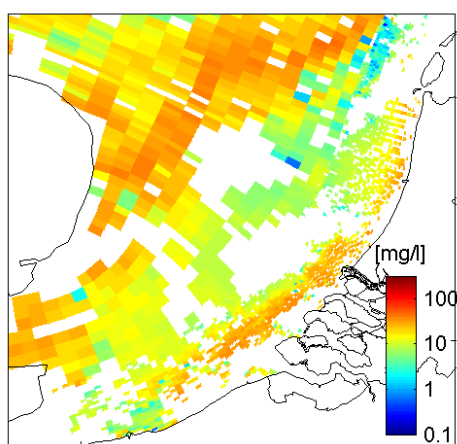
Model at surface layer



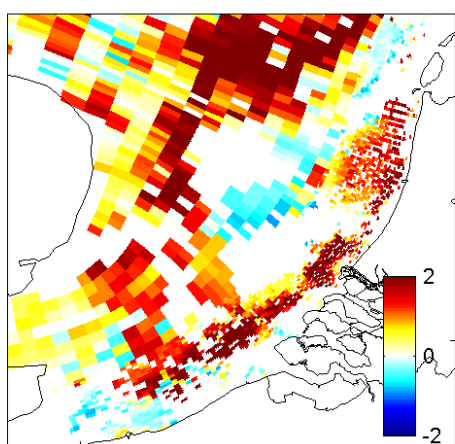
Model at bottom layer



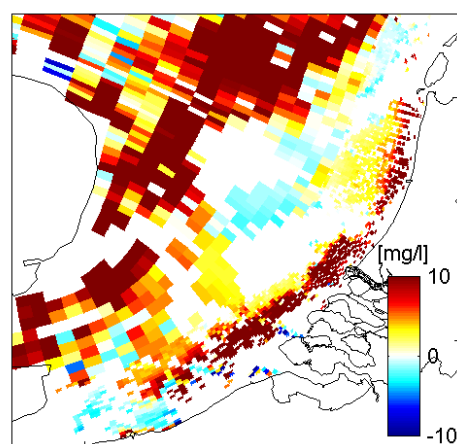
RMS difference



Relative difference [(MERIS-Model)/Model]



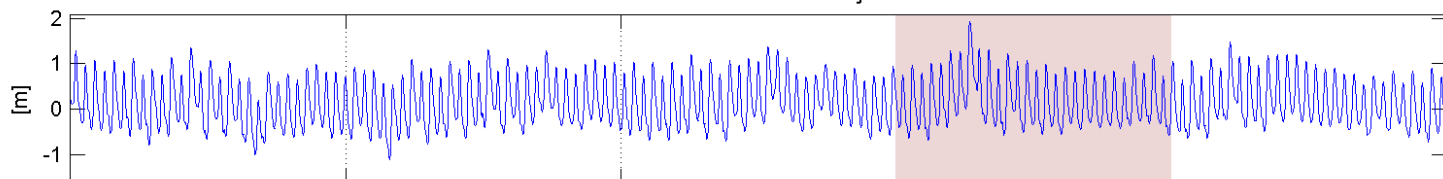
Mean difference [MERIS-Model]


x 10⁶

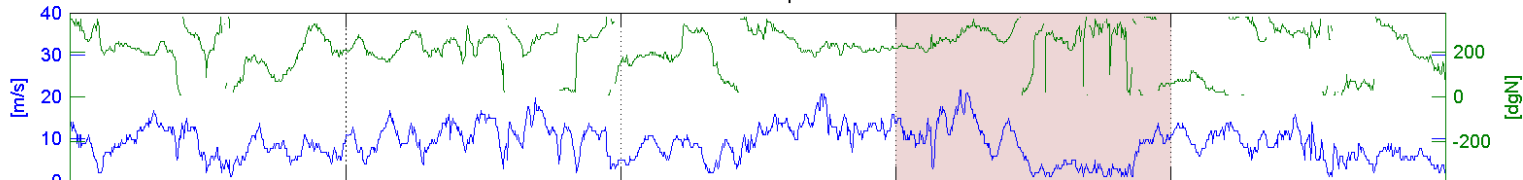
Sand mining volume for Maasvlakte 2



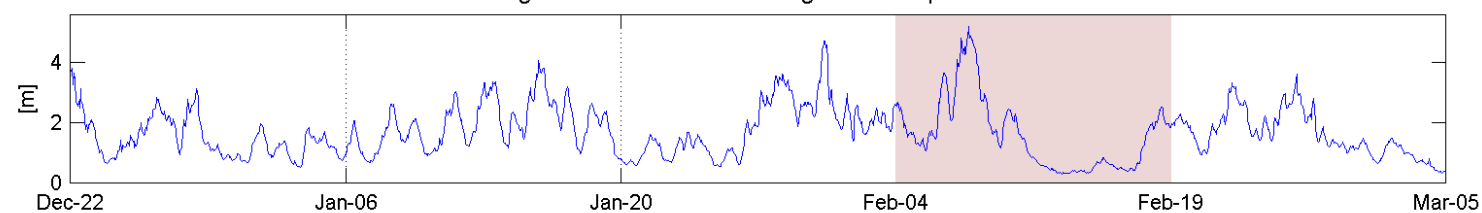
Water level at Noordwijk10



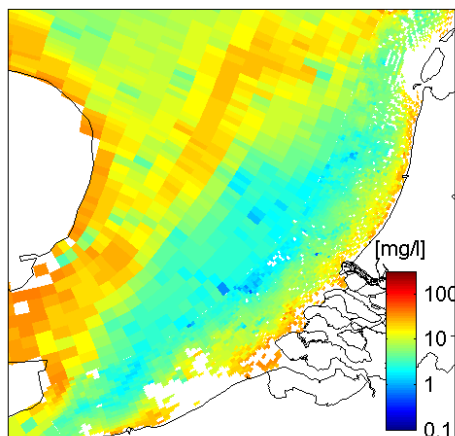
Wind at Euro platform



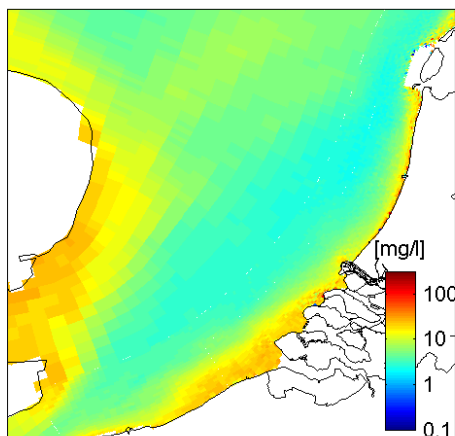
Significant surface wave height at Euro platform



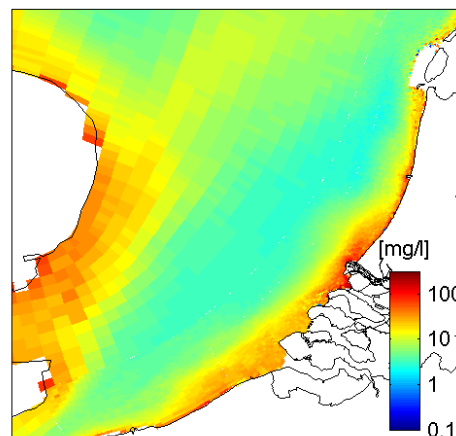
MERIS at surface layer



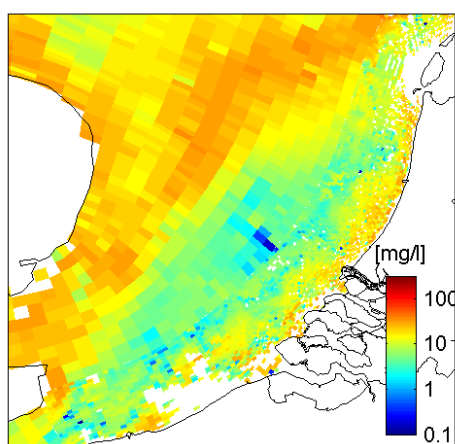
Model at surface layer



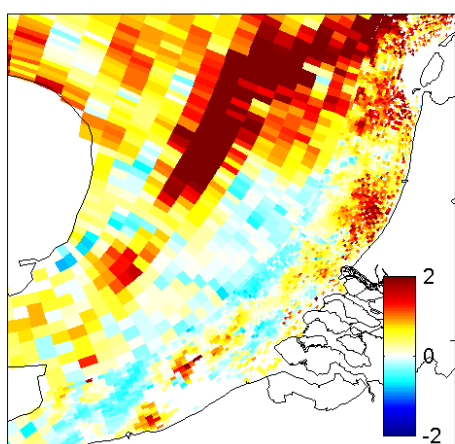
Model at bottom layer



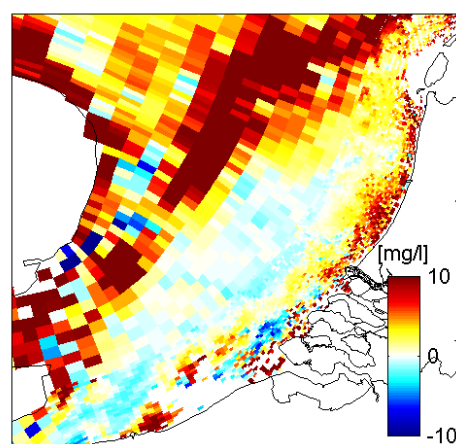
RMS difference



Relative difference [(MERIS-Model)/Model]



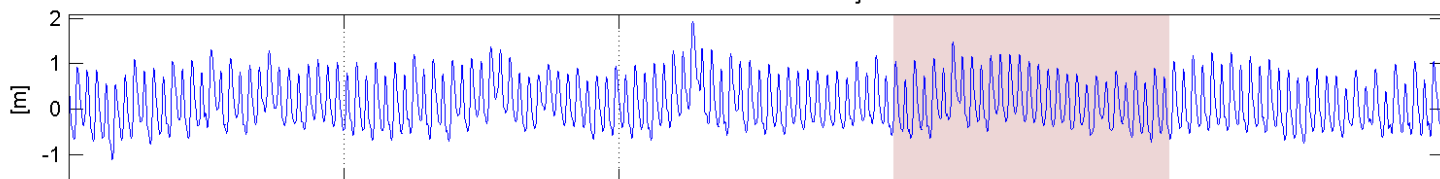
Mean difference [MERIS-Model]


x 10⁶

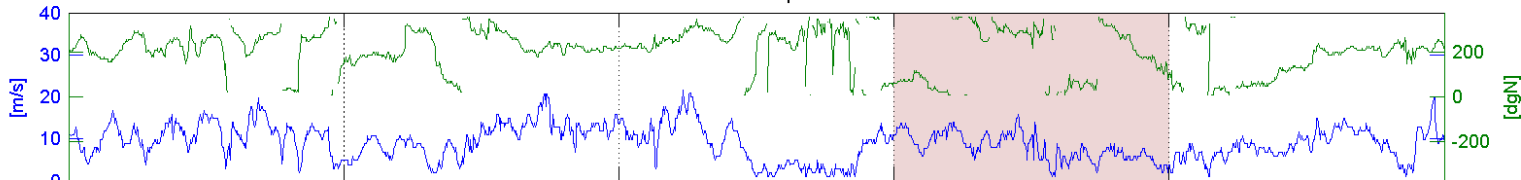
Sand mining volume for Maasvlakte 2



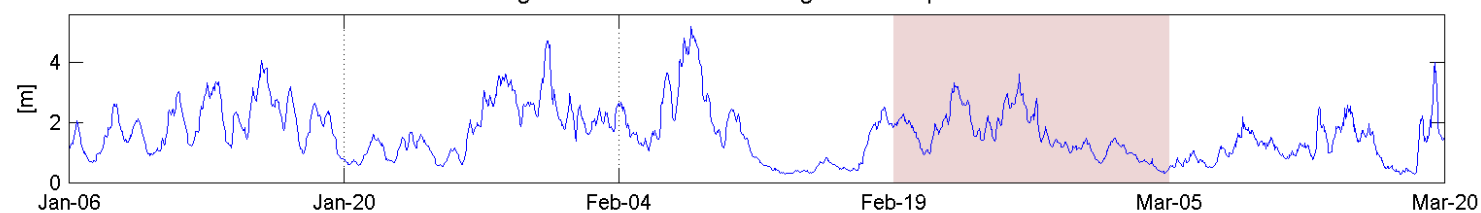
Water level at Noordwijk10



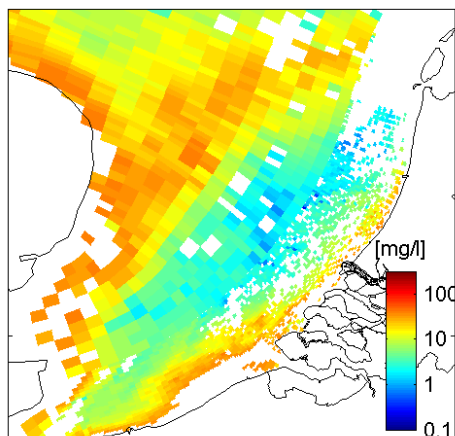
Wind at Euro platform



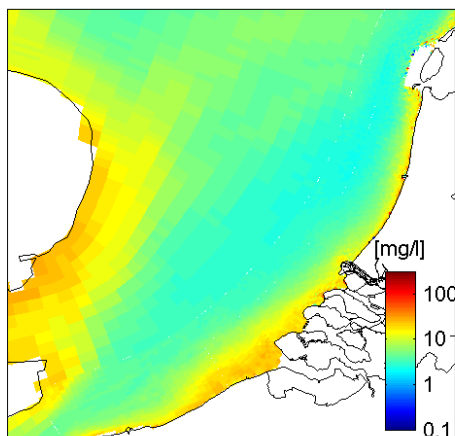
Significant surface wave height at Euro platform



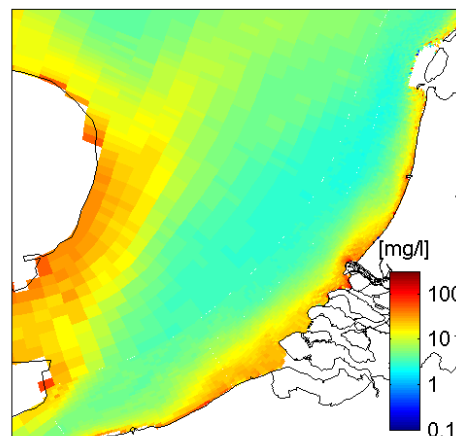
MERIS at surface layer



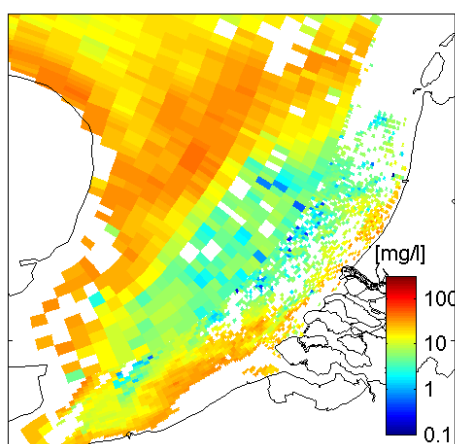
Model at surface layer



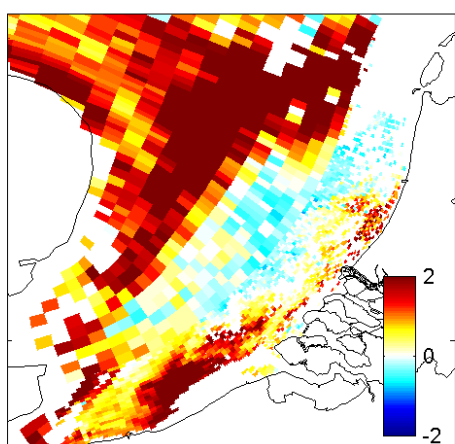
Model at bottom layer



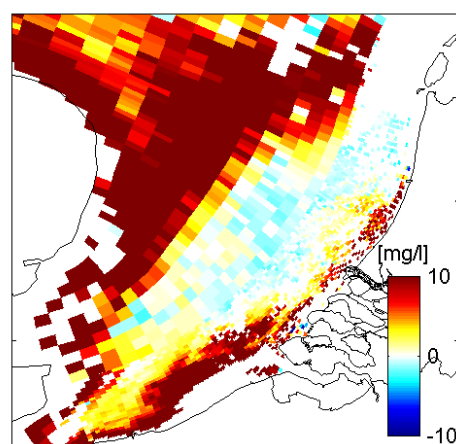
RMS difference



Relative difference [(MERIS-Model)/Model]



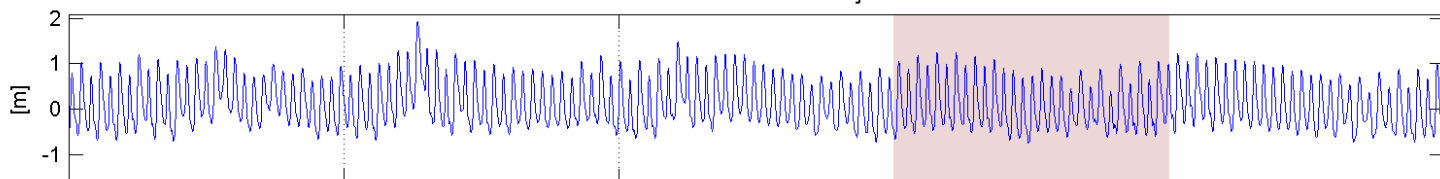
Mean difference [MERIS-Model]


 $\times 10^6$

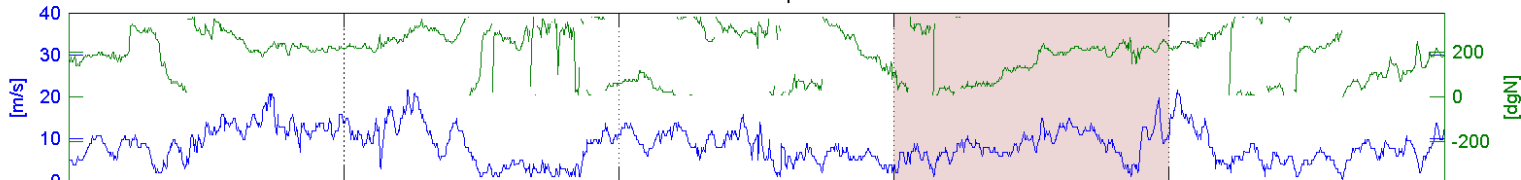
Sand mining volume for Maasvlakte 2



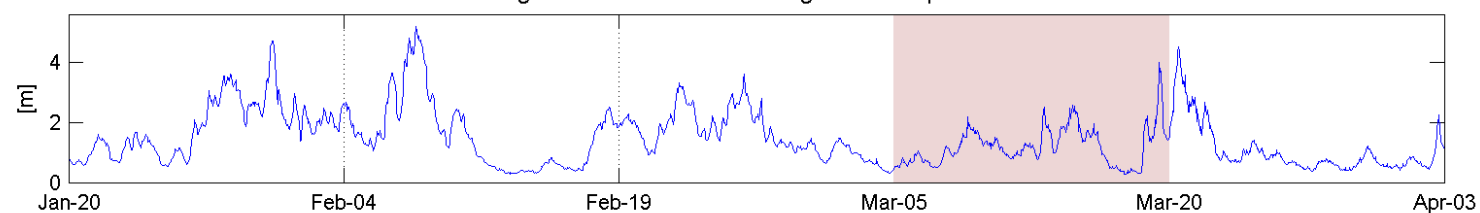
Water level at Noordwijk10



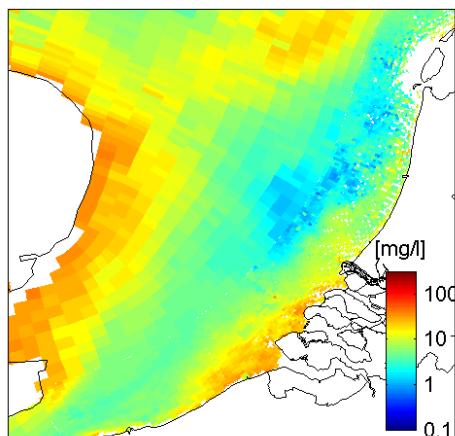
Wind at Euro platform



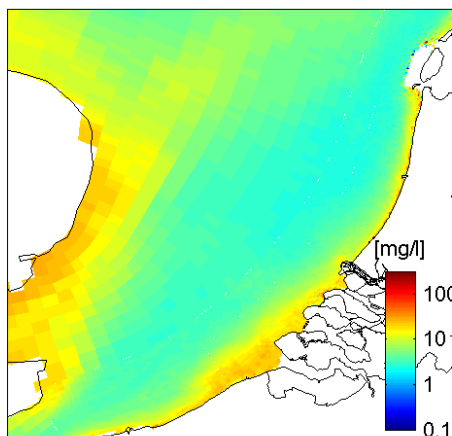
Significant surface wave height at Euro platform



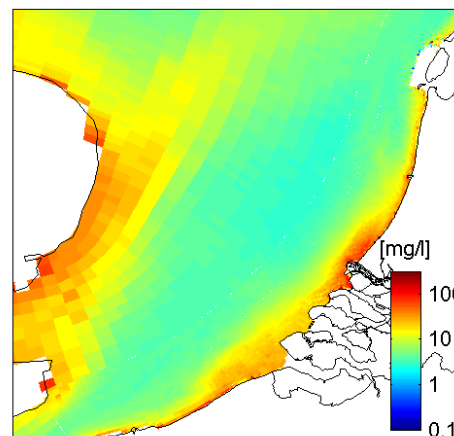
MERIS at surface layer



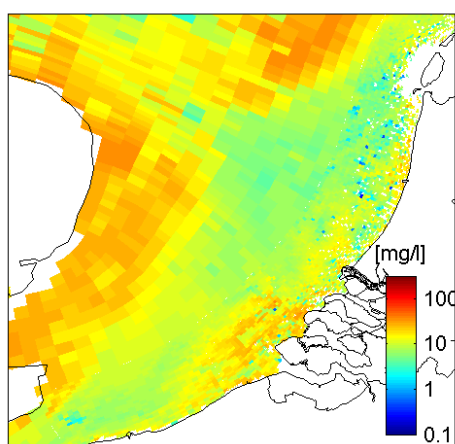
Model at surface layer



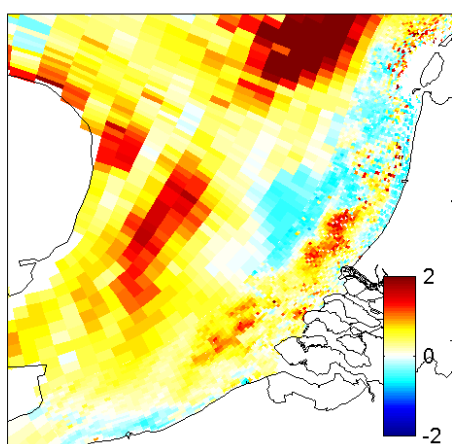
Model at bottom layer



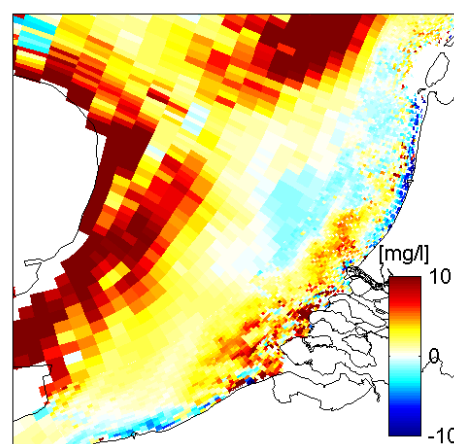
RMS difference



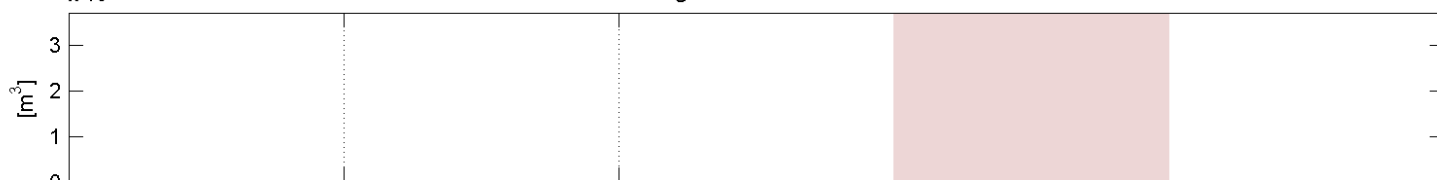
Relative difference [(MERIS-Model)/Model]



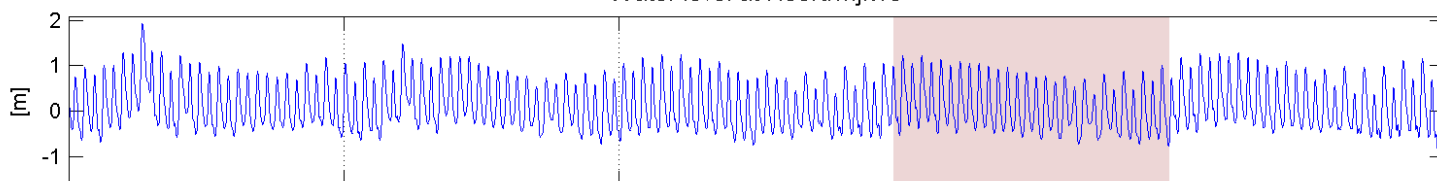
Mean difference [MERIS-Model]

x 10⁶

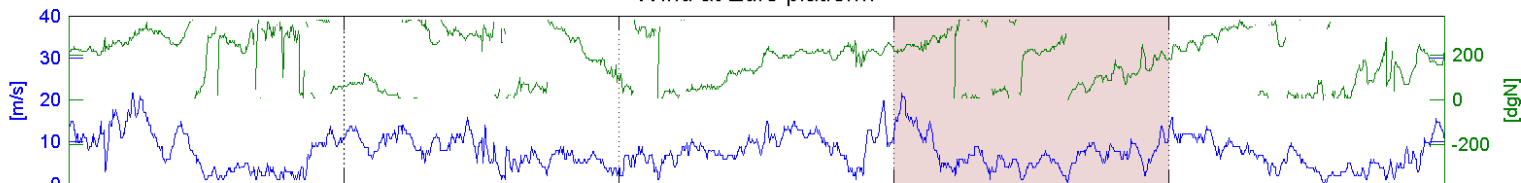
Sand mining volume for Maasvlakte 2



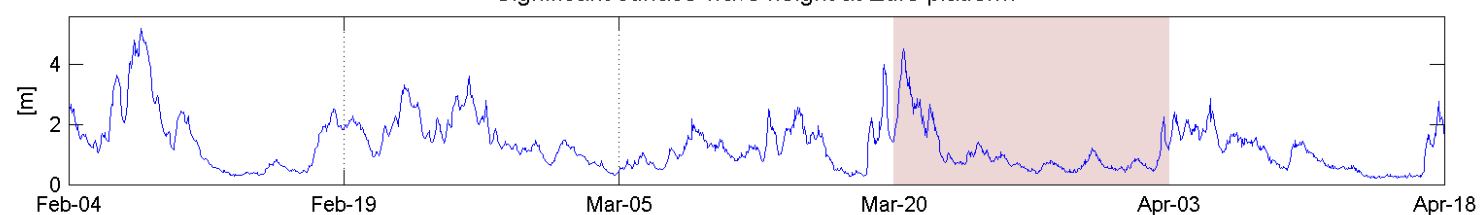
Water level at Noordwijk10



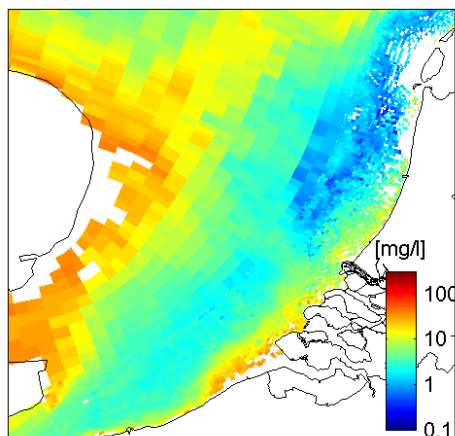
Wind at Euro platform



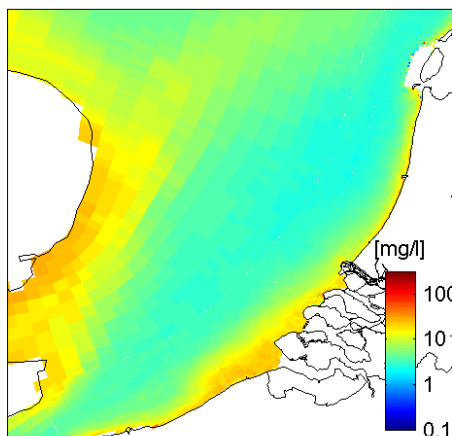
Significant surface wave height at Euro platform



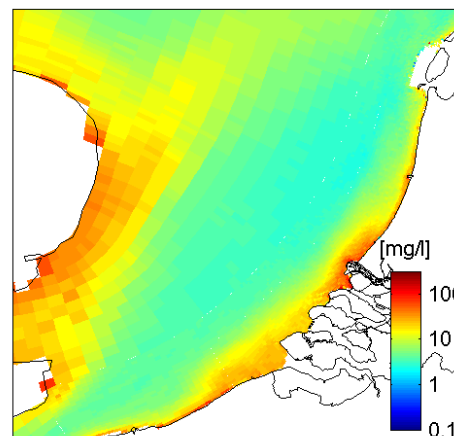
MERIS at surface layer



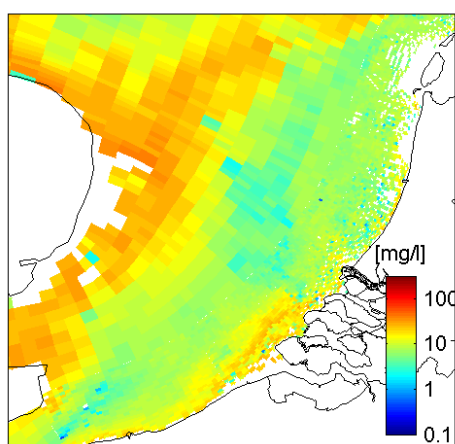
Model at surface layer



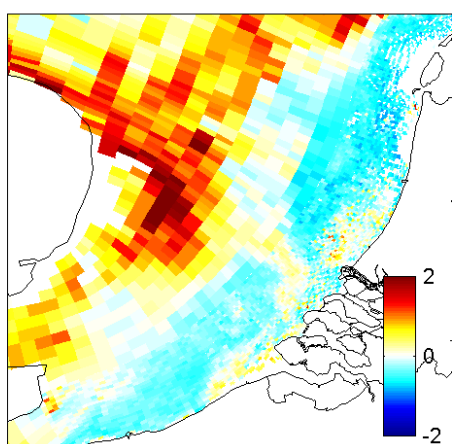
Model at bottom layer



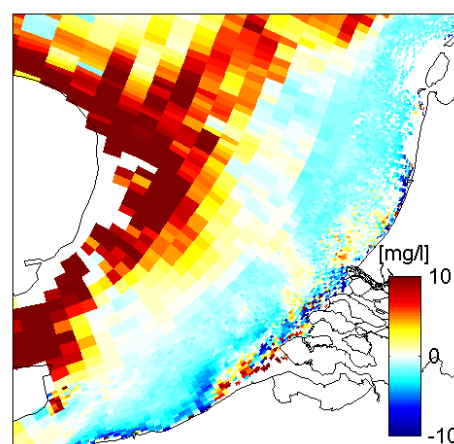
RMS difference



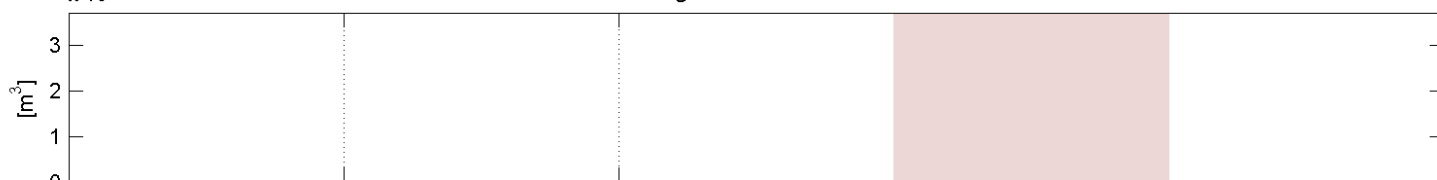
Relative difference [(MERIS-Model)/Model]



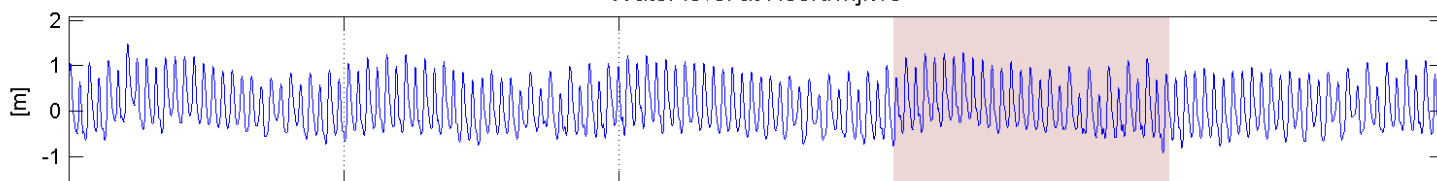
Mean difference [MERIS-Model]

 $\times 10^6$

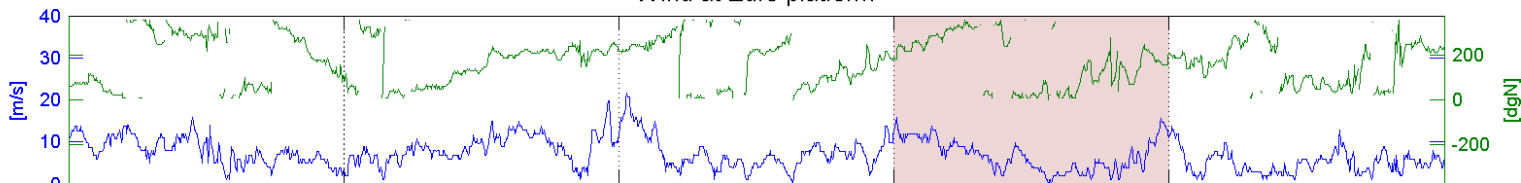
Sand mining volume for Maasvlakte 2



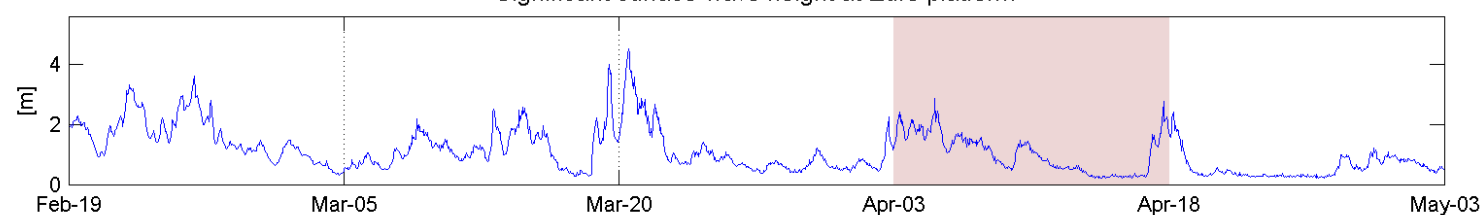
Water level at Noordwijk10



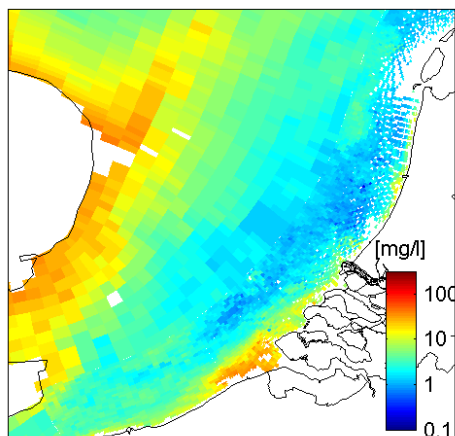
Wind at Euro platform



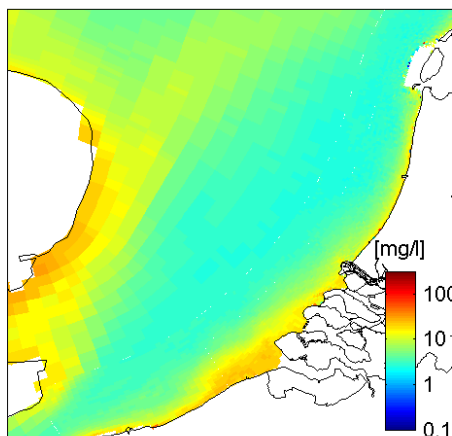
Significant surface wave height at Euro platform



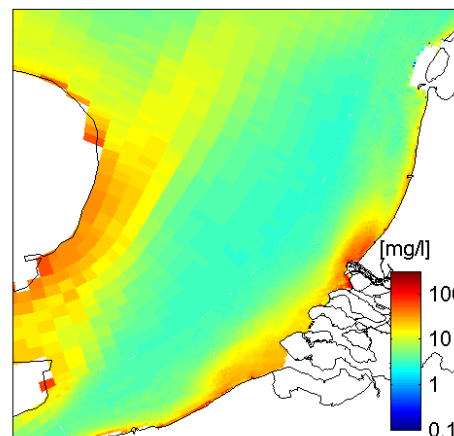
MERIS at surface layer



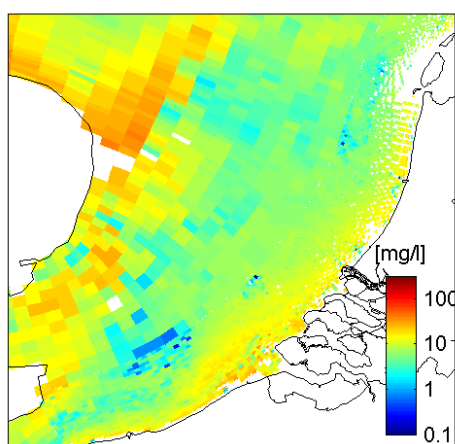
Model at surface layer



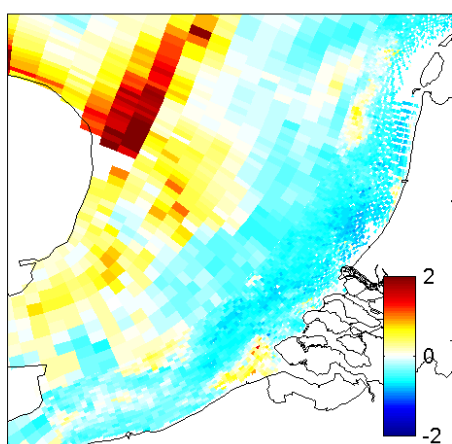
Model at bottom layer



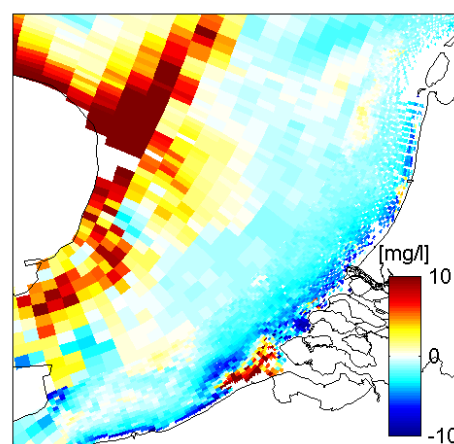
RMS difference



Relative difference [(MERIS-Model)/Model]



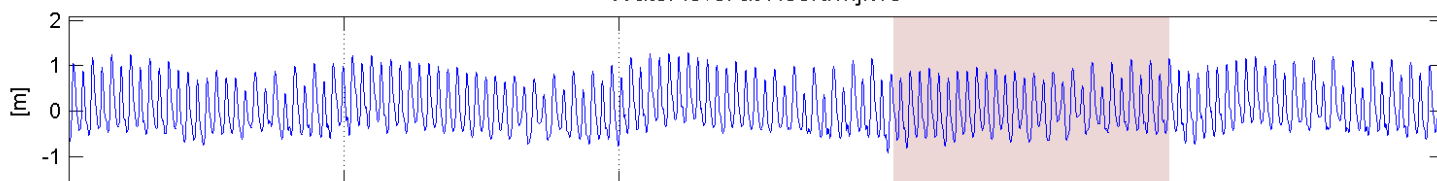
Mean difference [MERIS-Model]

 $\times 10^6$

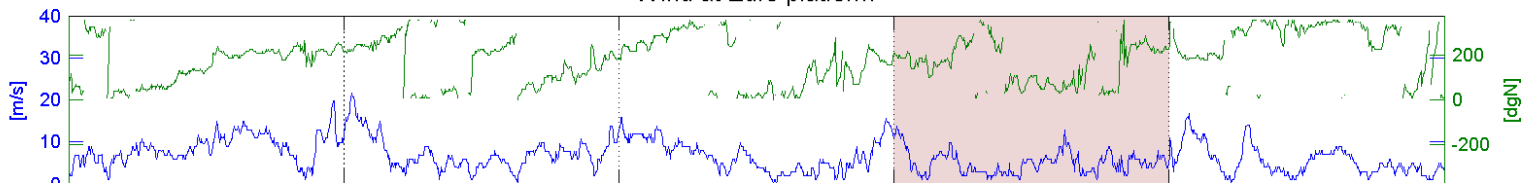
Sand mining volume for Maasvlakte 2



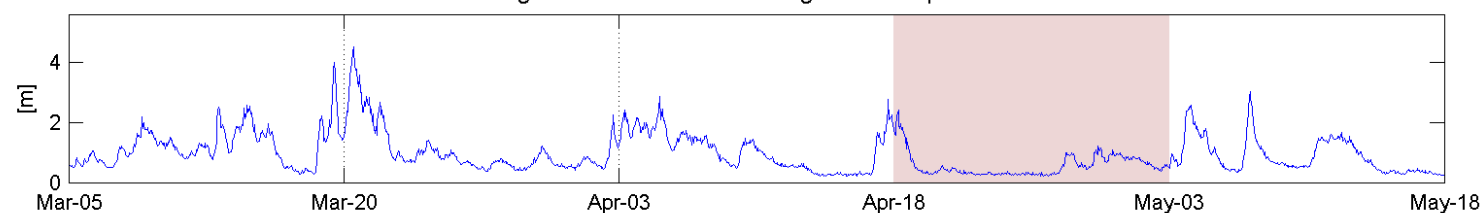
Water level at Noordwijk10



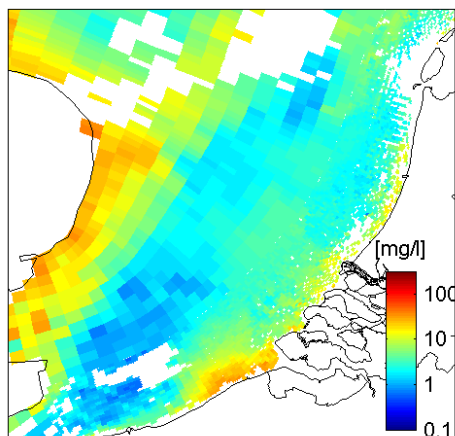
Wind at Euro platform



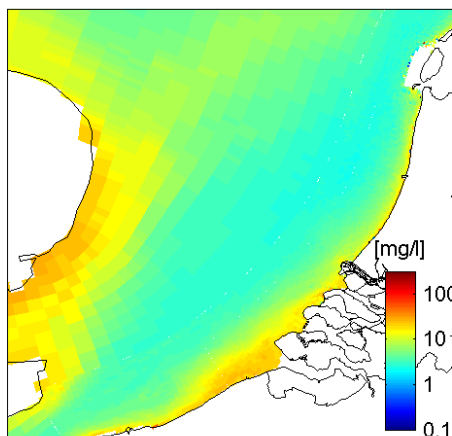
Significant surface wave height at Euro platform



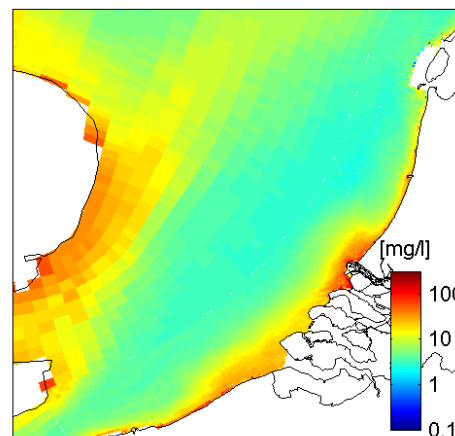
MERIS at surface layer



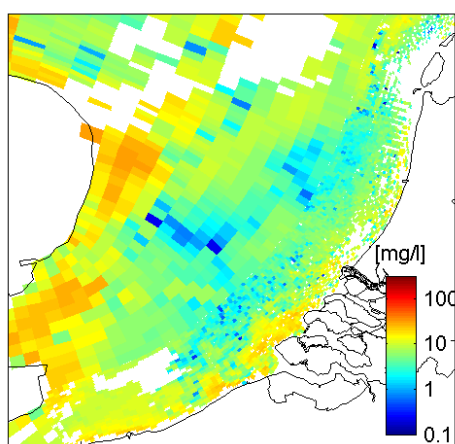
Model at surface layer



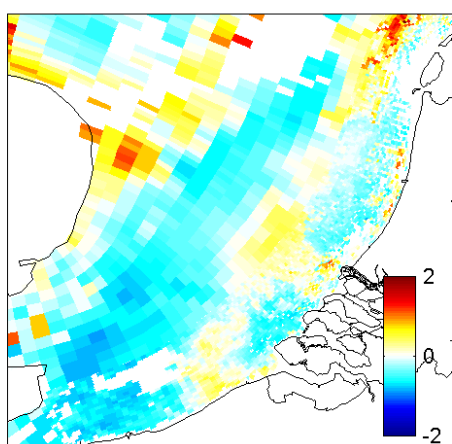
Model at bottom layer



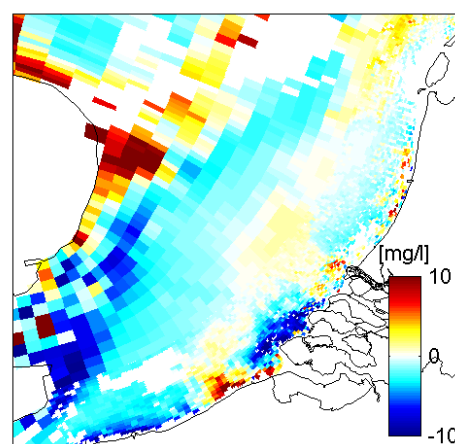
RMS difference



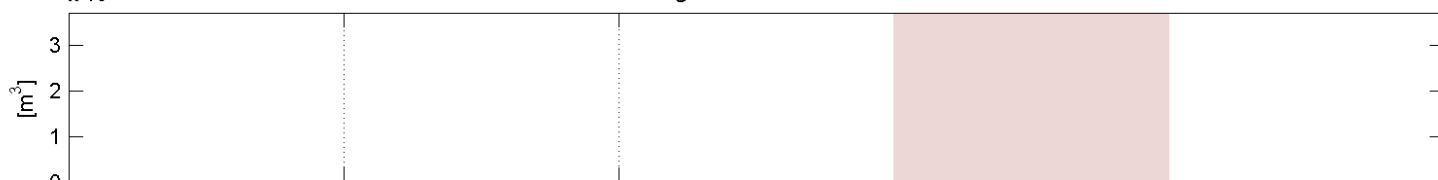
Relative difference [(MERIS-Model)/Model]



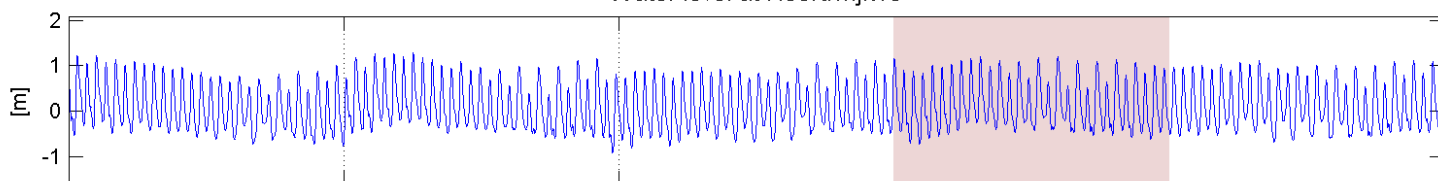
Mean difference [MERIS-Model]


 $\times 10^6$

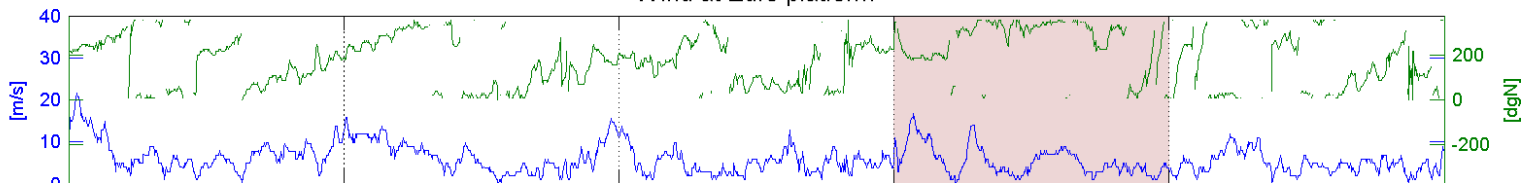
Sand mining volume for Maasvlakte 2



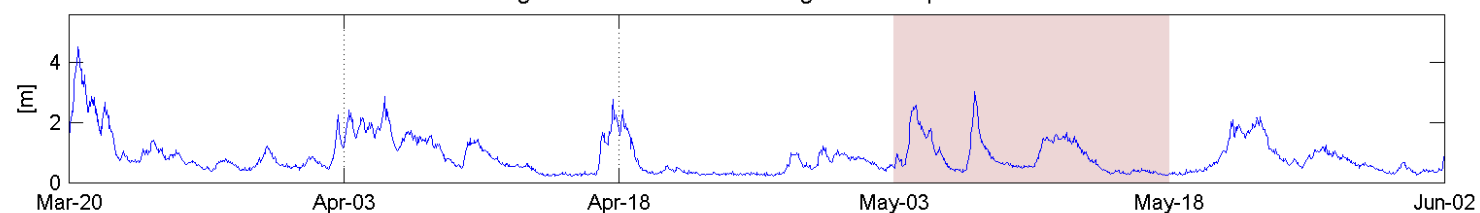
Water level at Noordwijk10



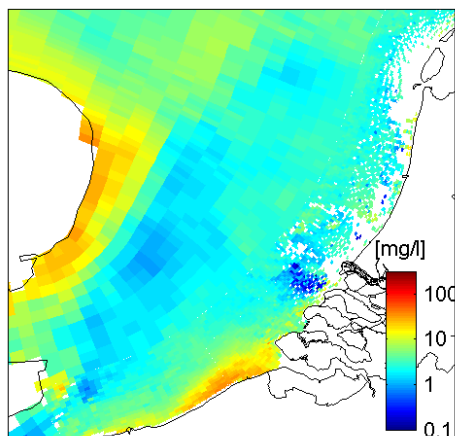
Wind at Euro platform



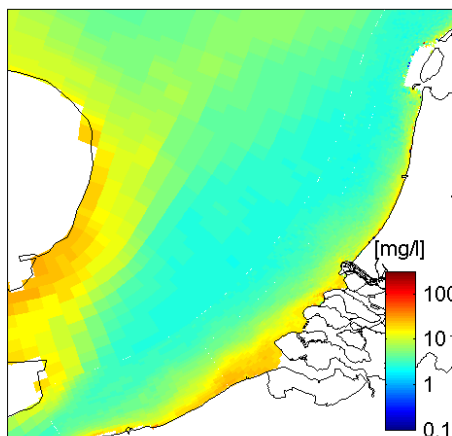
Significant surface wave height at Euro platform



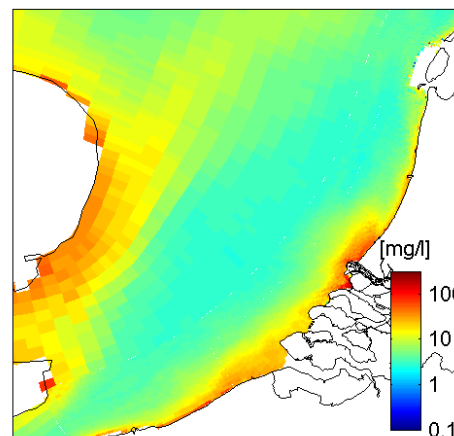
MERIS at surface layer



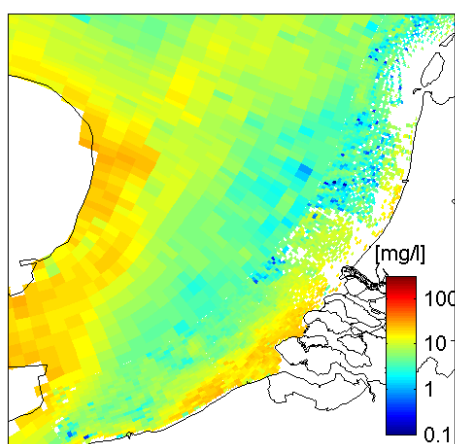
Model at surface layer



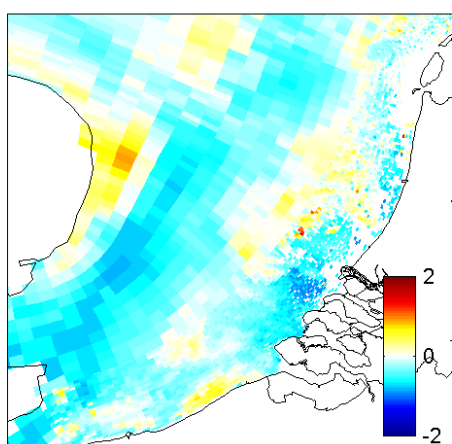
Model at bottom layer



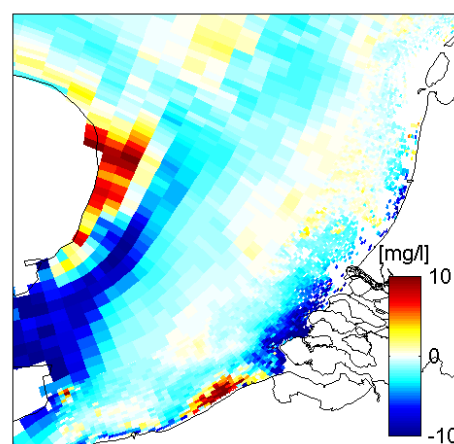
RMS difference



Relative difference [(MERIS-Model)/Model]



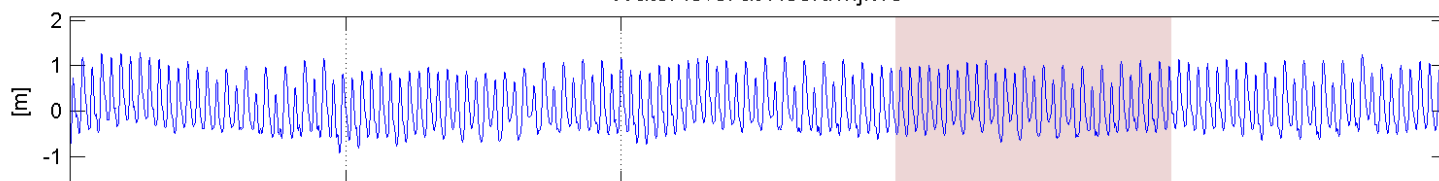
Mean difference [MERIS-Model]

 $\times 10^6$

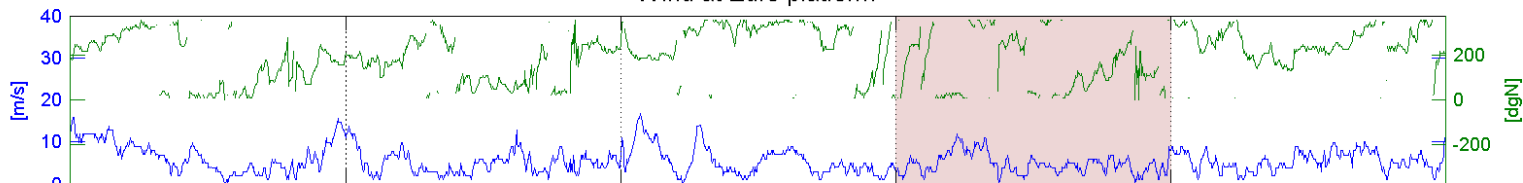
Sand mining volume for Maasvlakte 2



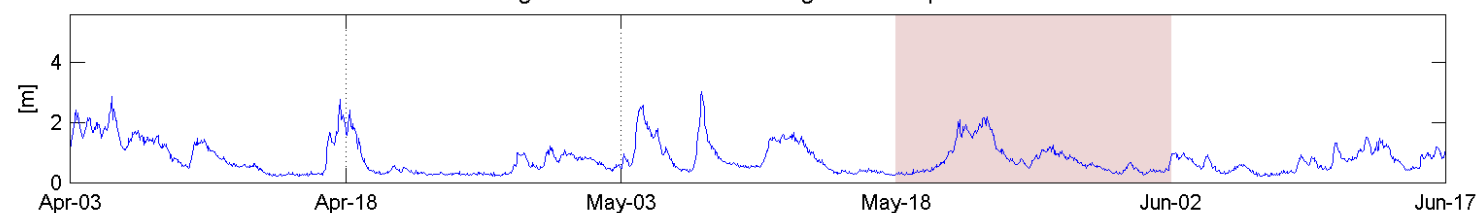
Water level at Noordwijk10



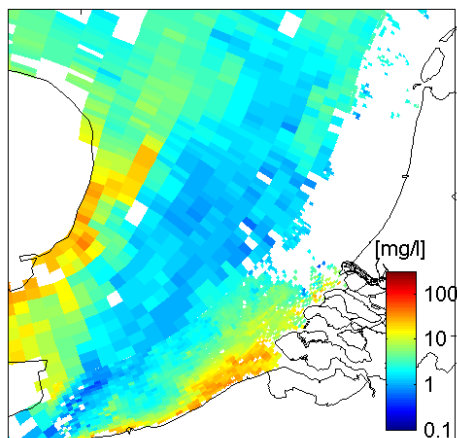
Wind at Euro platform



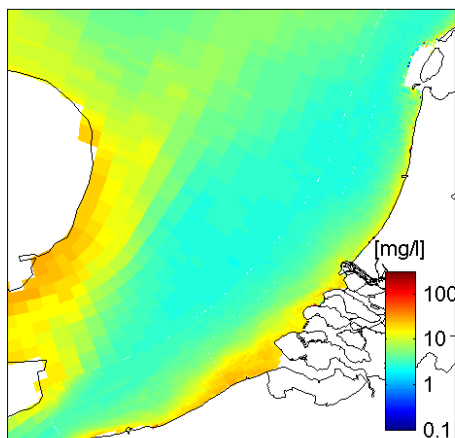
Significant surface wave height at Euro platform



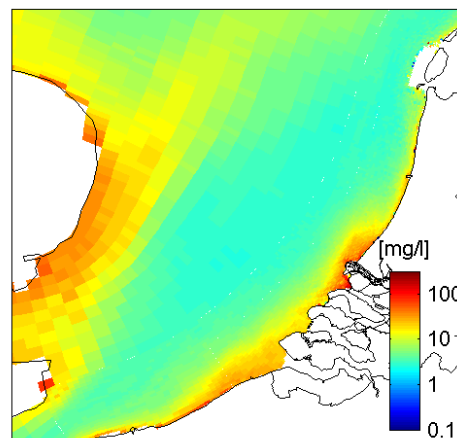
MERIS at surface layer



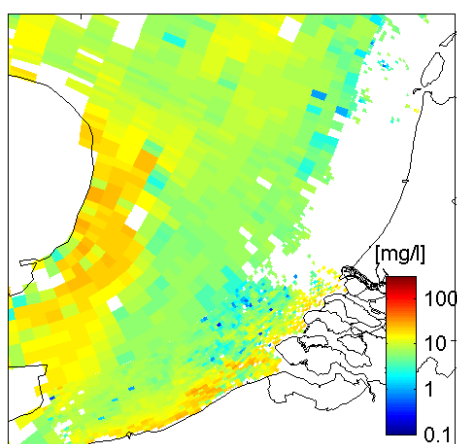
Model at surface layer



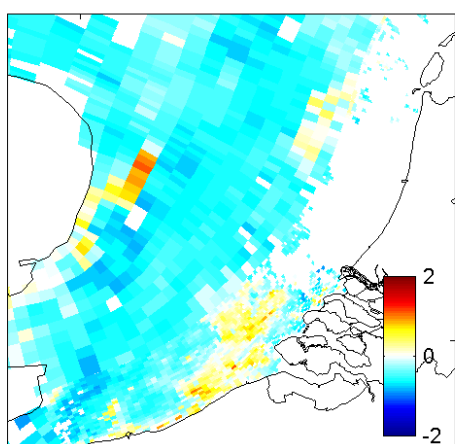
Model at bottom layer



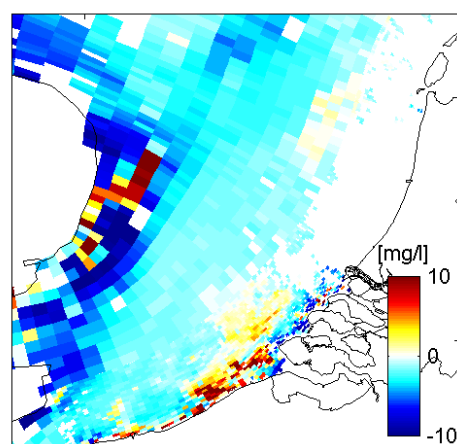
RMS difference



Relative difference [(MERIS-Model)/Model]



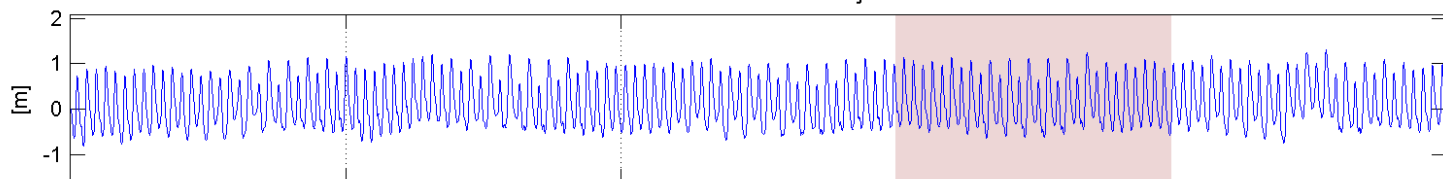
Mean difference [MERIS-Model]


 $\times 10^6$

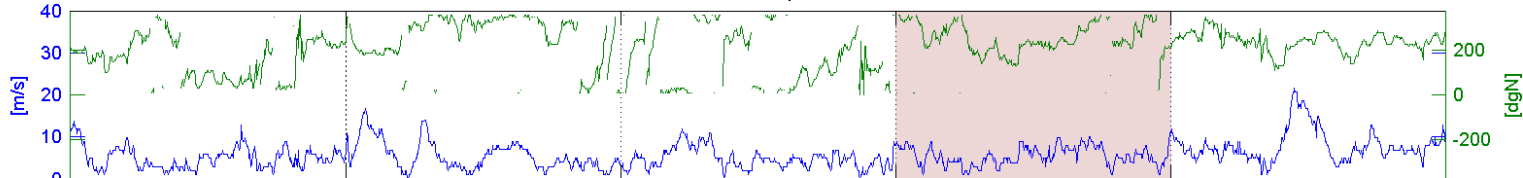
Sand mining volume for Maasvlakte 2



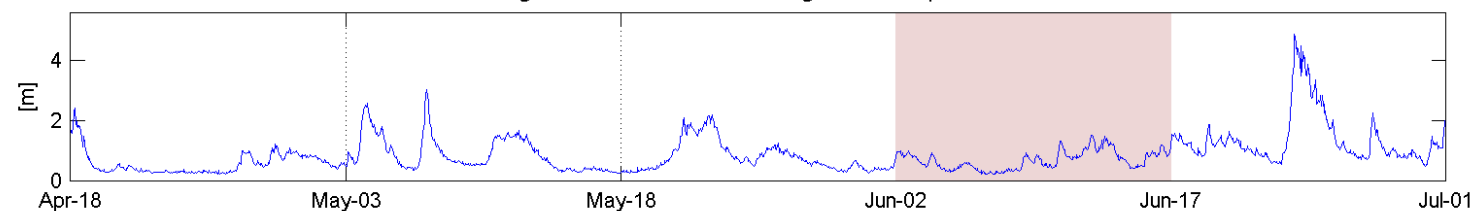
Water level at Noordwijk10



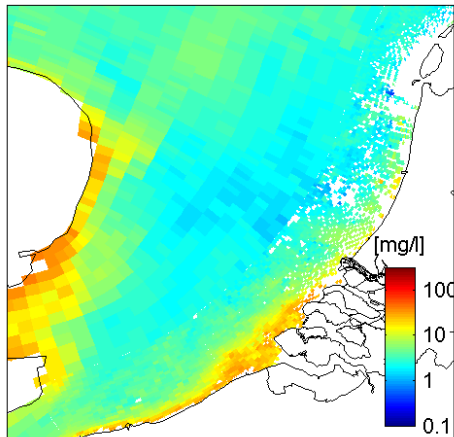
Wind at Euro platform



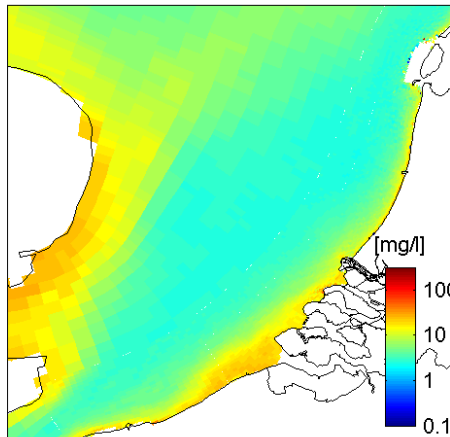
Significant surface wave height at Euro platform



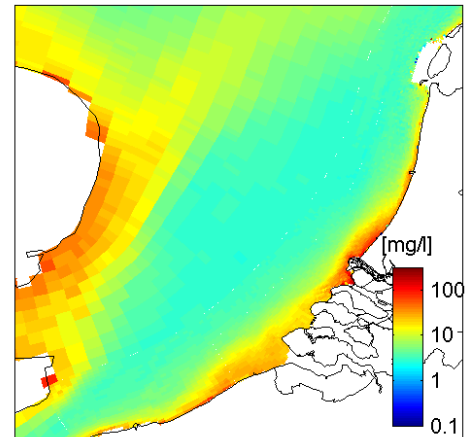
MERIS at surface layer



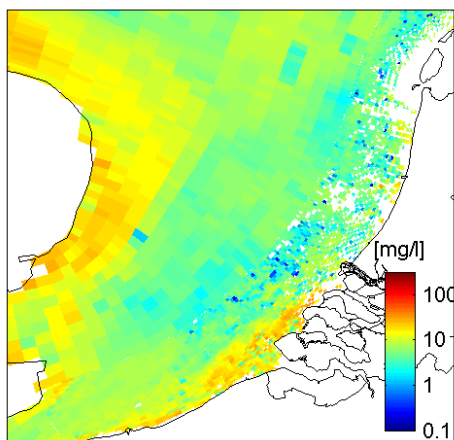
Model at surface layer



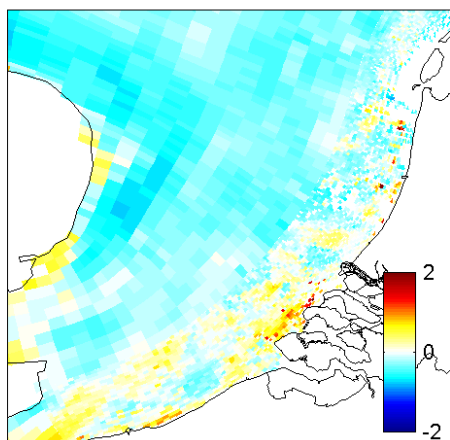
Model at bottom layer



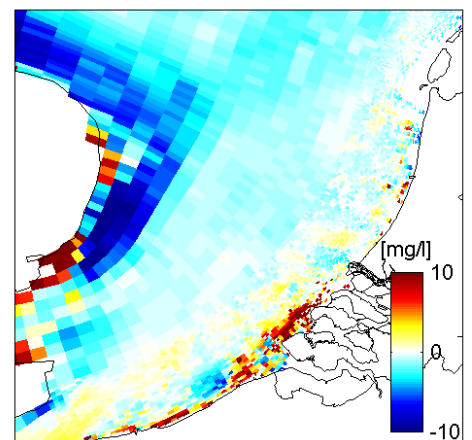
RMS difference



Relative difference [(MERIS-Model)/Model]



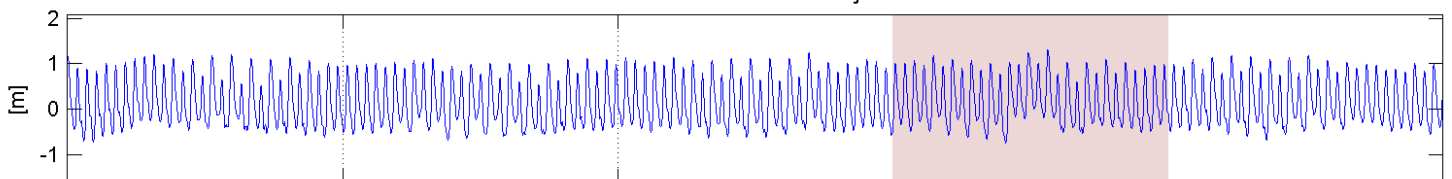
Mean difference [MERIS-Model]

 $\times 10^6$

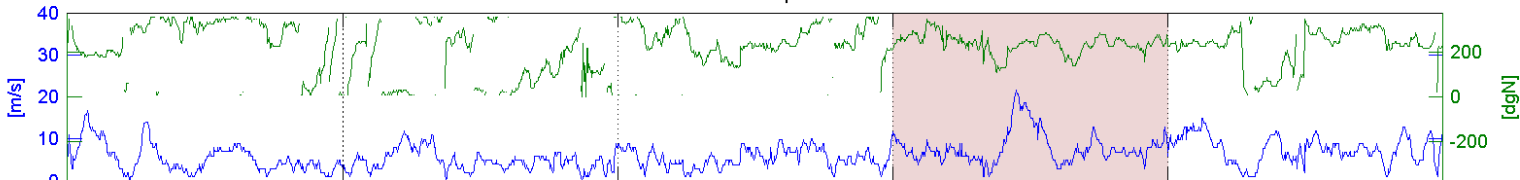
Sand mining volume for Maasvlakte 2



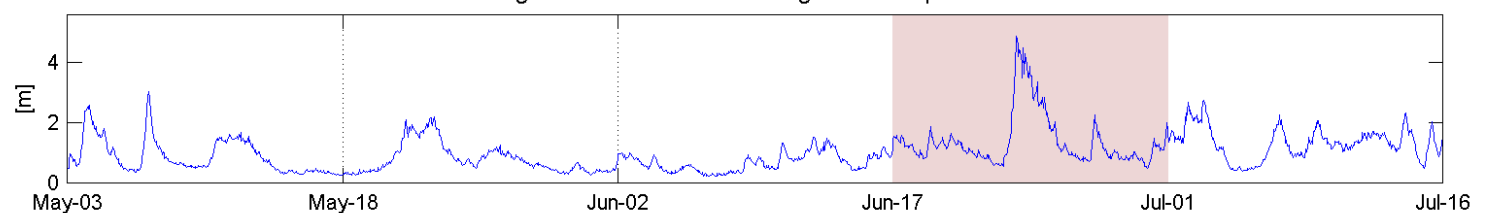
Water level at Noordwijk10



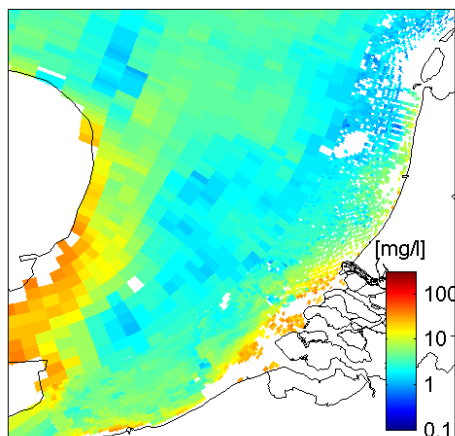
Wind at Euro platform



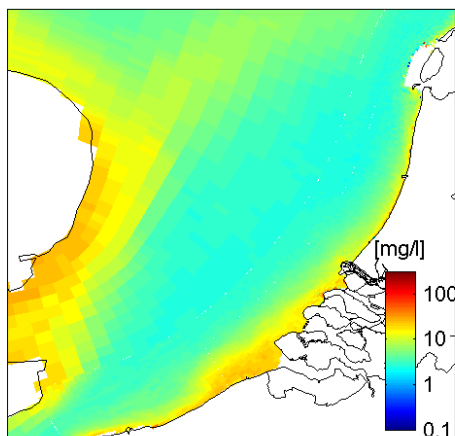
Significant surface wave height at Euro platform



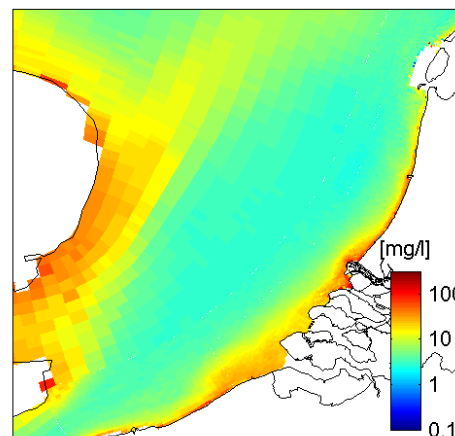
MERIS at surface layer



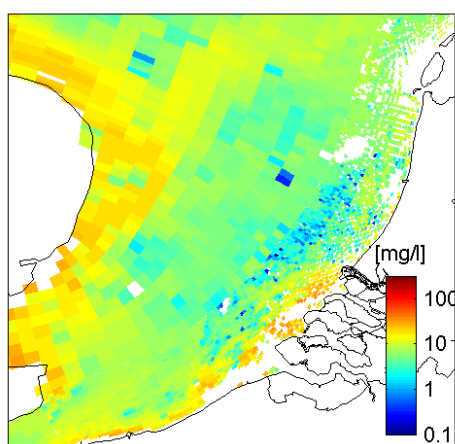
Model at surface layer



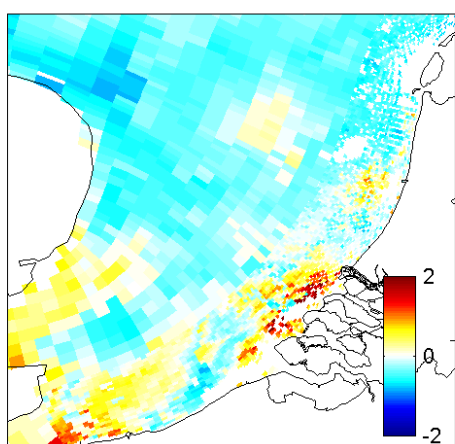
Model at bottom layer



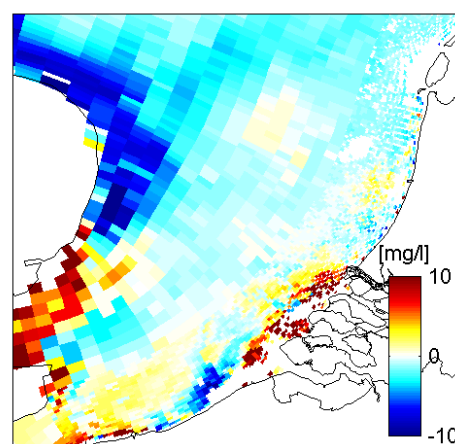
RMS difference



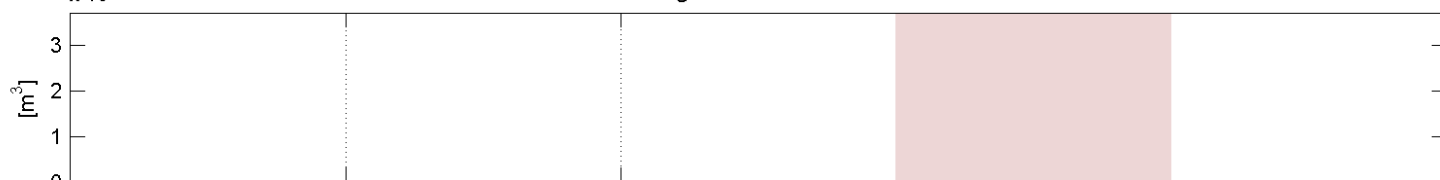
Relative difference [(MERIS-Model)/Model]



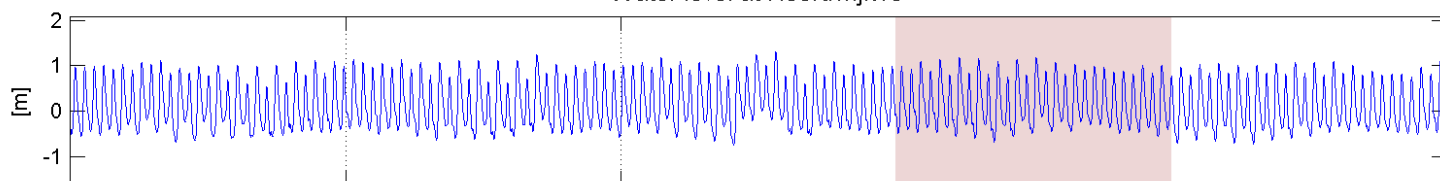
Mean difference [MERIS-Model]


x 10⁶

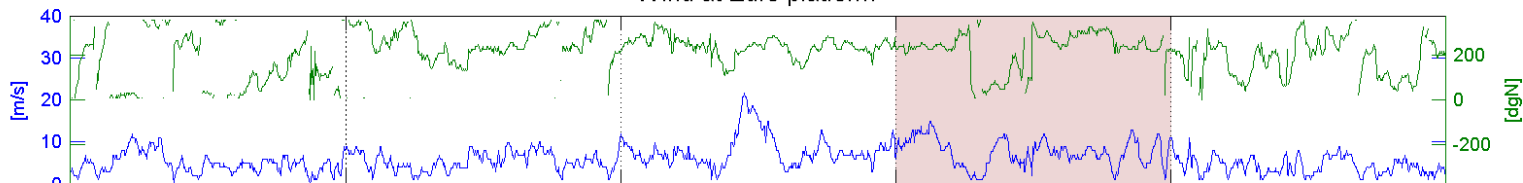
Sand mining volume for Maasvlakte 2



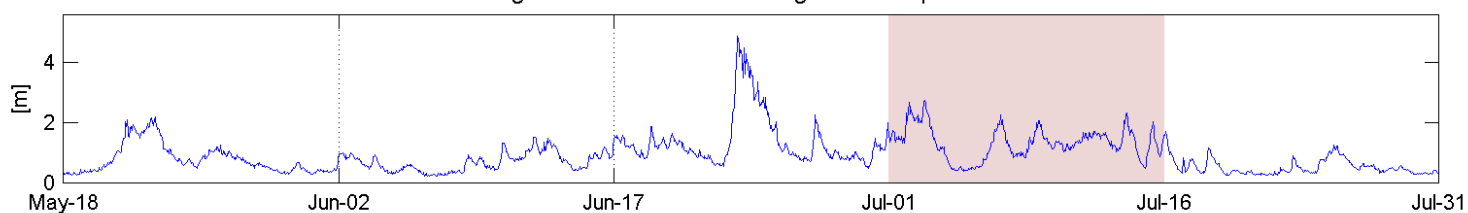
Water level at Noordwijk10



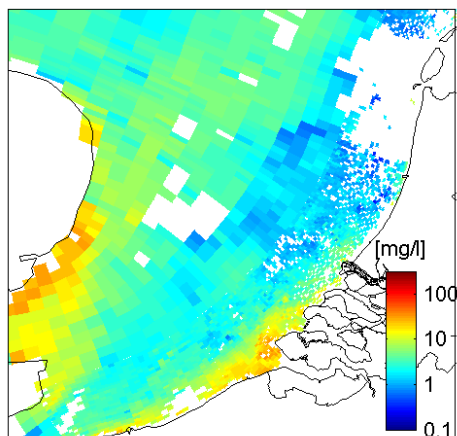
Wind at Euro platform



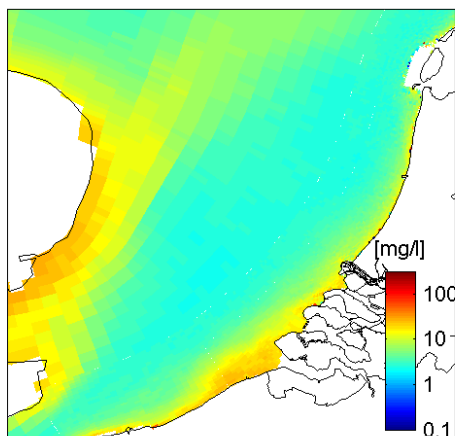
Significant surface wave height at Euro platform



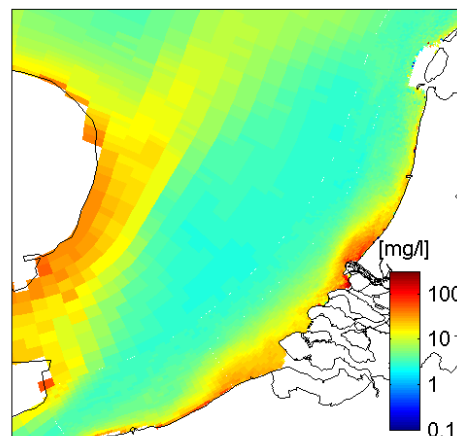
MERIS at surface layer



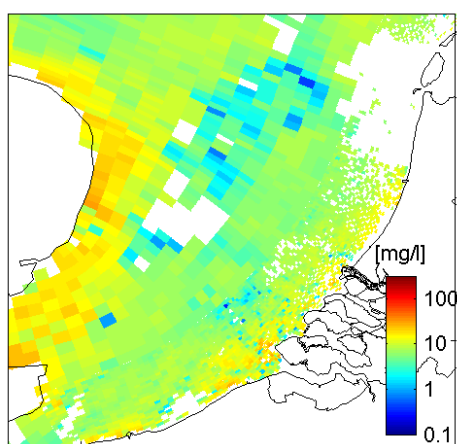
Model at surface layer



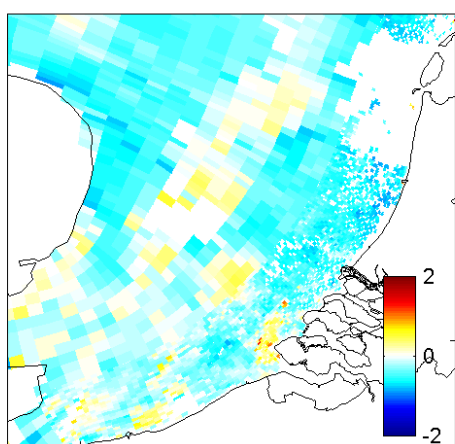
Model at bottom layer



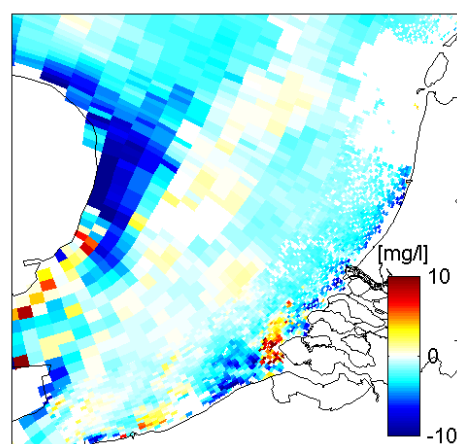
RMS difference



Relative difference [(MERIS-Model)/Model]



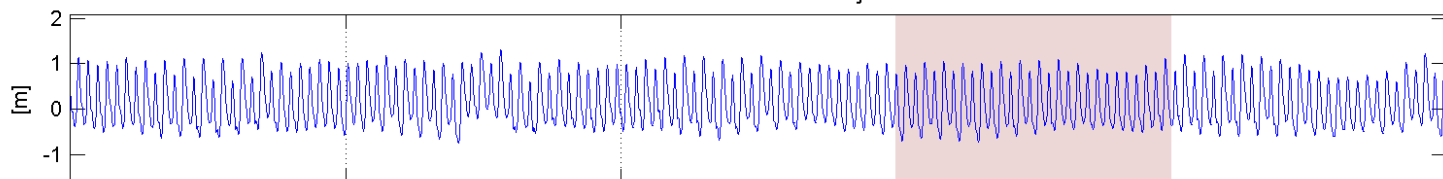
Mean difference [MERIS-Model]


 $\times 10^6$

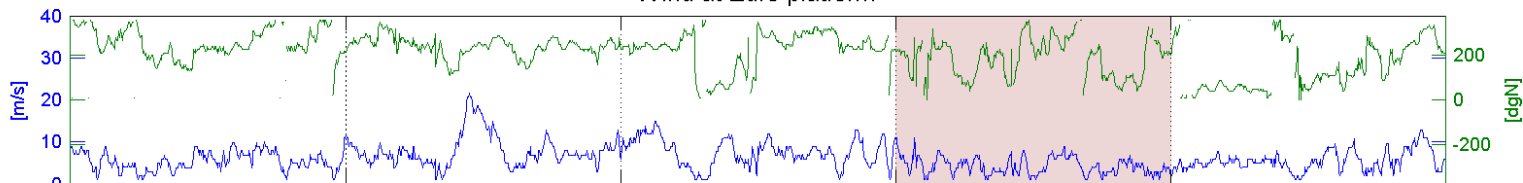
Sand mining volume for Maasvlakte 2



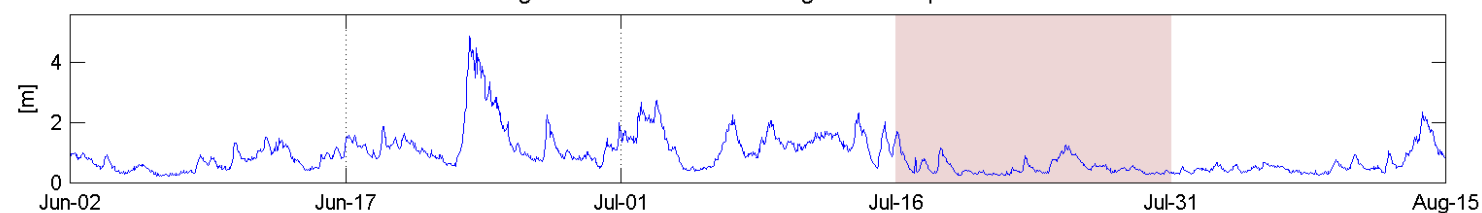
Water level at Noordwijk10



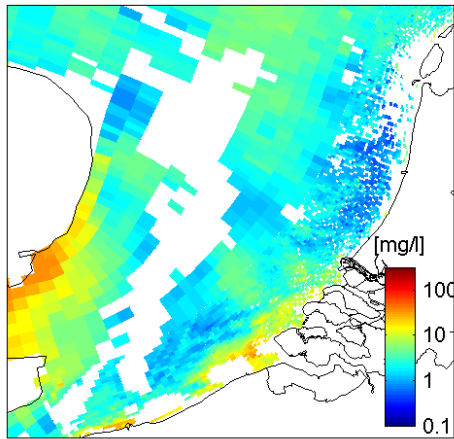
Wind at Euro platform



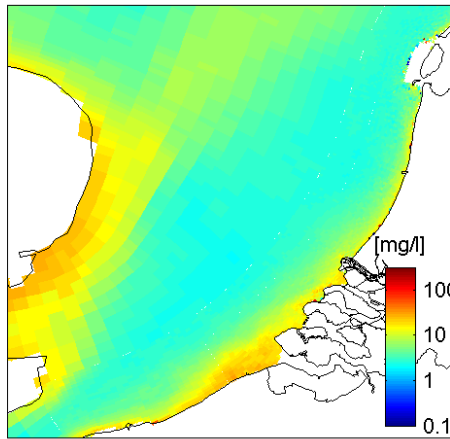
Significant surface wave height at Euro platform



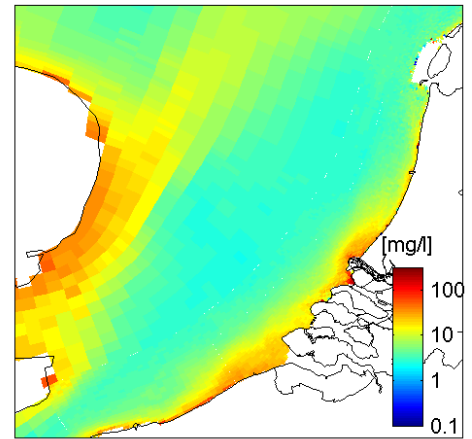
MERIS at surface layer



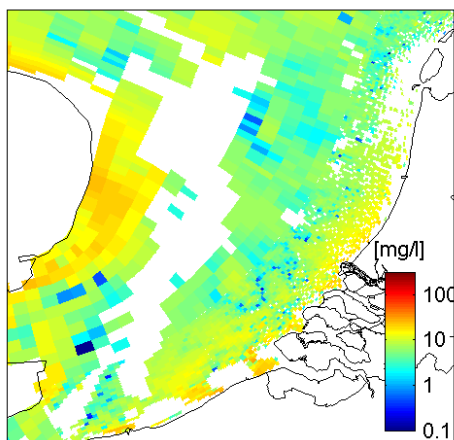
Model at surface layer



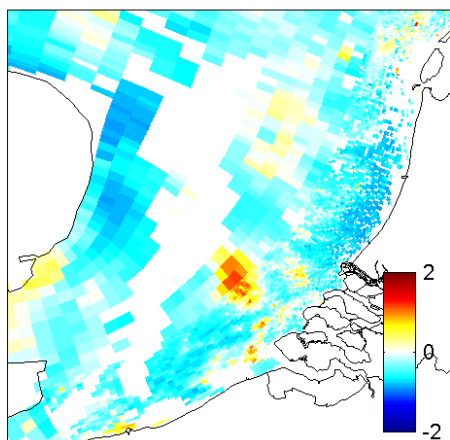
Model at bottom layer



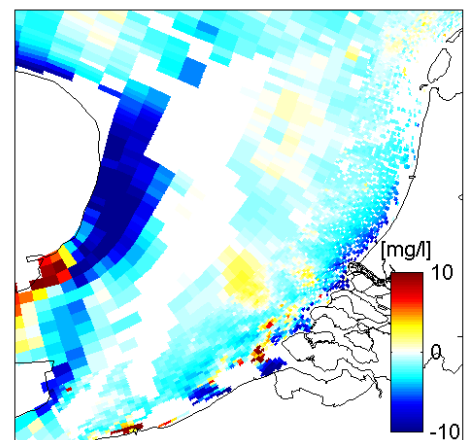
RMS difference



Relative difference [(MERIS-Model)/Model]



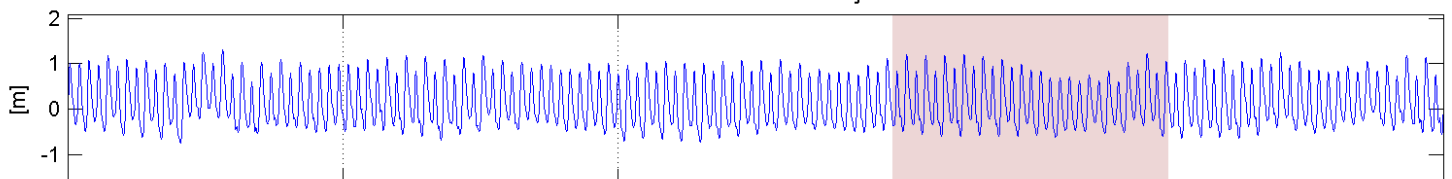
Mean difference [MERIS-Model]

 $\times 10^6$

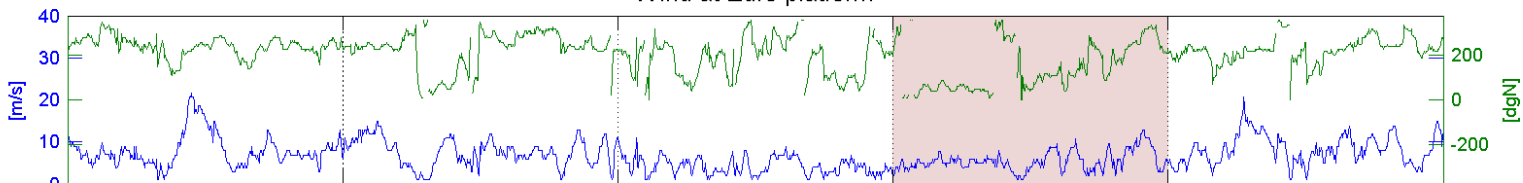
Sand mining volume for Maasvlakte 2



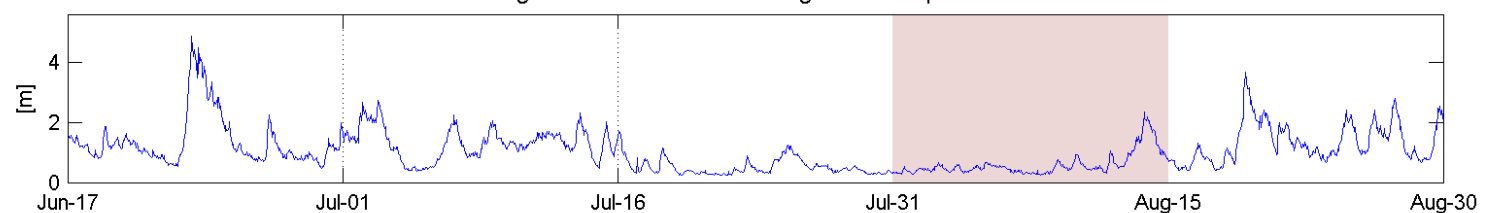
Water level at Noordwijk10



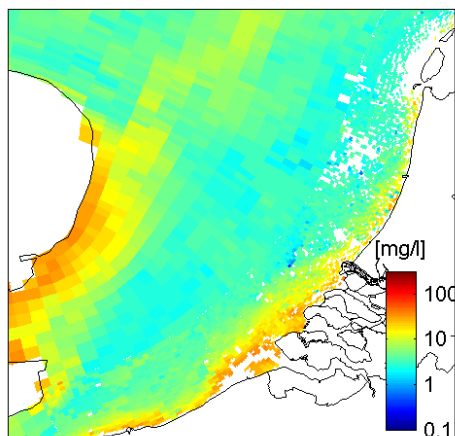
Wind at Euro platform



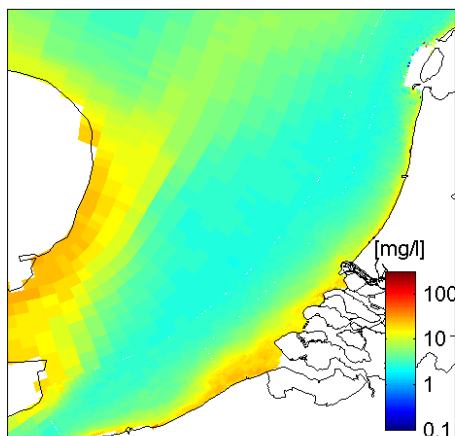
Significant surface wave height at Euro platform



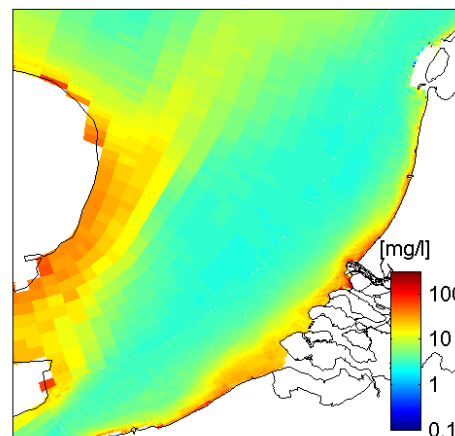
MERIS at surface layer



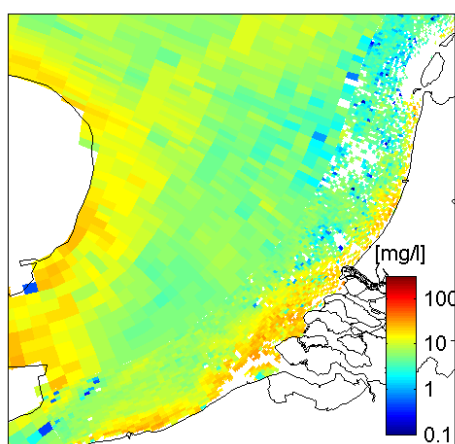
Model at surface layer



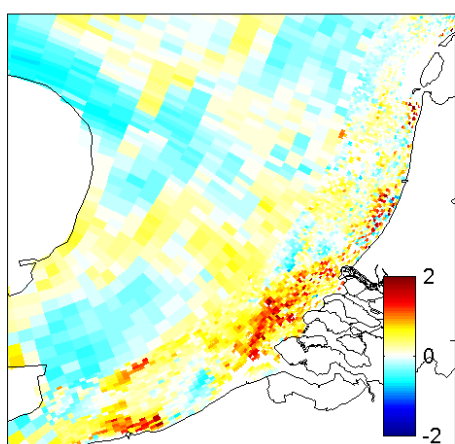
Model at bottom layer



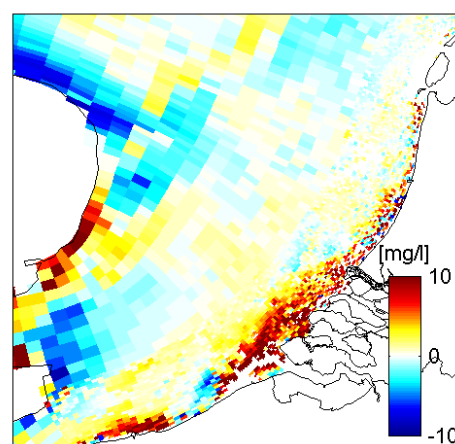
RMS difference



Relative difference [(MERIS-Model)/Model]



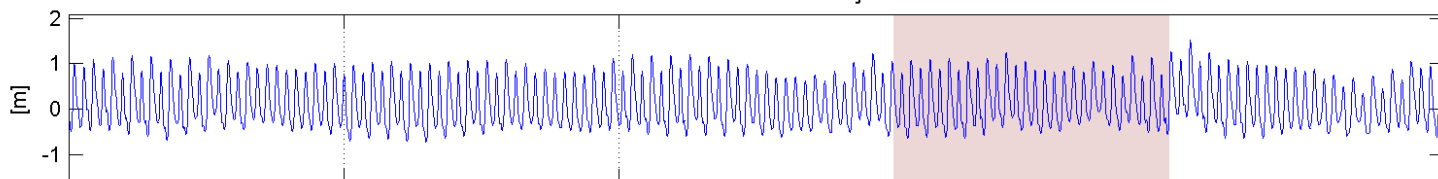
Mean difference [MERIS-Model]


x 10⁶

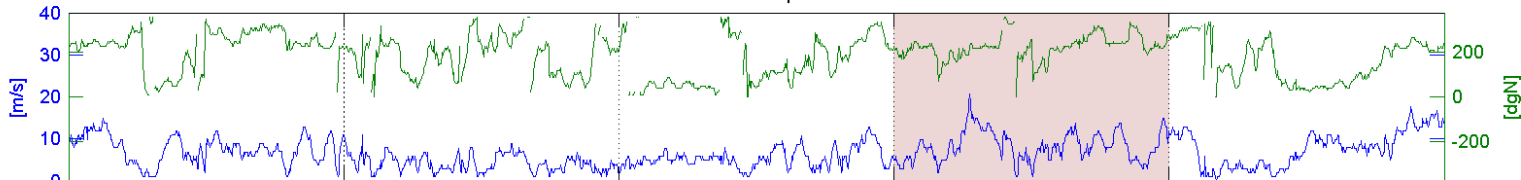
Sand mining volume for Maasvlakte 2



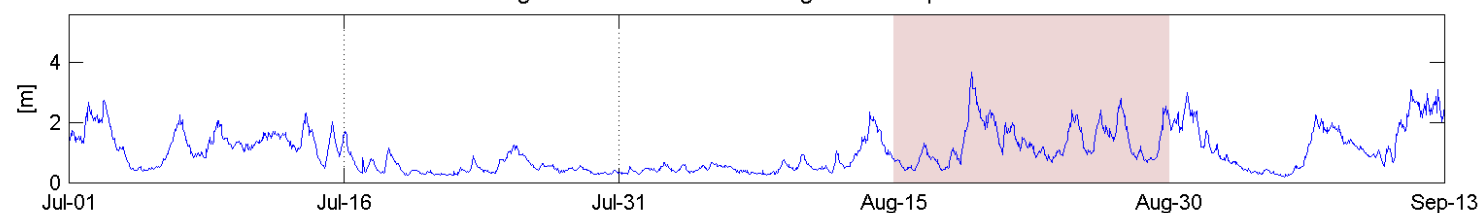
Water level at Noordwijk10



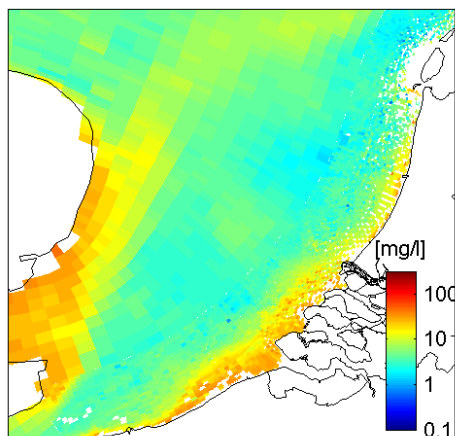
Wind at Euro platform



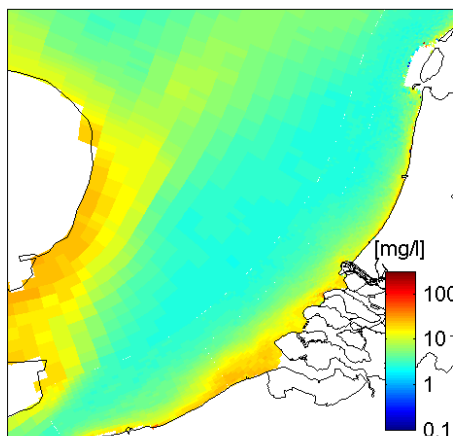
Significant surface wave height at Euro platform



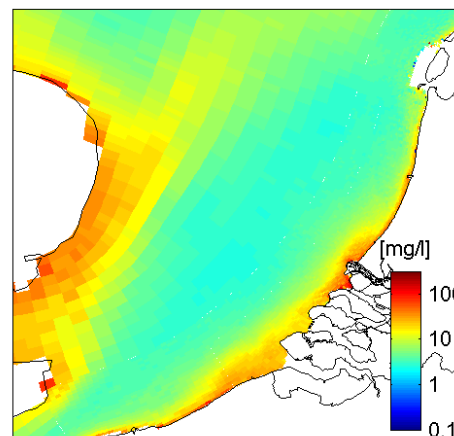
MERIS at surface layer



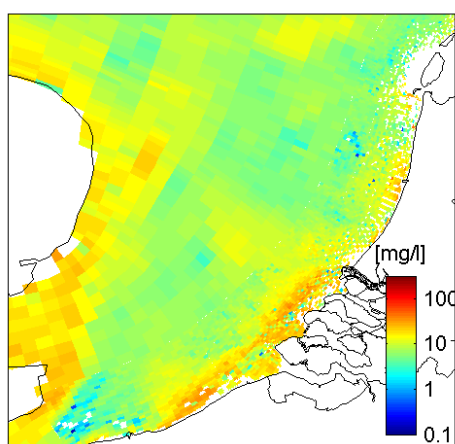
Model at surface layer



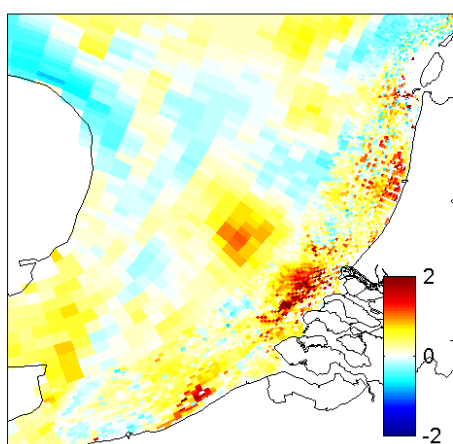
Model at bottom layer



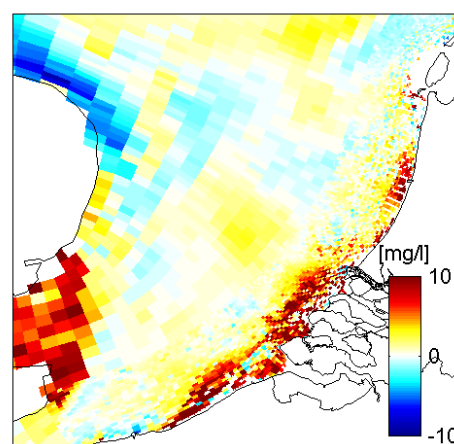
RMS difference



Relative difference [(MERIS-Model)/Model]



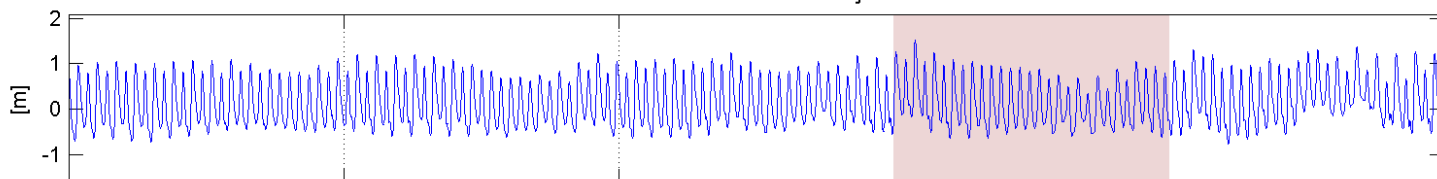
Mean difference [MERIS-Model]


x 10⁶

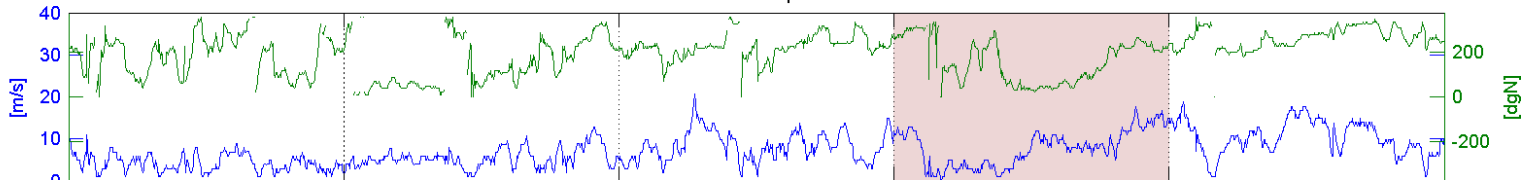
Sand mining volume for Maasvlakte 2



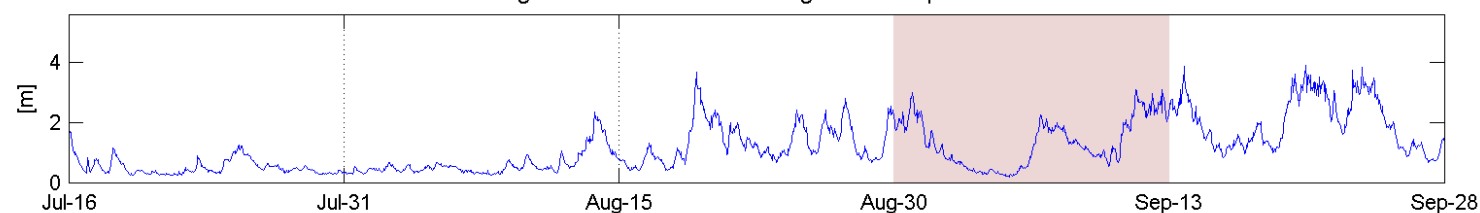
Water level at Noordwijk10



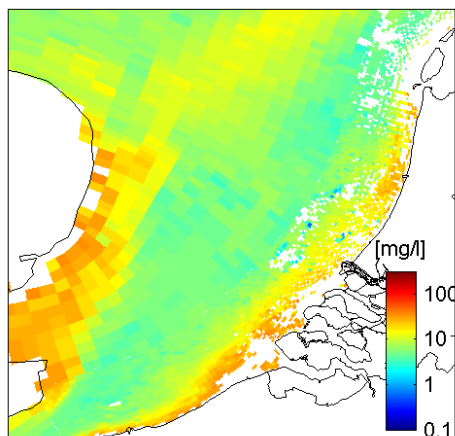
Wind at Euro platform



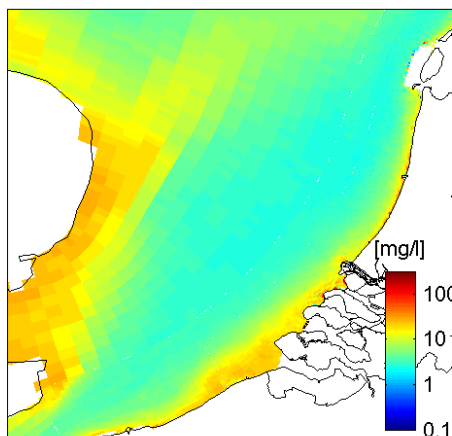
Significant surface wave height at Euro platform



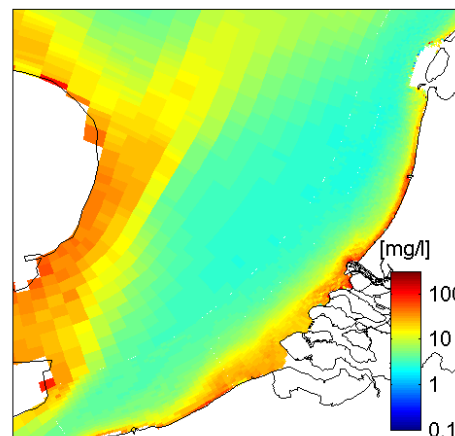
MERIS at surface layer



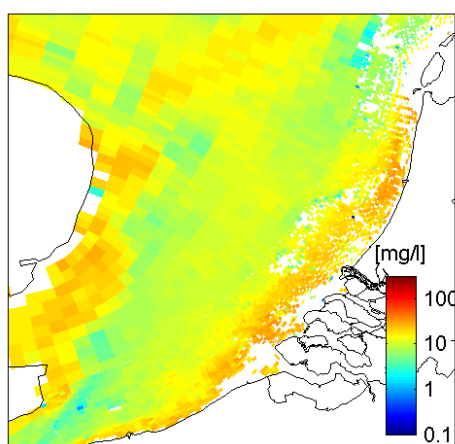
Model at surface layer



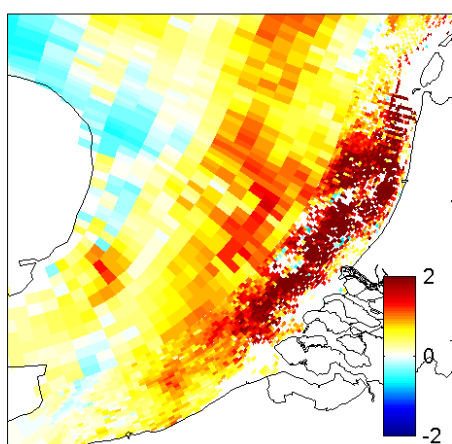
Model at bottom layer



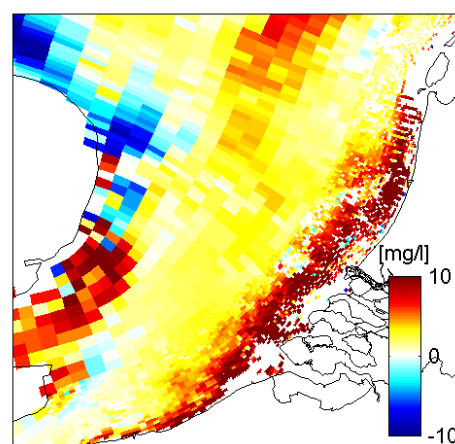
RMS difference



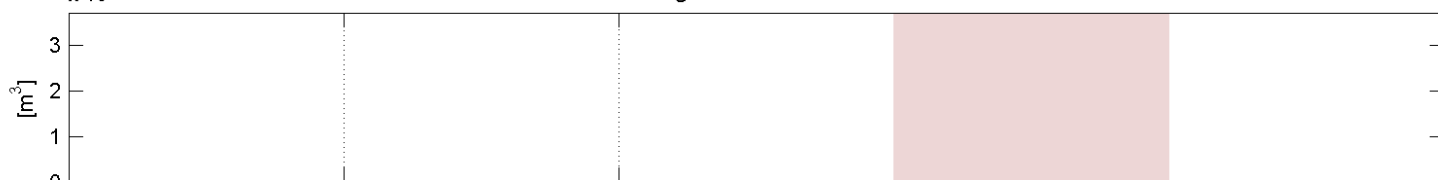
Relative difference [(MERIS-Model)/Model]



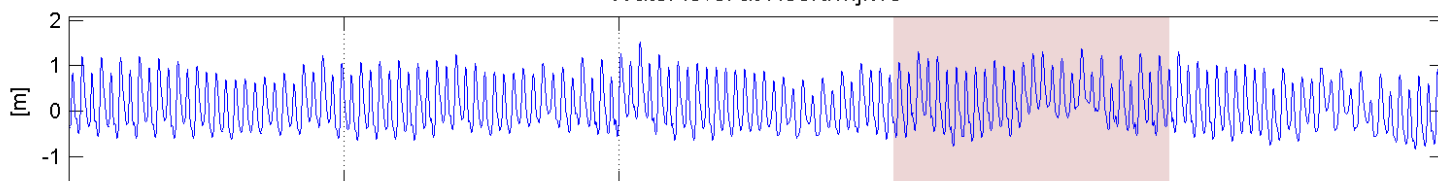
Mean difference [MERIS-Model]

 $\times 10^6$

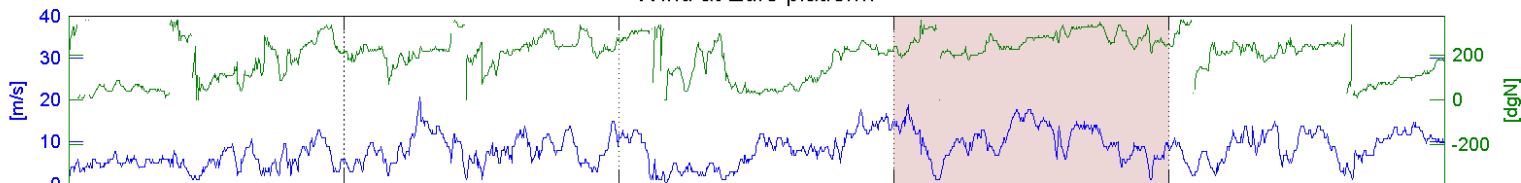
Sand mining volume for Maasvlakte 2



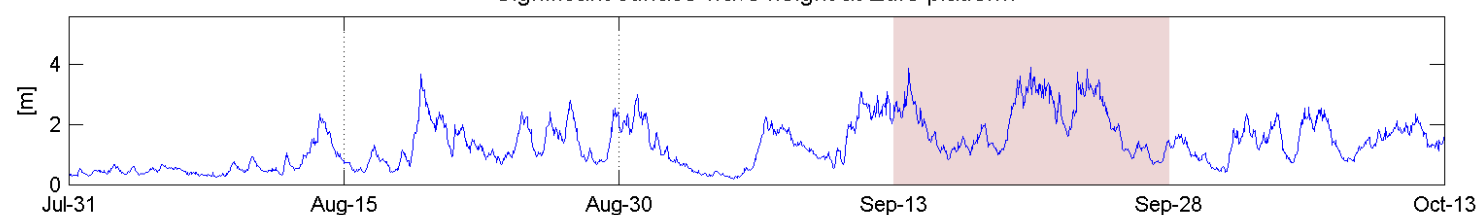
Water level at Noordwijk10



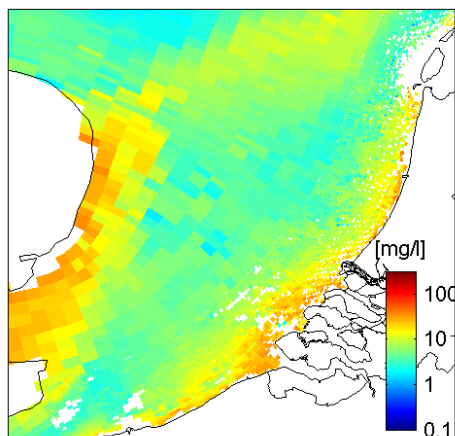
Wind at Euro platform



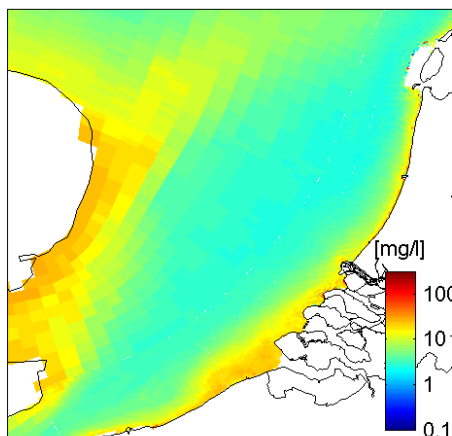
Significant surface wave height at Euro platform



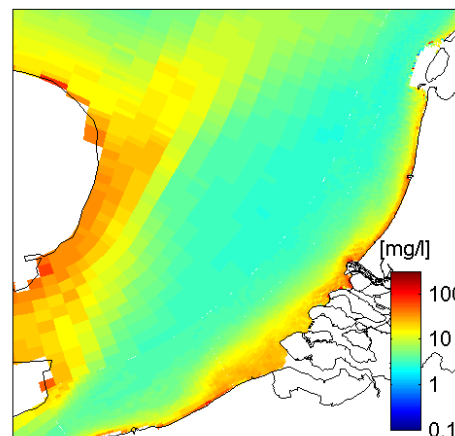
MERIS at surface layer



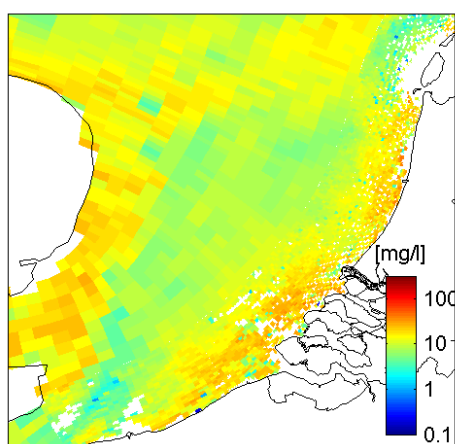
Model at surface layer



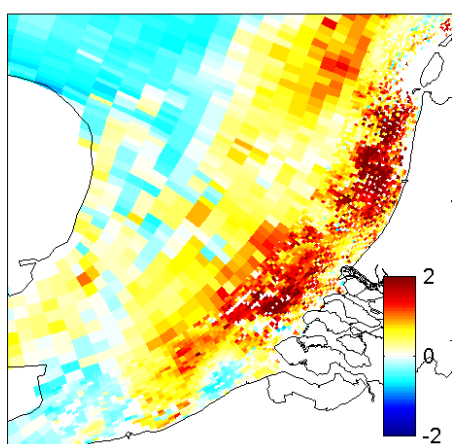
Model at bottom layer



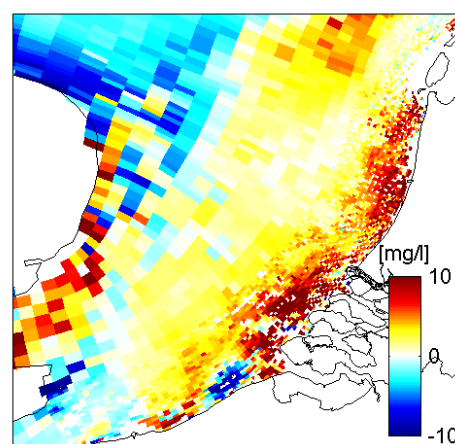
RMS difference



Relative difference [(MERIS-Model)/Model]



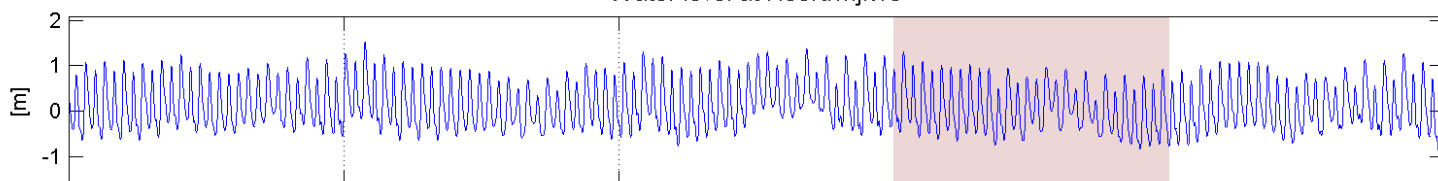
Mean difference [MERIS-Model]


x 10⁶

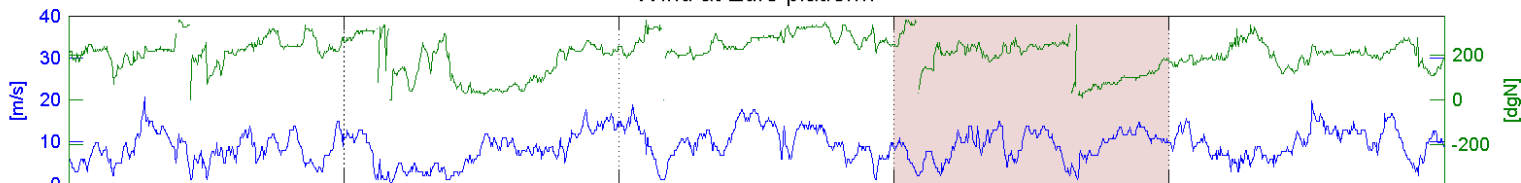
Sand mining volume for Maasvlakte 2



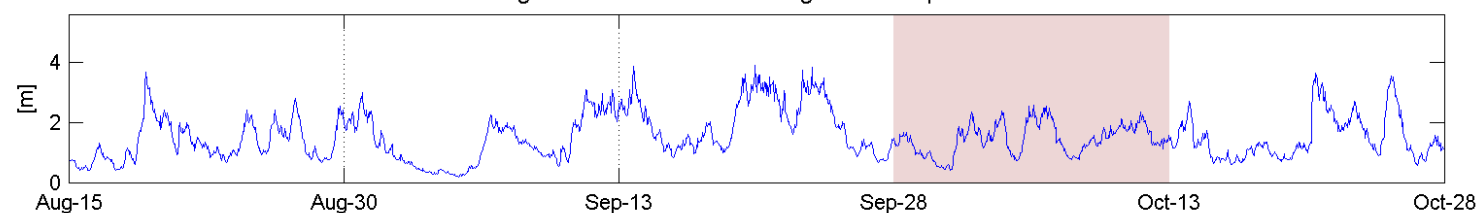
Water level at Noordwijk10



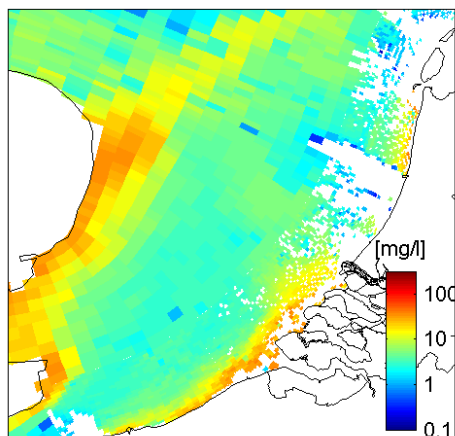
Wind at Euro platform



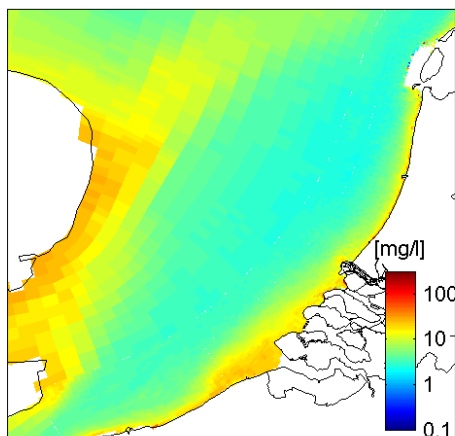
Significant surface wave height at Euro platform



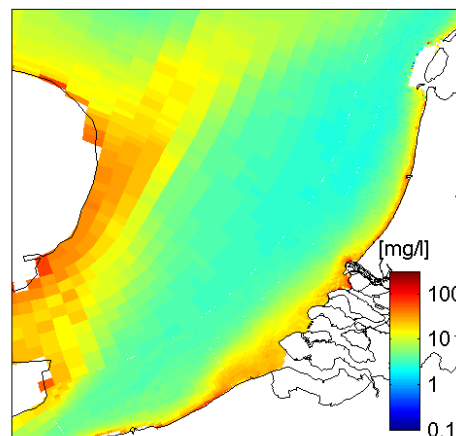
MERIS at surface layer



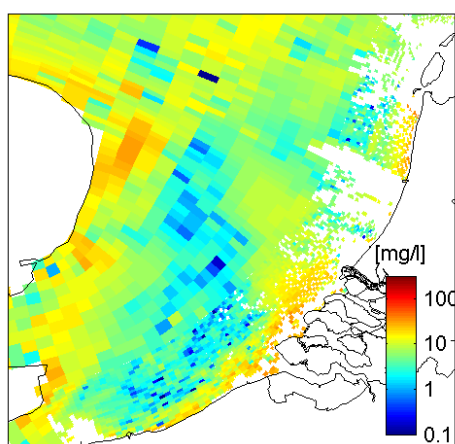
Model at surface layer



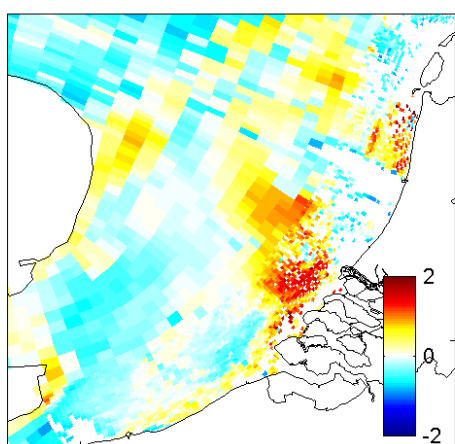
Model at bottom layer



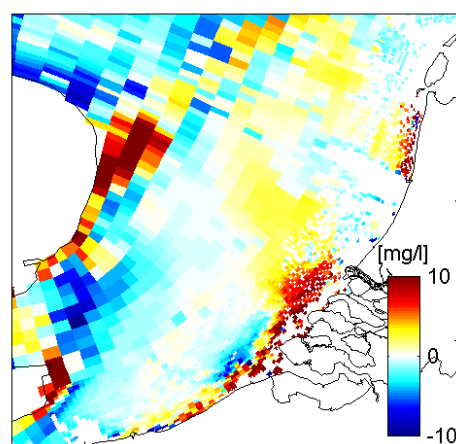
RMS difference



Relative difference [(MERIS-Model)/Model]



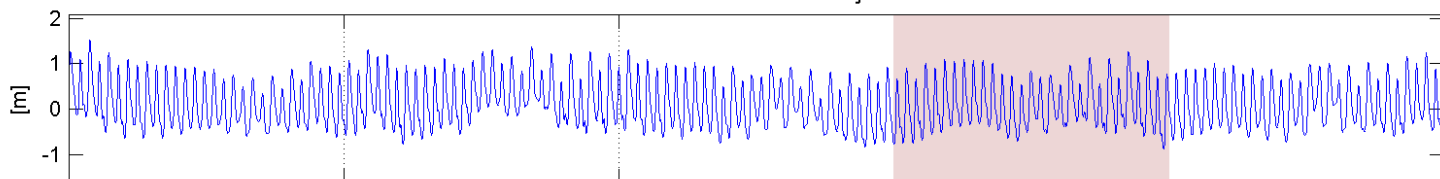
Mean difference [MERIS-Model]


x 10⁶

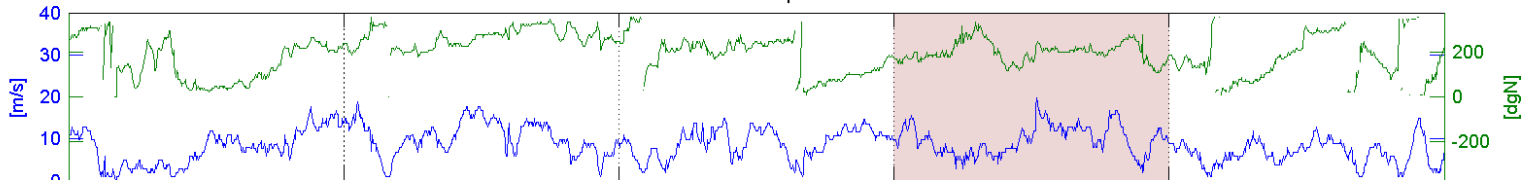
Sand mining volume for Maasvlakte 2



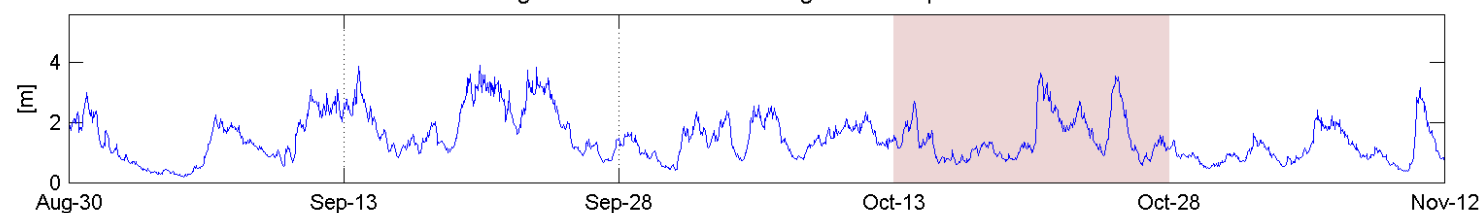
Water level at Noordwijk10



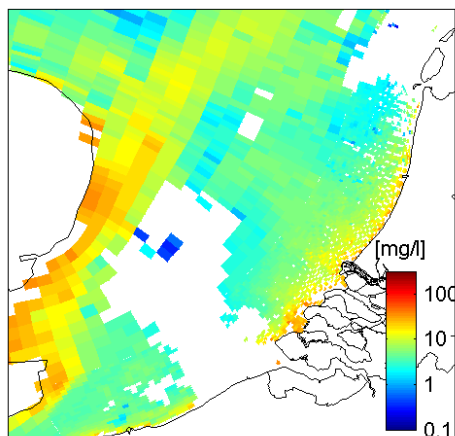
Wind at Euro platform



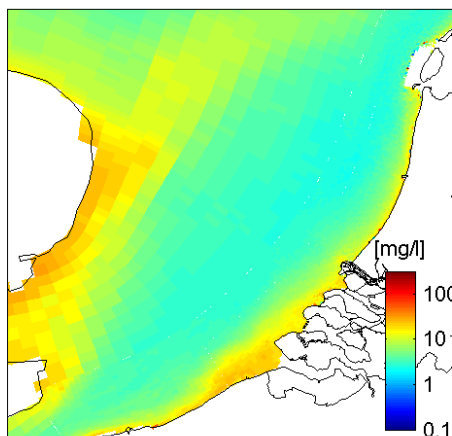
Significant surface wave height at Euro platform



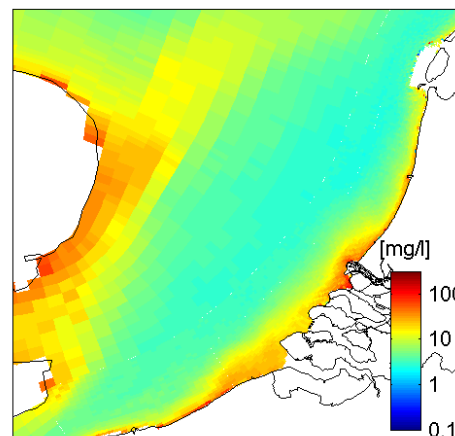
MERIS at surface layer



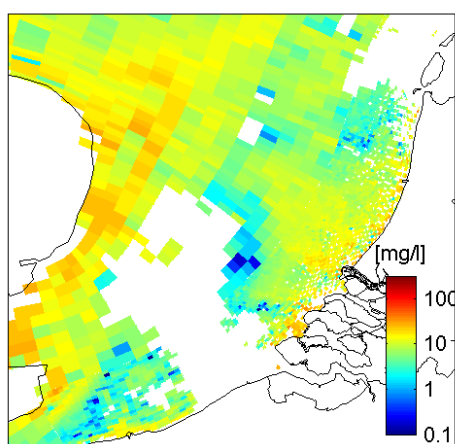
Model at surface layer



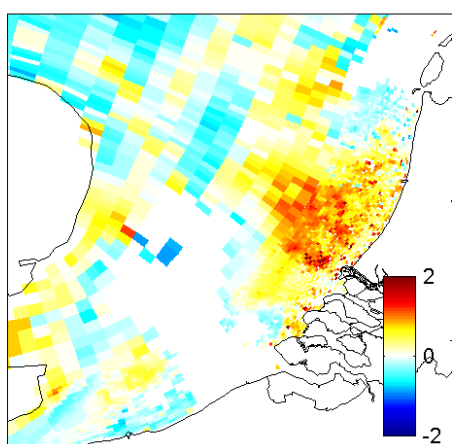
Model at bottom layer



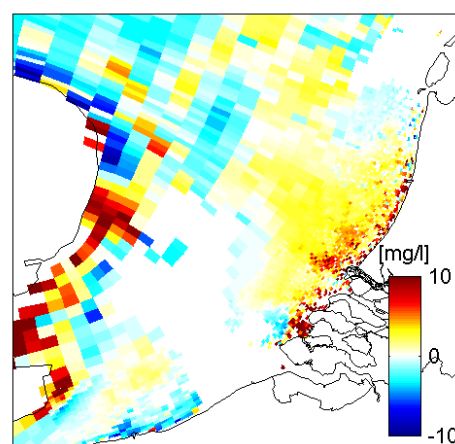
RMS difference



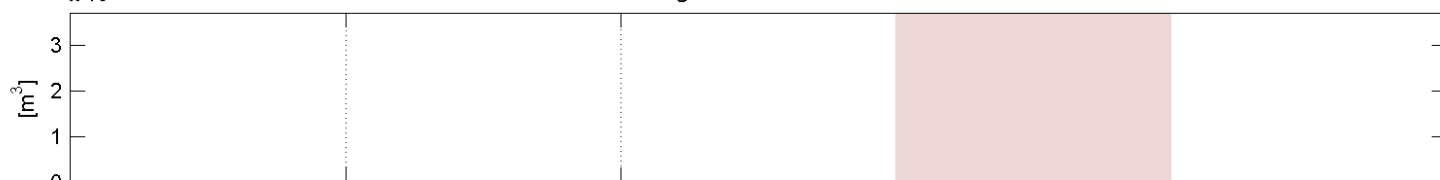
Relative difference [(MERIS-Model)/Model]



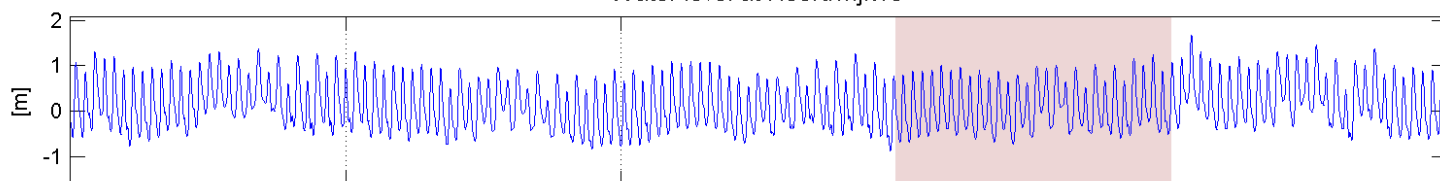
Mean difference [MERIS-Model]

 $\times 10^6$

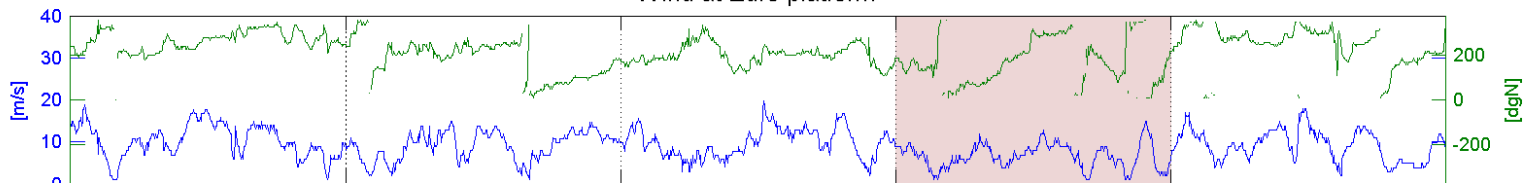
Sand mining volume for Maasvlakte 2



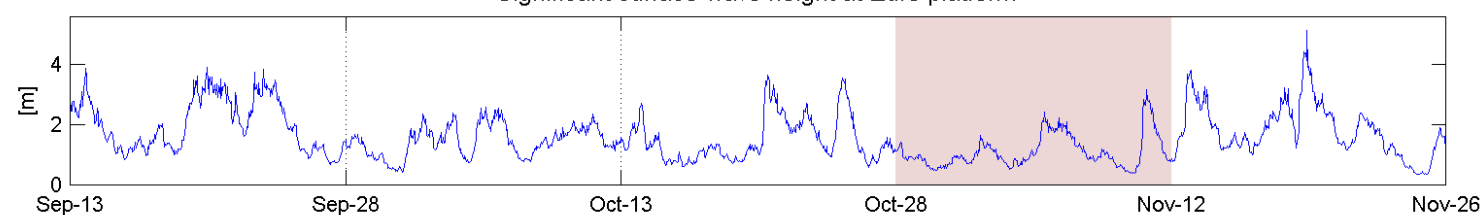
Water level at Noordwijk10



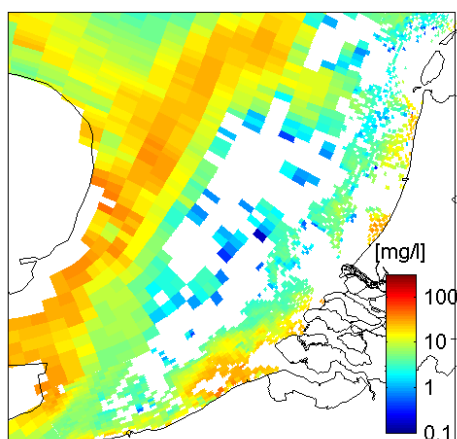
Wind at Euro platform



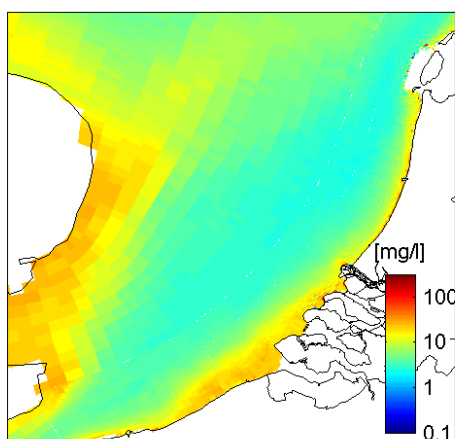
Significant surface wave height at Euro platform



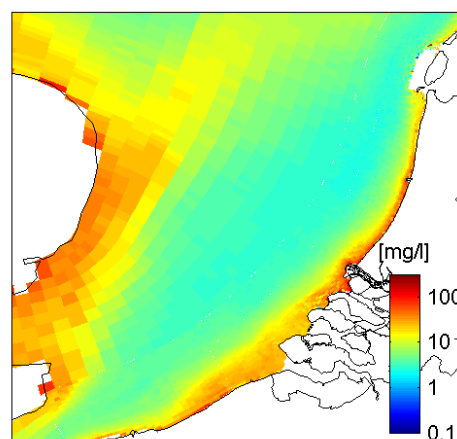
MERIS at surface layer



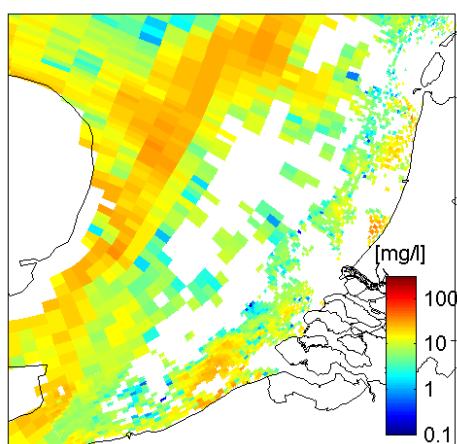
Model at surface layer



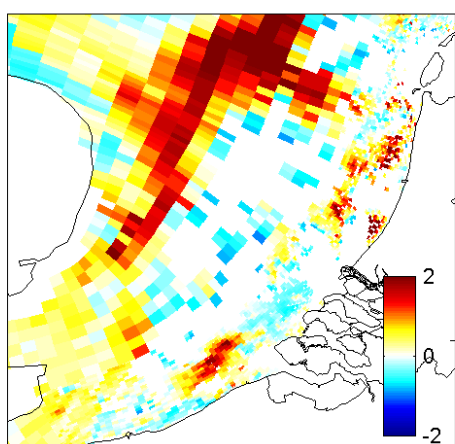
Model at bottom layer



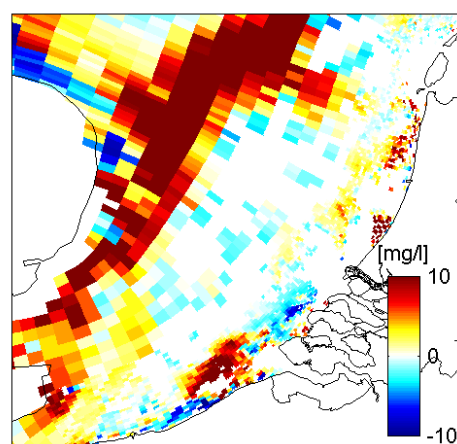
RMS difference



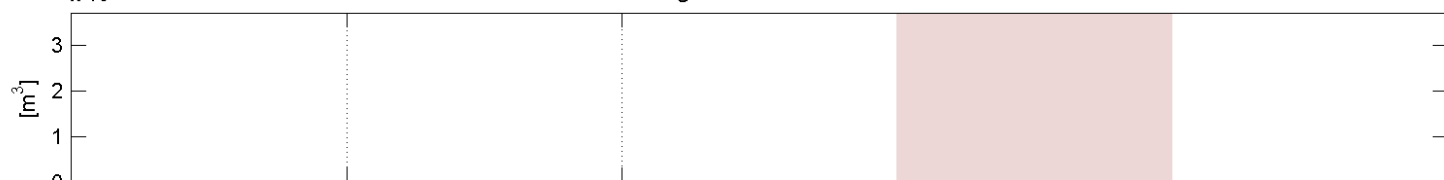
Relative difference [(MERIS-Model)/Model]



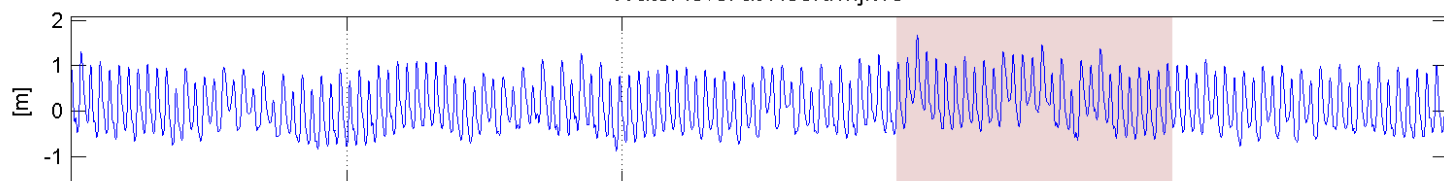
Mean difference [MERIS-Model]


x 10⁶

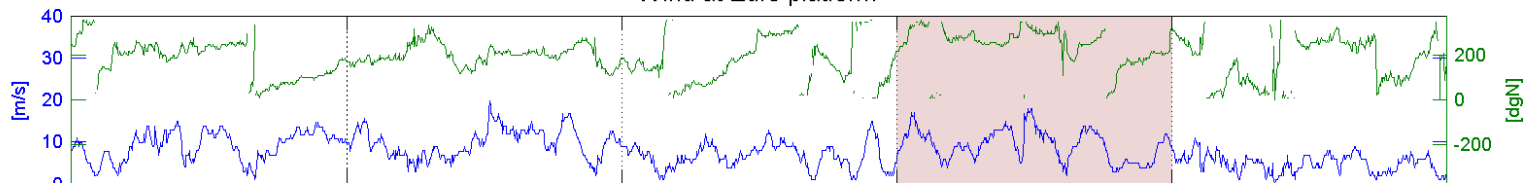
Sand mining volume for Maasvlakte 2



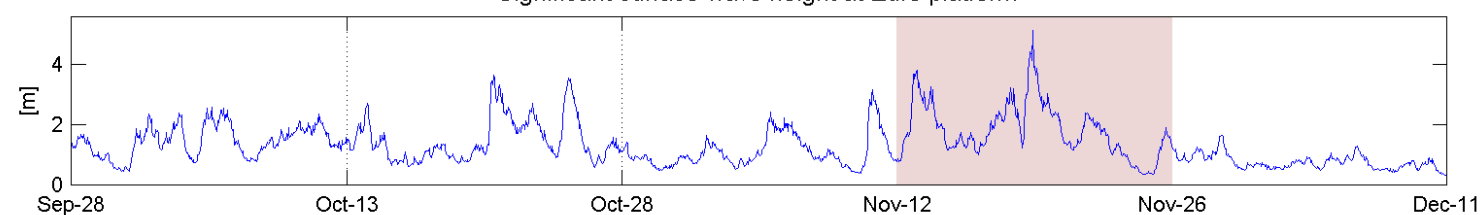
Water level at Noordwijk10



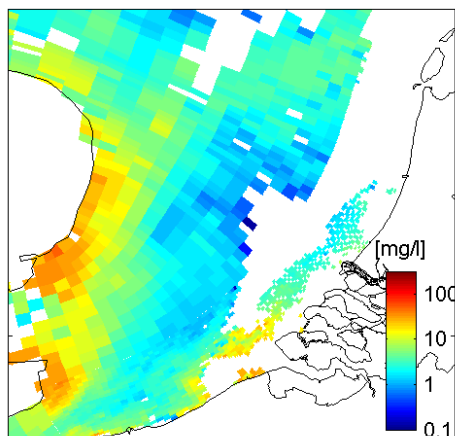
Wind at Euro platform



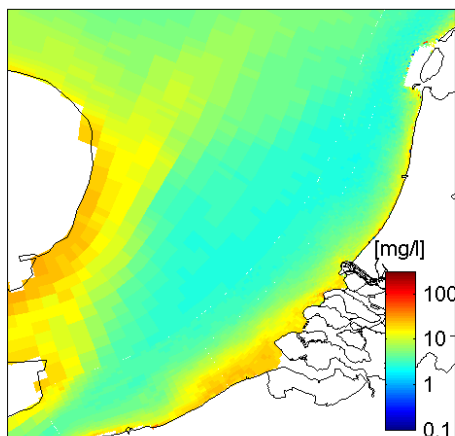
Significant surface wave height at Euro platform



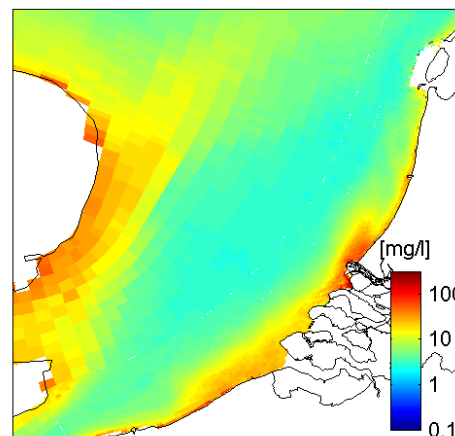
MERIS at surface layer



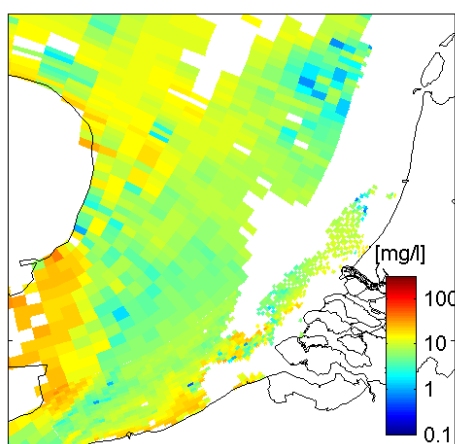
Model at surface layer



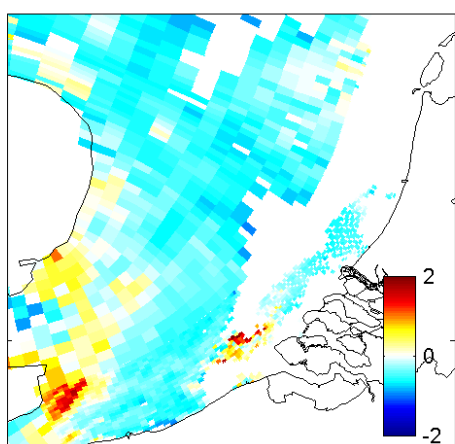
Model at bottom layer



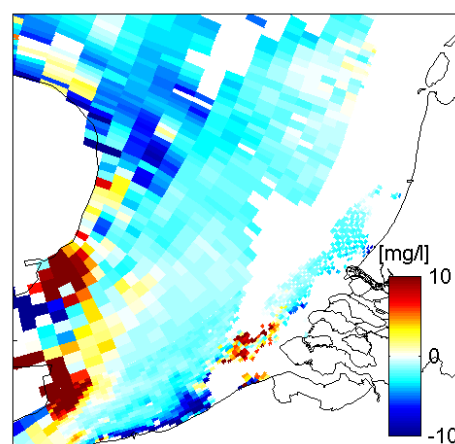
RMS difference



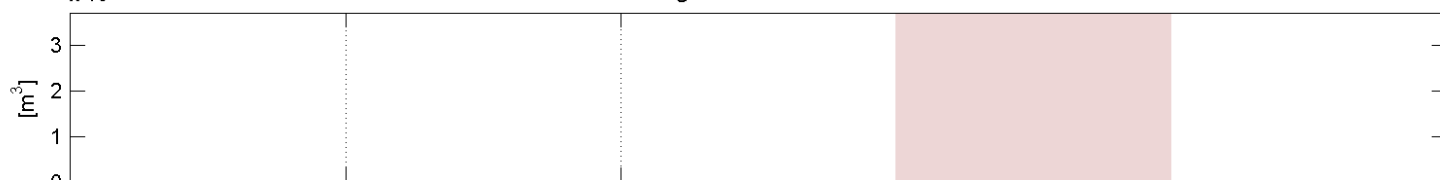
Relative difference [(MERIS-Model)/Model]



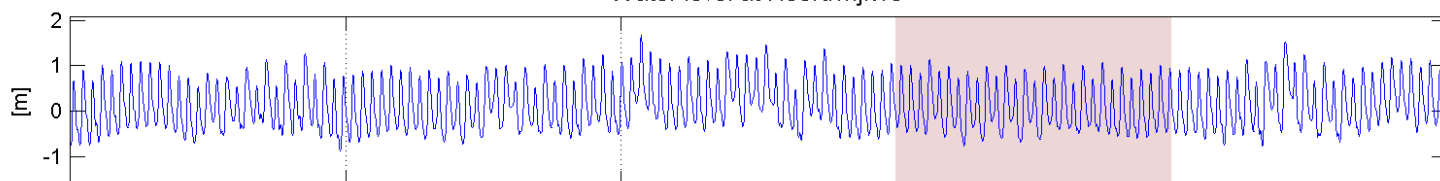
Mean difference [MERIS-Model]


 $\times 10^6$

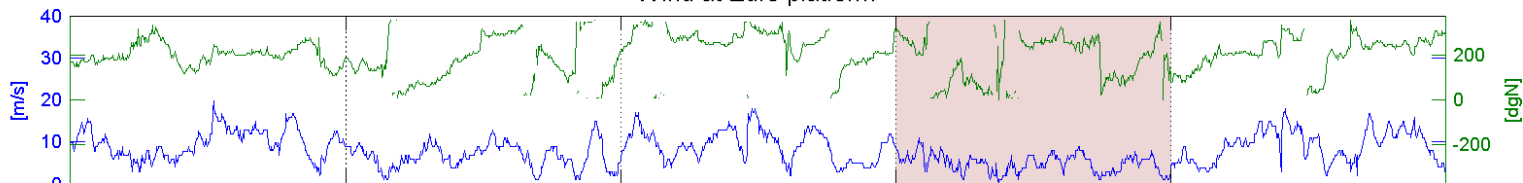
Sand mining volume for Maasvlakte 2



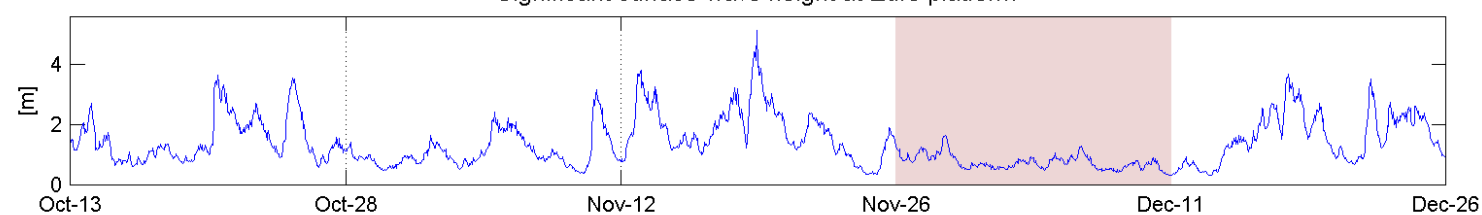
Water level at Noordwijk10



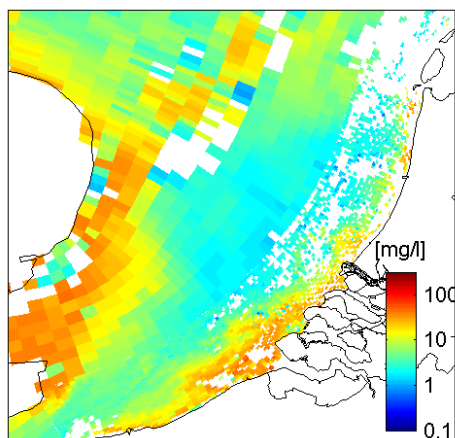
Wind at Euro platform



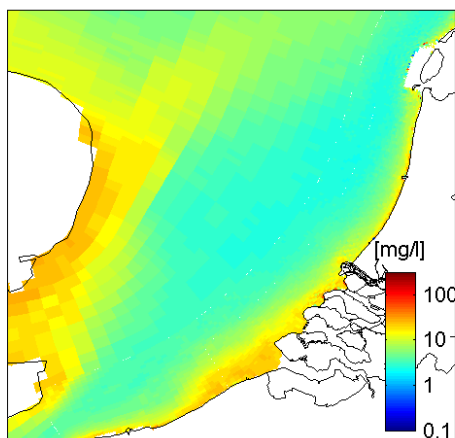
Significant surface wave height at Euro platform



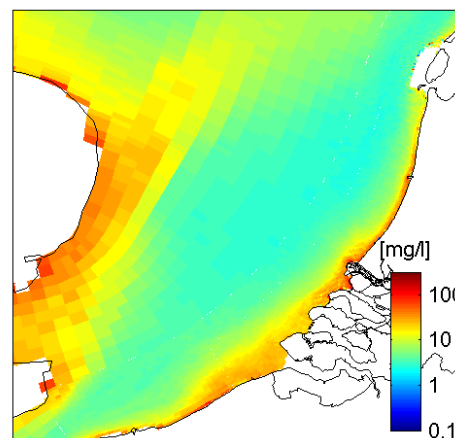
MERIS at surface layer



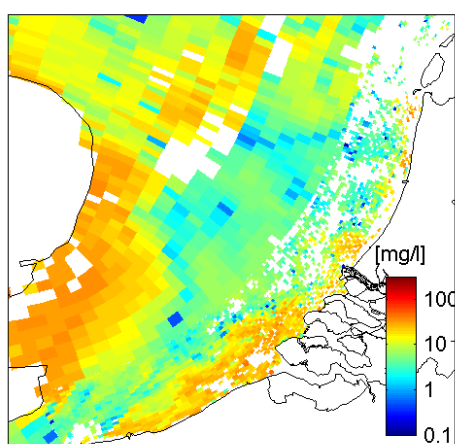
Model at surface layer



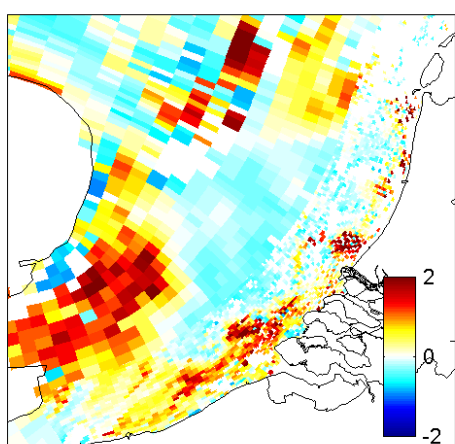
Model at bottom layer



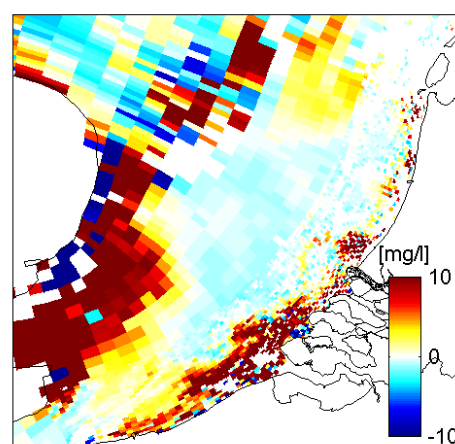
RMS difference



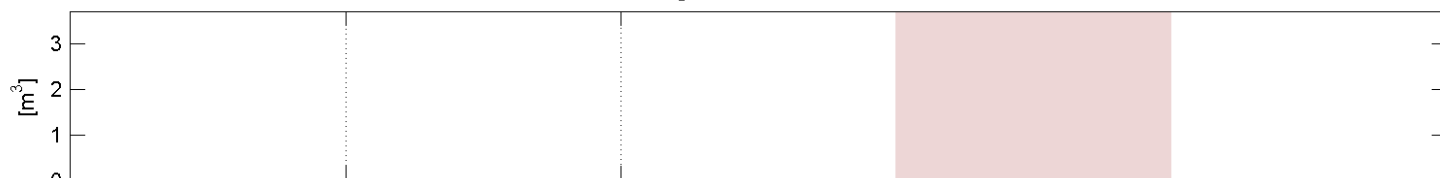
Relative difference [(MERIS-Model)/Model]



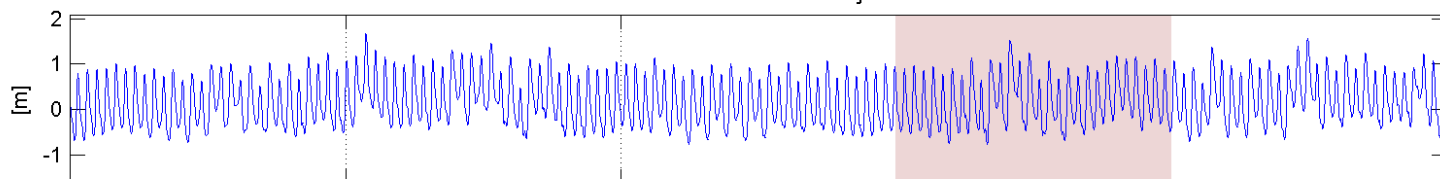
Mean difference [MERIS-Model]

 $\times 10^6$

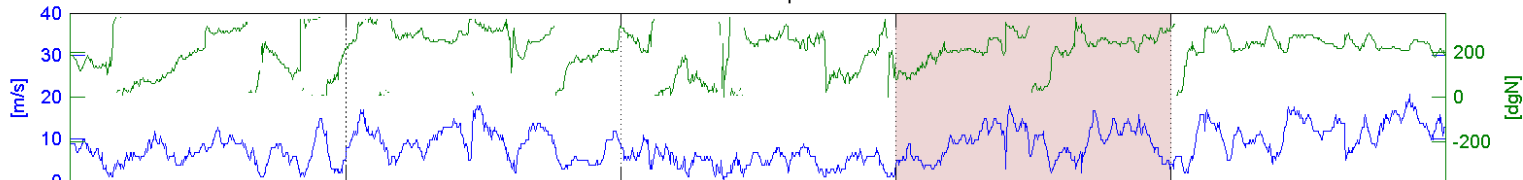
Sand mining volume for Maasvlakte 2



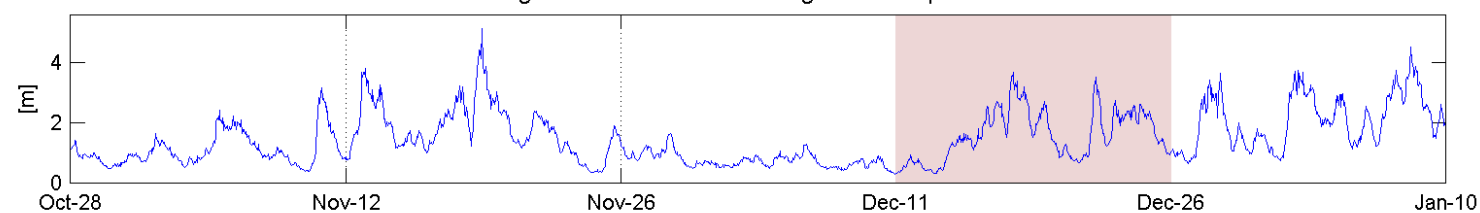
Water level at Noordwijk10



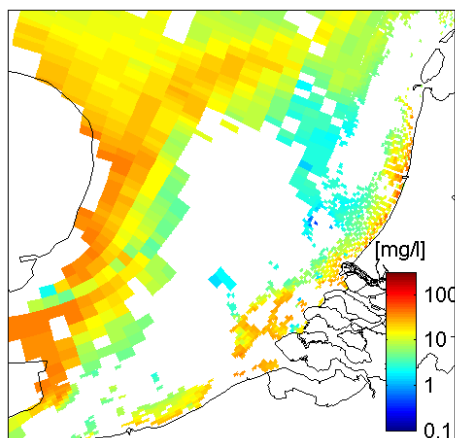
Wind at Euro platform



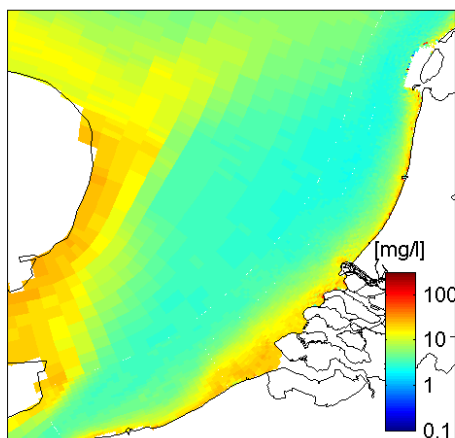
Significant surface wave height at Euro platform



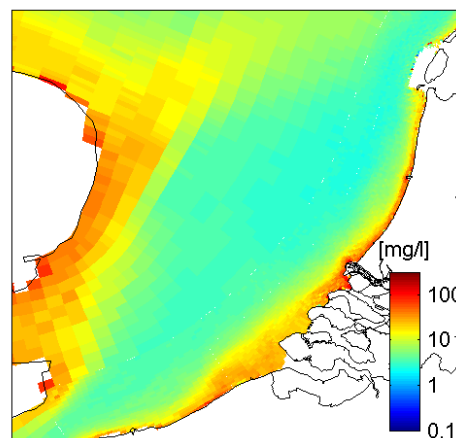
MERIS at surface layer



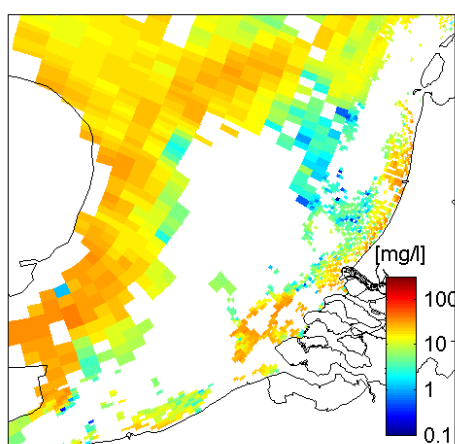
Model at surface layer



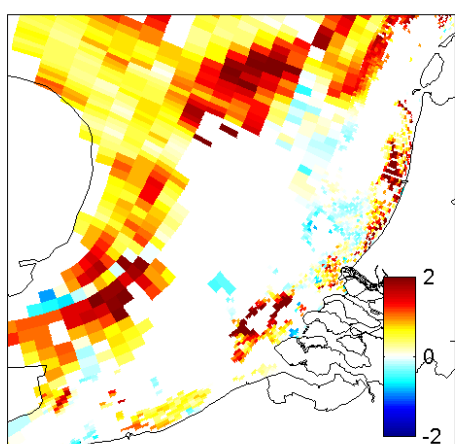
Model at bottom layer



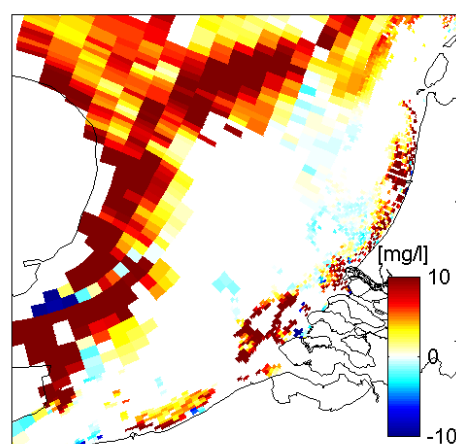
RMS difference



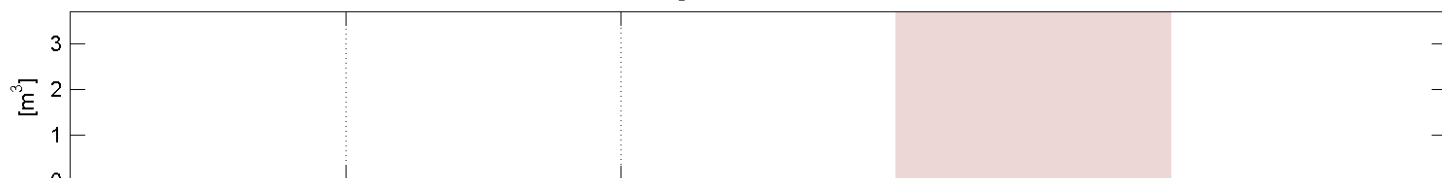
Relative difference [(MERIS-Model)/Model]



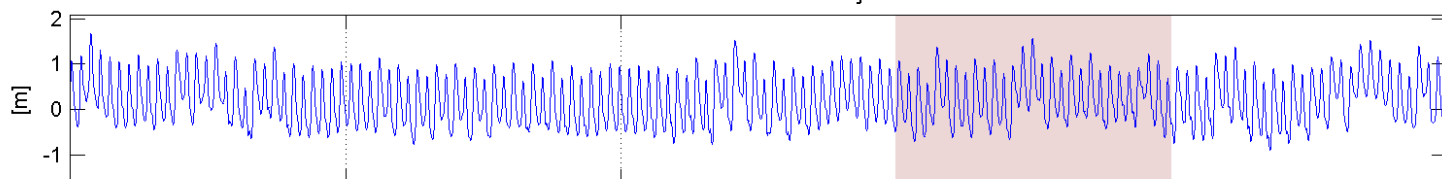
Mean difference [MERIS-Model]

 $\times 10^6$

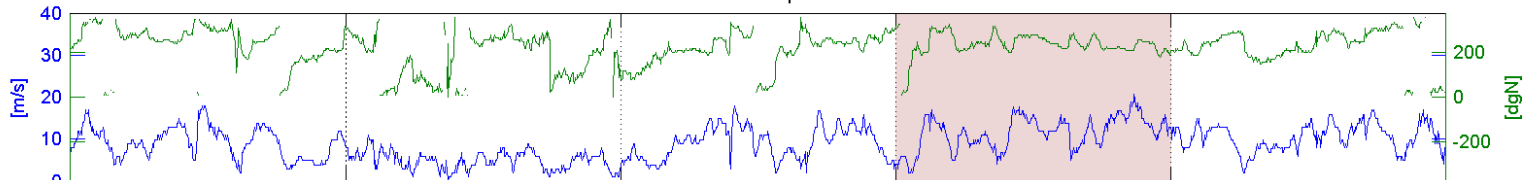
Sand mining volume for Maasvlakte 2



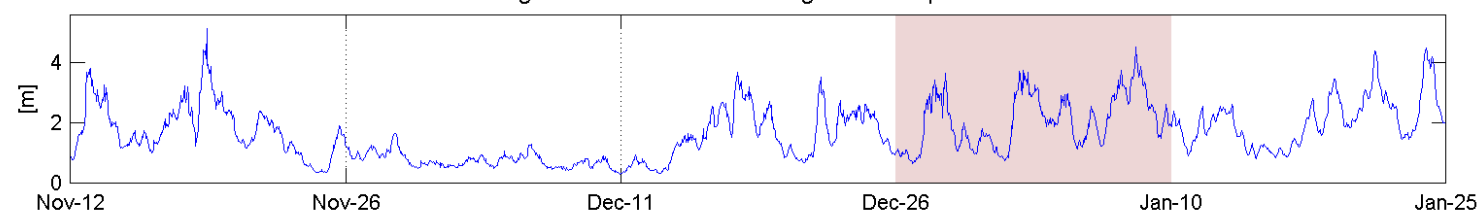
Water level at Noordwijk10



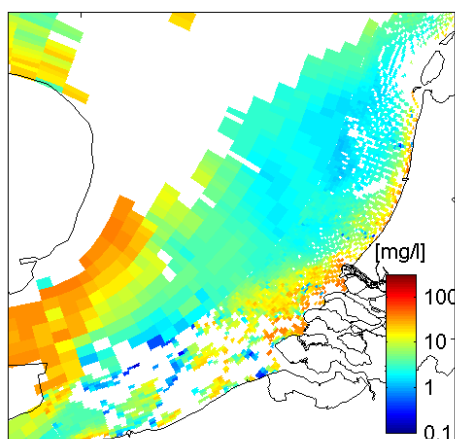
Wind at Euro platform



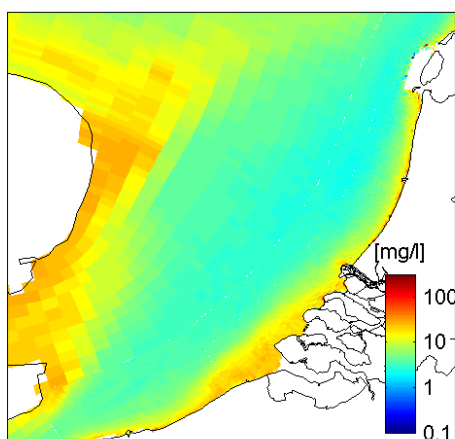
Significant surface wave height at Euro platform



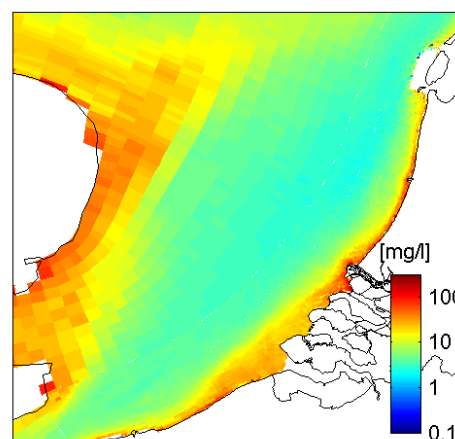
MERIS at surface layer



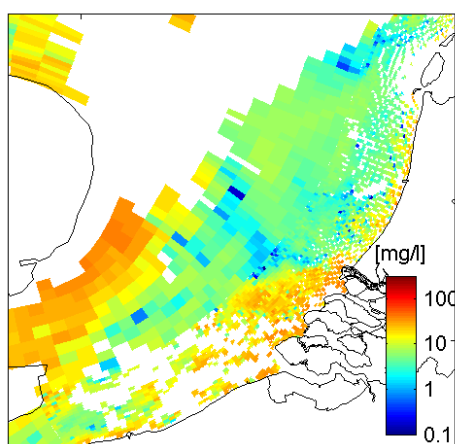
Model at surface layer



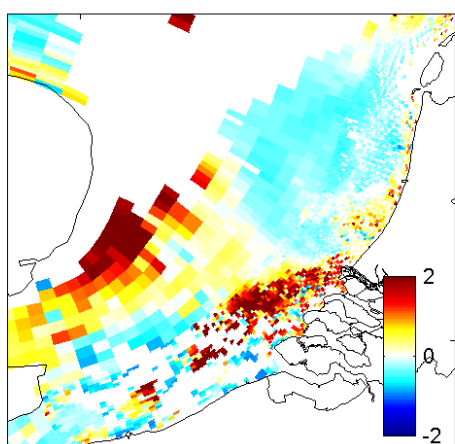
Model at bottom layer



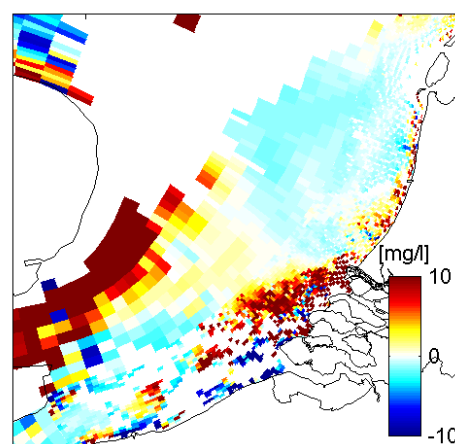
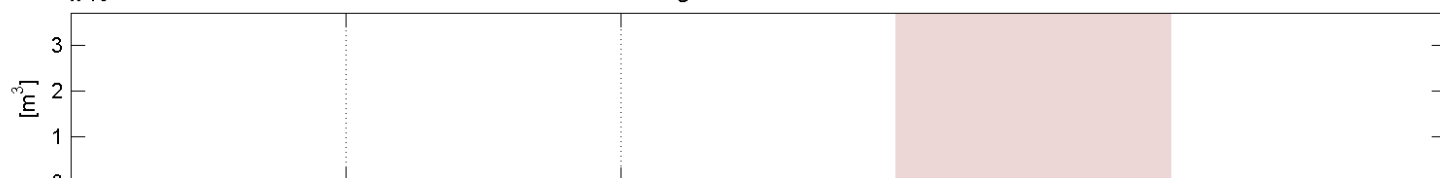
RMS difference



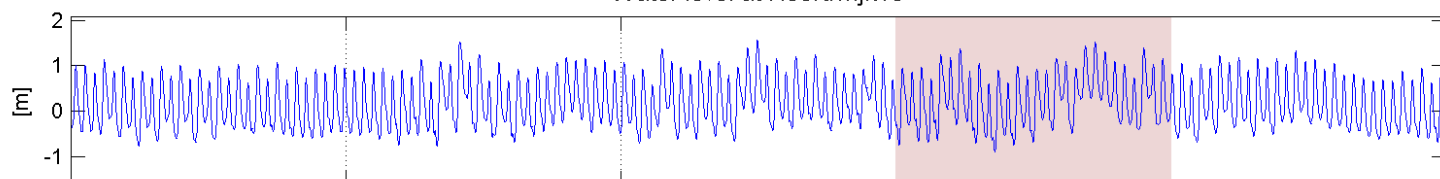
Relative difference [(MERIS-Model)/Model]



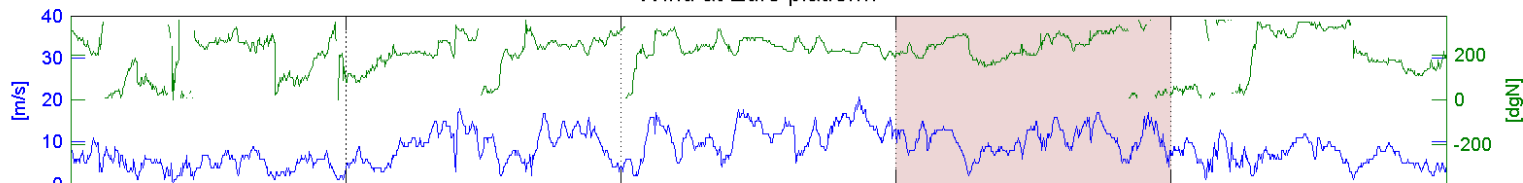
Mean difference [MERIS-Model]


x 10⁶ Sand mining volume for Maasvlakte 2

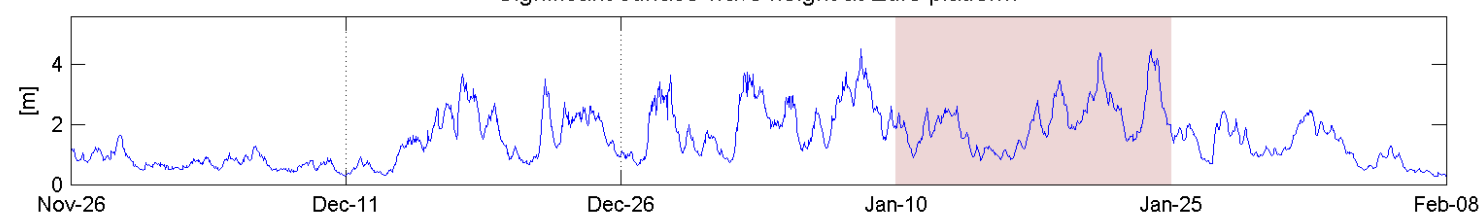
Water level at Noordwijk10



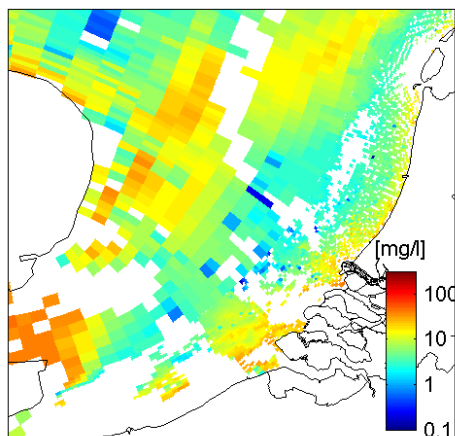
Wind at Euro platform



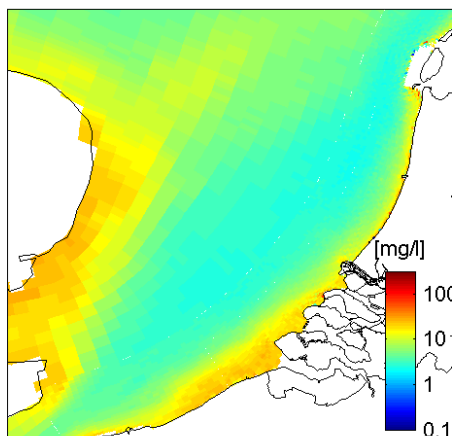
Significant surface wave height at Euro platform



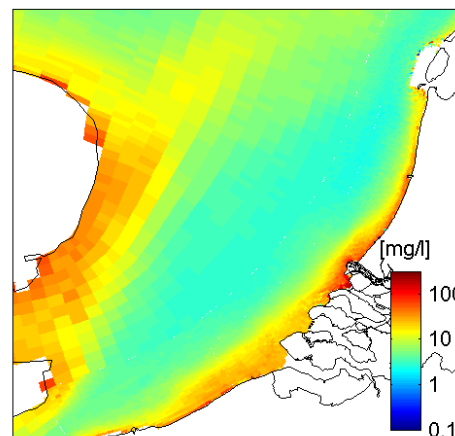
MERIS at surface layer



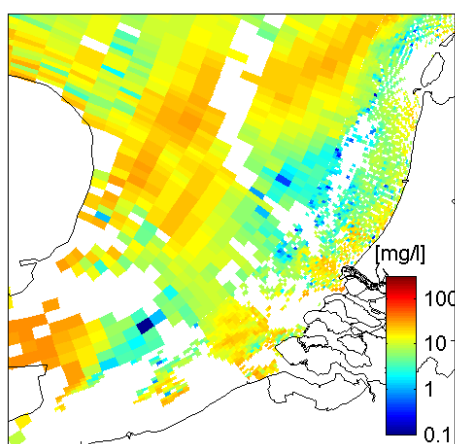
Model at surface layer



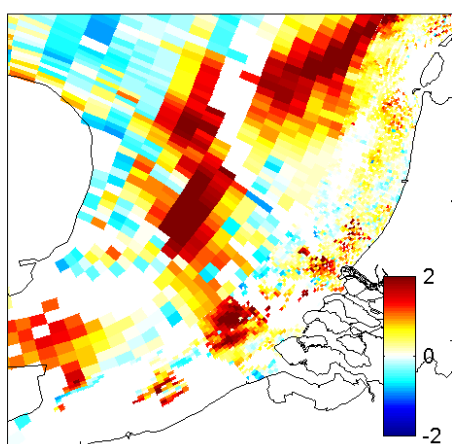
Model at bottom layer



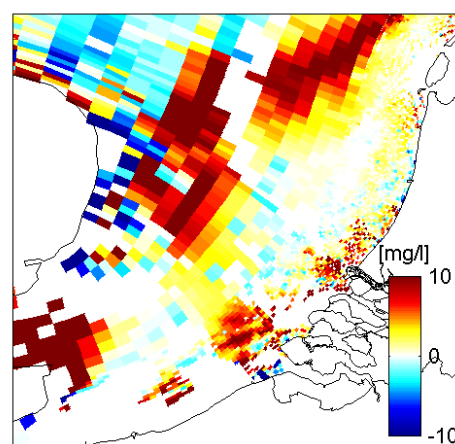
RMS difference



Relative difference [(MERIS-Model)/Model]



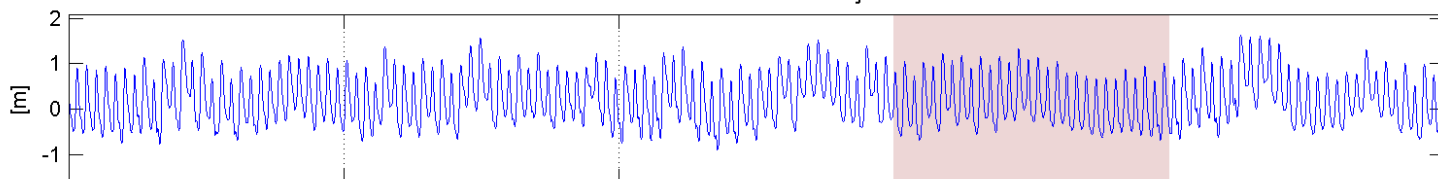
Mean difference [MERIS-Model]


x 10⁶

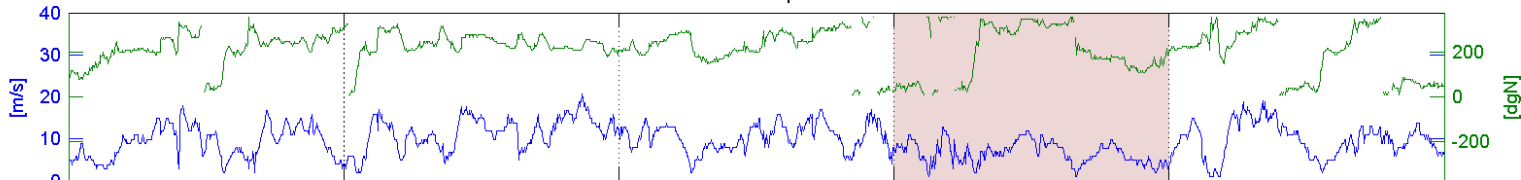
Sand mining volume for Maasvlakte 2



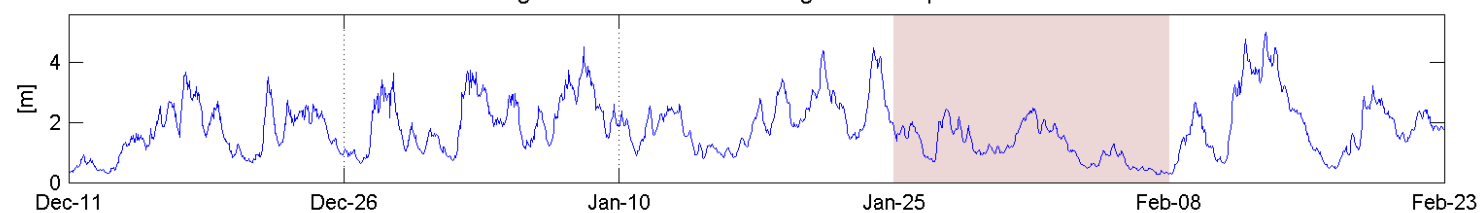
Water level at Noordwijk10



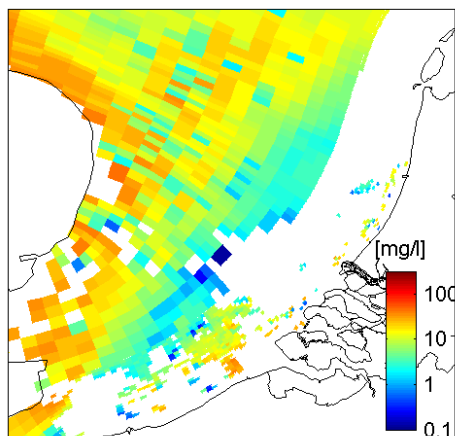
Wind at Euro platform



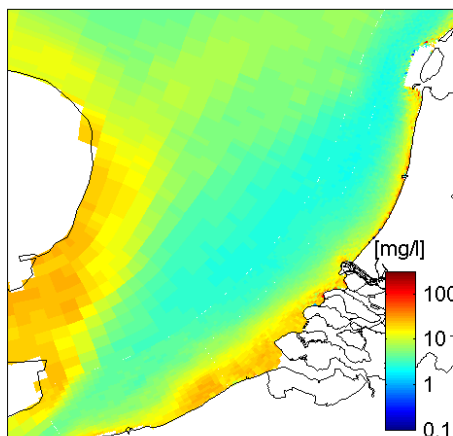
Significant surface wave height at Euro platform



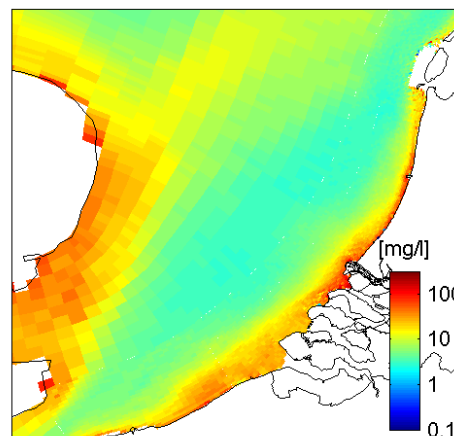
MERIS at surface layer



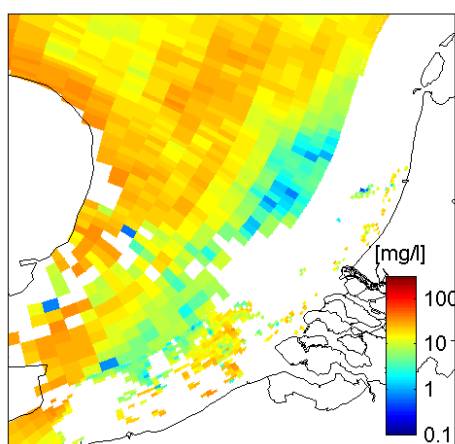
Model at surface layer



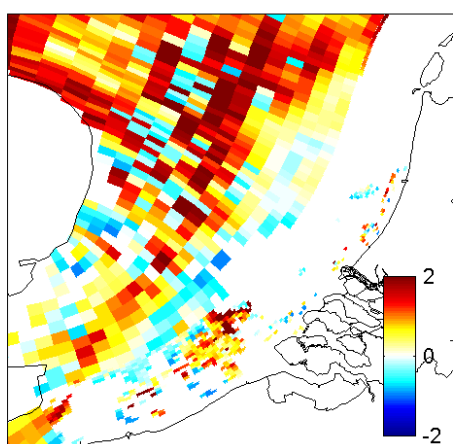
Model at bottom layer



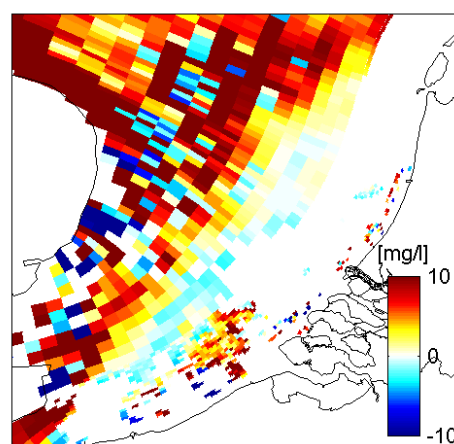
RMS difference



Relative difference [(MERIS-Model)/Model]



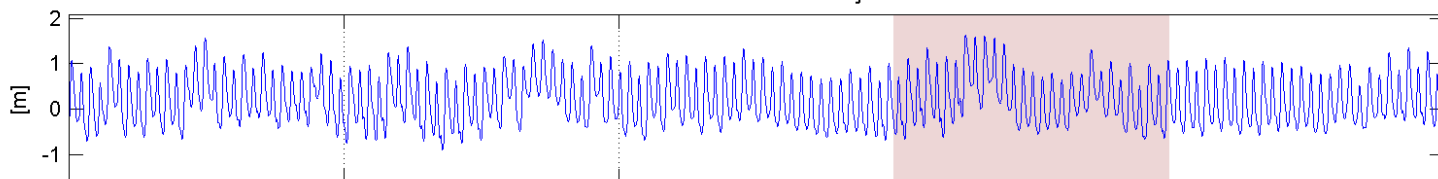
Mean difference [MERIS-Model]


 $\times 10^6$

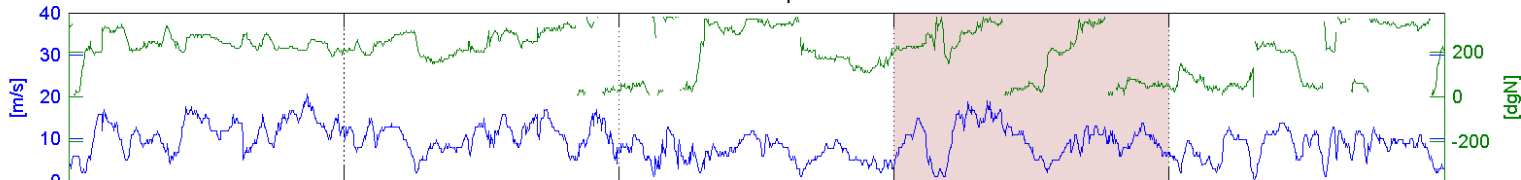
Sand mining volume for Maasvlakte 2



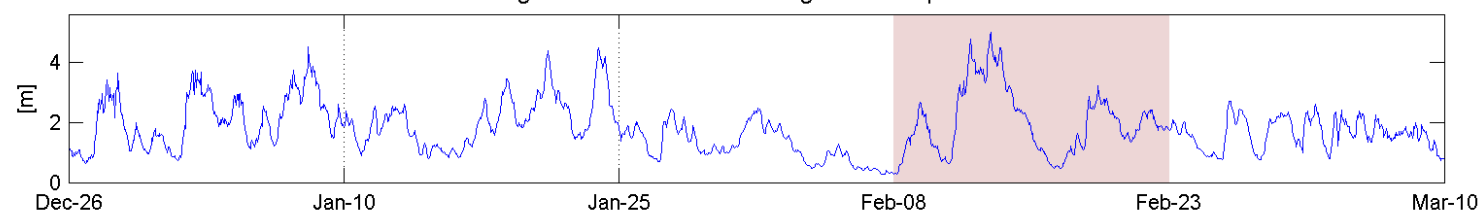
Water level at Noordwijk10



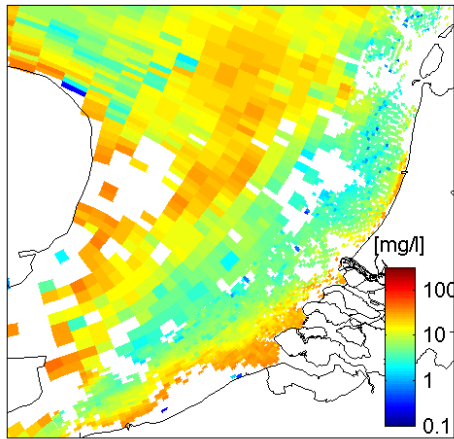
Wind at Euro platform



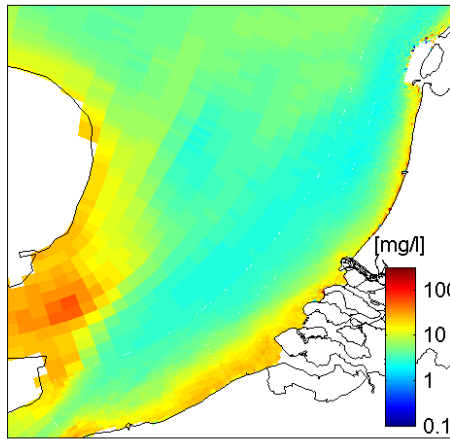
Significant surface wave height at Euro platform



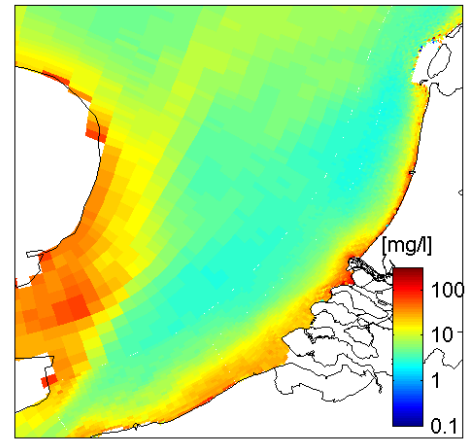
MERIS at surface layer



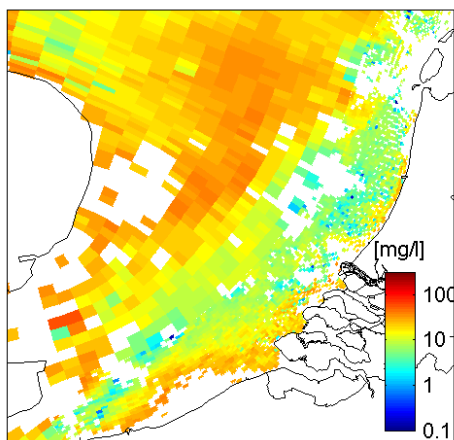
Model at surface layer



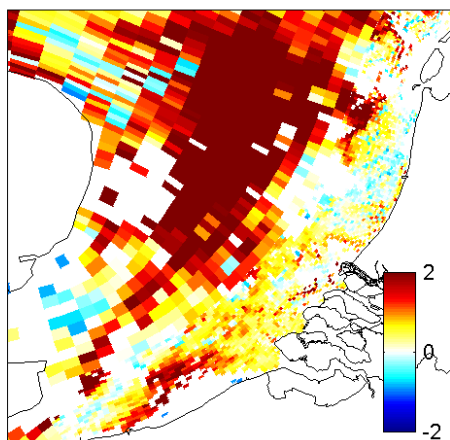
Model at bottom layer



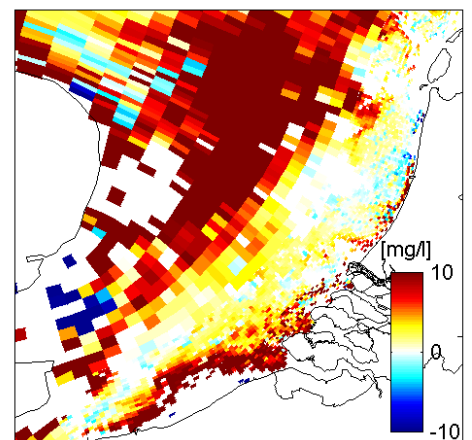
RMS difference



Relative difference [(MERIS-Model)/Model]



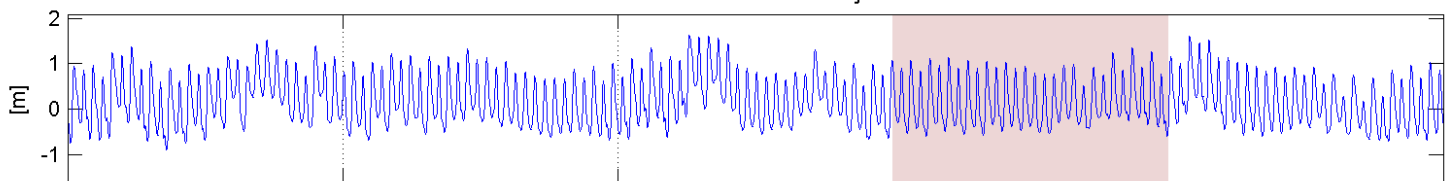
Mean difference [MERIS-Model]

 $\times 10^6$

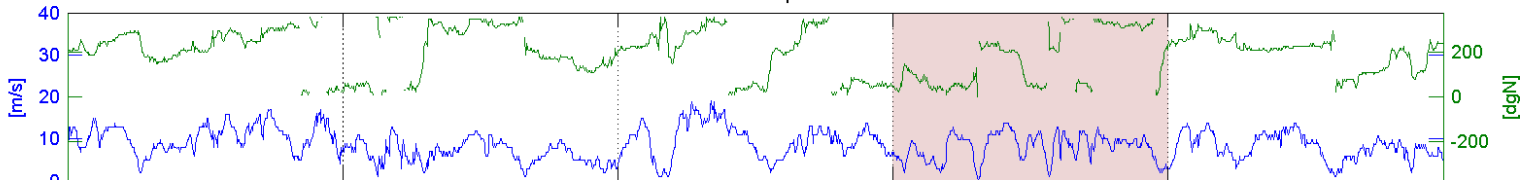
Sand mining volume for Maasvlakte 2



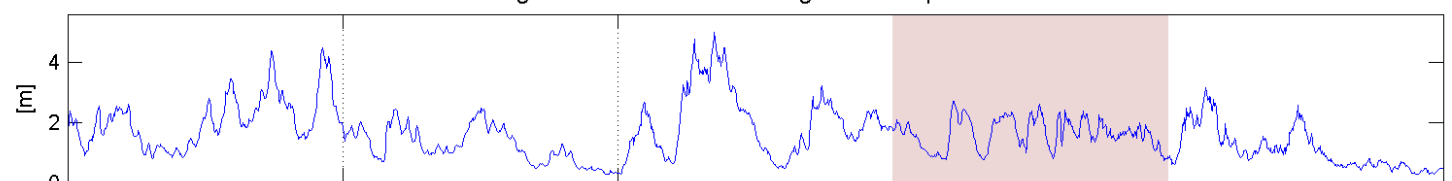
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Jan-10

Jan-25

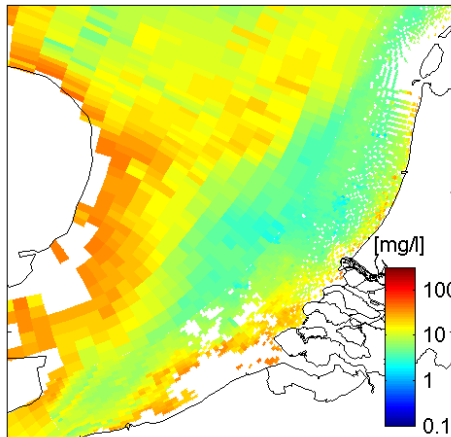
Feb-08

Feb-23

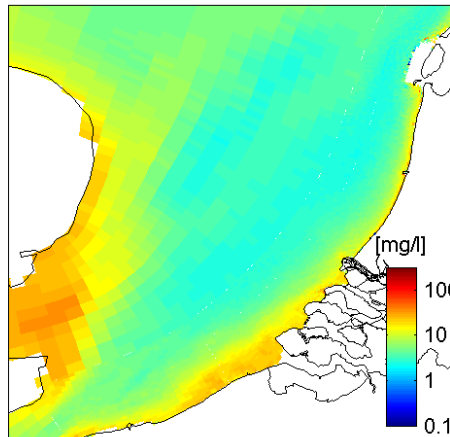
Mar-10

Mar-25

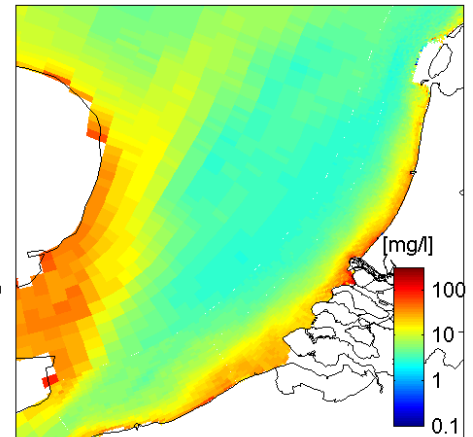
MERIS at surface layer



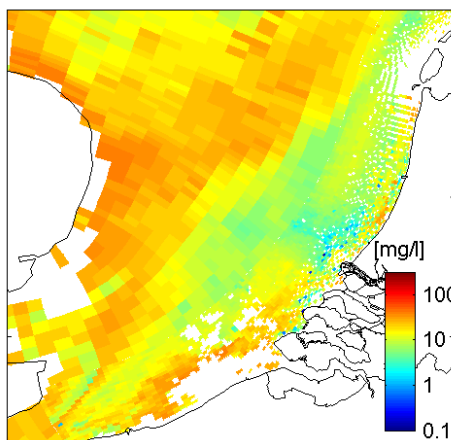
Model at surface layer



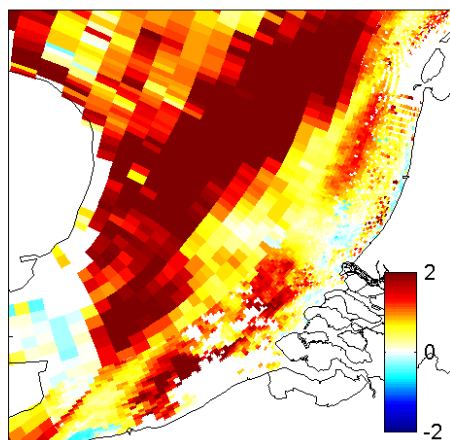
Model at bottom layer



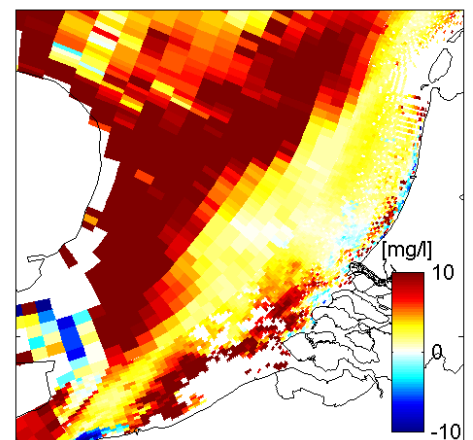
RMS difference



Relative difference [(MERIS-Model)/Model]



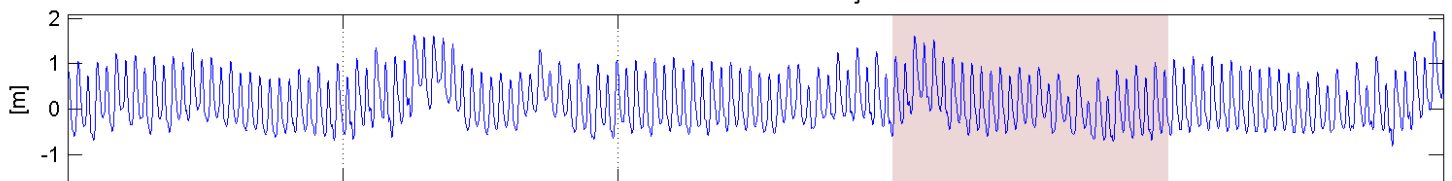
Mean difference [MERIS-Model]

x 10⁶

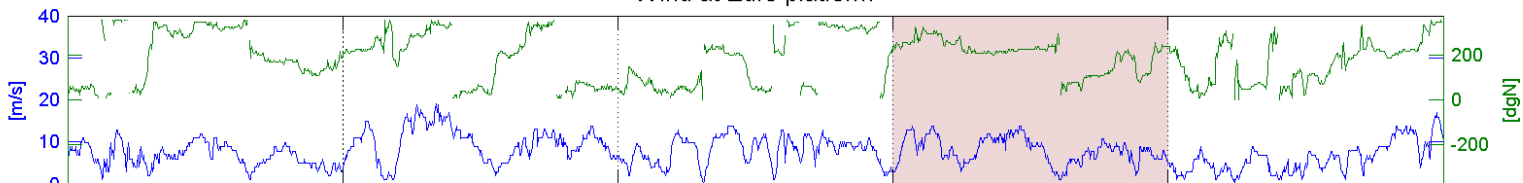
Sand mining volume for Maasvlakte 2



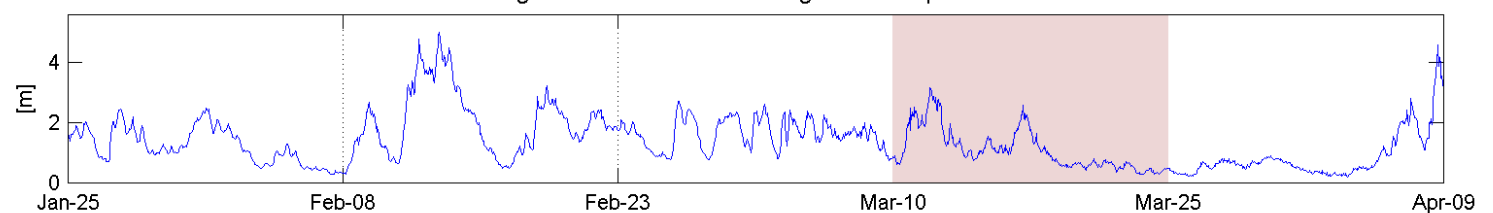
Water level at Noordwijk10



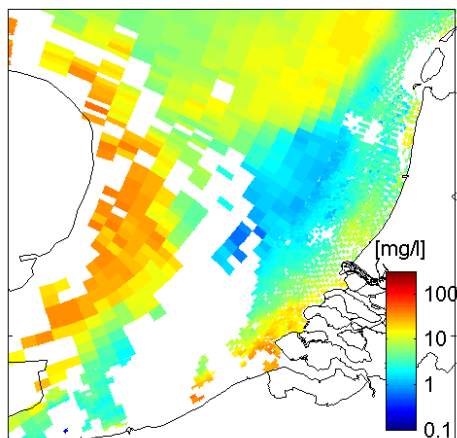
Wind at Euro platform



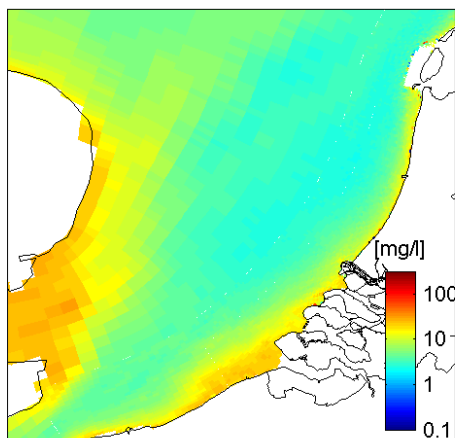
Significant surface wave height at Euro platform



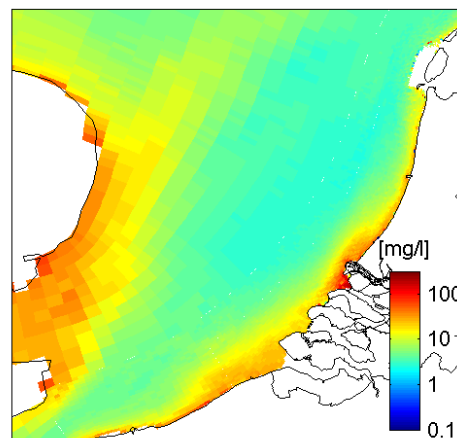
MERIS at surface layer



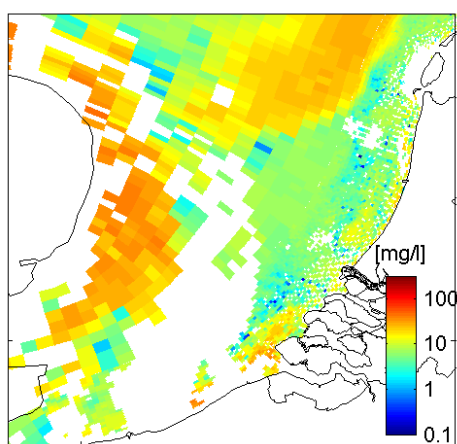
Model at surface layer



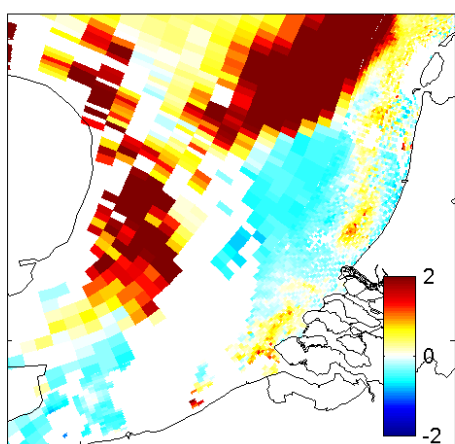
Model at bottom layer



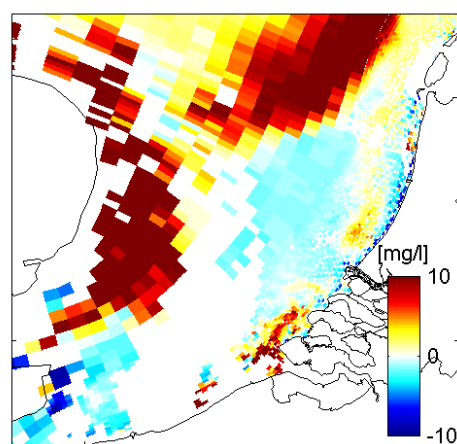
RMS difference



Relative difference [(MERIS-Model)/Model]



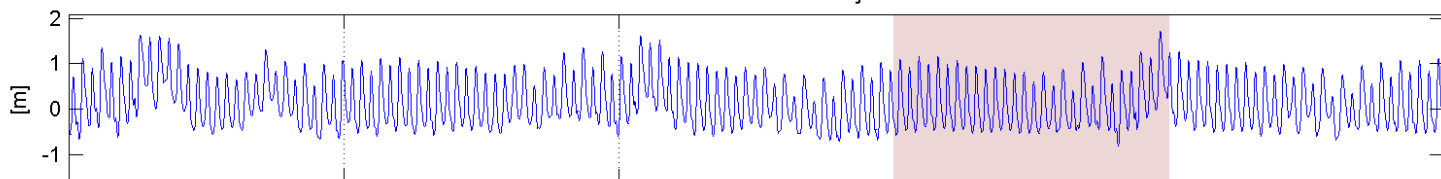
Mean difference [MERIS-Model]


x 10⁶

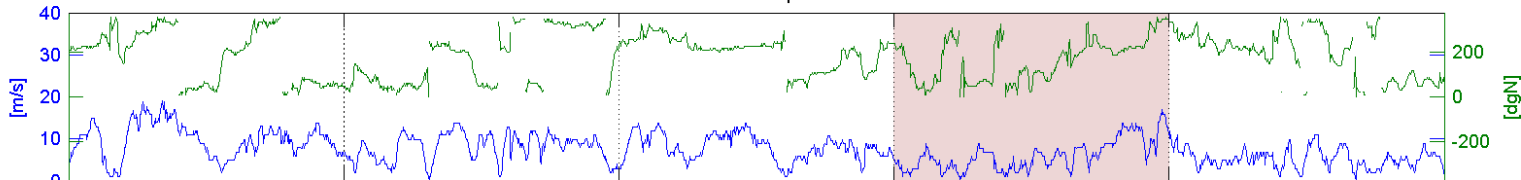
Sand mining volume for Maasvlakte 2



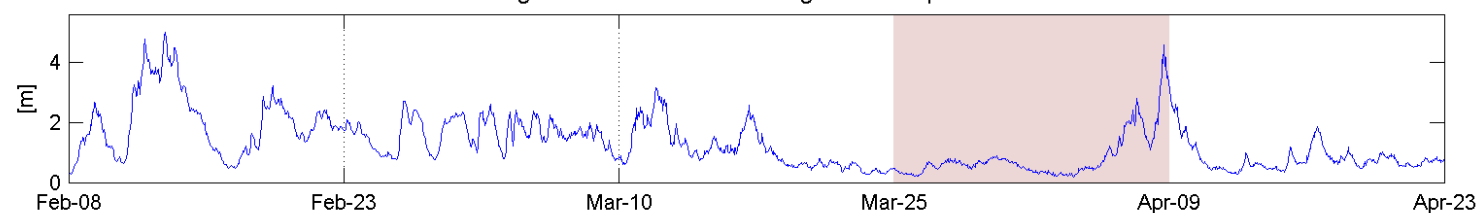
Water level at Noordwijk10



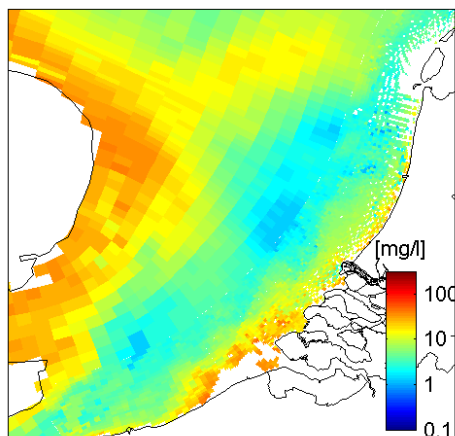
Wind at Euro platform



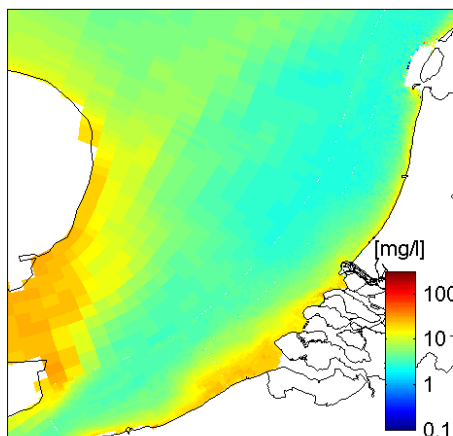
Significant surface wave height at Euro platform



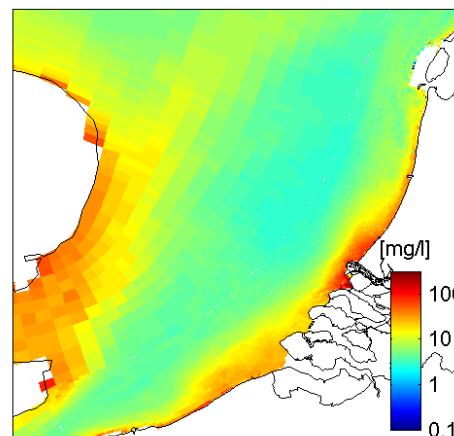
MERIS at surface layer



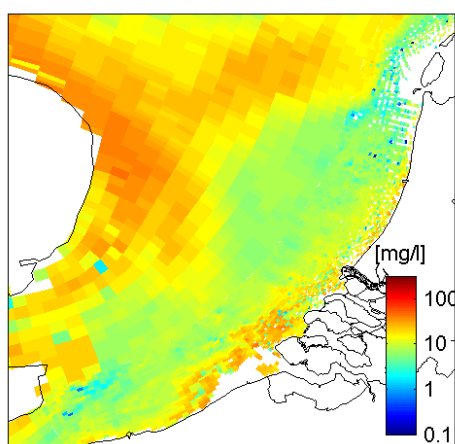
Model at surface layer



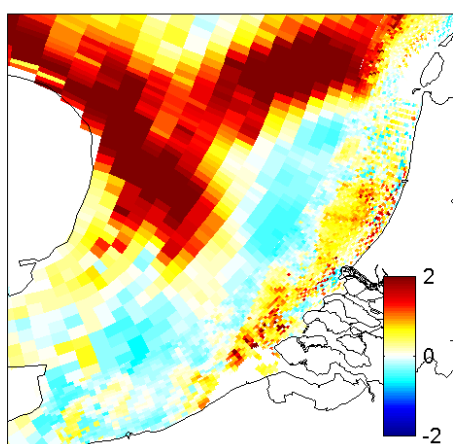
Model at bottom layer



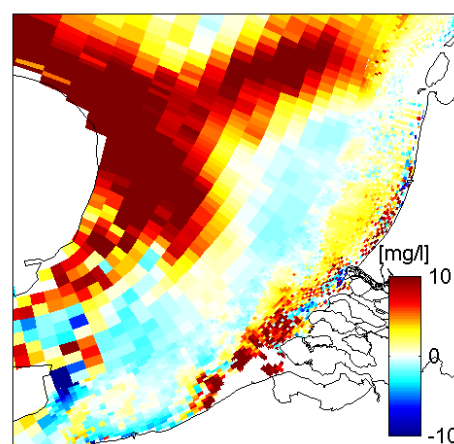
RMS difference



Relative difference [(MERIS-Model)/Model]



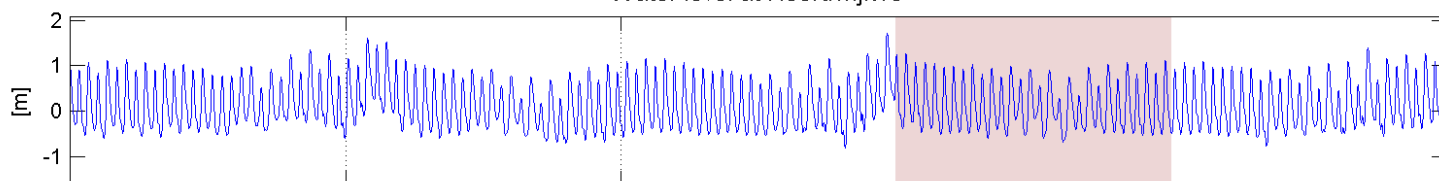
Mean difference [MERIS-Model]

x 10⁶

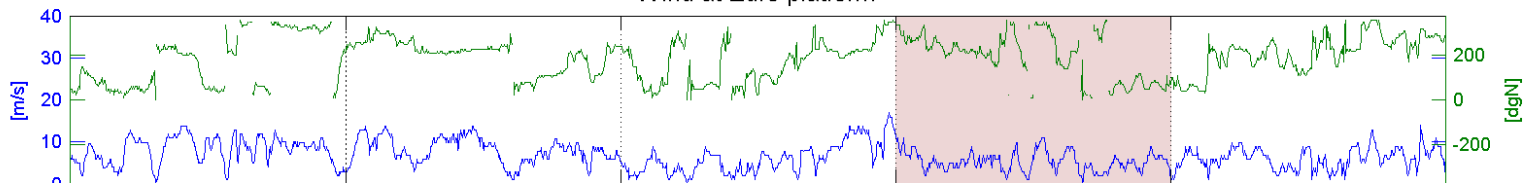
Sand mining volume for Maasvlakte 2



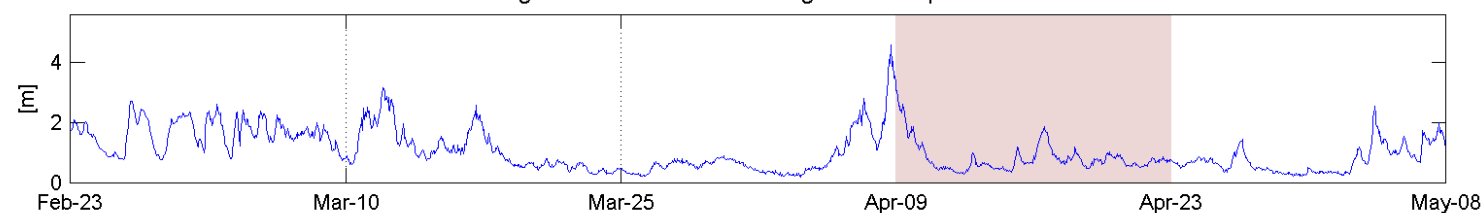
Water level at Noordwijk10



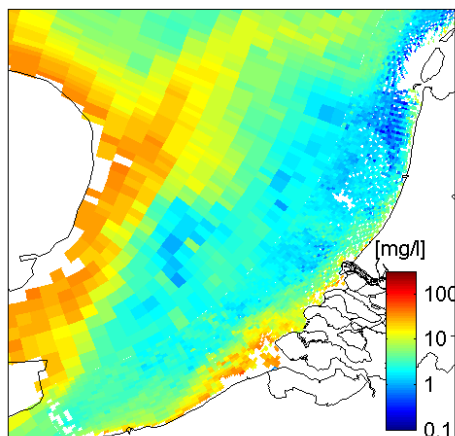
Wind at Euro platform



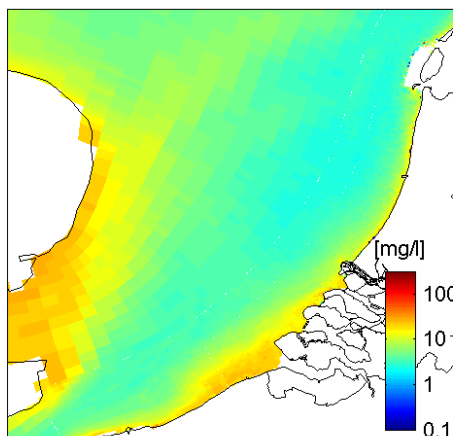
Significant surface wave height at Euro platform



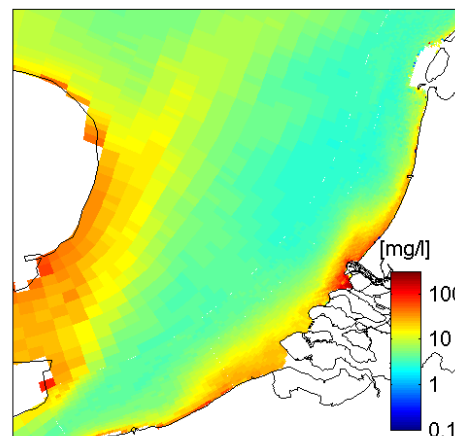
MERIS at surface layer



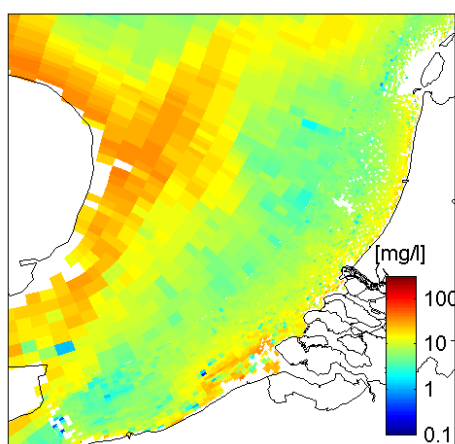
Model at surface layer



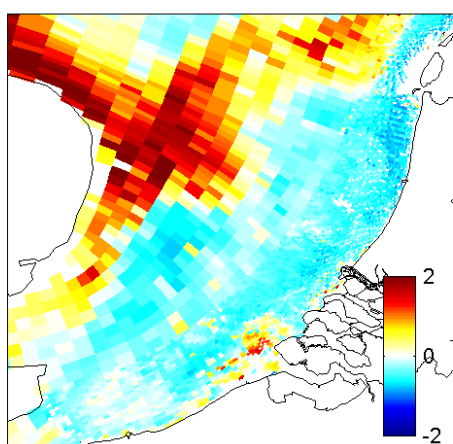
Model at bottom layer



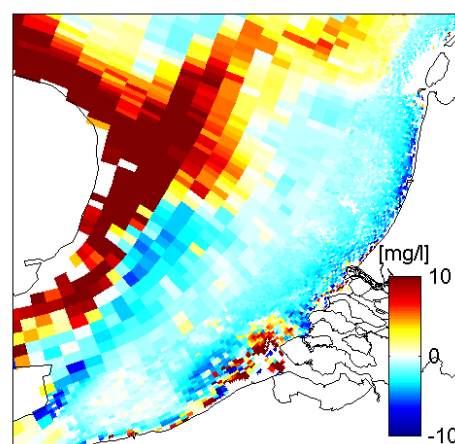
RMS difference



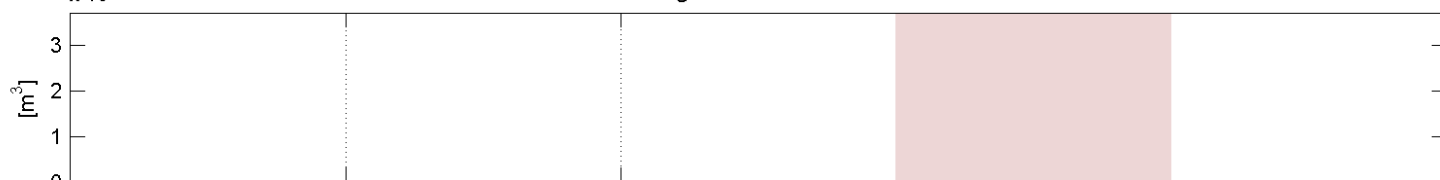
Relative difference [(MERIS-Model)/Model]



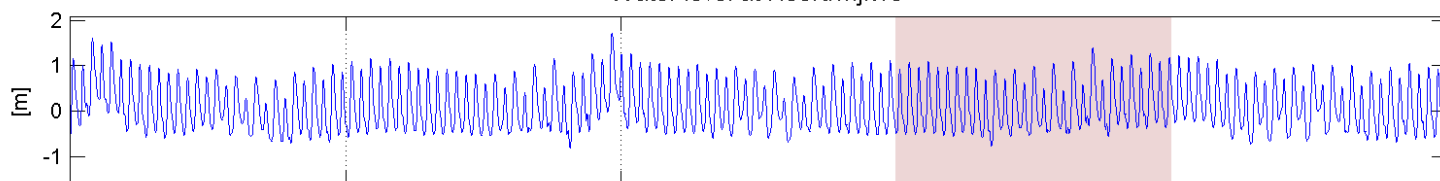
Mean difference [MERIS-Model]


x 10⁶

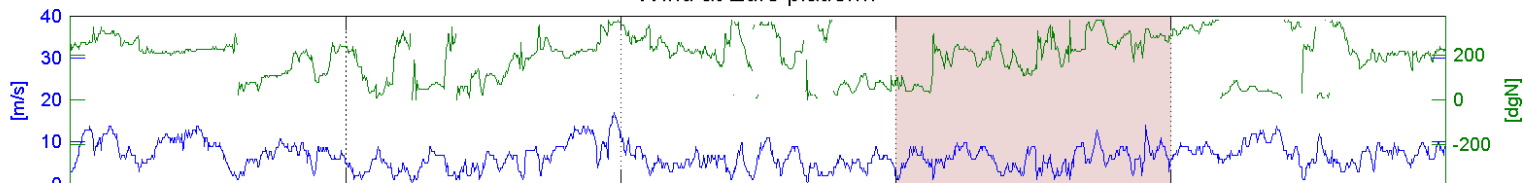
Sand mining volume for Maasvlakte 2



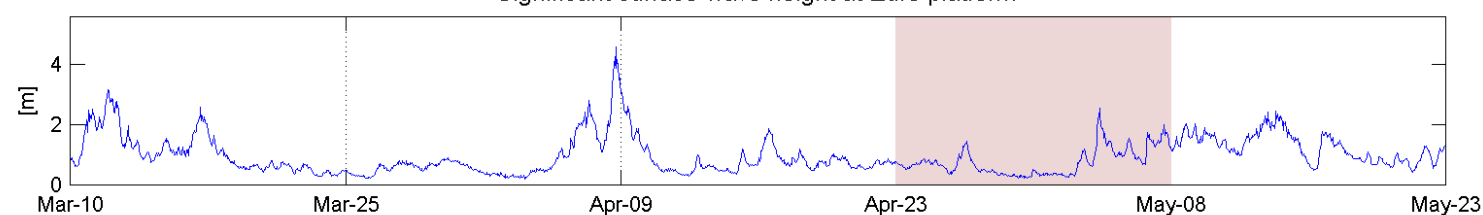
Water level at Noordwijk10



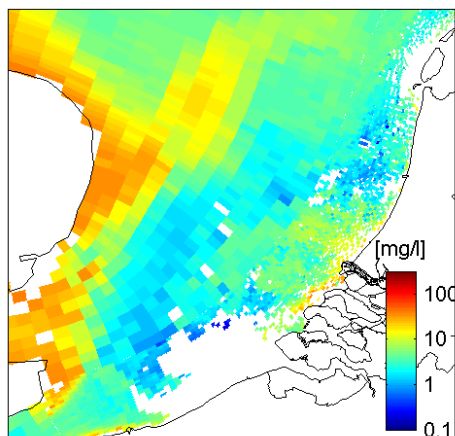
Wind at Euro platform



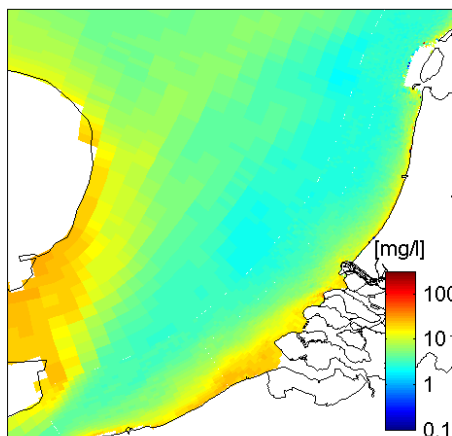
Significant surface wave height at Euro platform



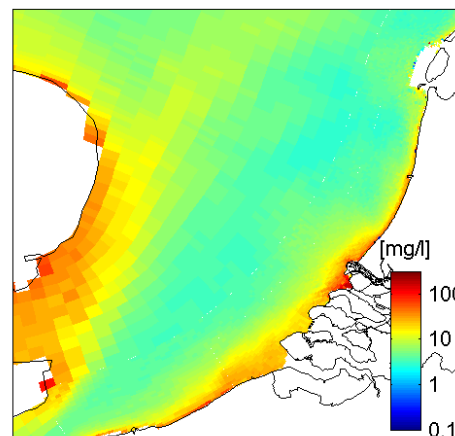
MERIS at surface layer



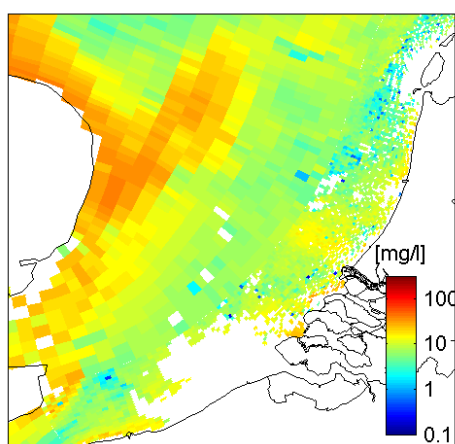
Model at surface layer



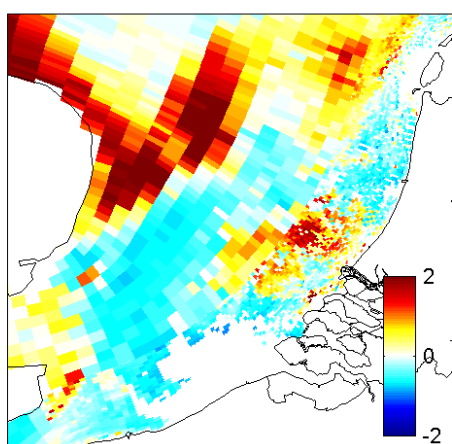
Model at bottom layer



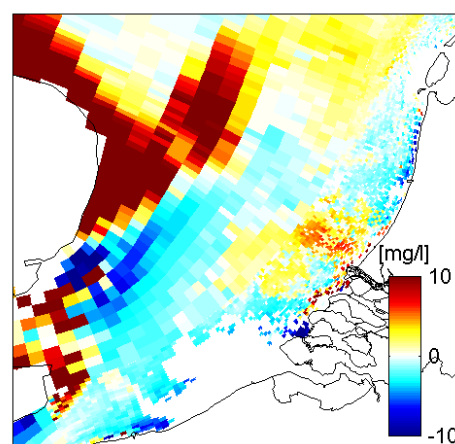
RMS difference



Relative difference [(MERIS-Model)/Model]



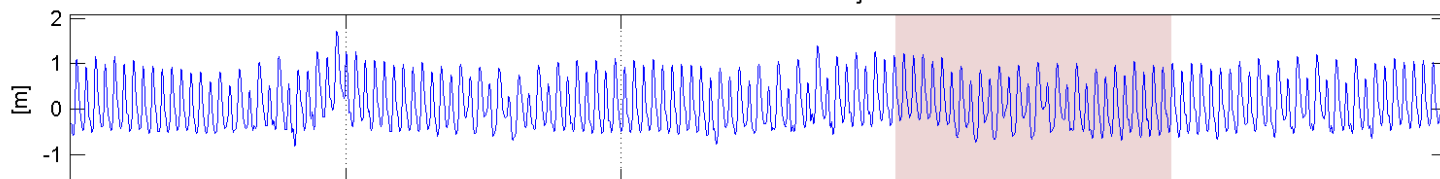
Mean difference [MERIS-Model]


 $\times 10^6$

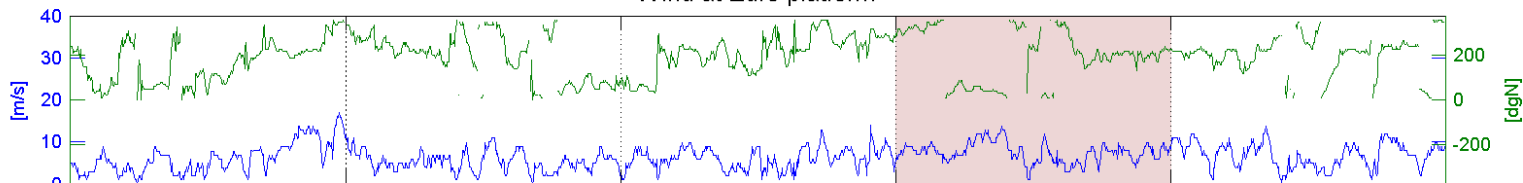
Sand mining volume for Maasvlakte 2



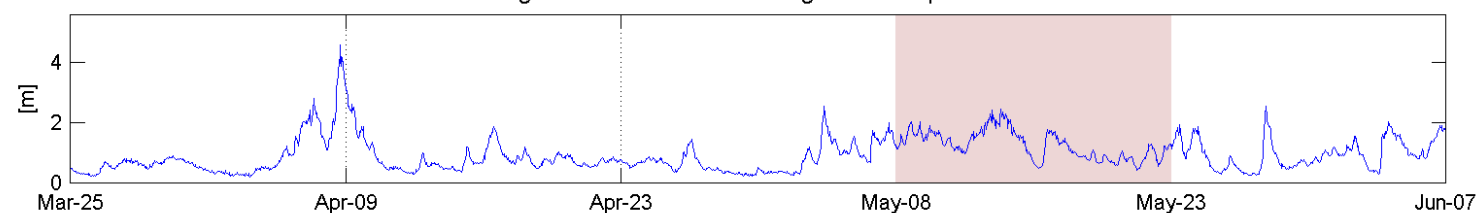
Water level at Noordwijk10



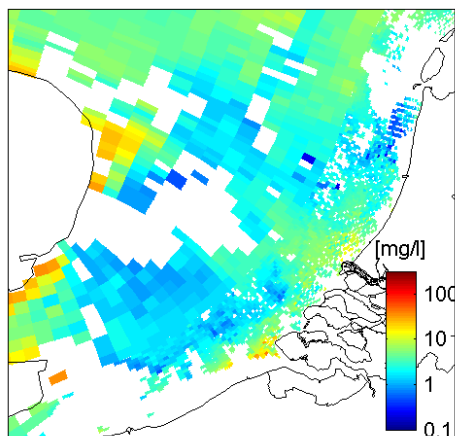
Wind at Euro platform



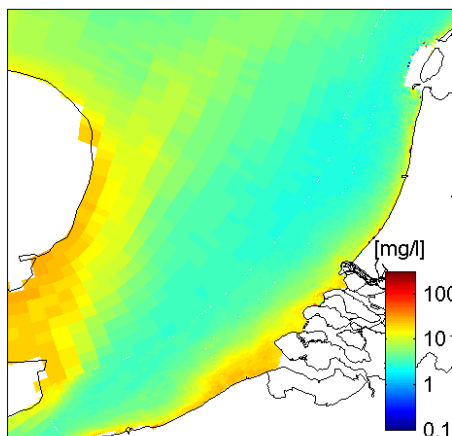
Significant surface wave height at Euro platform



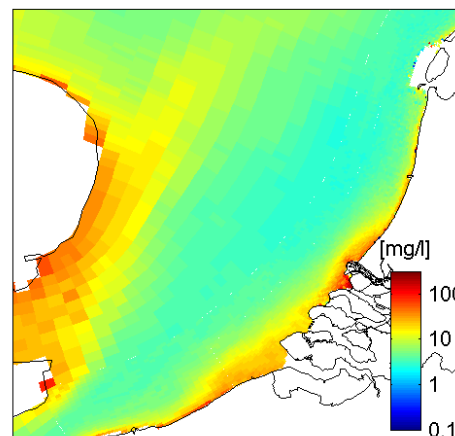
MERIS at surface layer



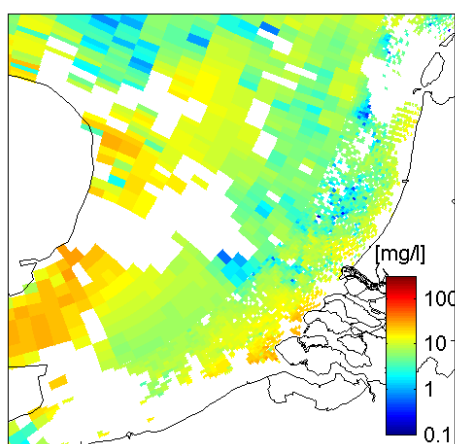
Model at surface layer



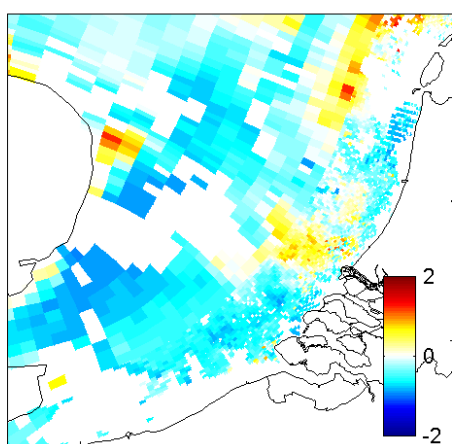
Model at bottom layer



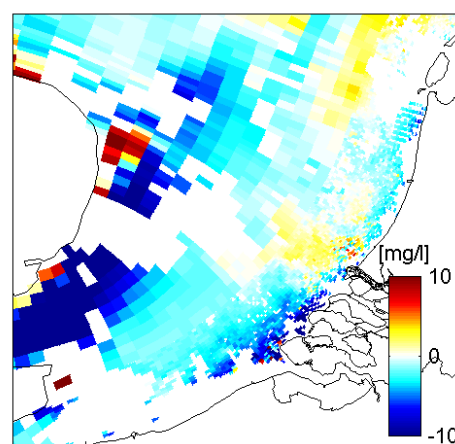
RMS difference



Relative difference [(MERIS-Model)/Model]



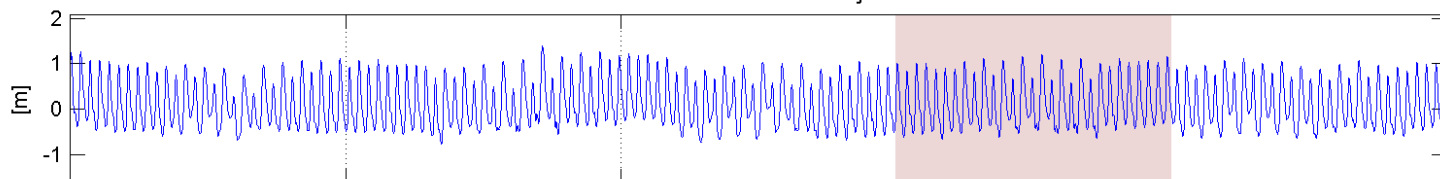
Mean difference [MERIS-Model]


 $\times 10^6$

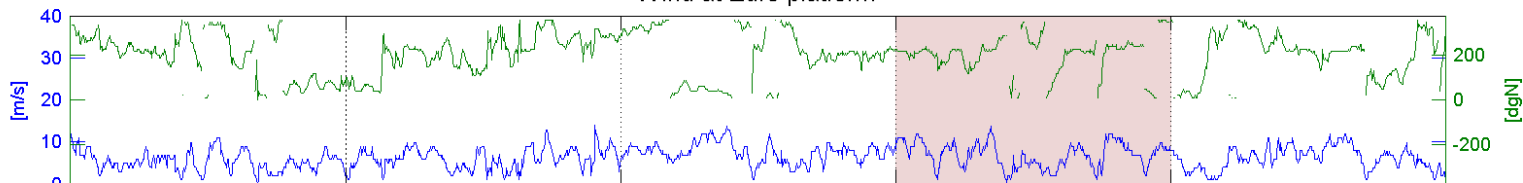
Sand mining volume for Maasvlakte 2



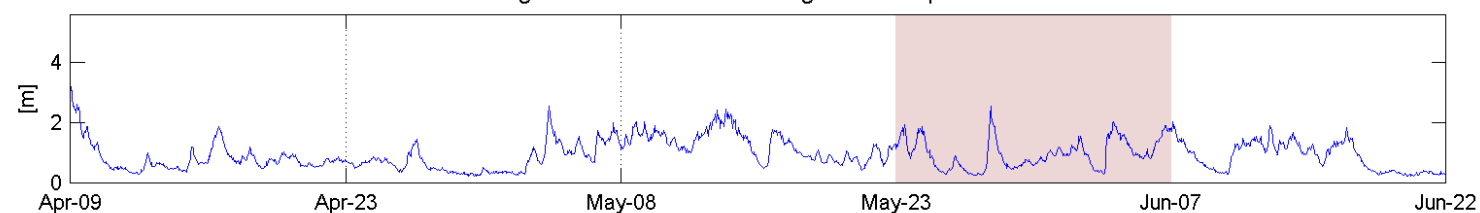
Water level at Noordwijk10



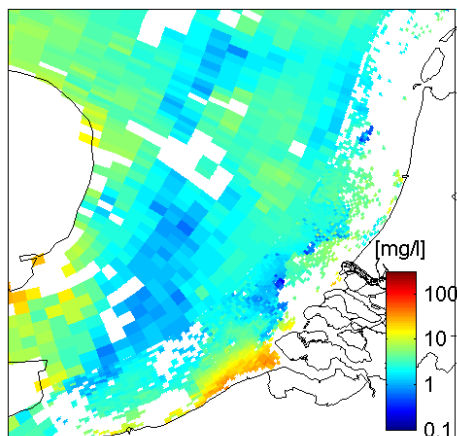
Wind at Euro platform



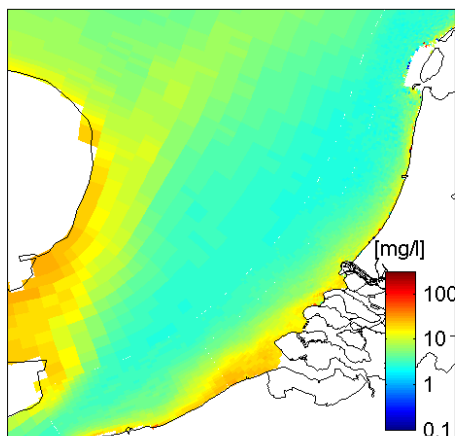
Significant surface wave height at Euro platform



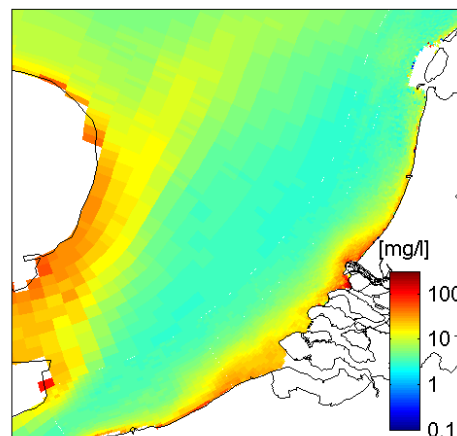
MERIS at surface layer



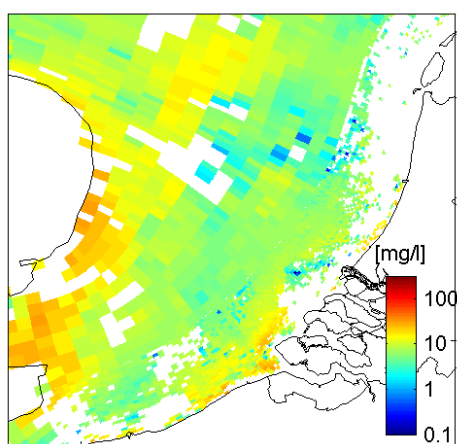
Model at surface layer



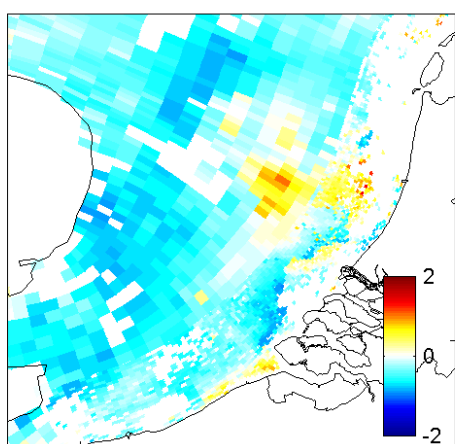
Model at bottom layer



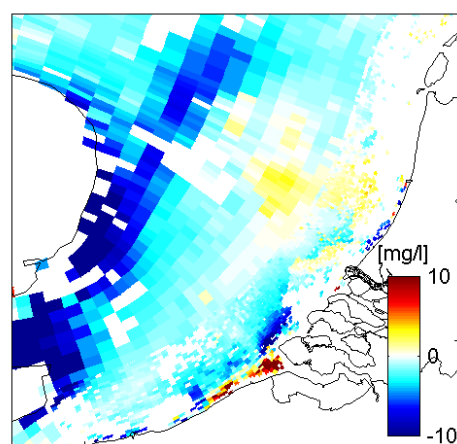
RMS difference



Relative difference [(MERIS-Model)/Model]



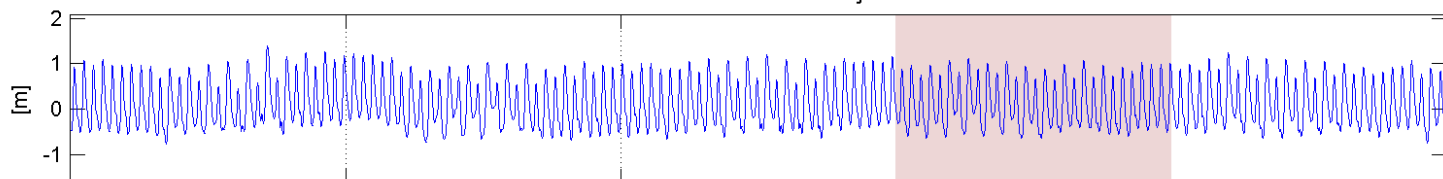
Mean difference [MERIS-Model]


 $\times 10^6$

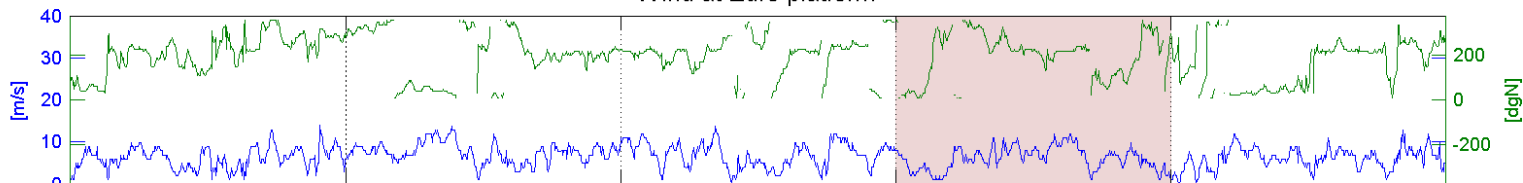
Sand mining volume for Maasvlakte 2



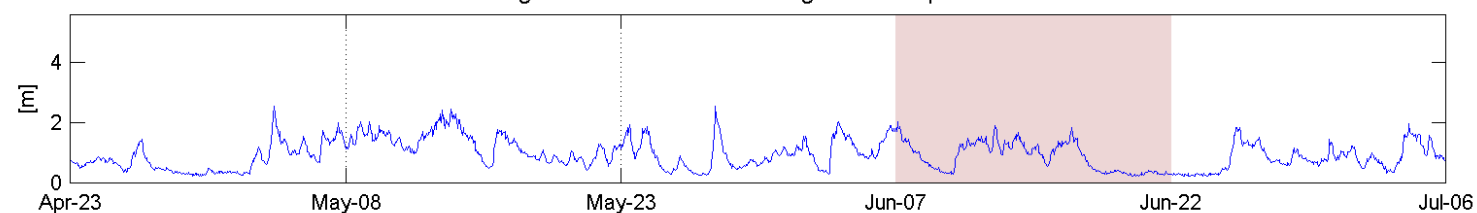
Water level at Noordwijk10



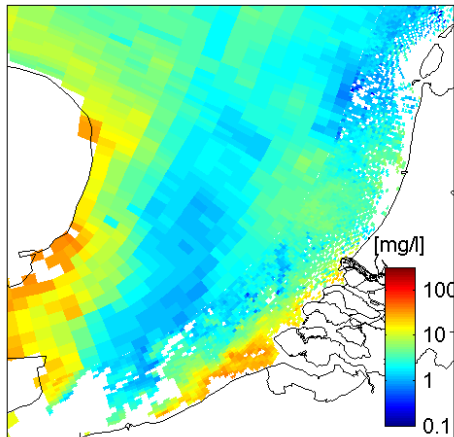
Wind at Euro platform



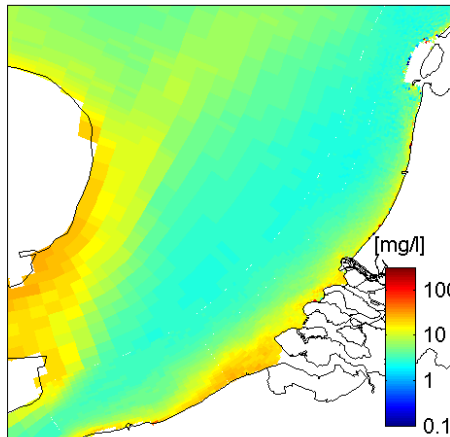
Significant surface wave height at Euro platform



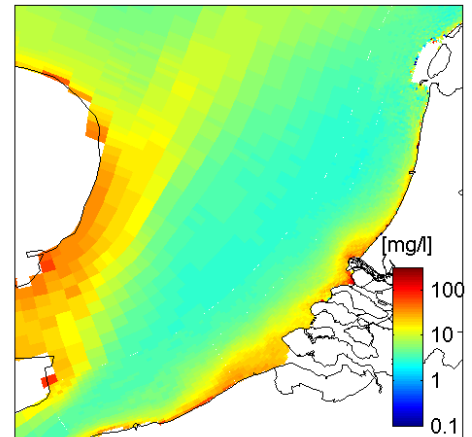
MERIS at surface layer



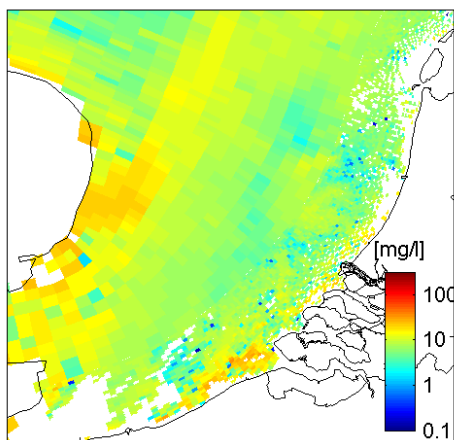
Model at surface layer



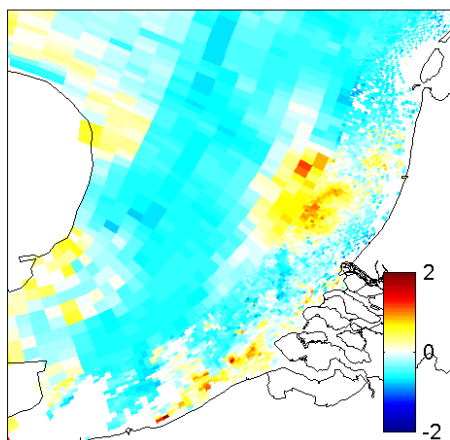
Model at bottom layer



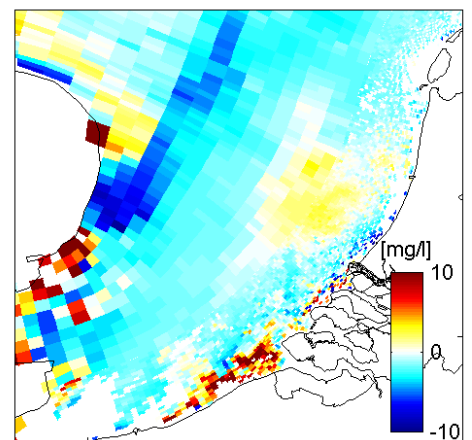
RMS difference



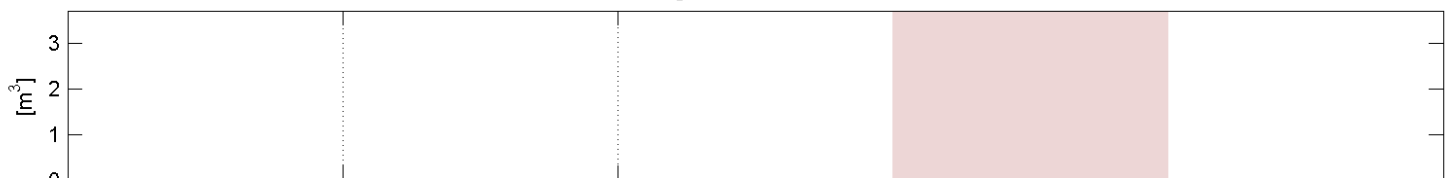
Relative difference [(MERIS-Model)/Model]



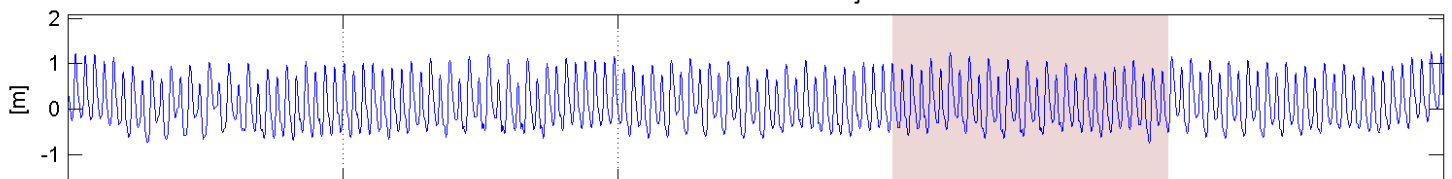
Mean difference [MERIS-Model]

 $\times 10^6$

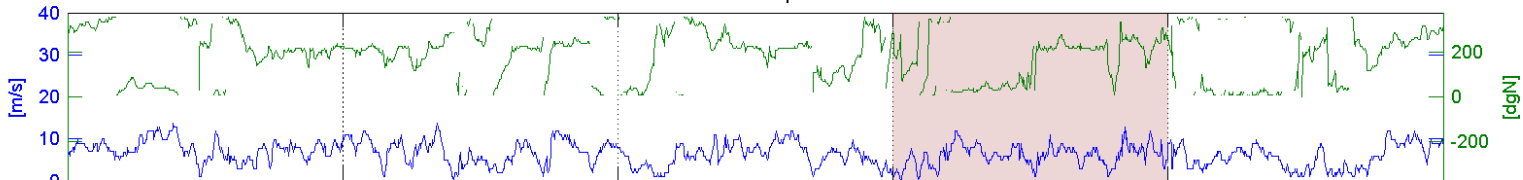
Sand mining volume for Maasvlakte 2



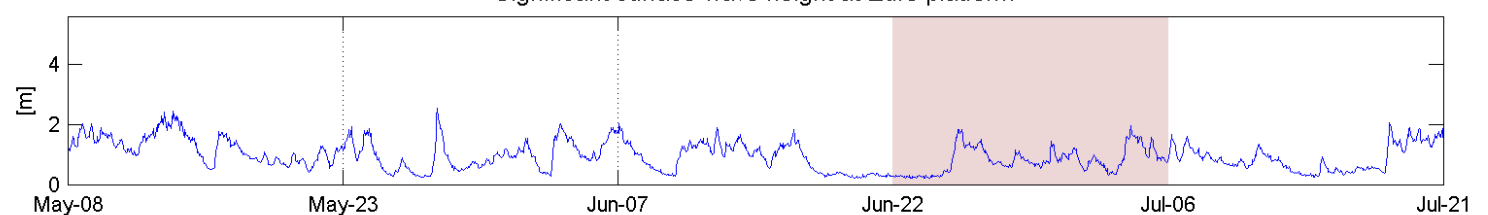
Water level at Noordwijk10



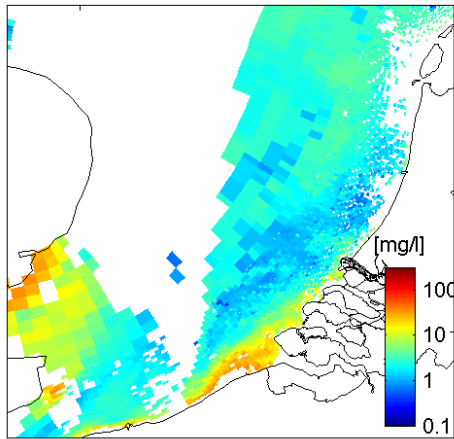
Wind at Euro platform



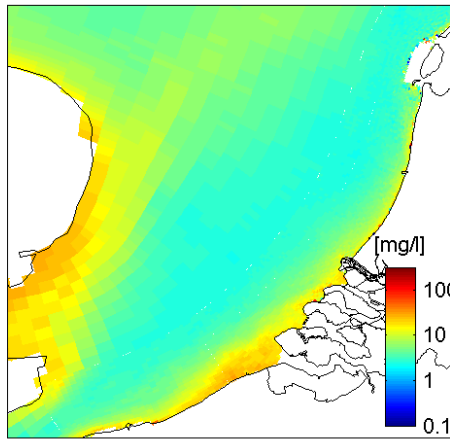
Significant surface wave height at Euro platform



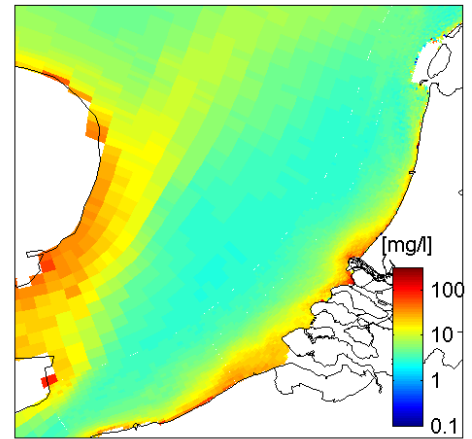
MERIS at surface layer



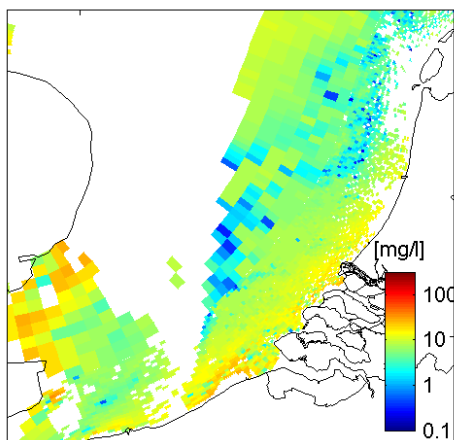
Model at surface layer



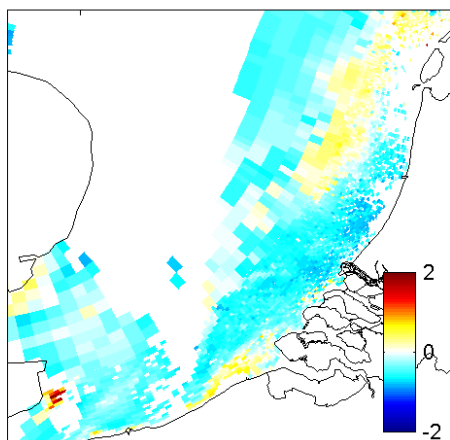
Model at bottom layer



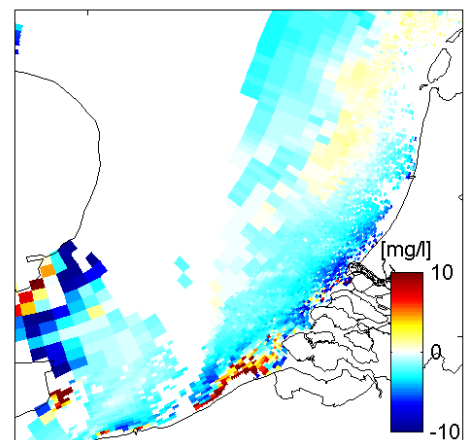
RMS difference



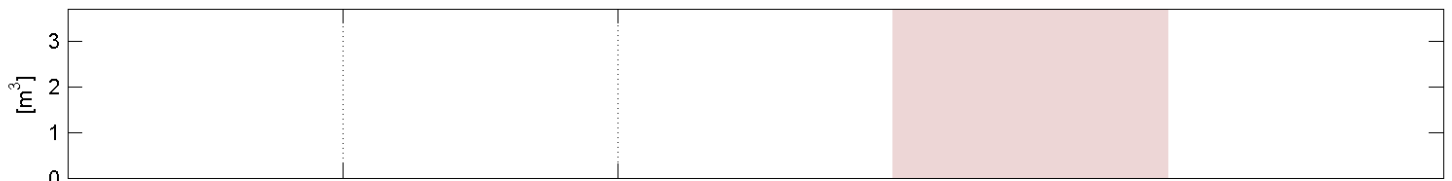
Relative difference [(MERIS-Model)/Model]



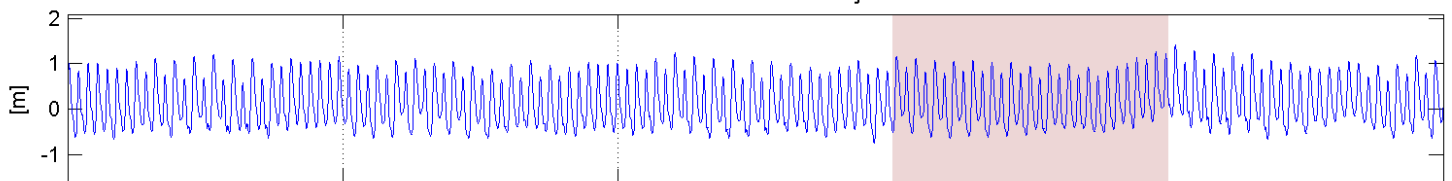
Mean difference [MERIS-Model]

 $\times 10^6$

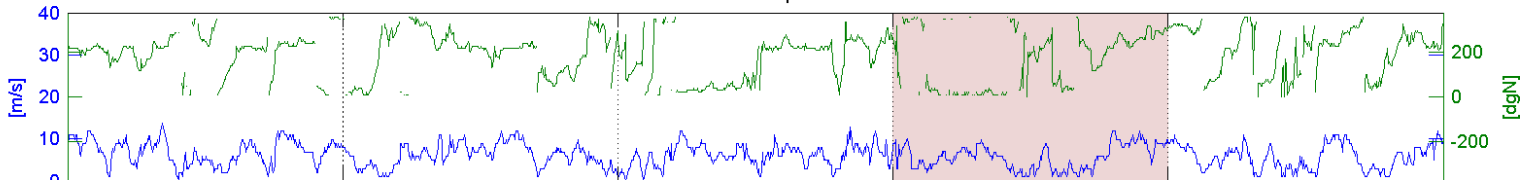
Sand mining volume for Maasvlakte 2



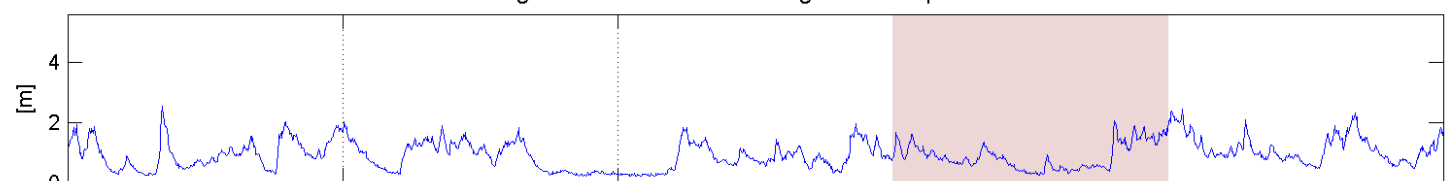
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



May-23

Jun-07

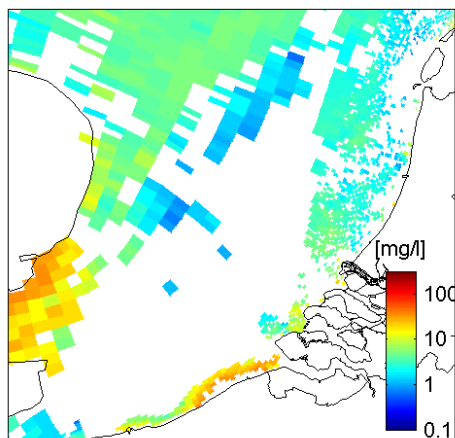
Jun-22

Jul-06

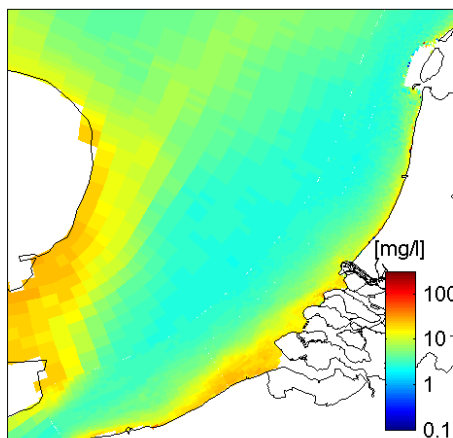
Jul-21

Aug-05

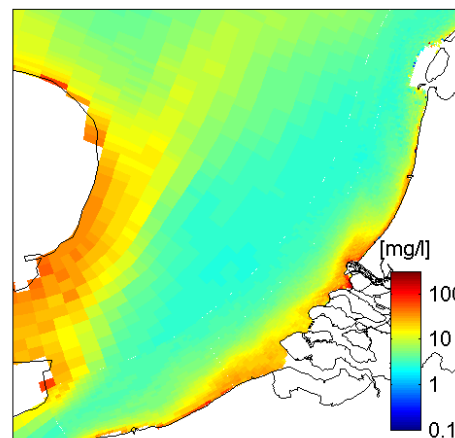
MERIS at surface layer



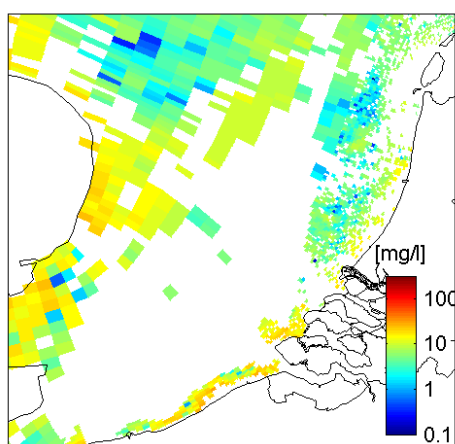
Model at surface layer



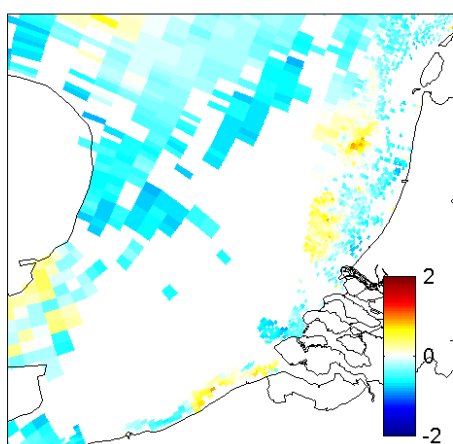
Model at bottom layer



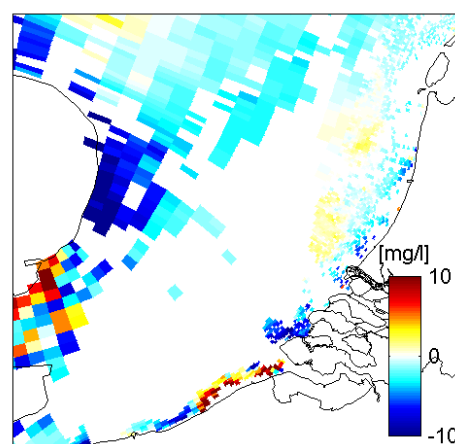
RMS difference



Relative difference [(MERIS-Model)/Model]



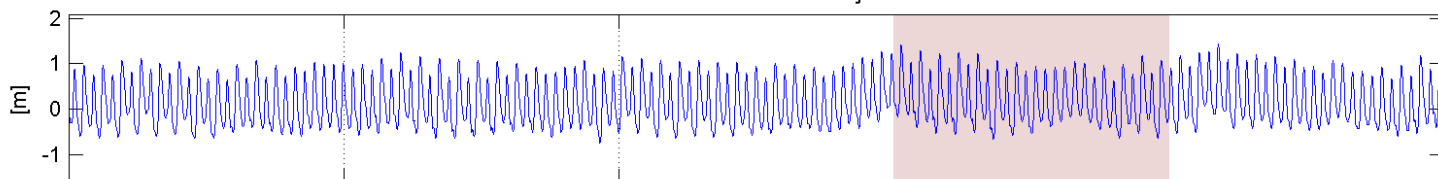
Mean difference [MERIS-Model]


 $\times 10^6$

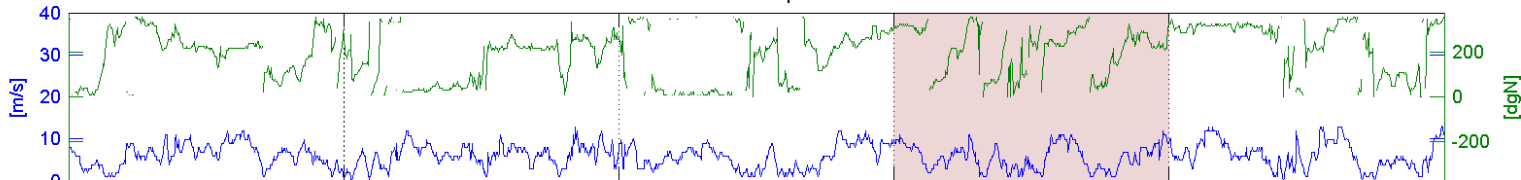
Sand mining volume for Maasvlakte 2



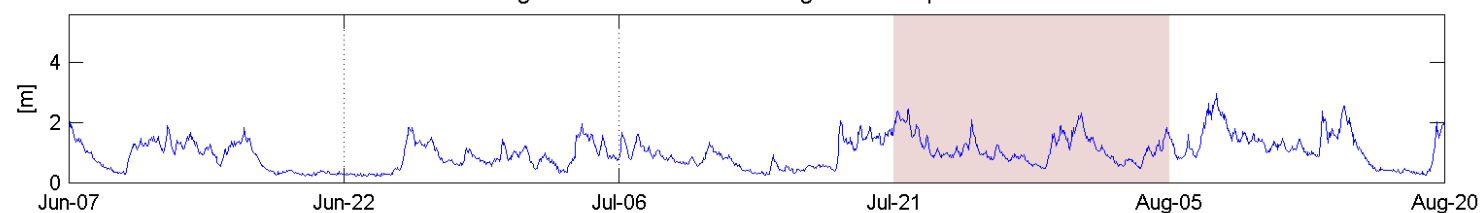
Water level at Noordwijk10



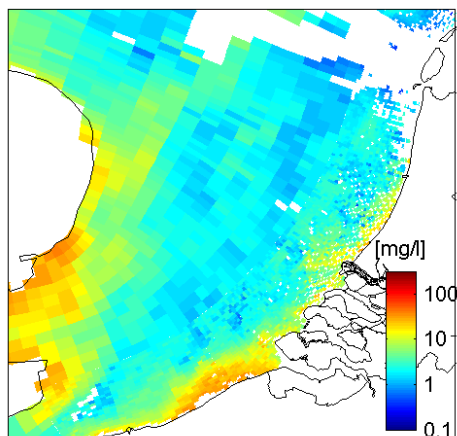
Wind at Euro platform



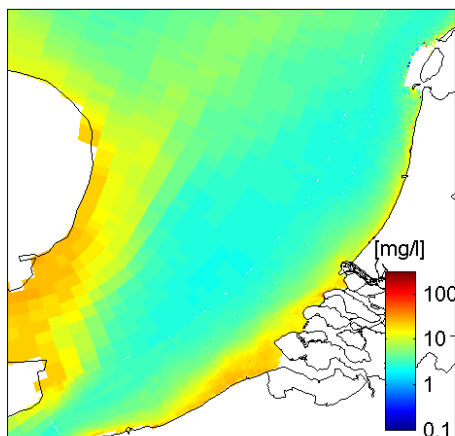
Significant surface wave height at Euro platform



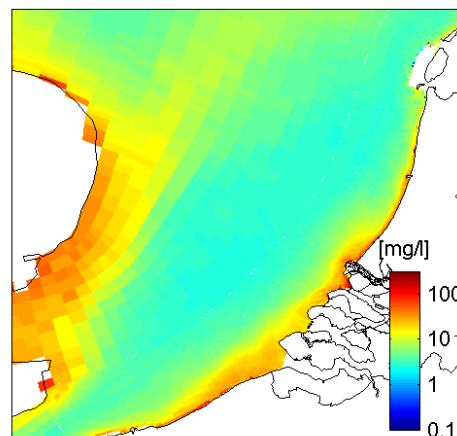
MERIS at surface layer



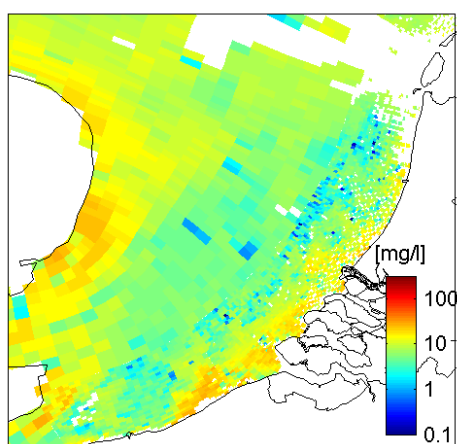
Model at surface layer



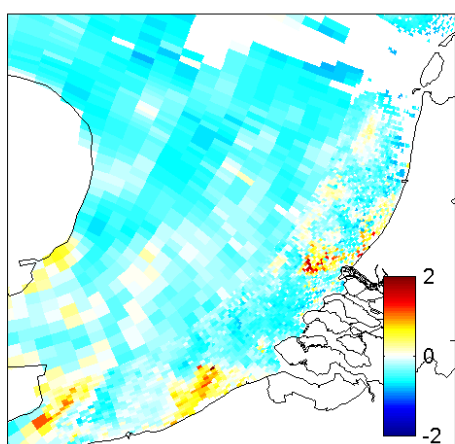
Model at bottom layer



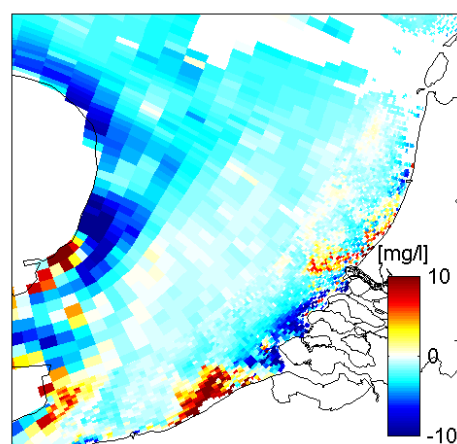
RMS difference



Relative difference [(MERIS-Model)/Model]



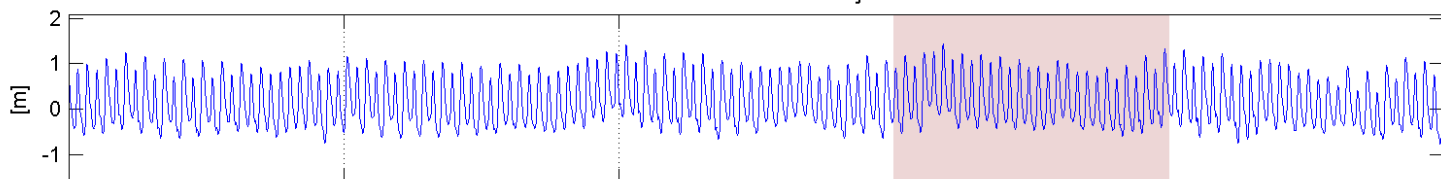
Mean difference [MERIS-Model]

 $\times 10^6$

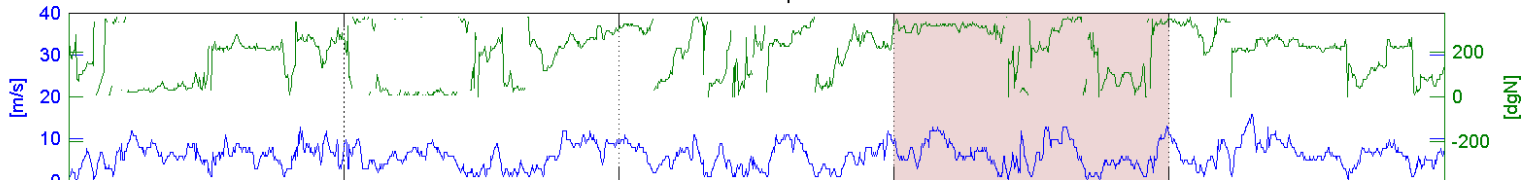
Sand mining volume for Maasvlakte 2



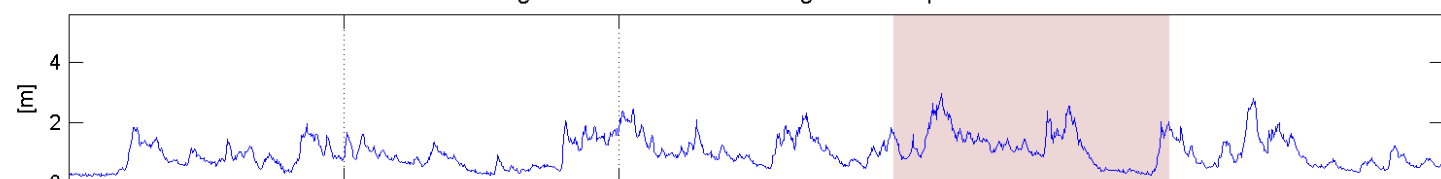
Water level at Noordwijk10



Wind at Euro platform

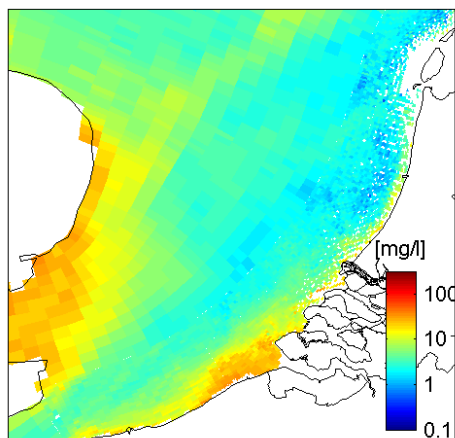


Significant surface wave height at Euro platform

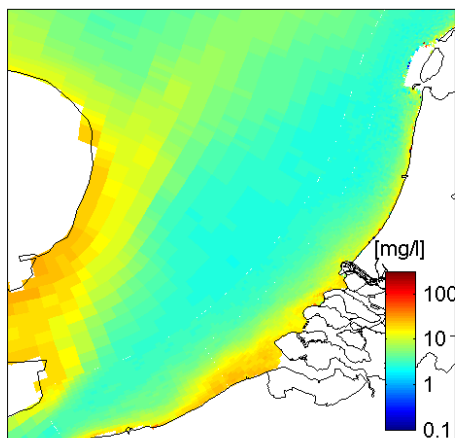


Jun-22 Jul-06 Jul-21 Aug-05 Aug-20 Sep-04

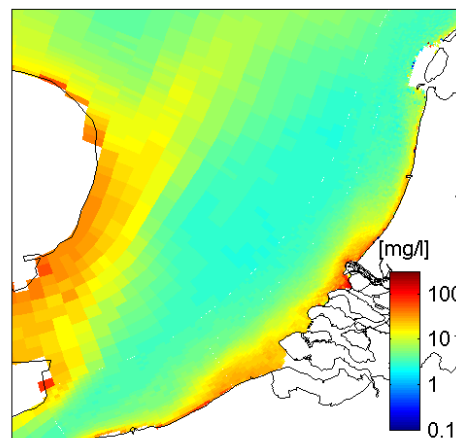
MERIS at surface layer



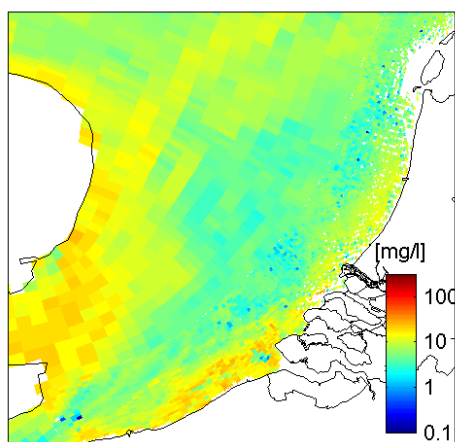
Model at surface layer



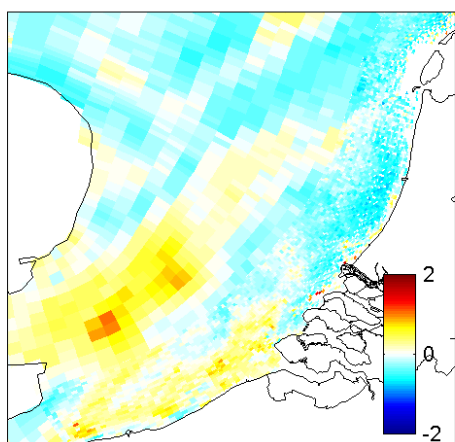
Model at bottom layer



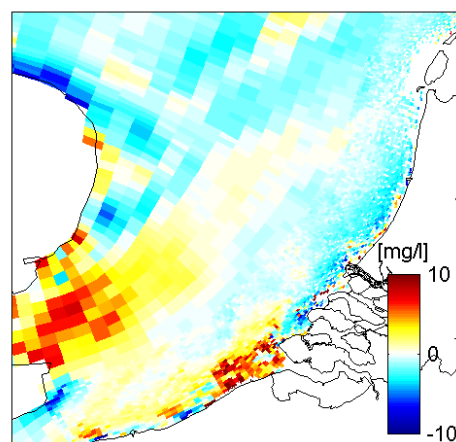
RMS difference



Relative difference [(MERIS-Model)/Model]



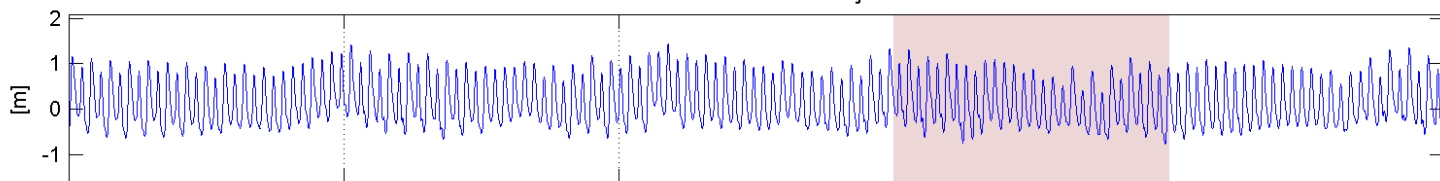
Mean difference [MERIS-Model]

 $\times 10^6$

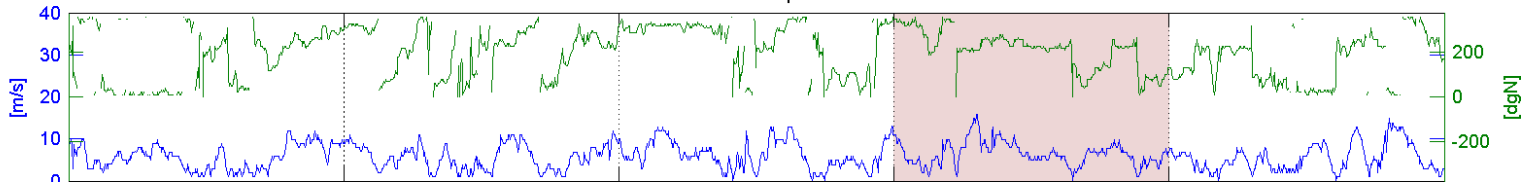
Sand mining volume for Maasvlakte 2



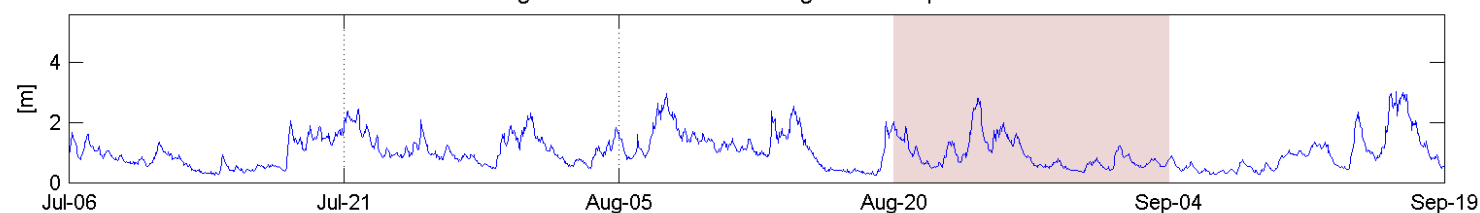
Water level at Noordwijk10



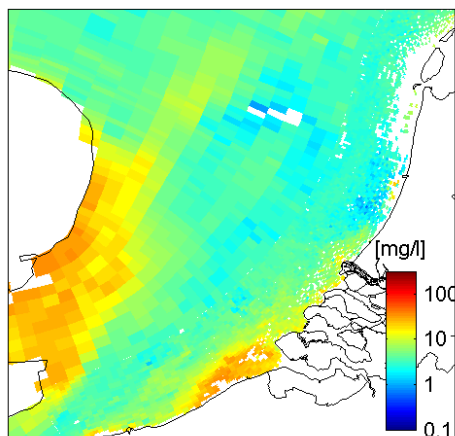
Wind at Euro platform



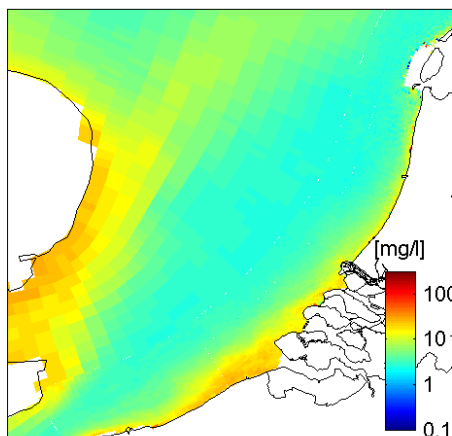
Significant surface wave height at Euro platform



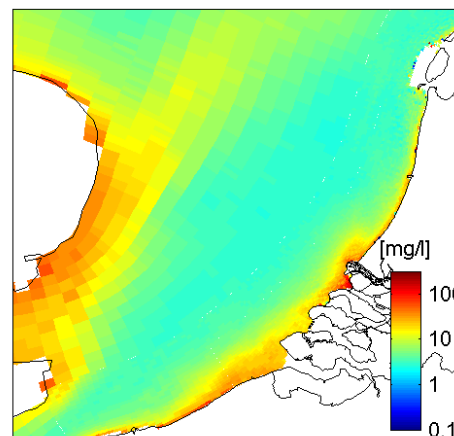
MERIS at surface layer



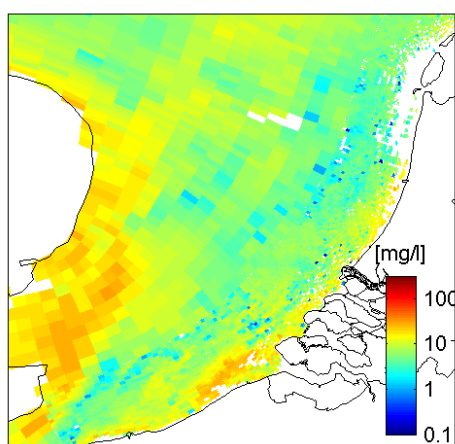
Model at surface layer



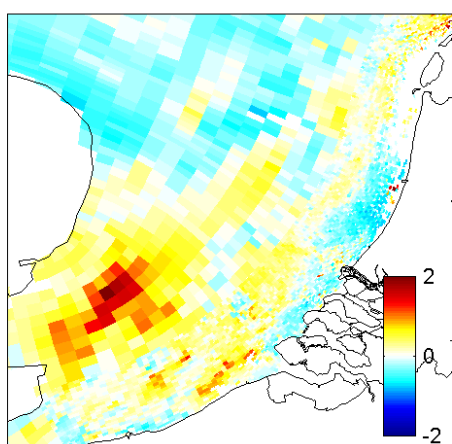
Model at bottom layer



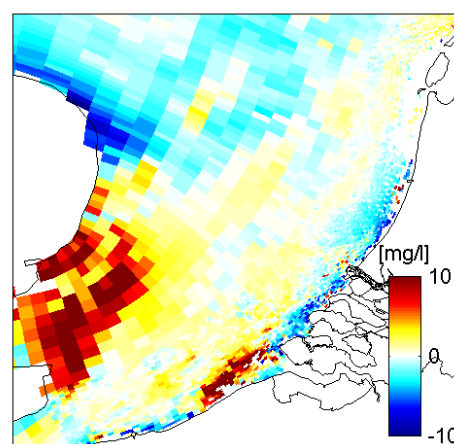
RMS difference



Relative difference [(MERIS-Model)/Model]



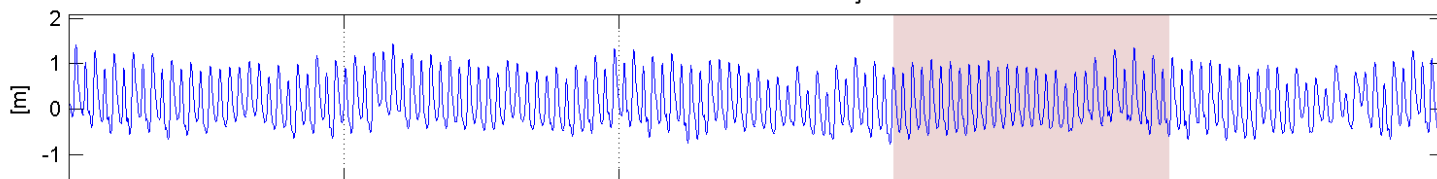
Mean difference [MERIS-Model]

 $\times 10^6$

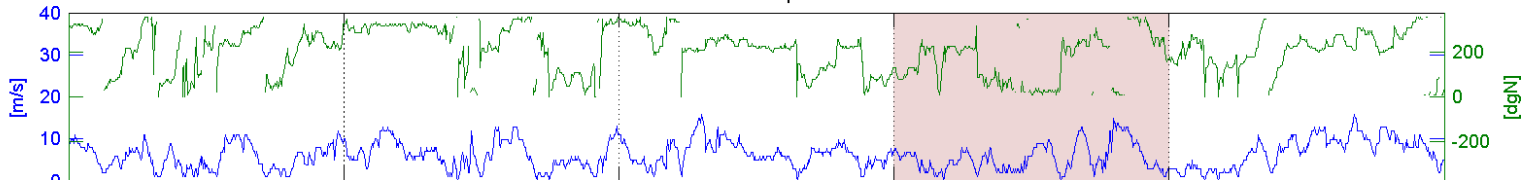
Sand mining volume for Maasvlakte 2



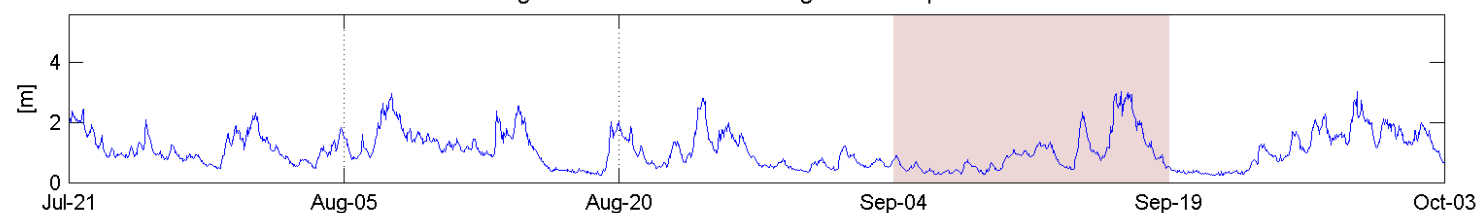
Water level at Noordwijk10



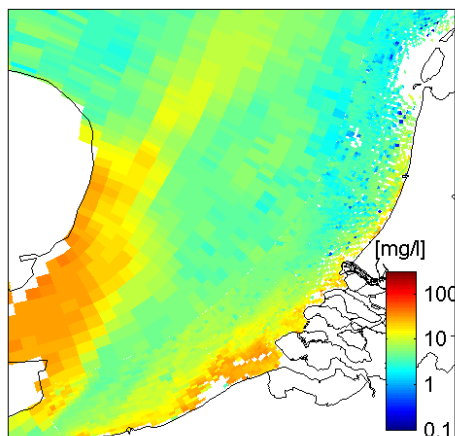
Wind at Euro platform



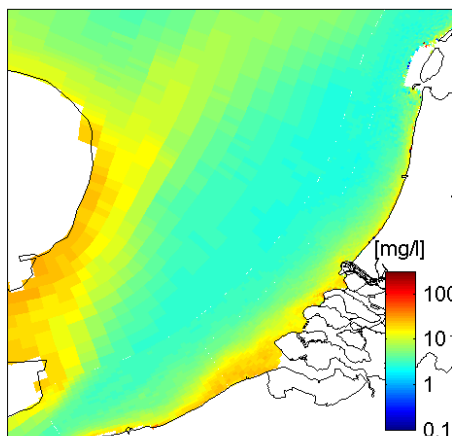
Significant surface wave height at Euro platform



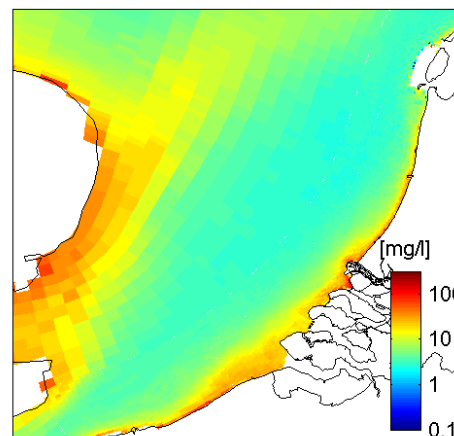
MERIS at surface layer



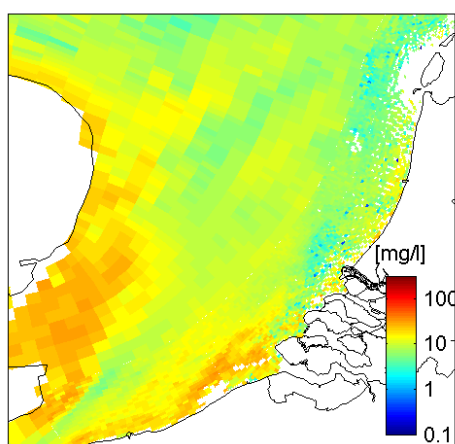
Model at surface layer



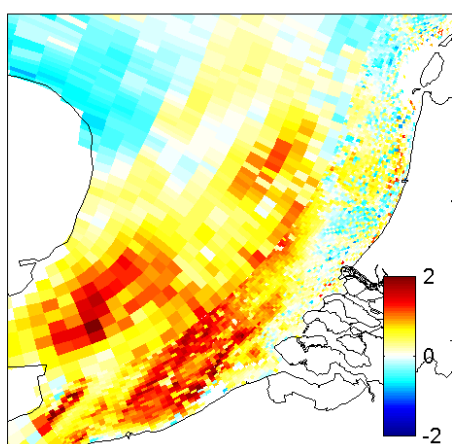
Model at bottom layer



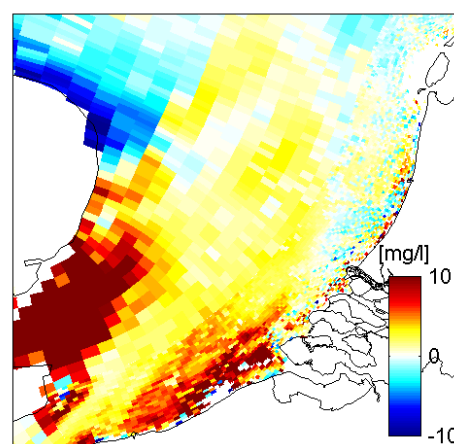
RMS difference



Relative difference [(MERIS-Model)/Model]



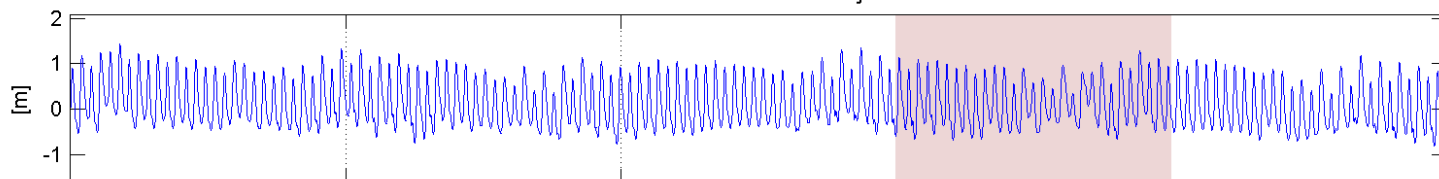
Mean difference [MERIS-Model]


x 10⁶

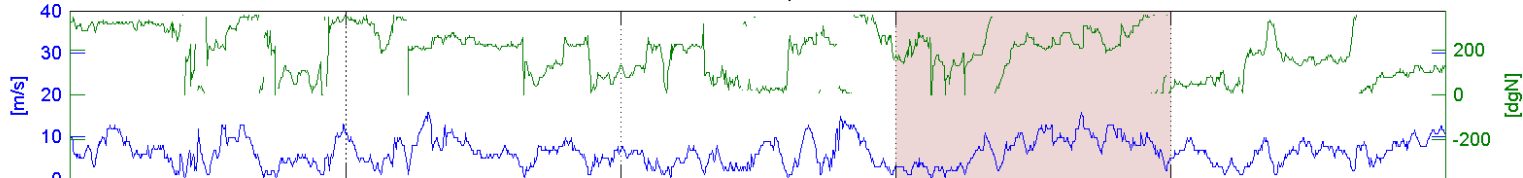
Sand mining volume for Maasvlakte 2



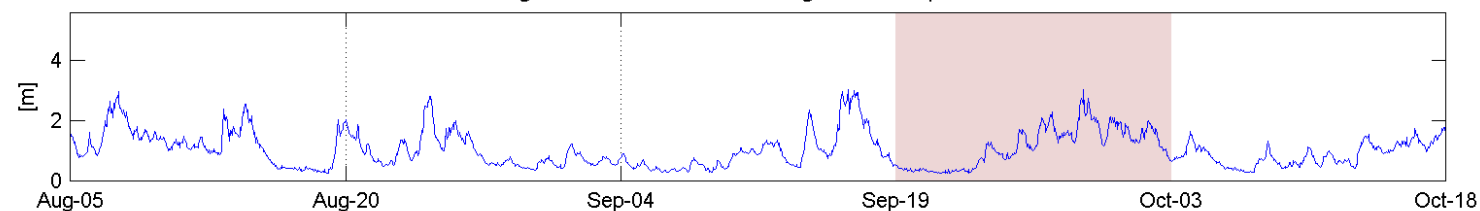
Water level at Noordwijk10



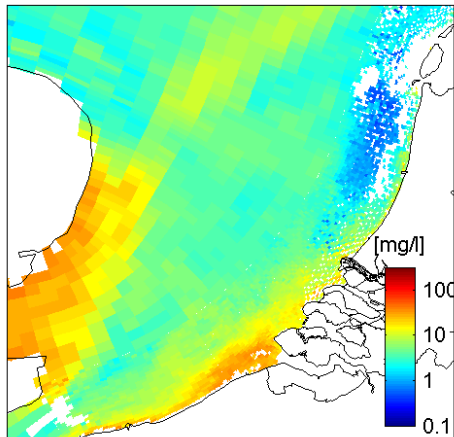
Wind at Euro platform



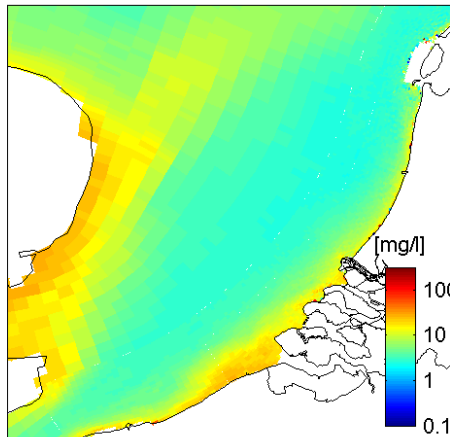
Significant surface wave height at Euro platform



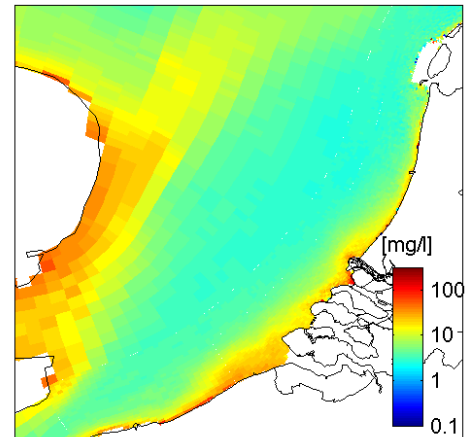
MERIS at surface layer



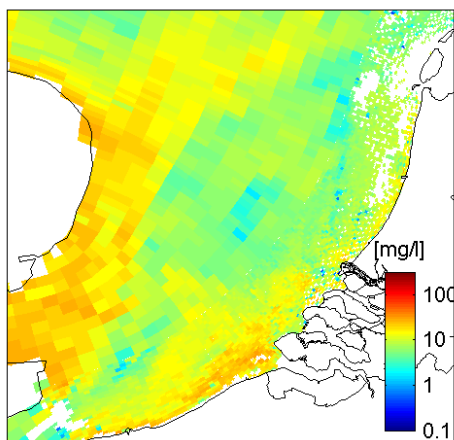
Model at surface layer



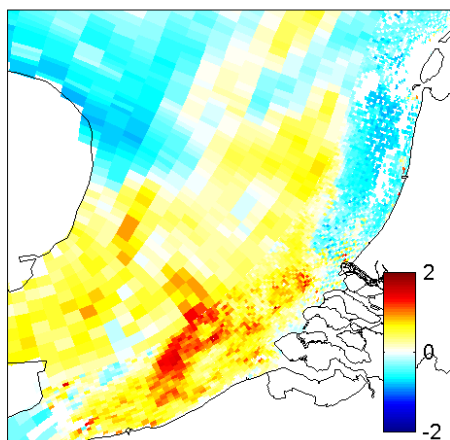
Model at bottom layer



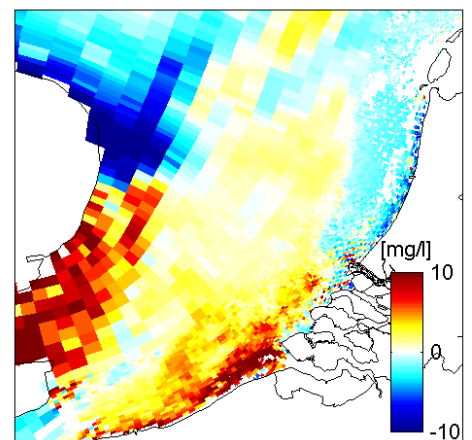
RMS difference



Relative difference [(MERIS-Model)/Model]



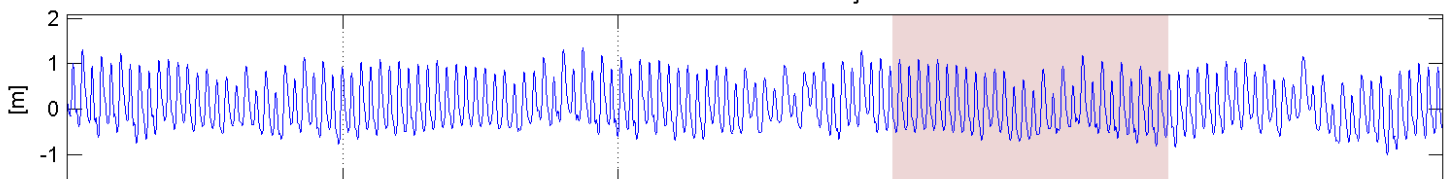
Mean difference [MERIS-Model]

 $\times 10^6$

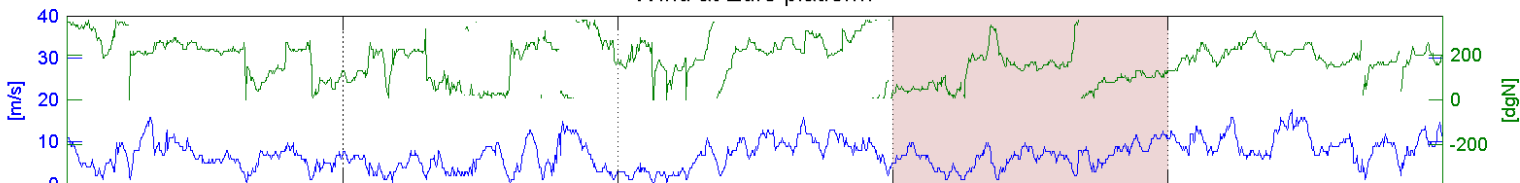
Sand mining volume for Maasvlakte 2



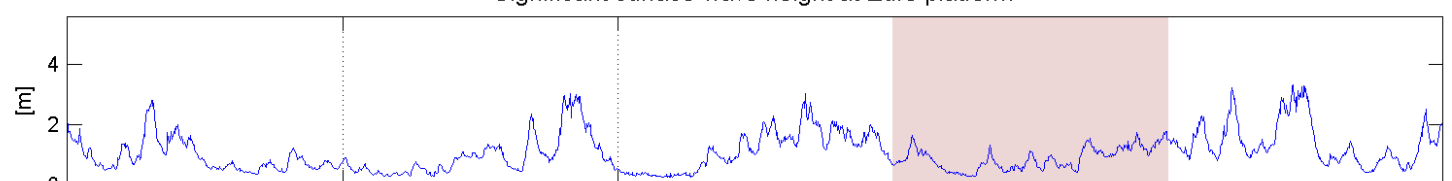
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Aug-20

Sep-04

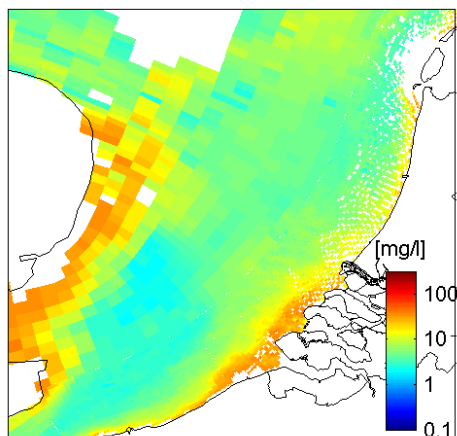
Sep-19

Oct-03

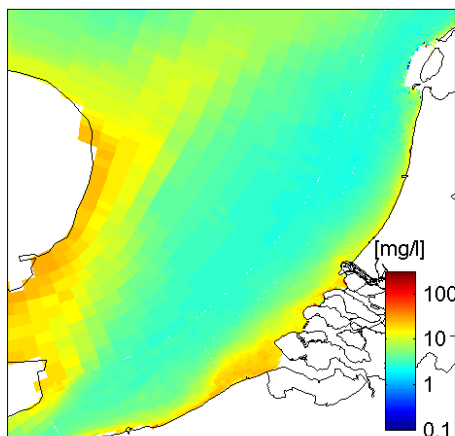
Oct-18

Nov-02

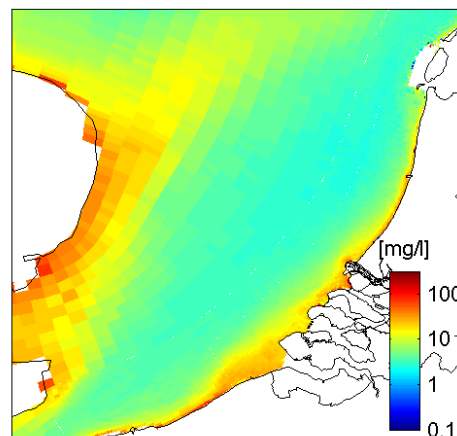
MERIS at surface layer



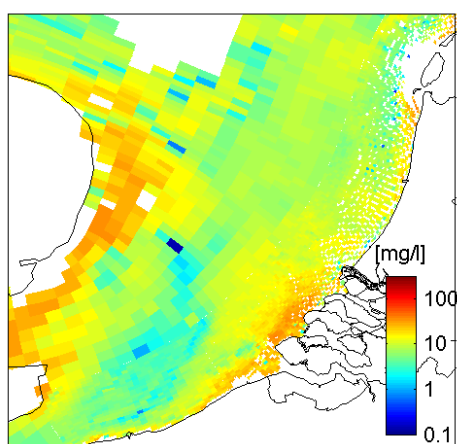
Model at surface layer



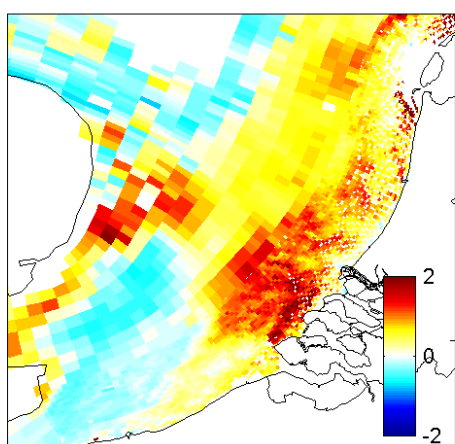
Model at bottom layer



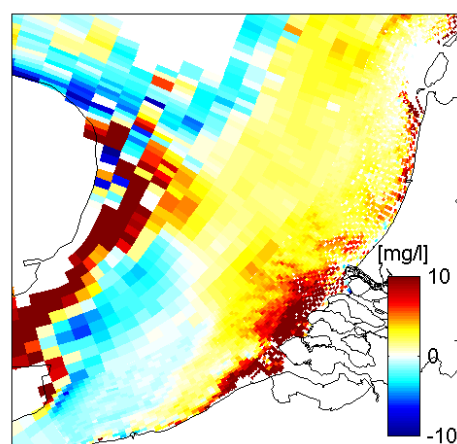
RMS difference



Relative difference [(MERIS-Model)/Model]



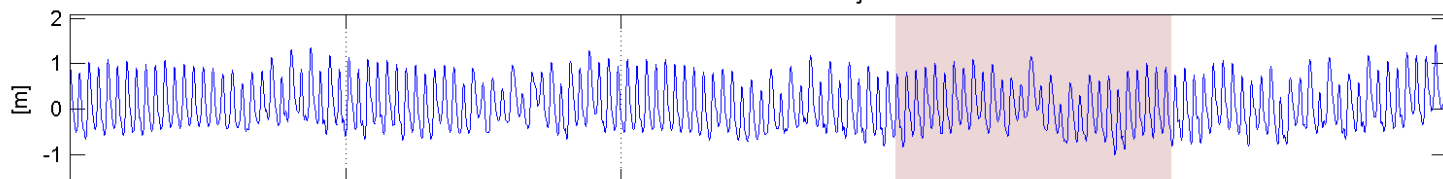
Mean difference [MERIS-Model]


x 10⁶

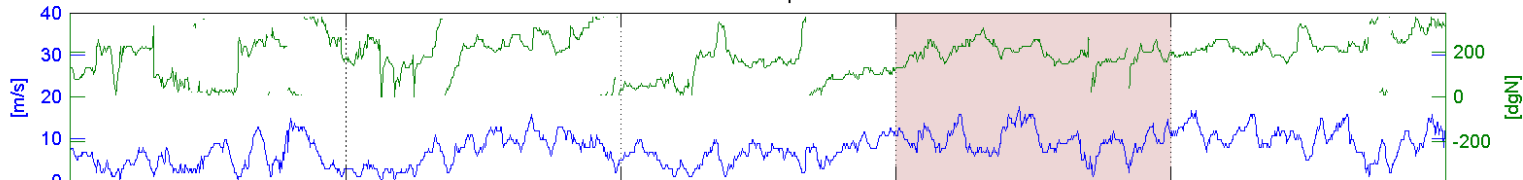
Sand mining volume for Maasvlakte 2



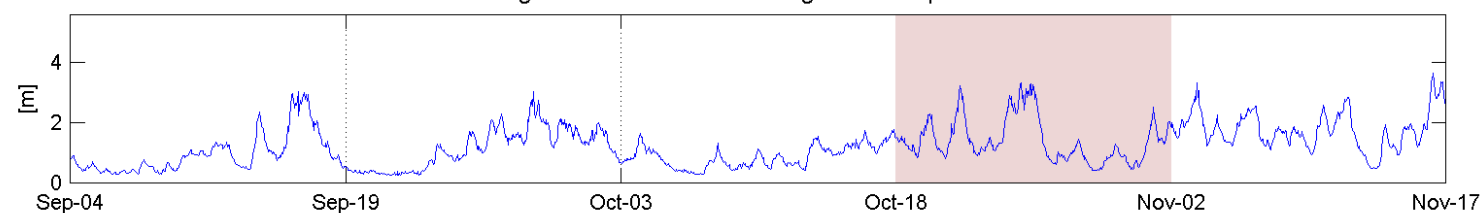
Water level at Noordwijk10



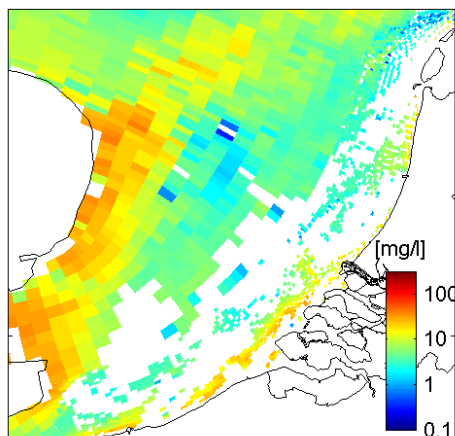
Wind at Euro platform



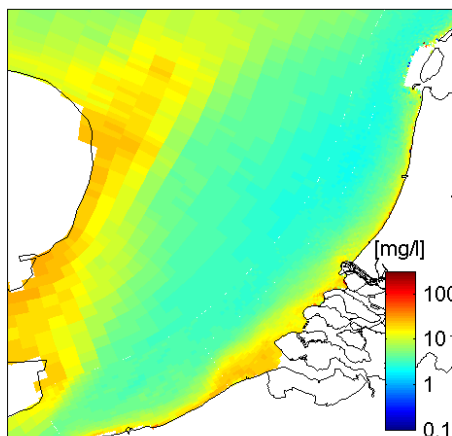
Significant surface wave height at Euro platform



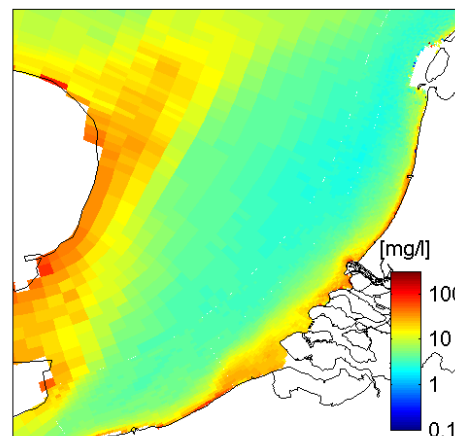
MERIS at surface layer



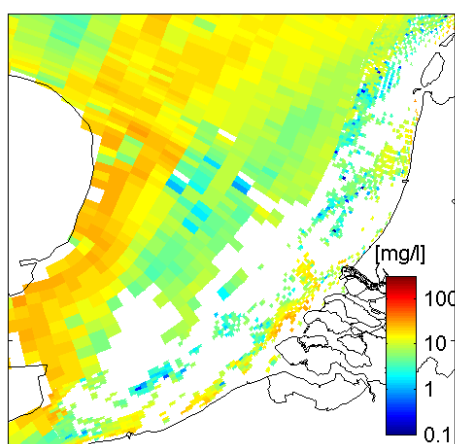
Model at surface layer



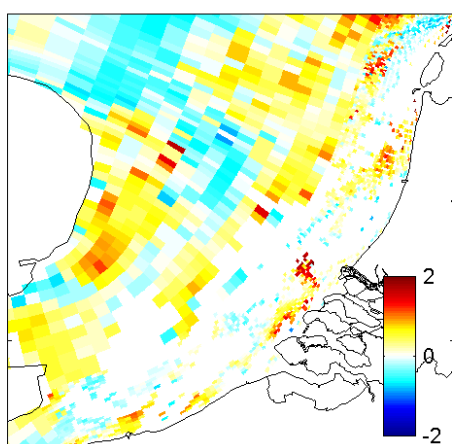
Model at bottom layer



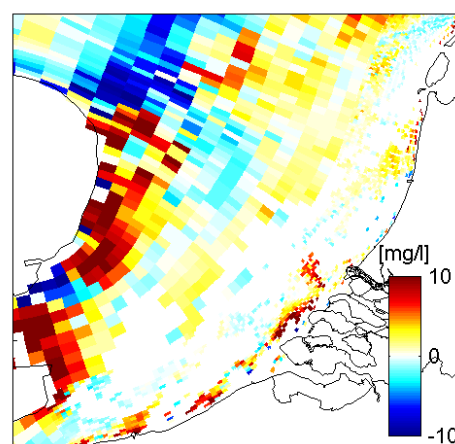
RMS difference



Relative difference [(MERIS-Model)/Model]



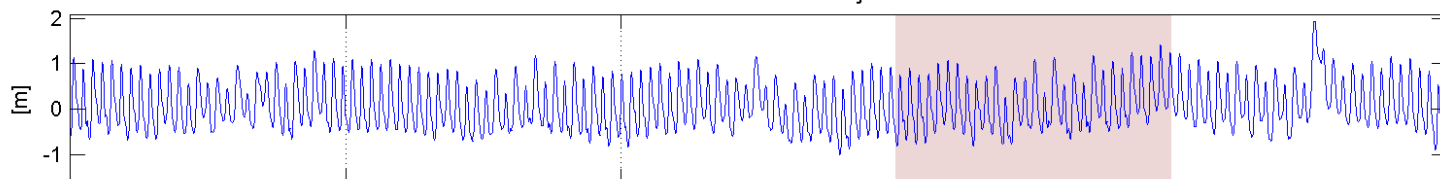
Mean difference [MERIS-Model]

 $\times 10^6$

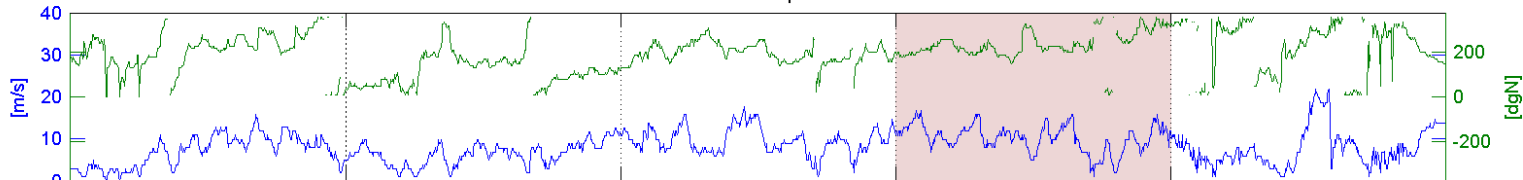
Sand mining volume for Maasvlakte 2



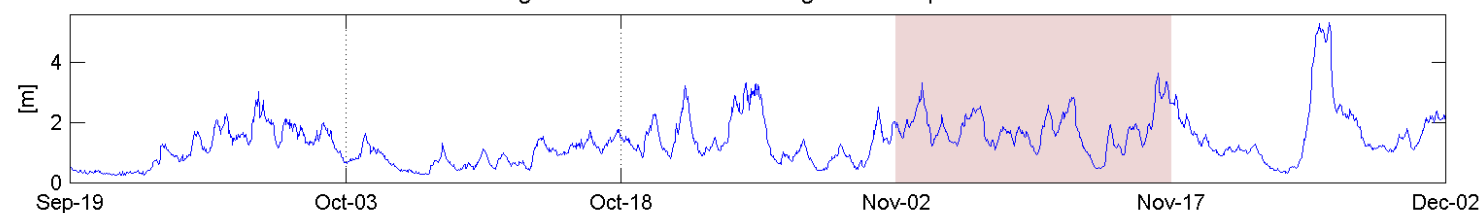
Water level at Noordwijk10



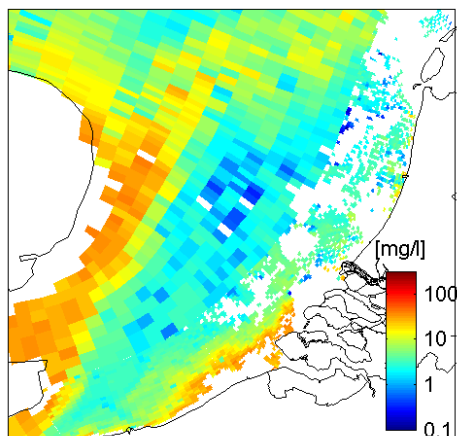
Wind at Euro platform



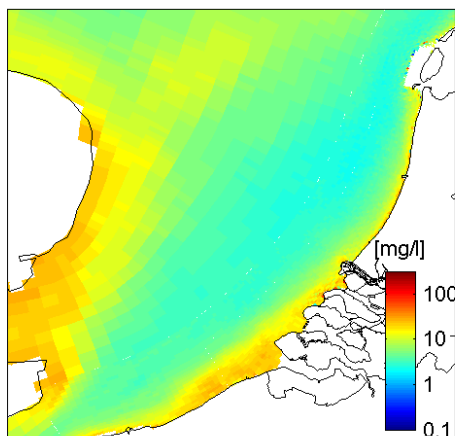
Significant surface wave height at Euro platform



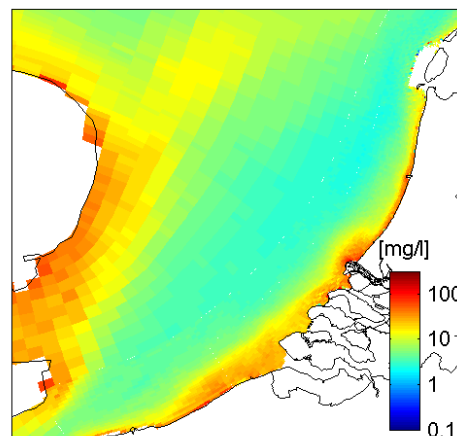
MERIS at surface layer



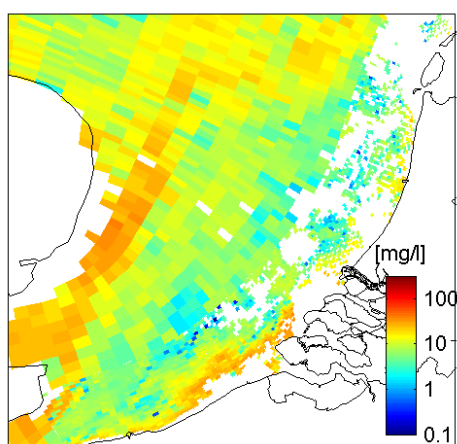
Model at surface layer



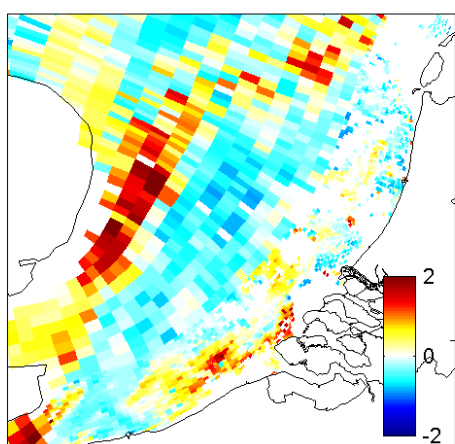
Model at bottom layer



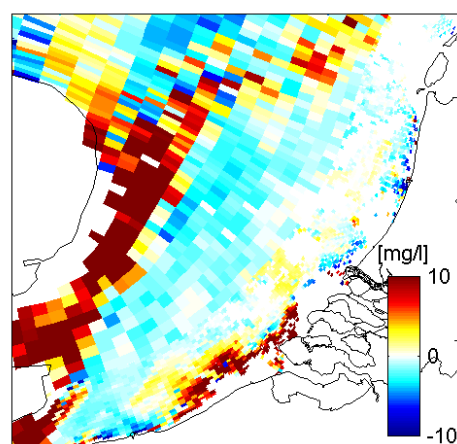
RMS difference



Relative difference [(MERIS-Model)/Model]



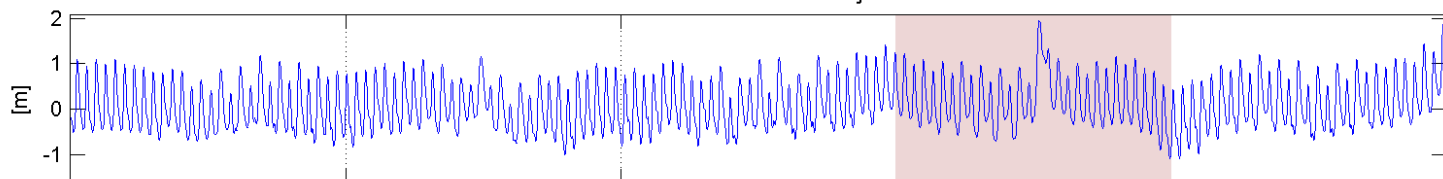
Mean difference [MERIS-Model]


 $\times 10^6$

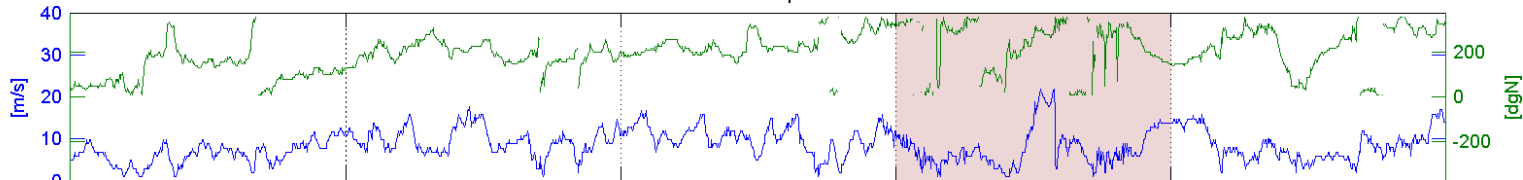
Sand mining volume for Maasvlakte 2



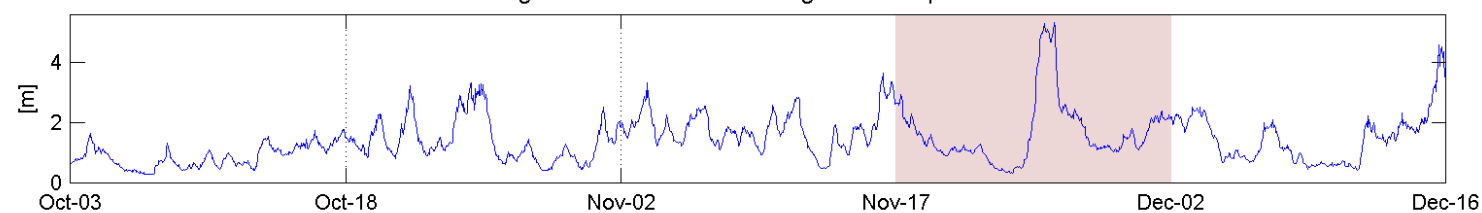
Water level at Noordwijk10



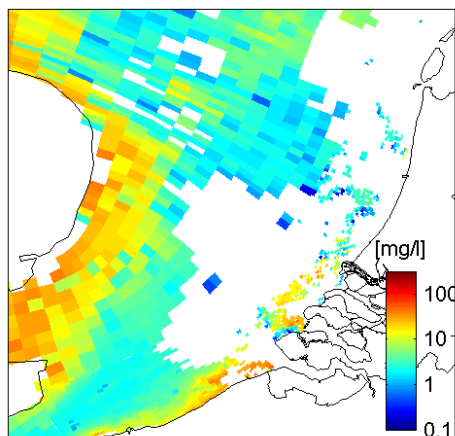
Wind at Euro platform



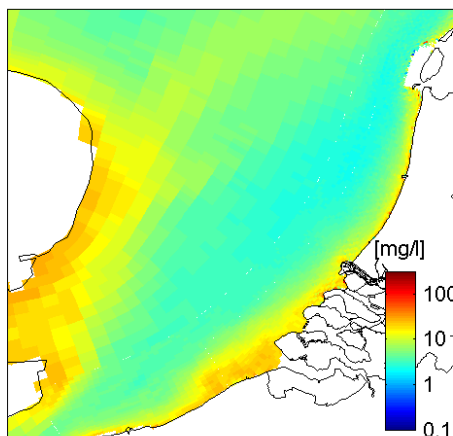
Significant surface wave height at Euro platform



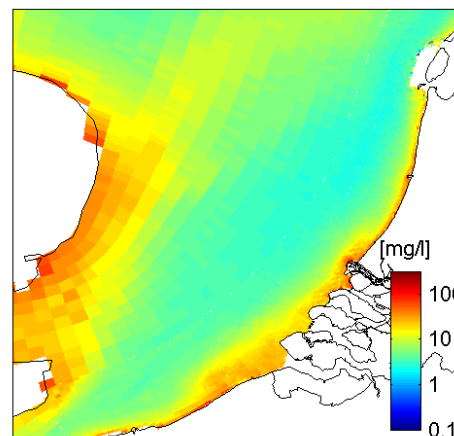
MERIS at surface layer



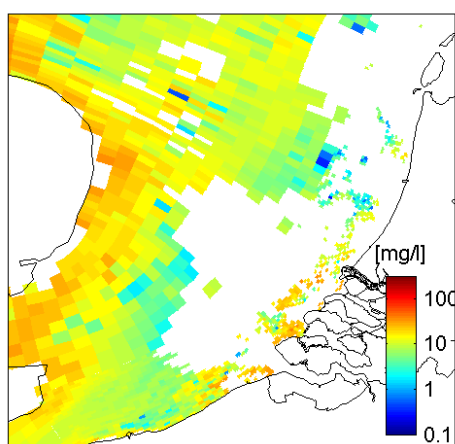
Model at surface layer



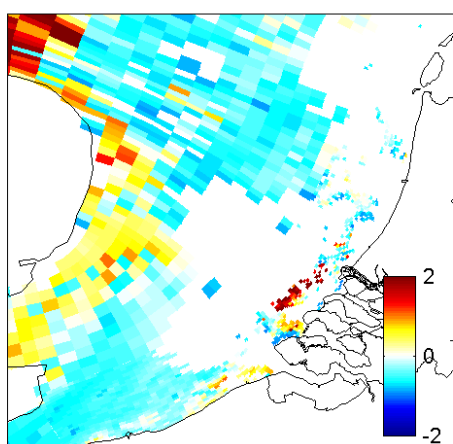
Model at bottom layer



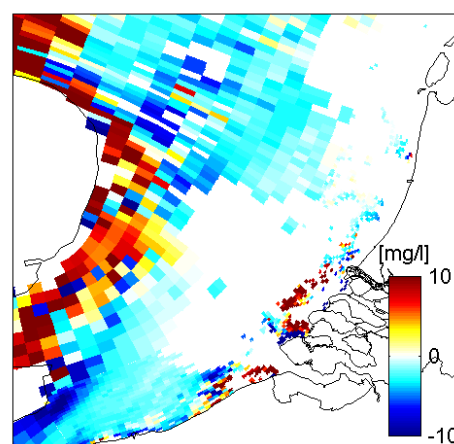
RMS difference



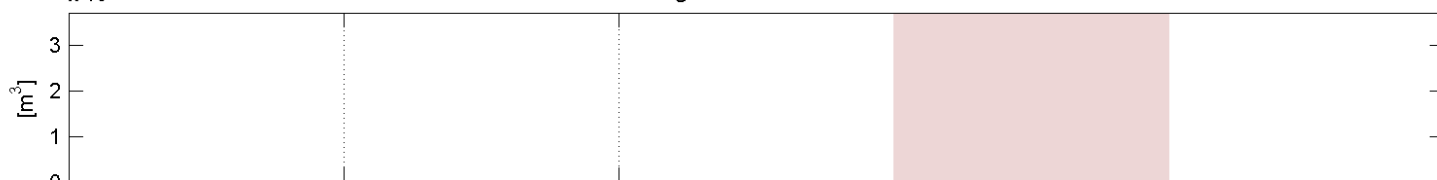
Relative difference [(MERIS-Model)/Model]



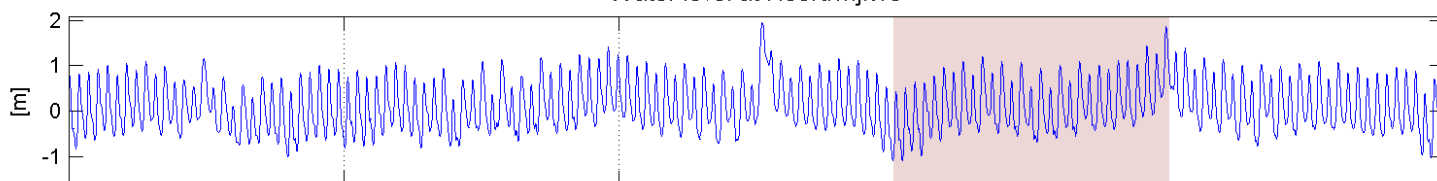
Mean difference [MERIS-Model]


x 10⁶

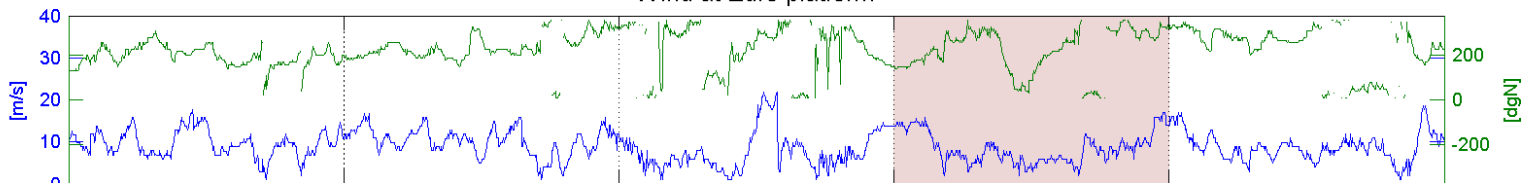
Sand mining volume for Maasvlakte 2



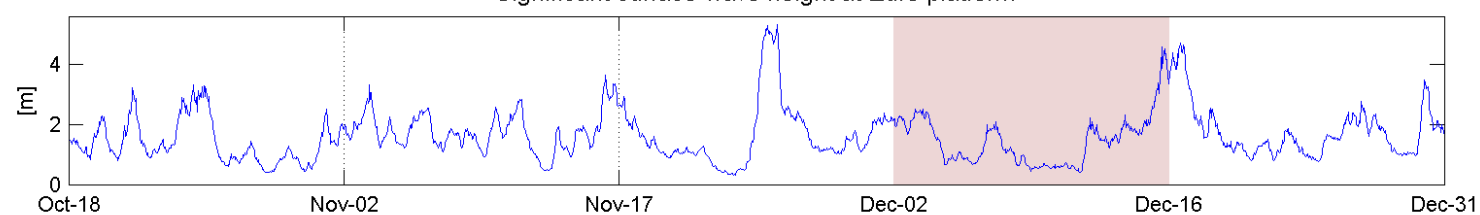
Water level at Noordwijk10



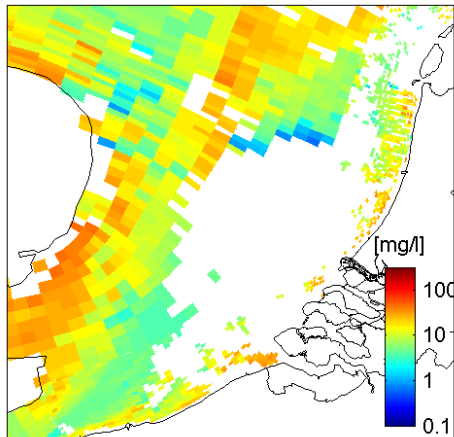
Wind at Euro platform



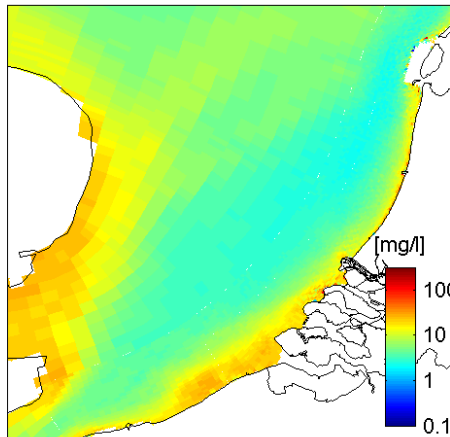
Significant surface wave height at Euro platform



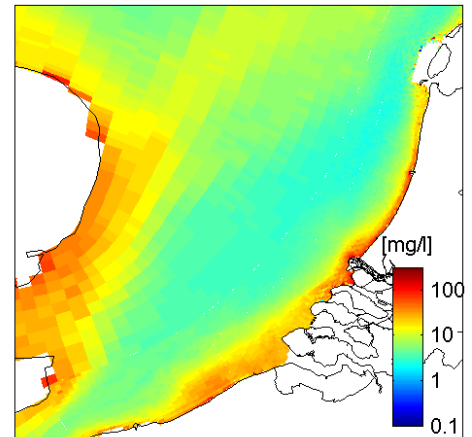
MERIS at surface layer



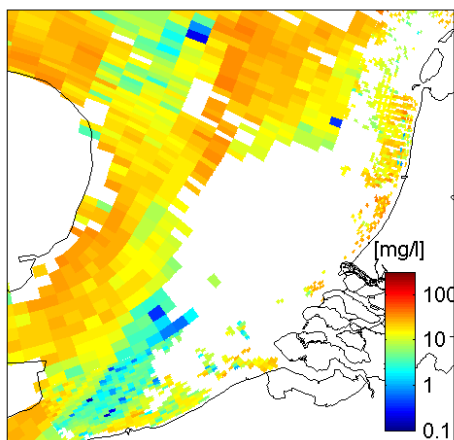
Model at surface layer



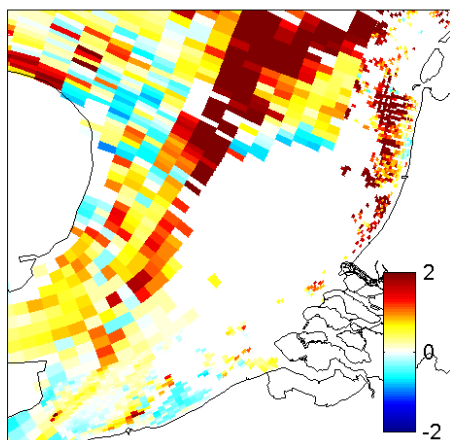
Model at bottom layer



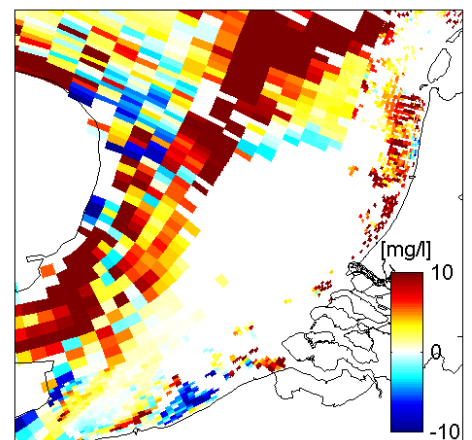
RMS difference



Relative difference [(MERIS-Model)/Model]



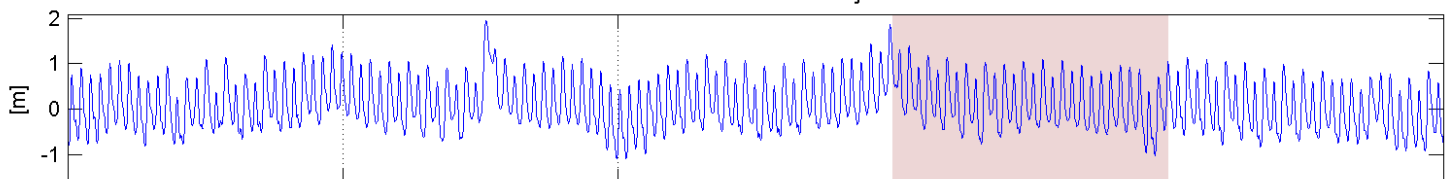
Mean difference [MERIS-Model]

 $\times 10^6$

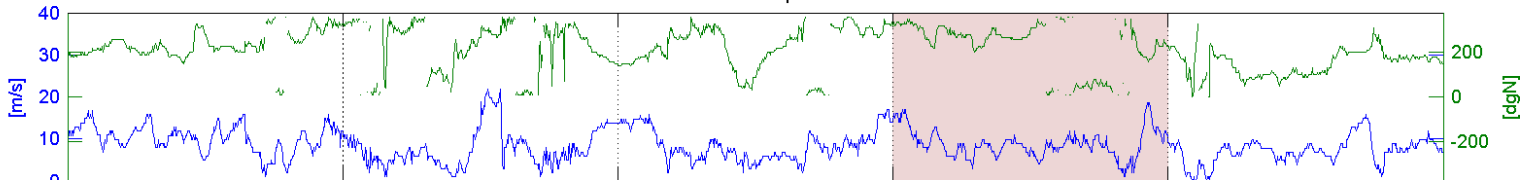
Sand mining volume for Maasvlakte 2



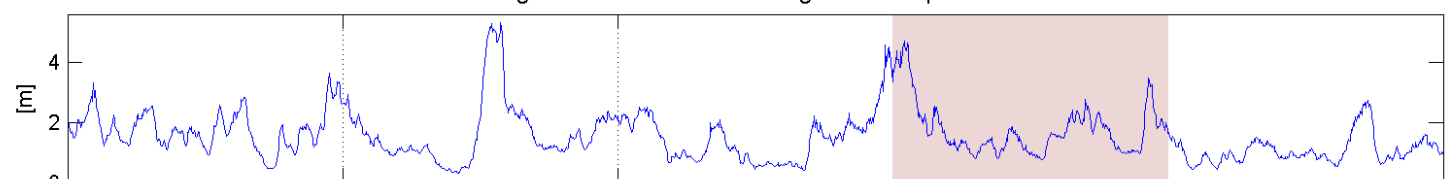
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Nov-02

Nov-17

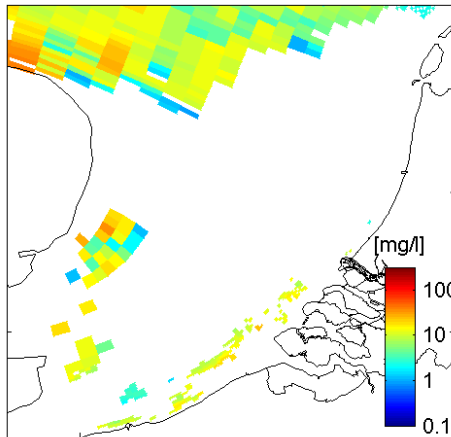
Dec-02

Dec-16

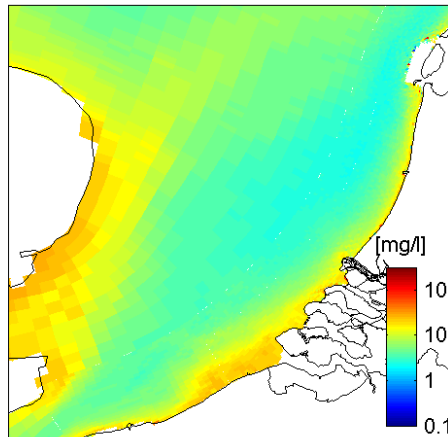
Dec-31

Jan-15

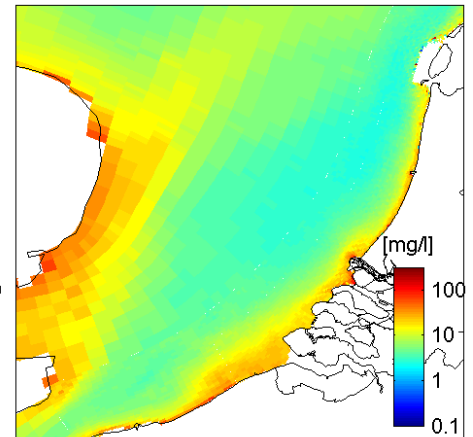
MERIS at surface layer



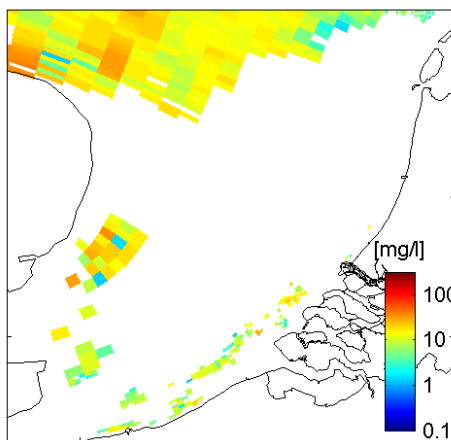
Model at surface layer



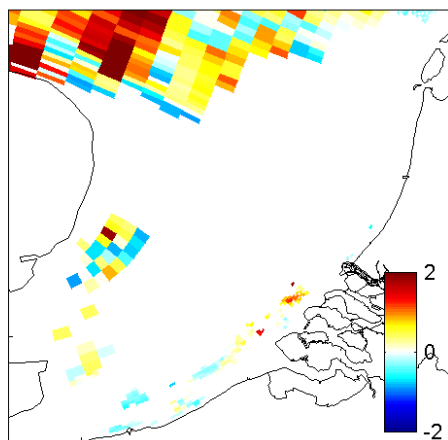
Model at bottom layer



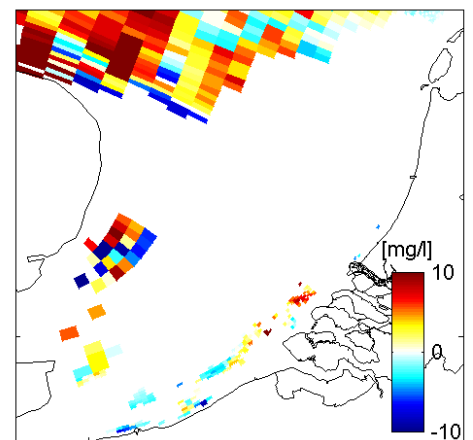
RMS difference



Relative difference [(MERIS-Model)/Model]



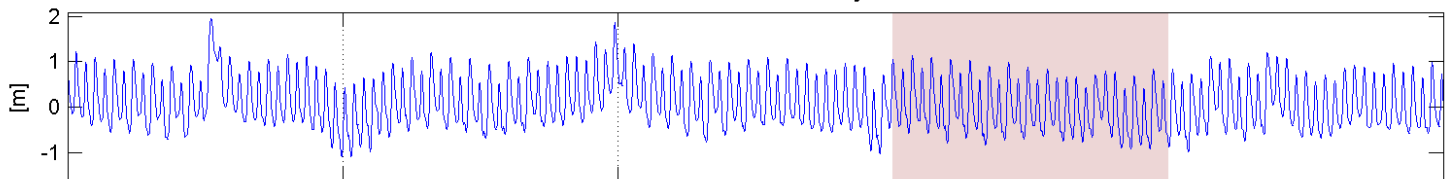
Mean difference [MERIS-Model]

 $\times 10^6$

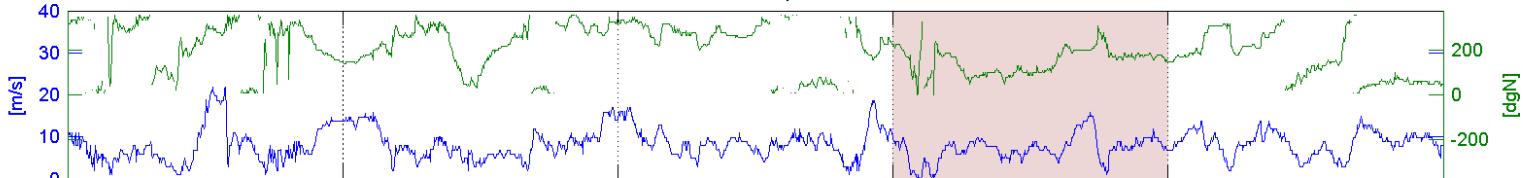
Sand mining volume for Maasvlakte 2



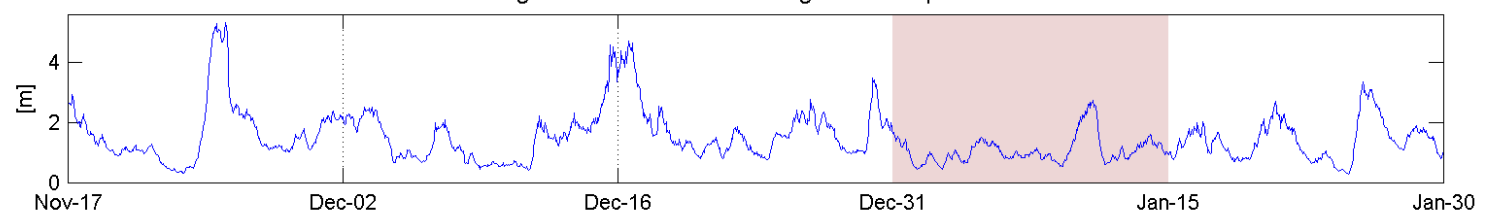
Water level at Noordwijk10



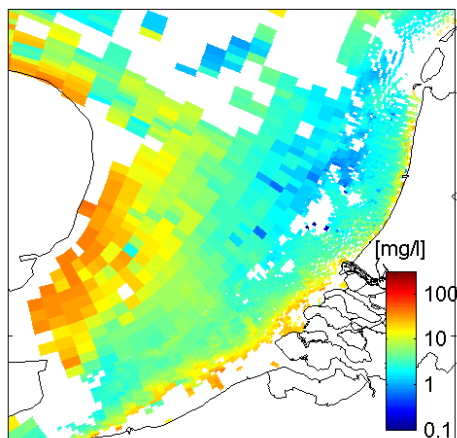
Wind at Euro platform



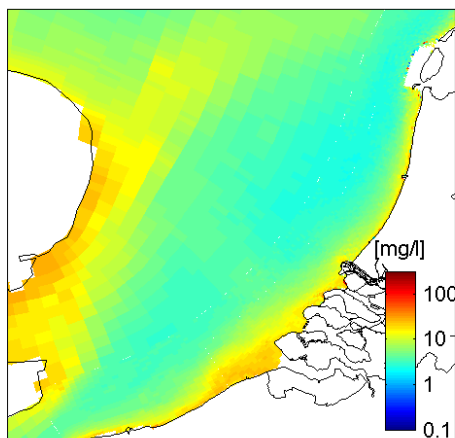
Significant surface wave height at Euro platform



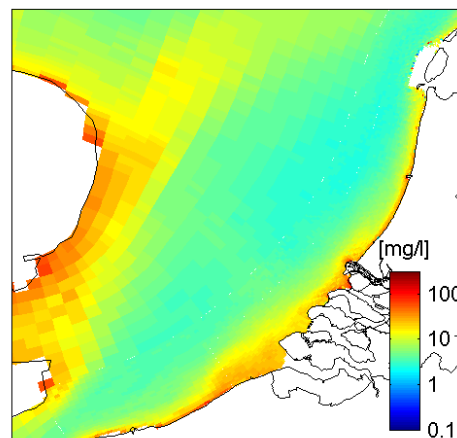
MERIS at surface layer



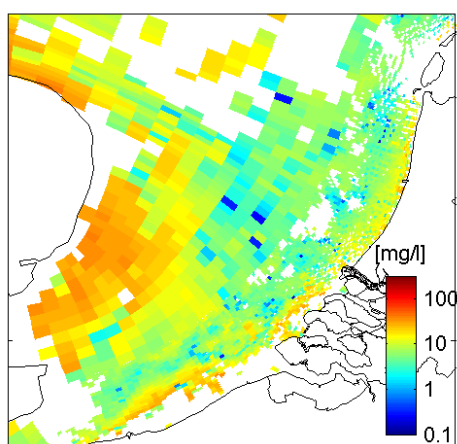
Model at surface layer



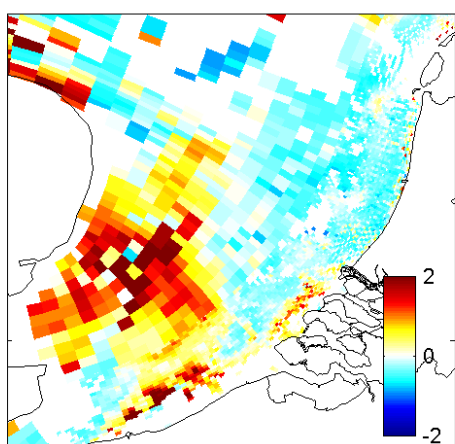
Model at bottom layer



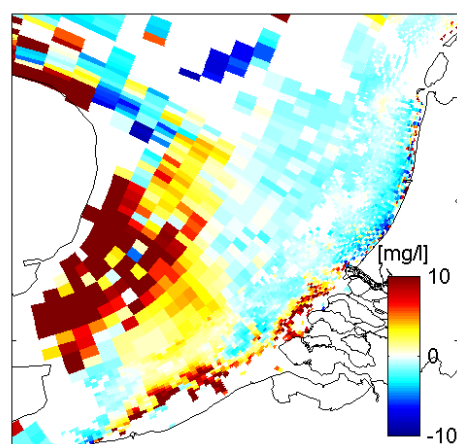
RMS difference



Relative difference [(MERIS-Model)/Model]



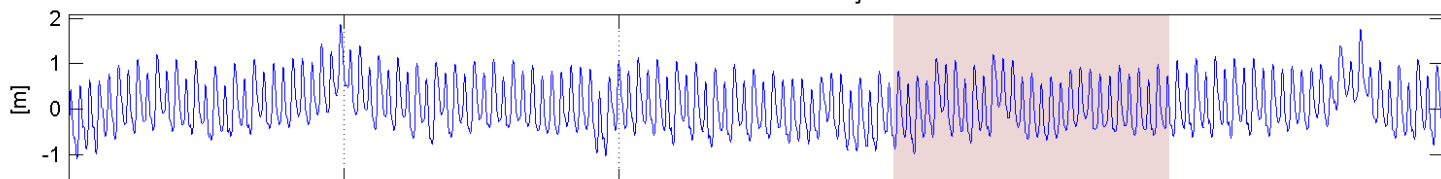
Mean difference [MERIS-Model]


x 10⁶

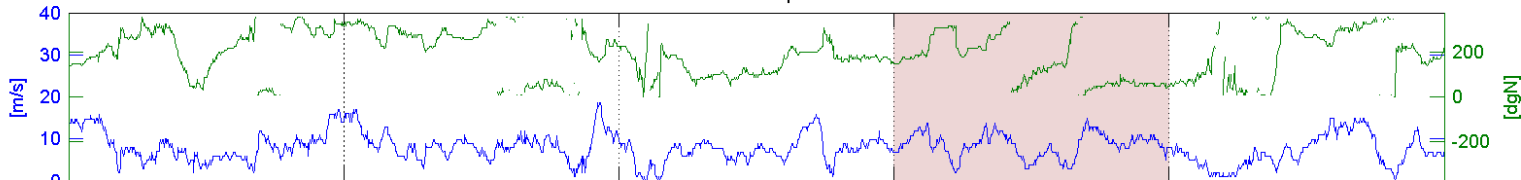
Sand mining volume for Maasvlakte 2



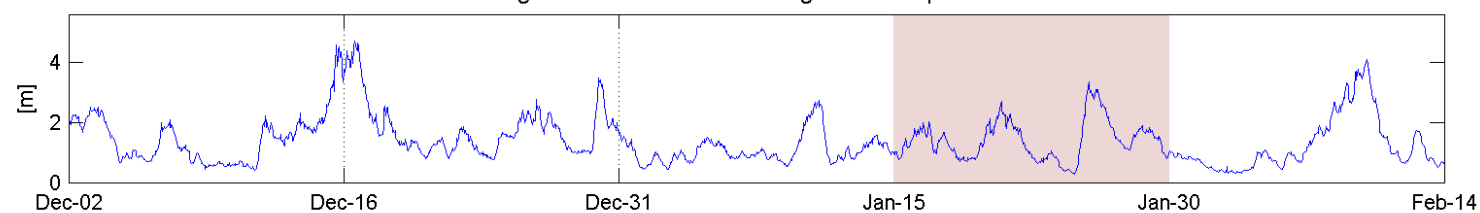
Water level at Noordwijk10



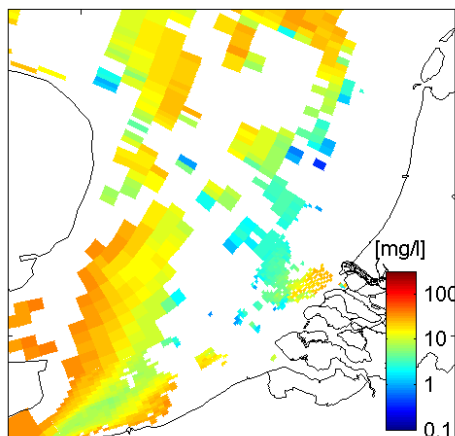
Wind at Euro platform



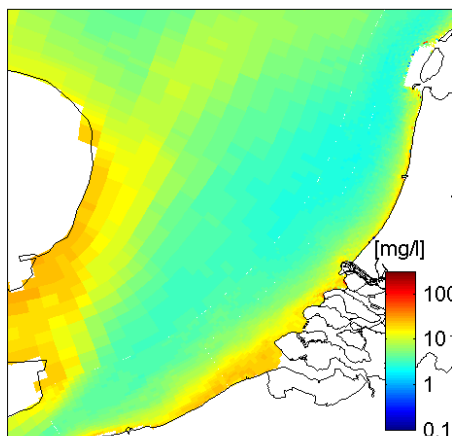
Significant surface wave height at Euro platform



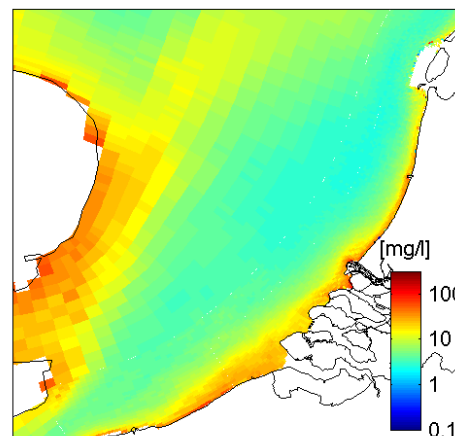
MERIS at surface layer



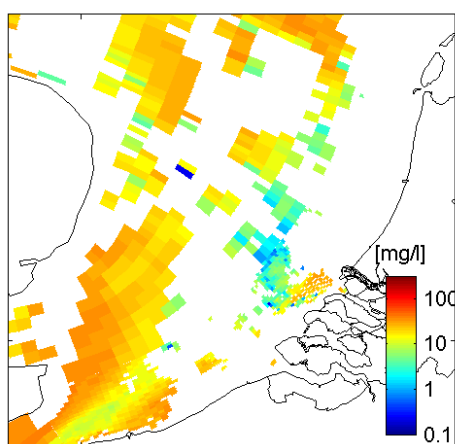
Model at surface layer



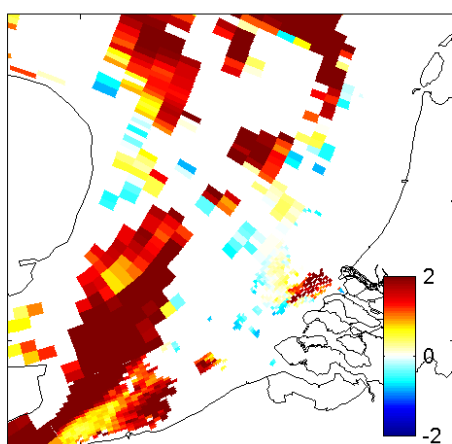
Model at bottom layer



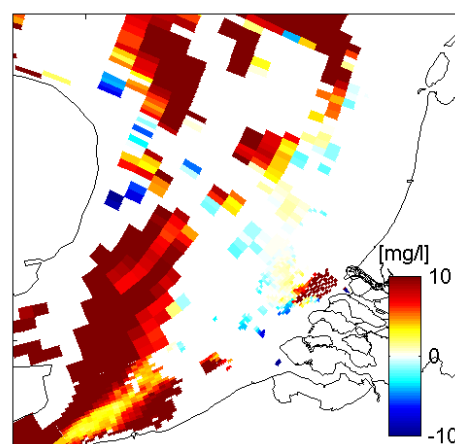
RMS difference



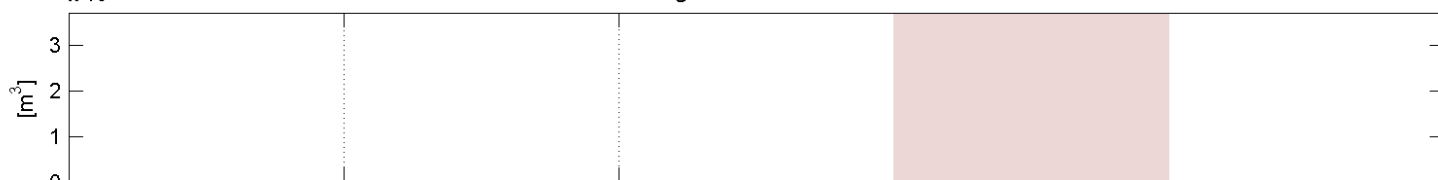
Relative difference [(MERIS-Model)/Model]



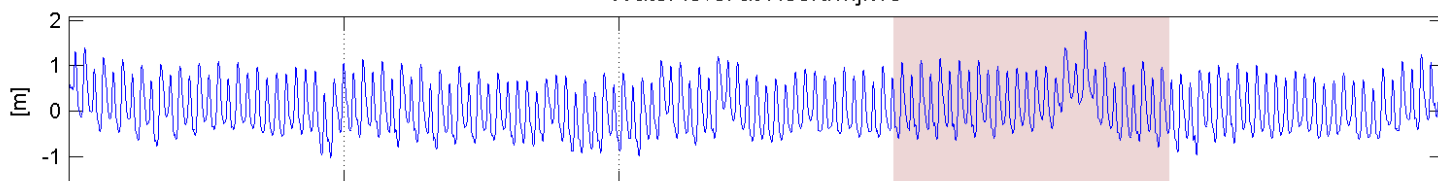
Mean difference [MERIS-Model]


 $\times 10^6$

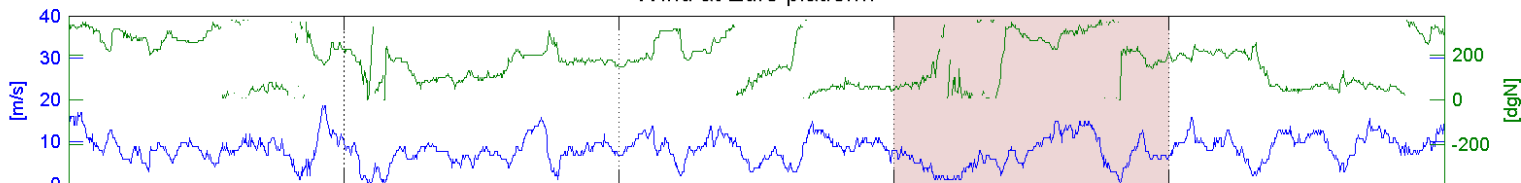
Sand mining volume for Maasvlakte 2



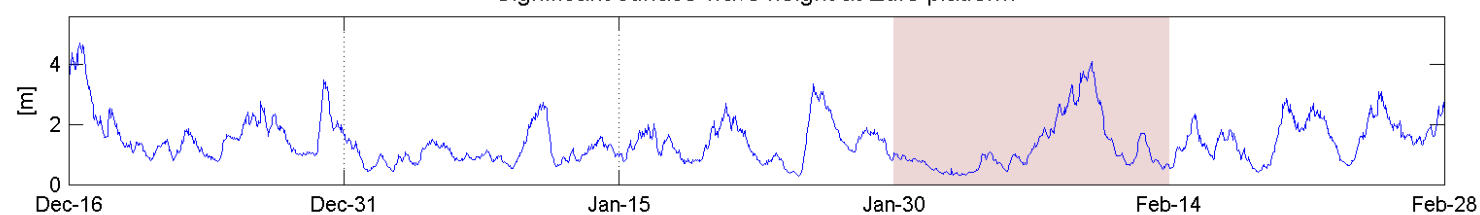
Water level at Noordwijk10



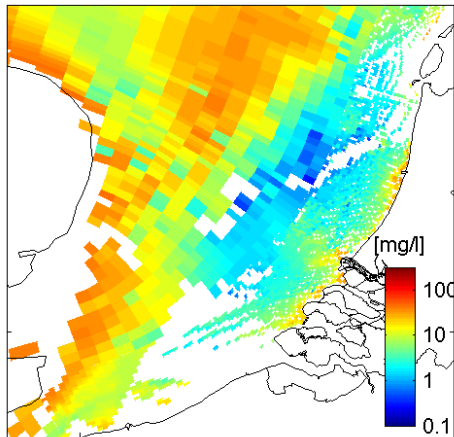
Wind at Euro platform



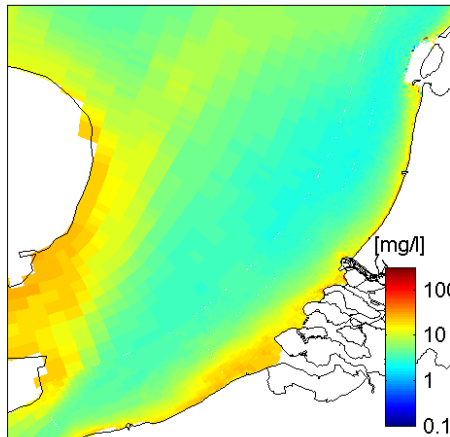
Significant surface wave height at Euro platform



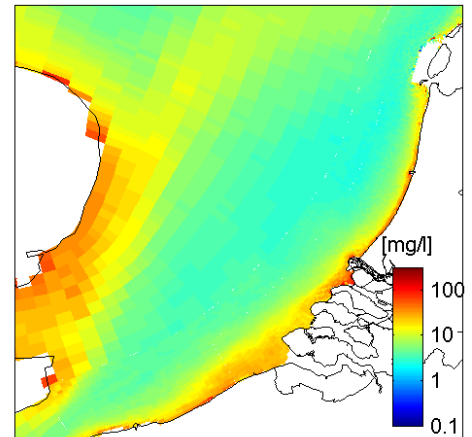
MERIS at surface layer



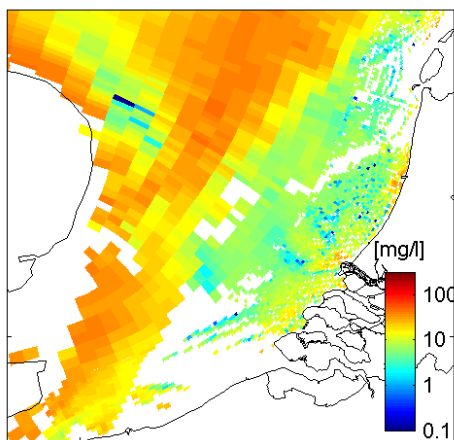
Model at surface layer



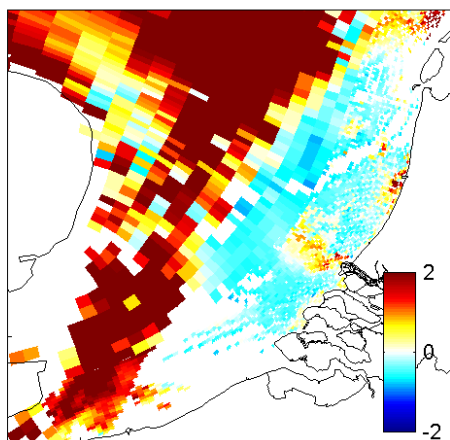
Model at bottom layer



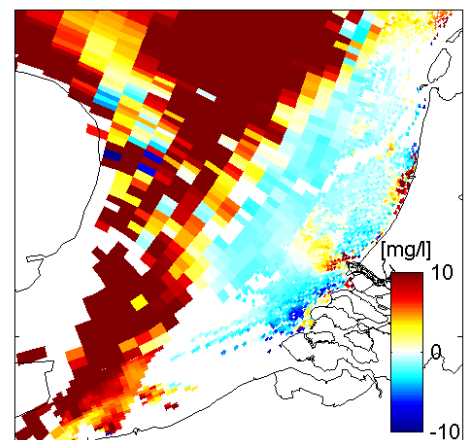
RMS difference



Relative difference [(MERIS-Model)/Model]



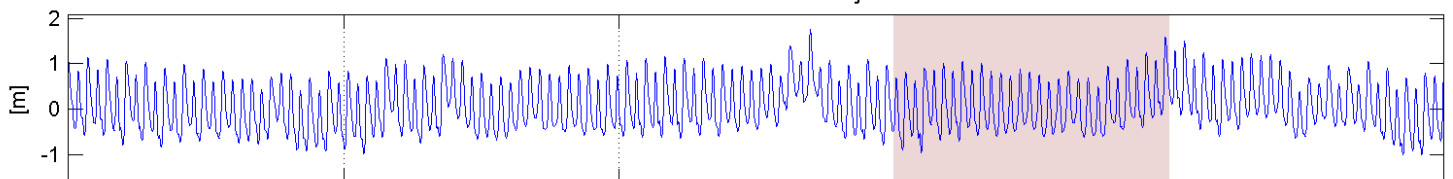
Mean difference [MERIS-Model]

 $\times 10^6$

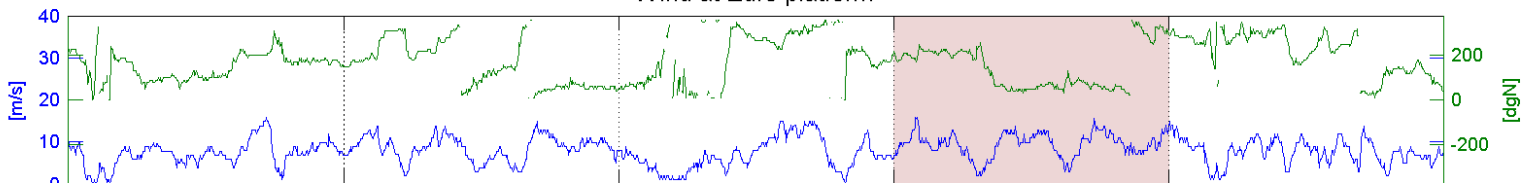
Sand mining volume for Maasvlakte 2



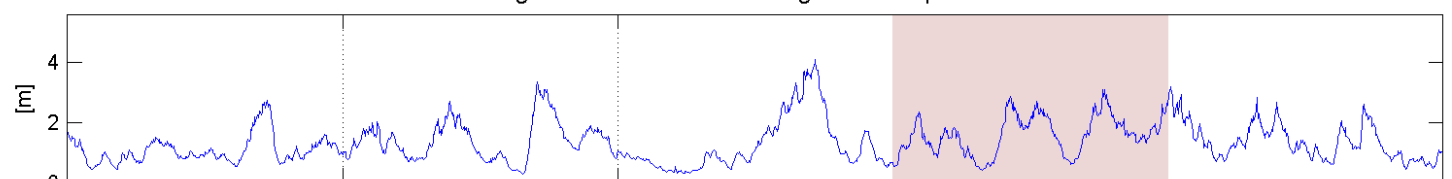
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Dec-31

Jan-15

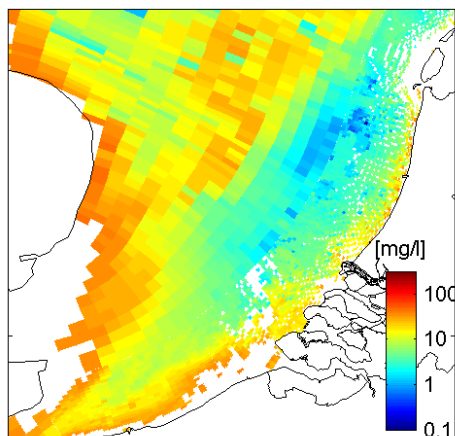
Jan-30

Feb-14

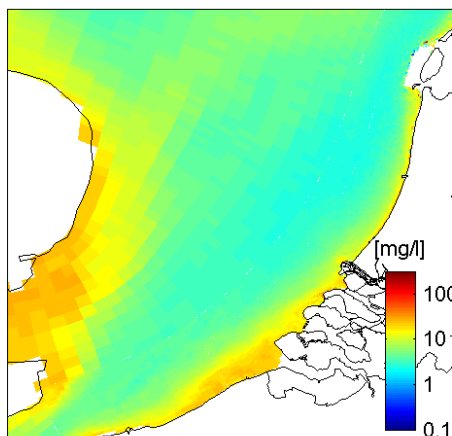
Feb-28

Mar-15

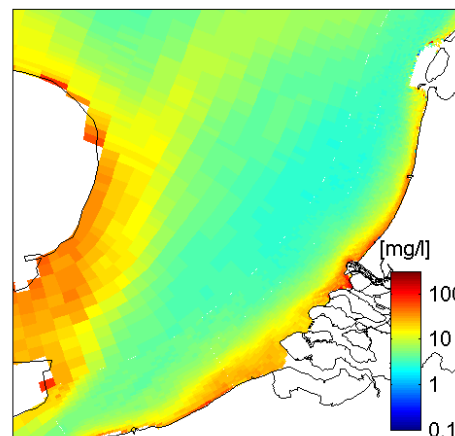
MERIS at surface layer



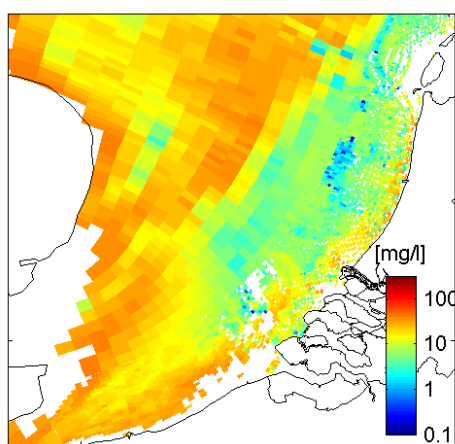
Model at surface layer



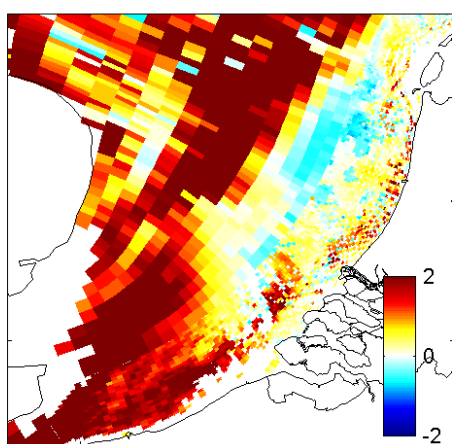
Model at bottom layer



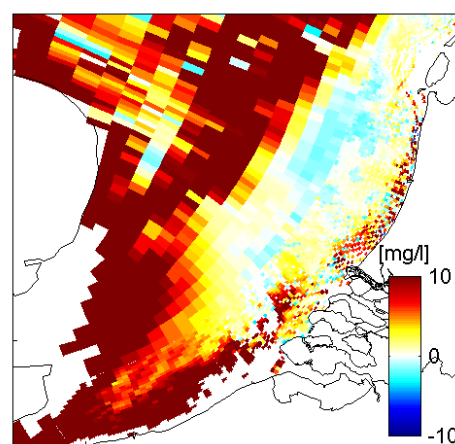
RMS difference



Relative difference [(MERIS-Model)/Model]



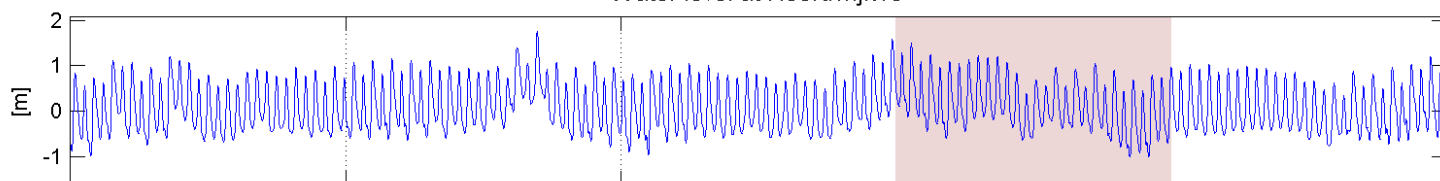
Mean difference [MERIS-Model]

 $\times 10^6$

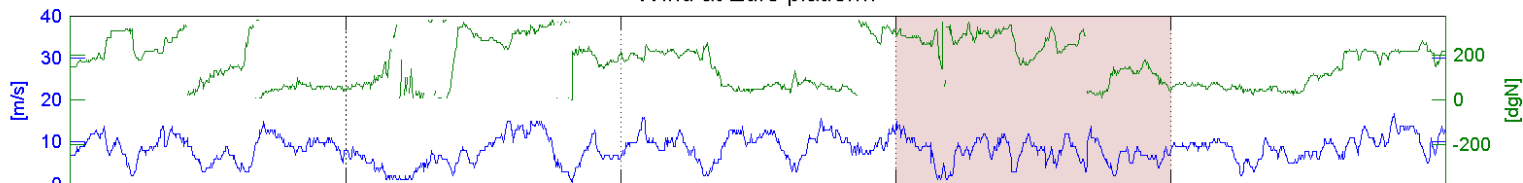
Sand mining volume for Maasvlakte 2



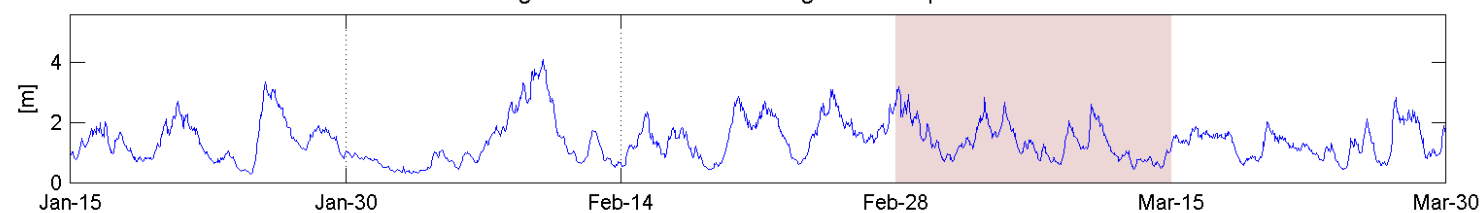
Water level at Noordwijk10



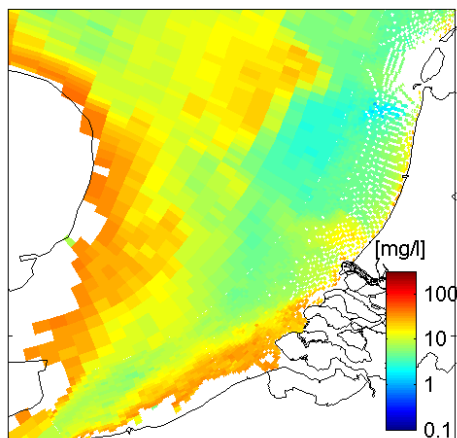
Wind at Euro platform



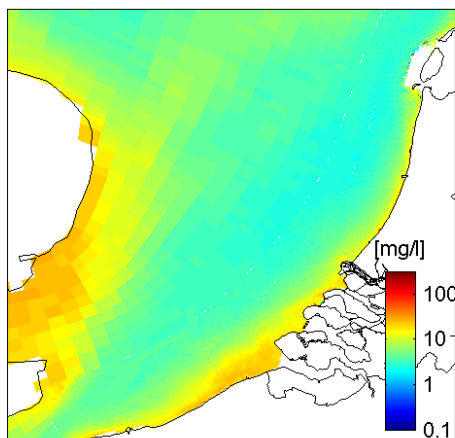
Significant surface wave height at Euro platform



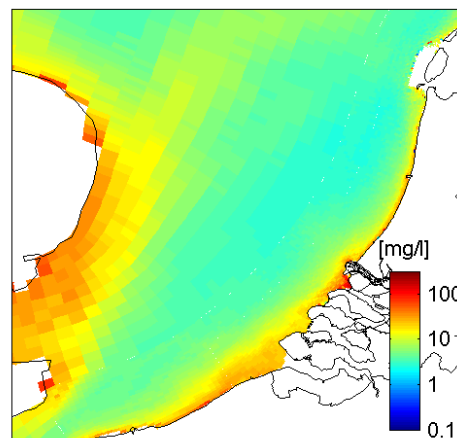
MERIS at surface layer



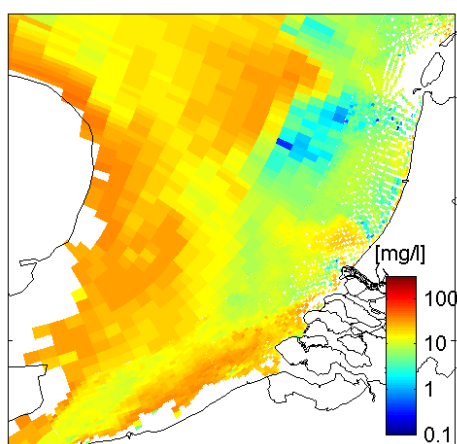
Model at surface layer



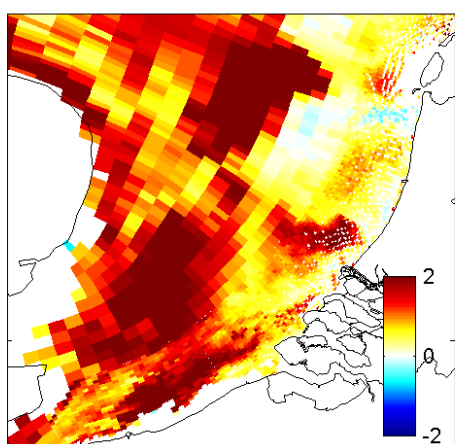
Model at bottom layer



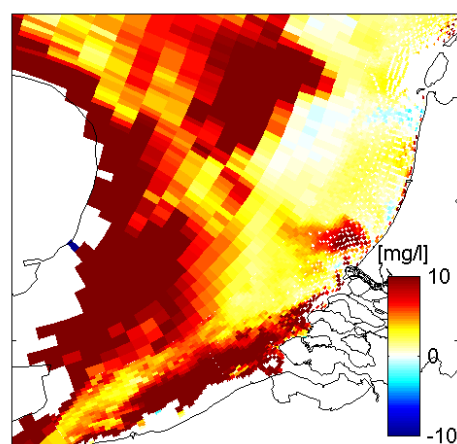
RMS difference



Relative difference [(MERIS-Model)/Model]



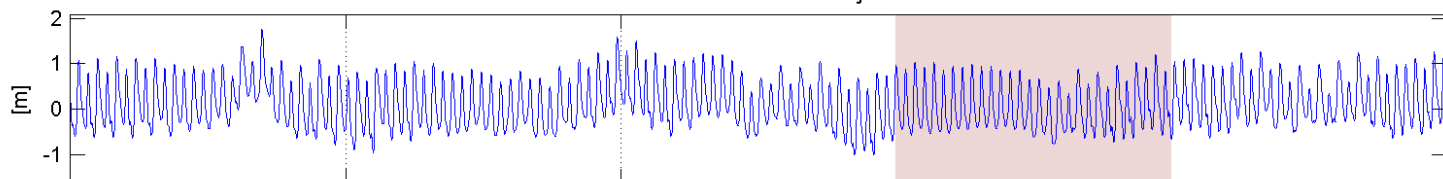
Mean difference [MERIS-Model]


x 10⁶

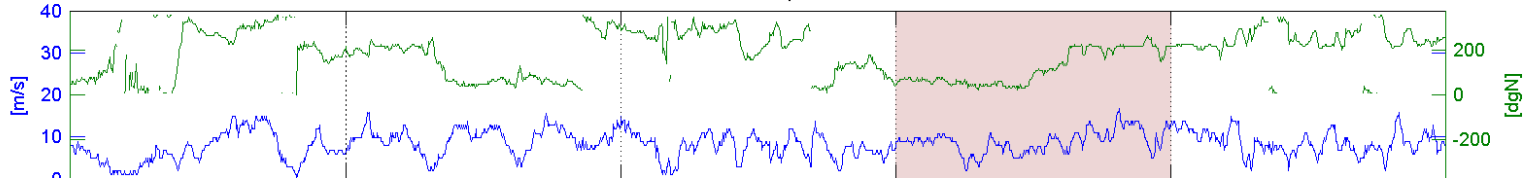
Sand mining volume for Maasvlakte 2



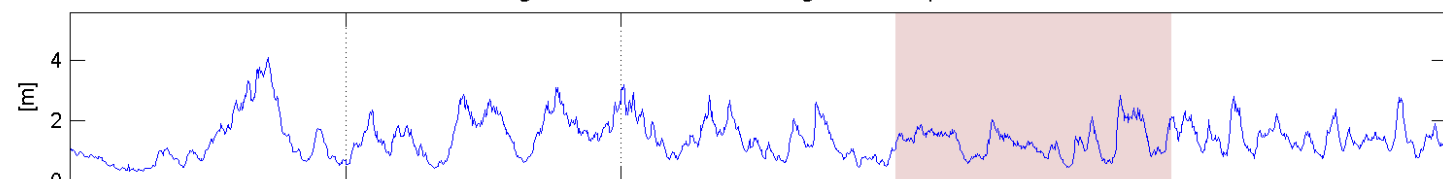
Water level at Noordwijk10



Wind at Euro platform

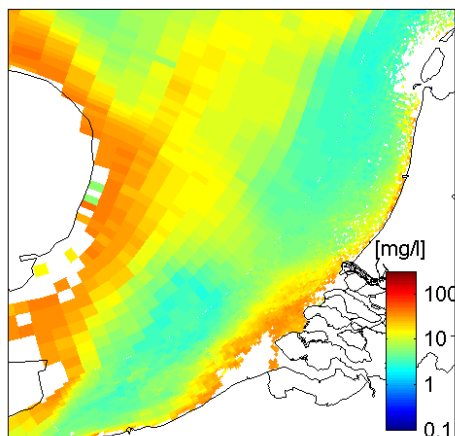


Significant surface wave height at Euro platform

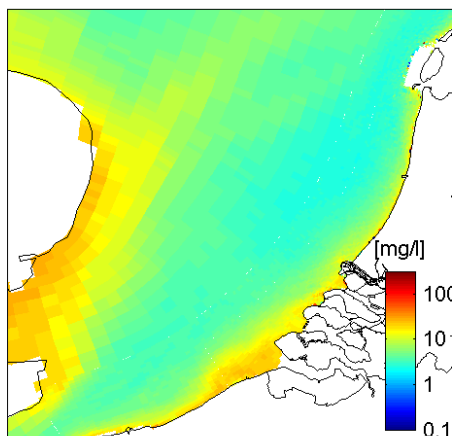


Jan-30 Feb-14 Feb-28 Mar-15 Mar-30 Apr-14

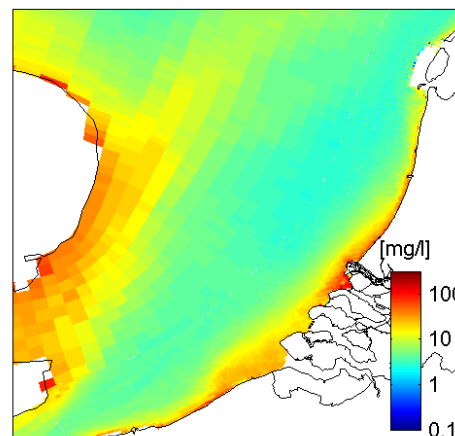
MERIS at surface layer



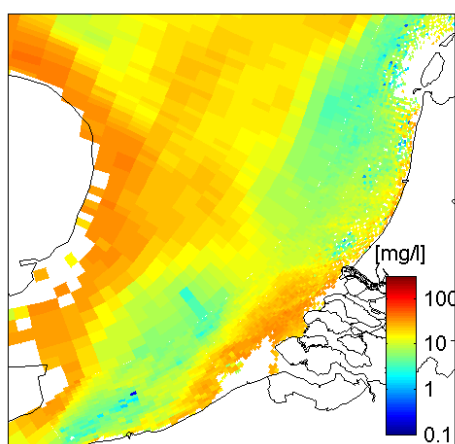
Model at surface layer



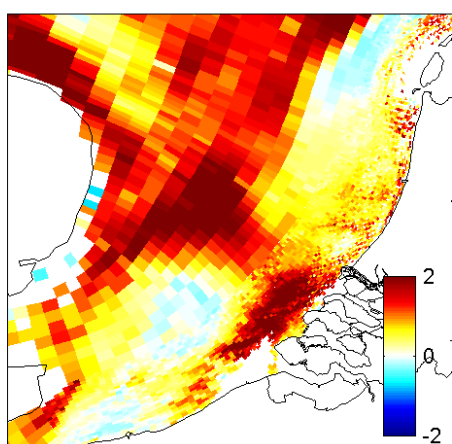
Model at bottom layer



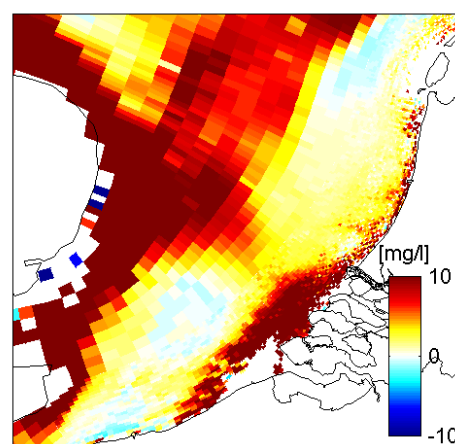
RMS difference



Relative difference [(MERIS-Model)/Model]



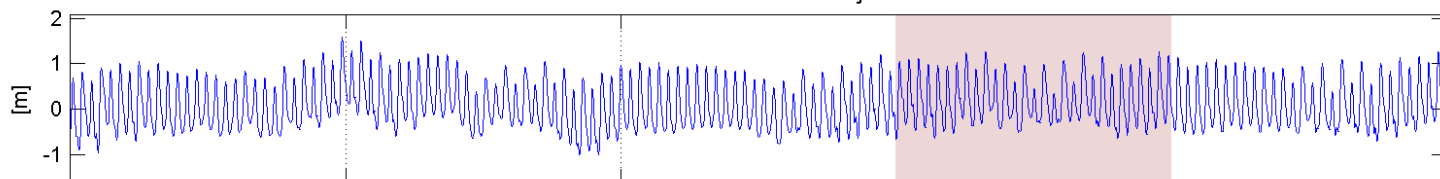
Mean difference [MERIS-Model]

 $\times 10^6$

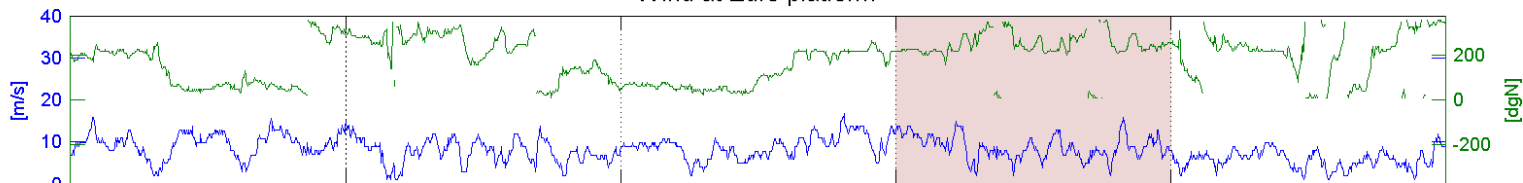
Sand mining volume for Maasvlakte 2



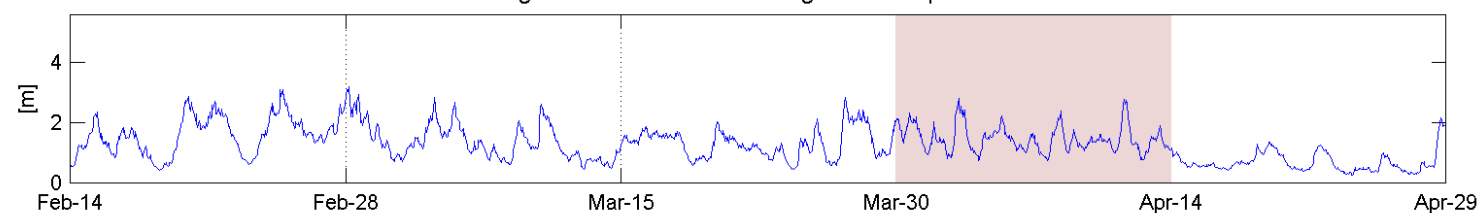
Water level at Noordwijk10



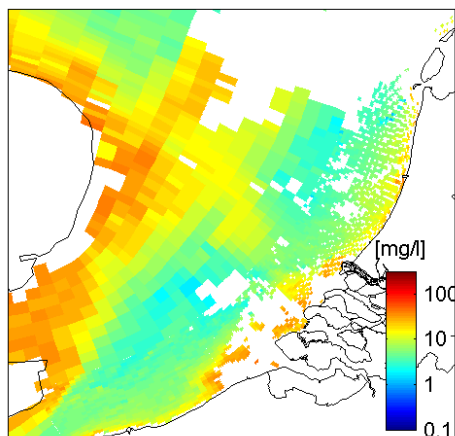
Wind at Euro platform



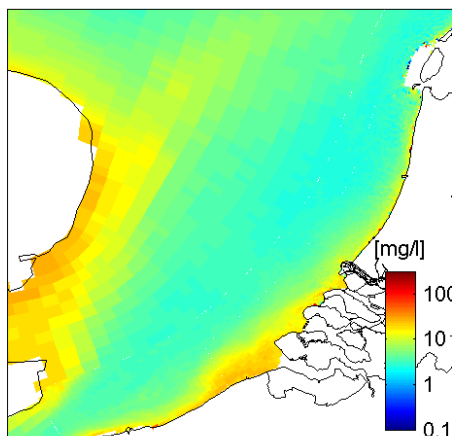
Significant surface wave height at Euro platform



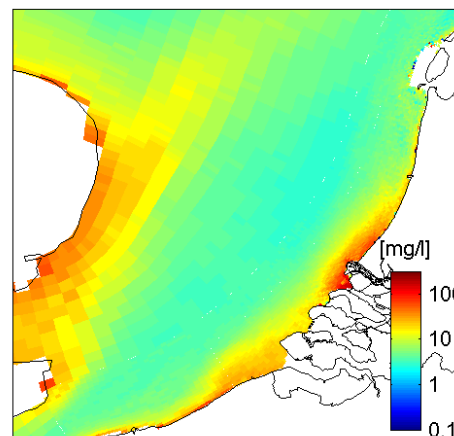
MERIS at surface layer



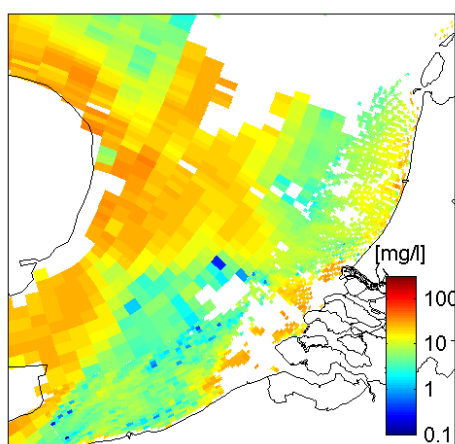
Model at surface layer



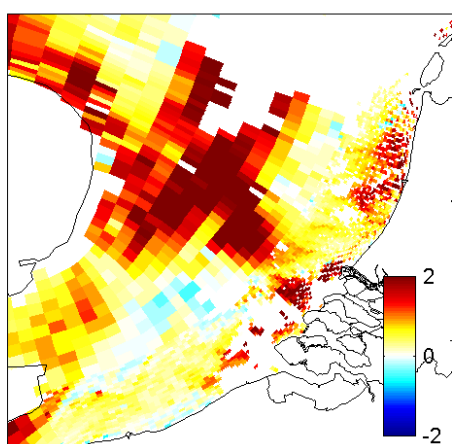
Model at bottom layer



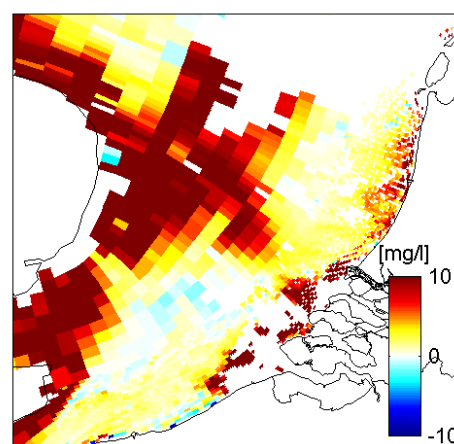
RMS difference



Relative difference [(MERIS-Model)/Model]



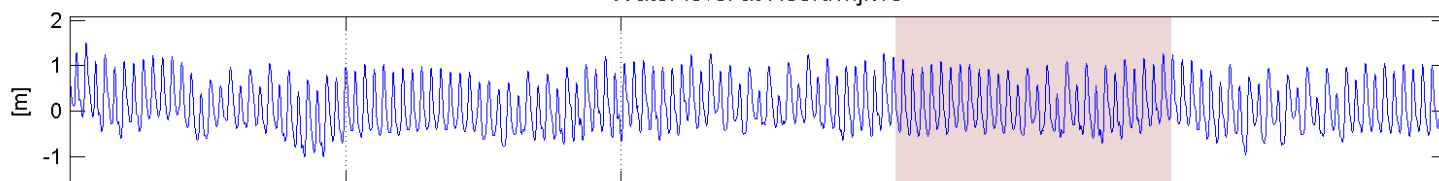
Mean difference [MERIS-Model]

 $\times 10^6$

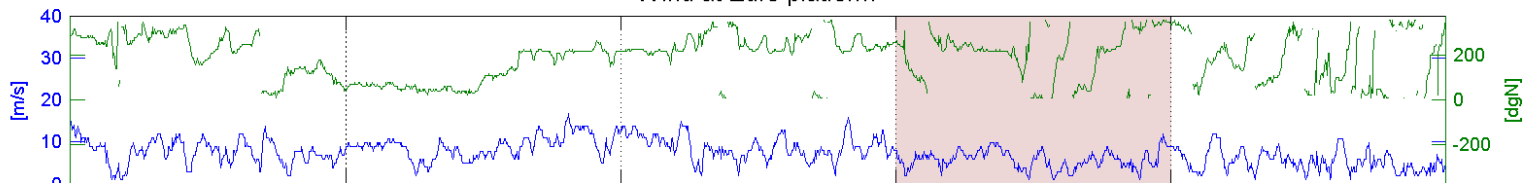
Sand mining volume for Maasvlakte 2



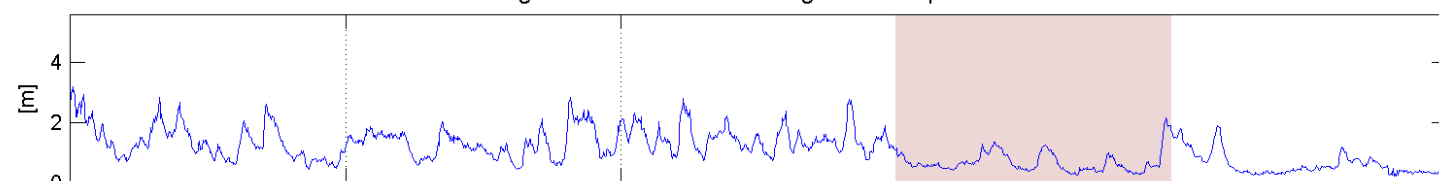
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Feb-28

Mar-15

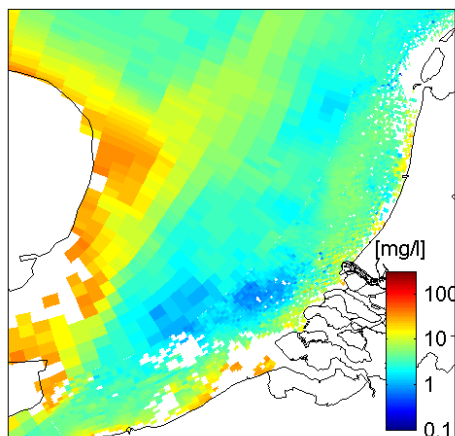
Mar-30

Apr-14

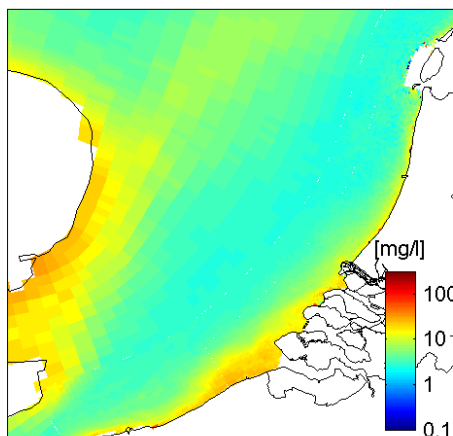
Apr-29

May-13

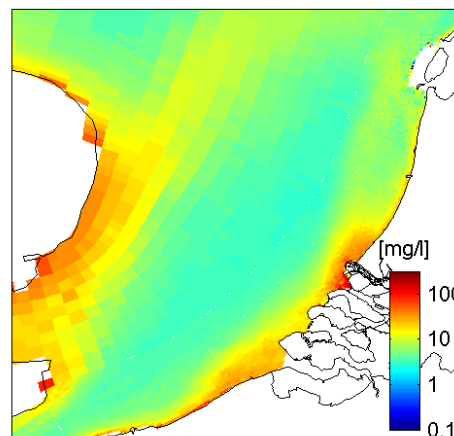
MERIS at surface layer



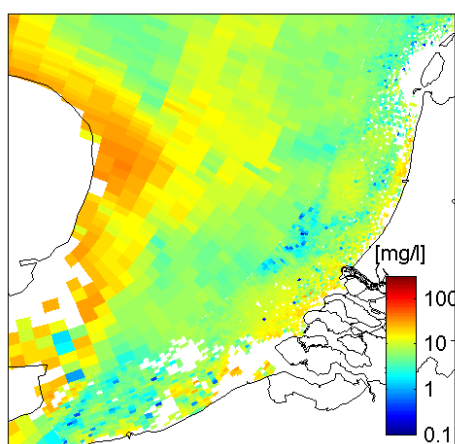
Model at surface layer



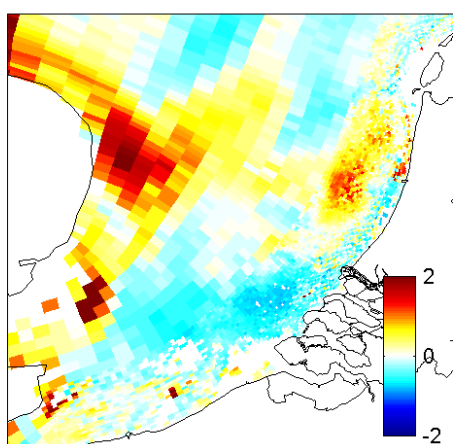
Model at bottom layer



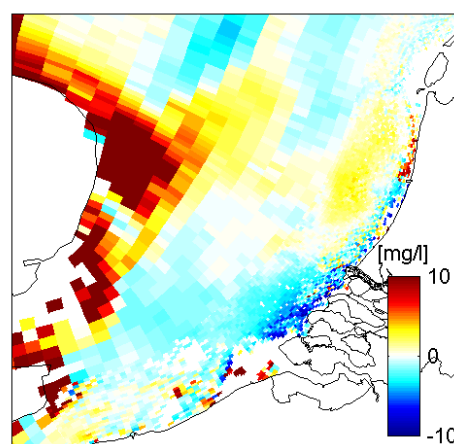
RMS difference



Relative difference [(MERIS-Model)/Model]



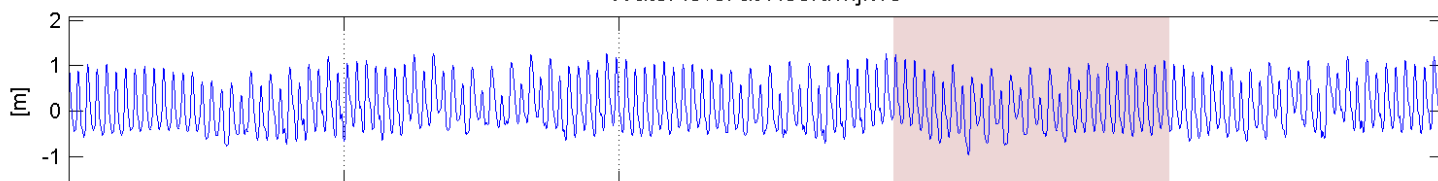
Mean difference [MERIS-Model]

x 10⁶

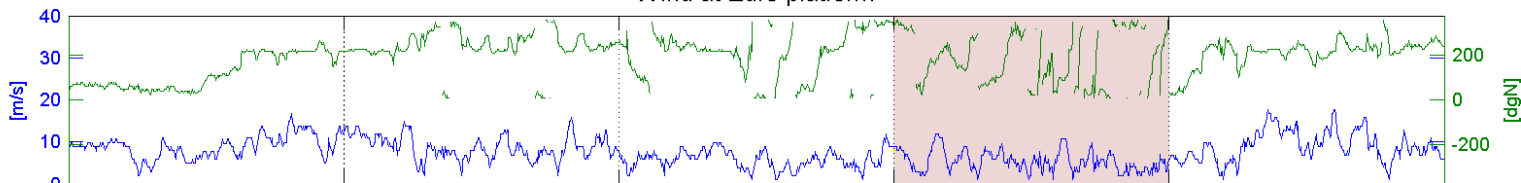
Sand mining volume for Maasvlakte 2



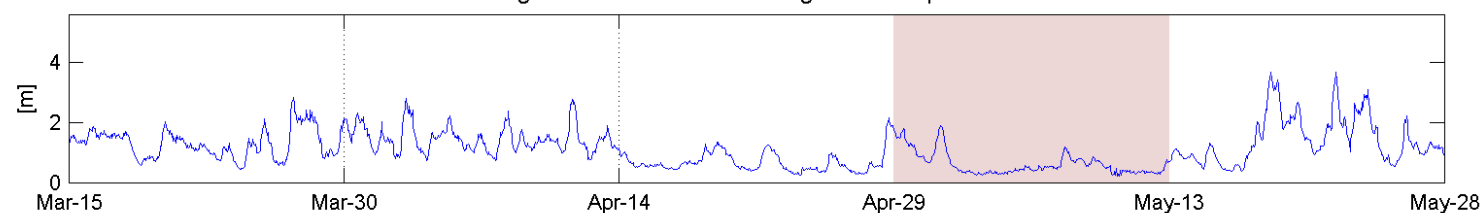
Water level at Noordwijk10



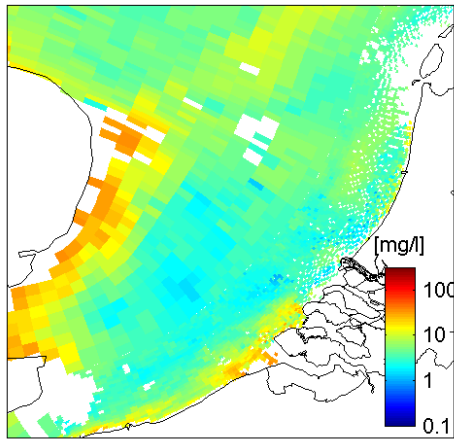
Wind at Euro platform



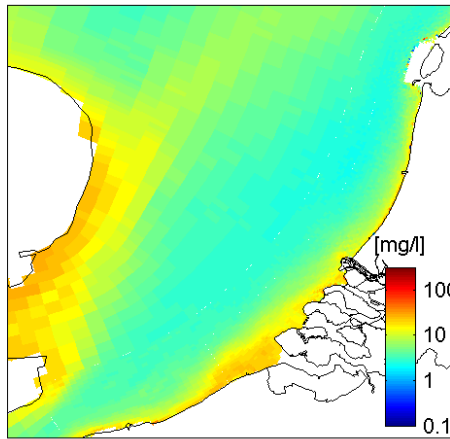
Significant surface wave height at Euro platform



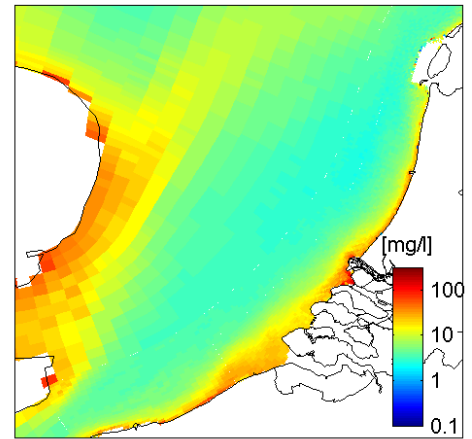
MERIS at surface layer



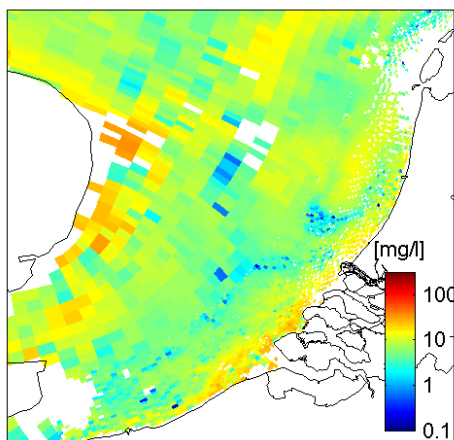
Model at surface layer



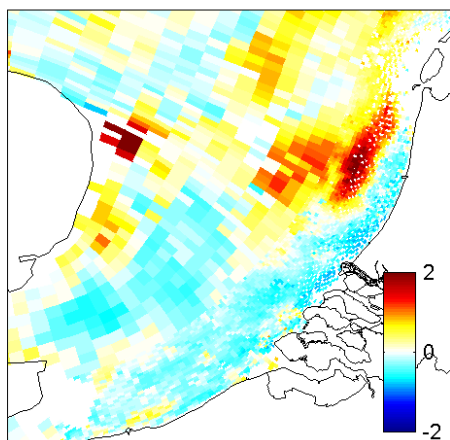
Model at bottom layer



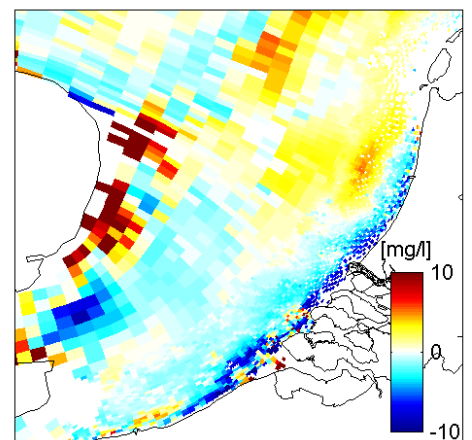
RMS difference



Relative difference [(MERIS-Model)/Model]



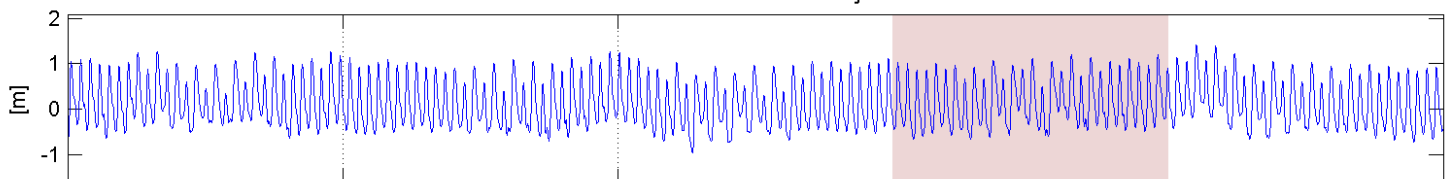
Mean difference [MERIS-Model]

 $\times 10^6$

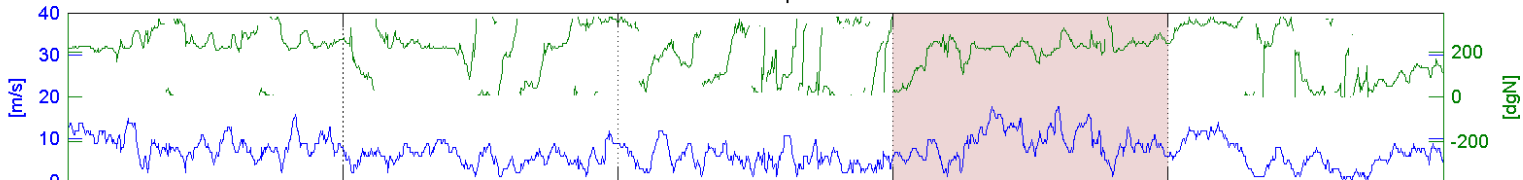
Sand mining volume for Maasvlakte 2



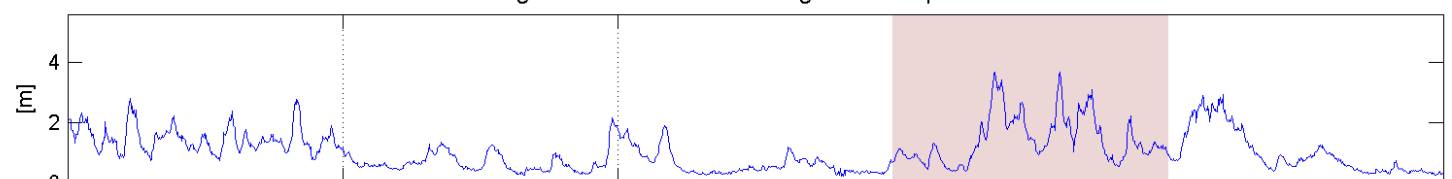
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Mar-30

Apr-14

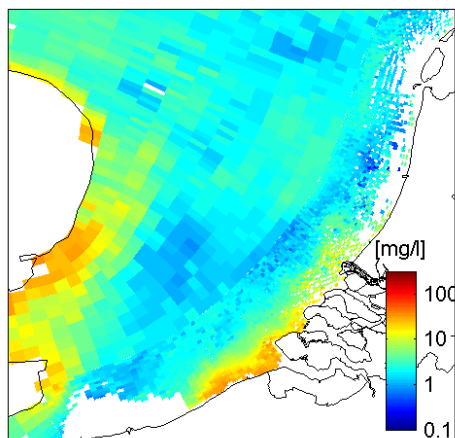
Apr-29

May-13

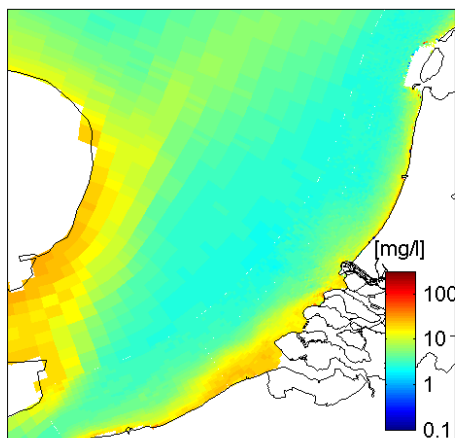
May-28

Jun-12

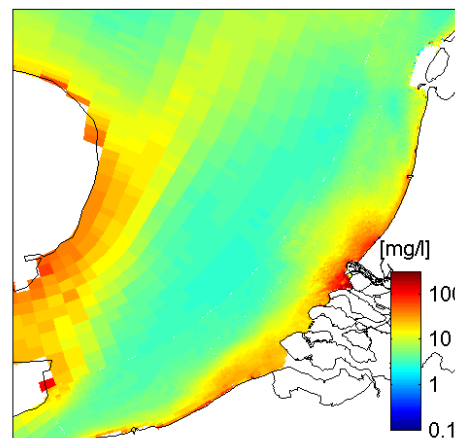
MERIS at surface layer



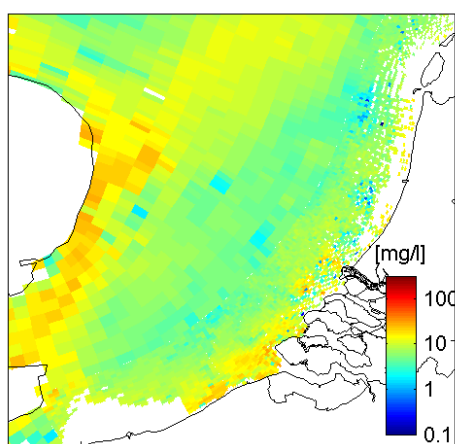
Model at surface layer



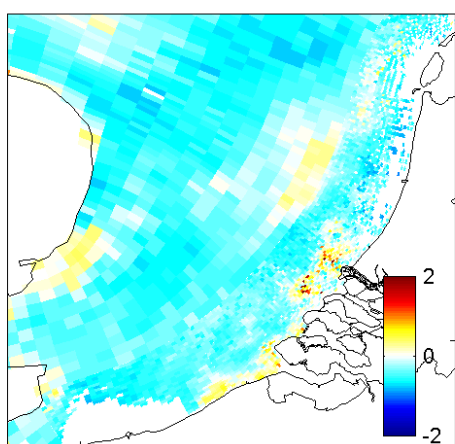
Model at bottom layer



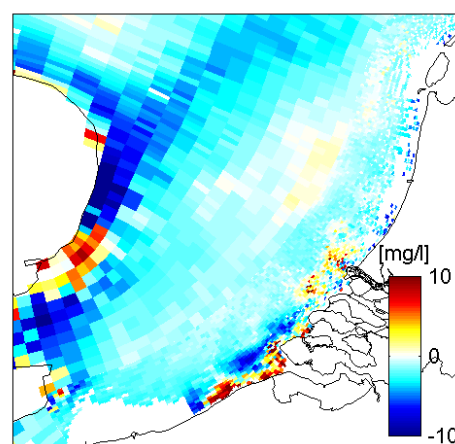
RMS difference



Relative difference [(MERIS-Model)/Model]



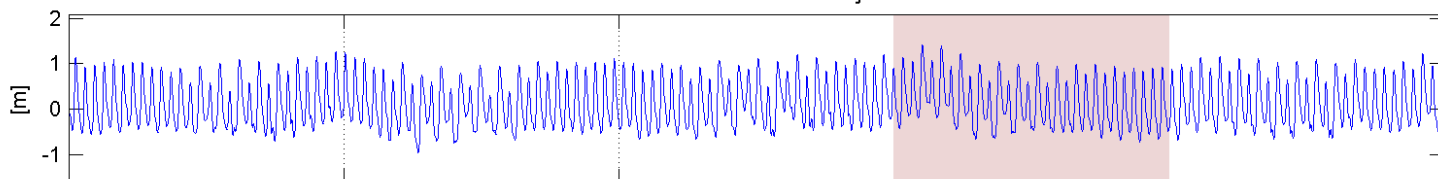
Mean difference [MERIS-Model]


x 10⁶

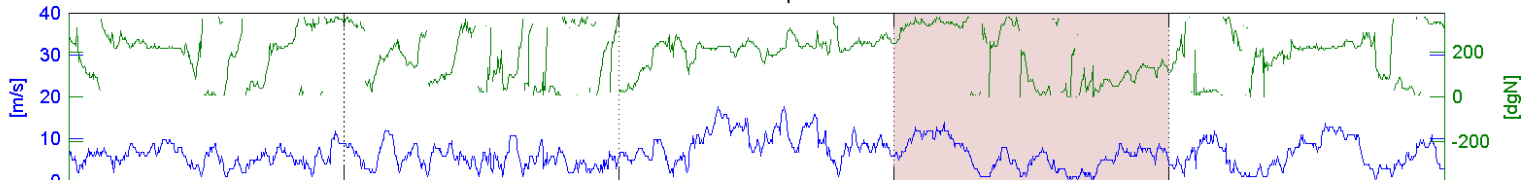
Sand mining volume for Maasvlakte 2



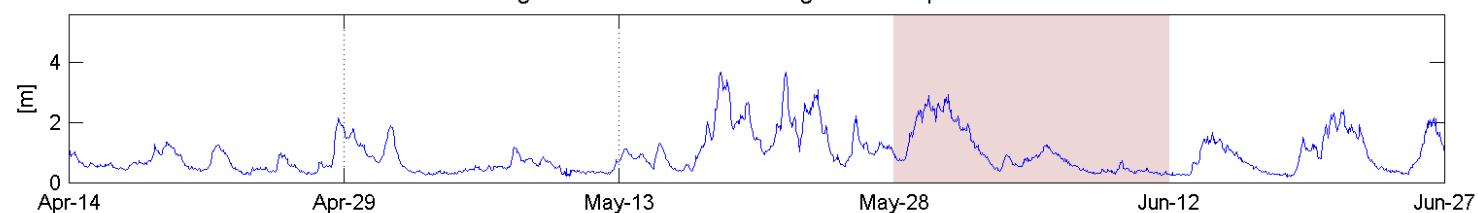
Water level at Noordwijk10



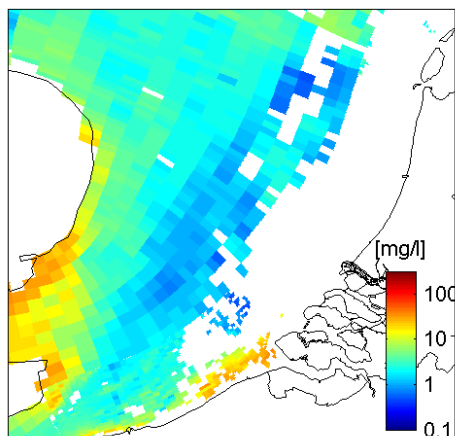
Wind at Euro platform



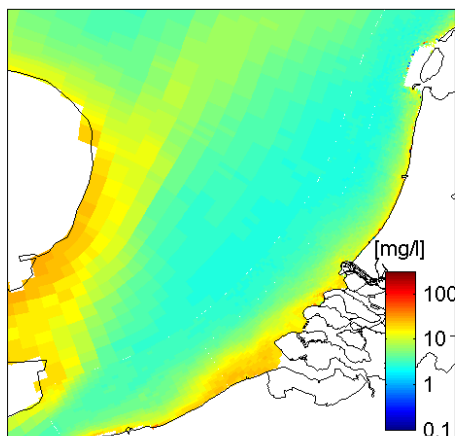
Significant surface wave height at Euro platform



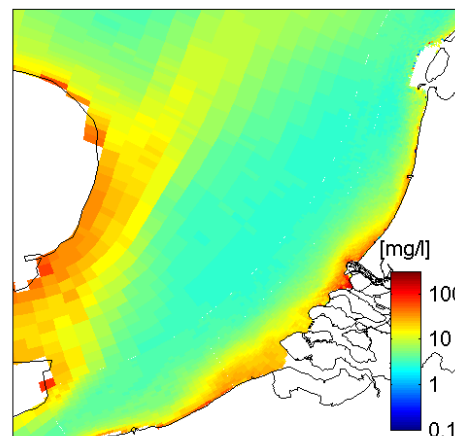
MERIS at surface layer



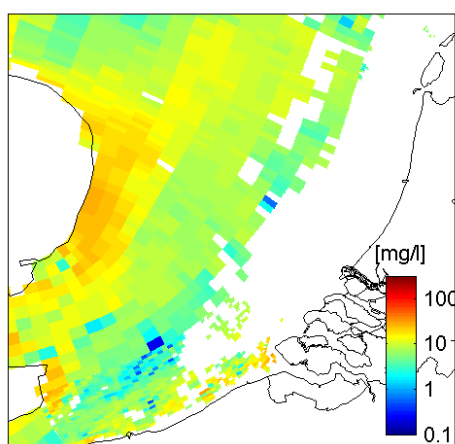
Model at surface layer



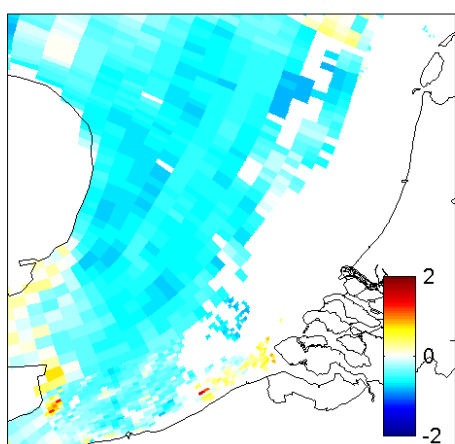
Model at bottom layer



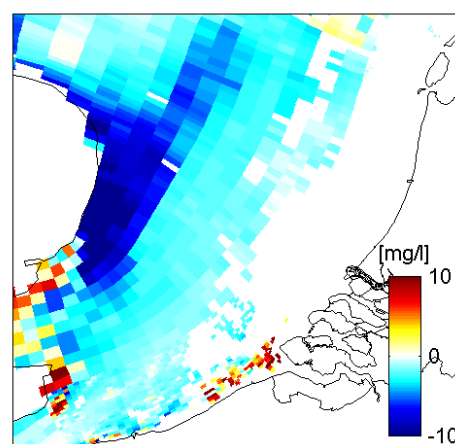
RMS difference



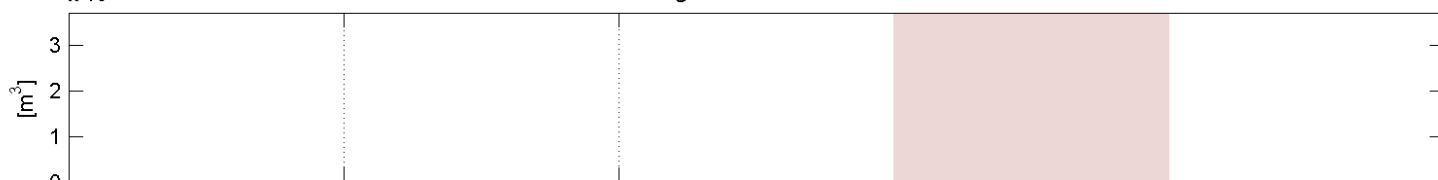
Relative difference [(MERIS-Model)/Model]



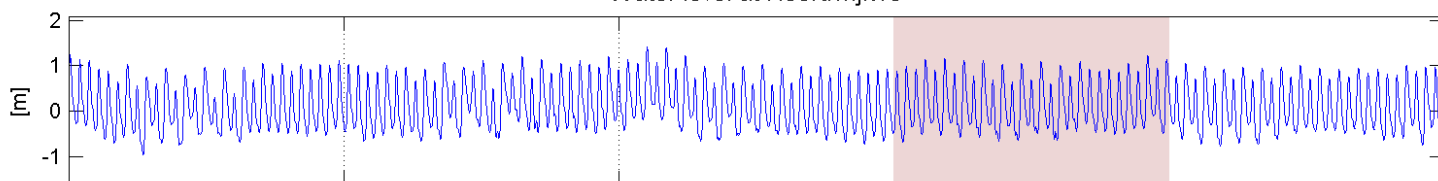
Mean difference [MERIS-Model]


x 10⁶

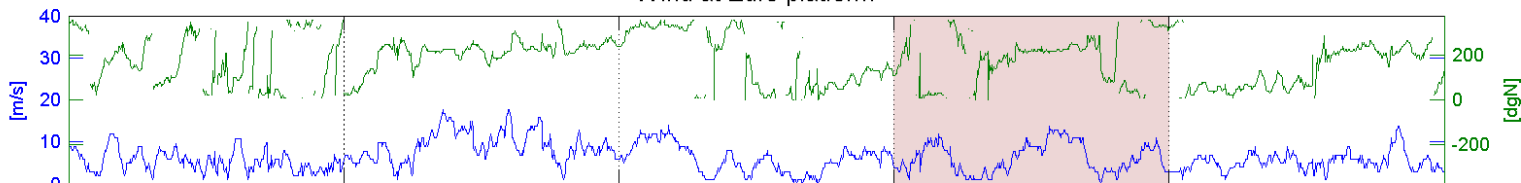
Sand mining volume for Maasvlakte 2



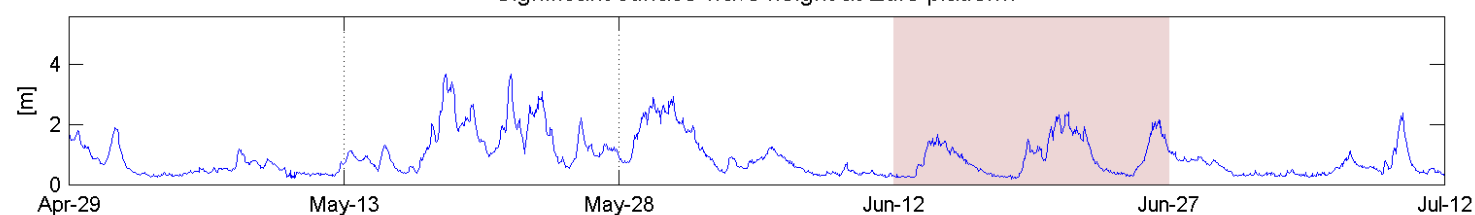
Water level at Noordwijk10



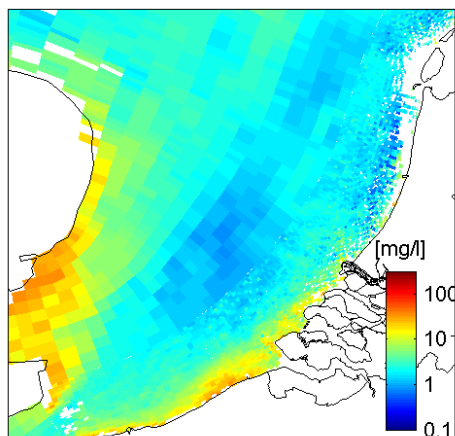
Wind at Euro platform



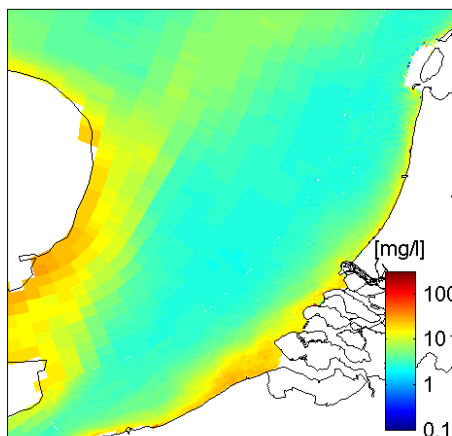
Significant surface wave height at Euro platform



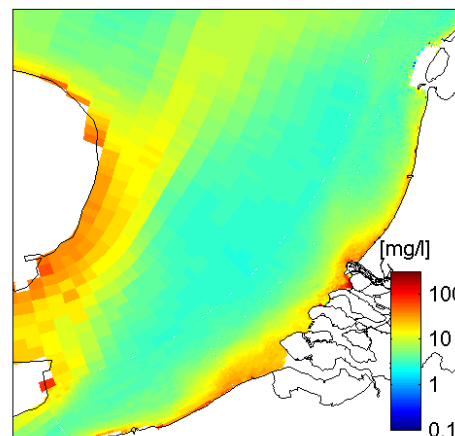
MERIS at surface layer



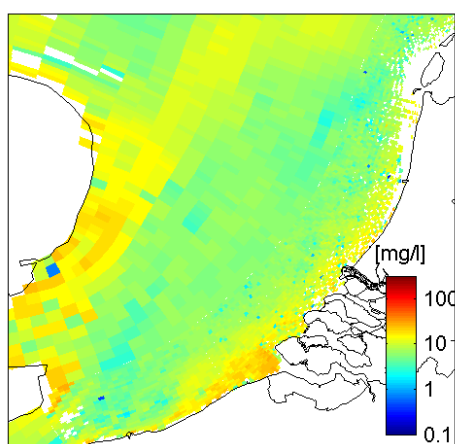
Model at surface layer



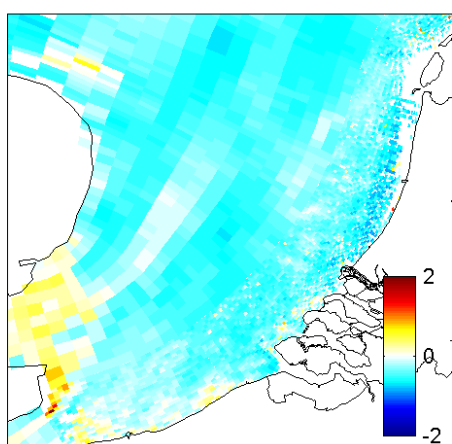
Model at bottom layer



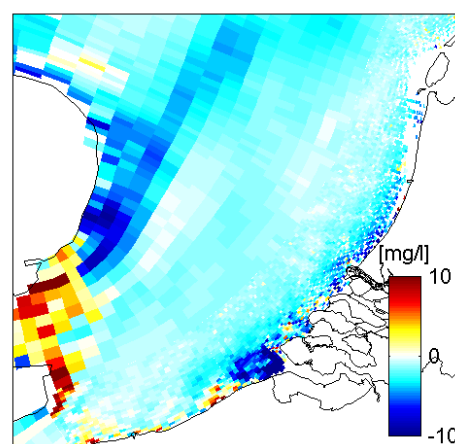
RMS difference



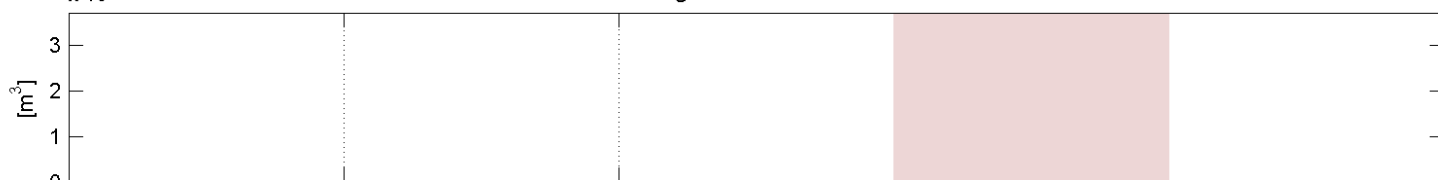
Relative difference [(MERIS-Model)/Model]



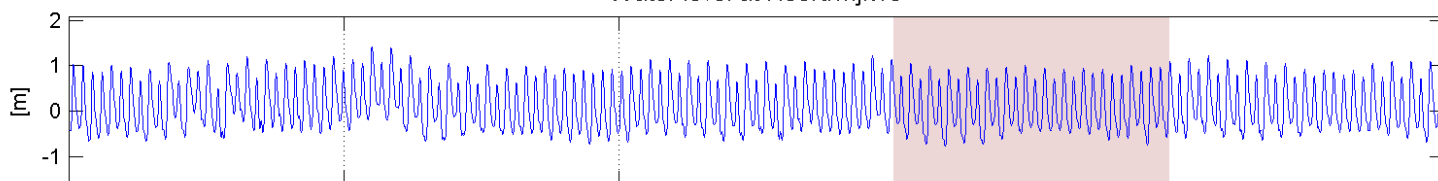
Mean difference [MERIS-Model]

x 10⁶

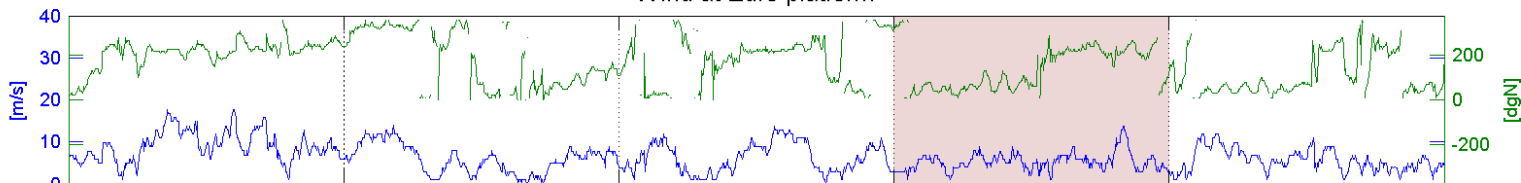
Sand mining volume for Maasvlakte 2



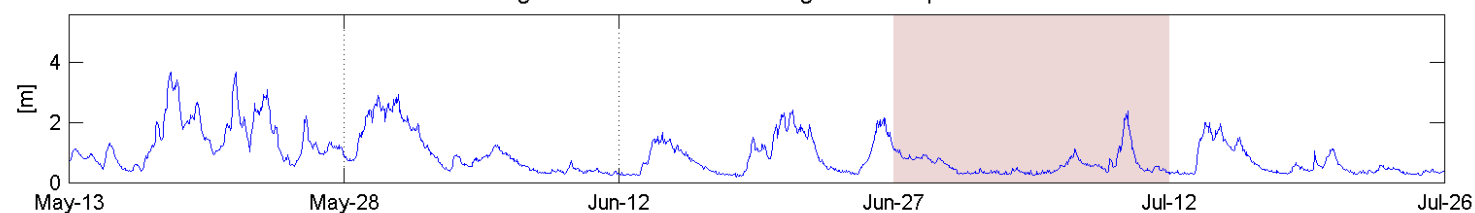
Water level at Noordwijk10



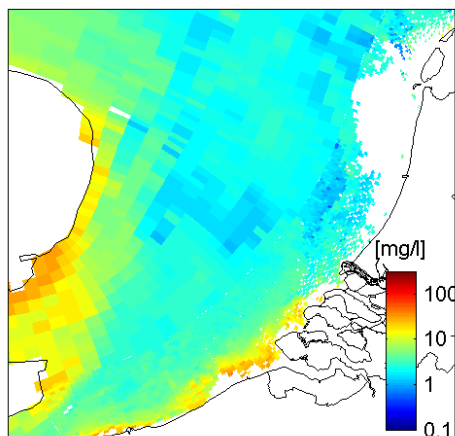
Wind at Euro platform



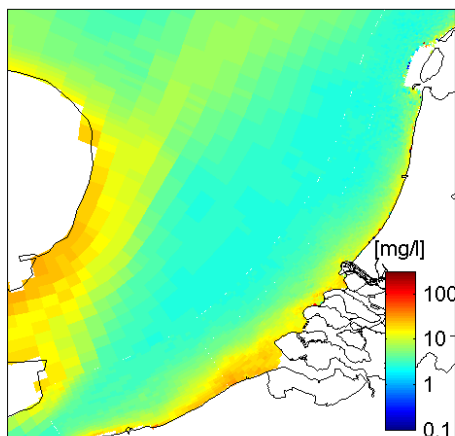
Significant surface wave height at Euro platform



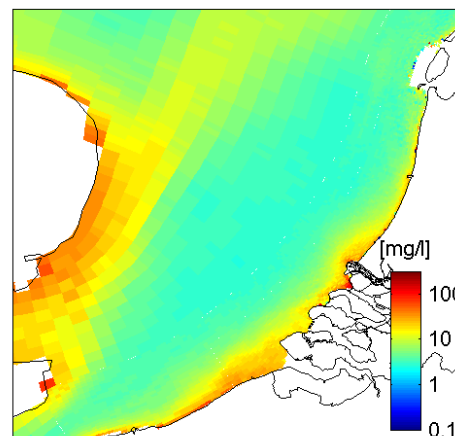
MERIS at surface layer



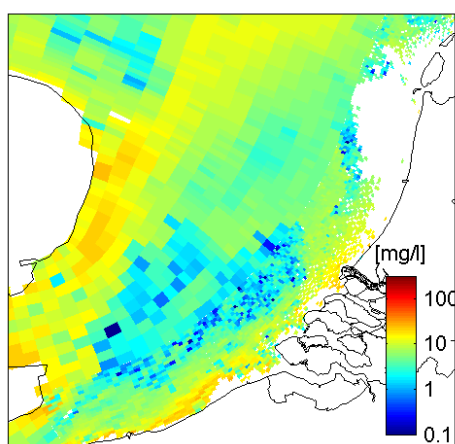
Model at surface layer



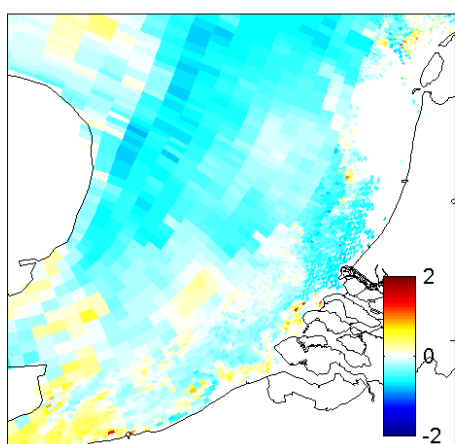
Model at bottom layer



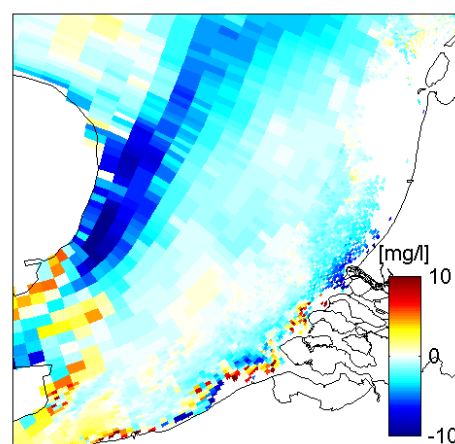
RMS difference



Relative difference [(MERIS-Model)/Model]



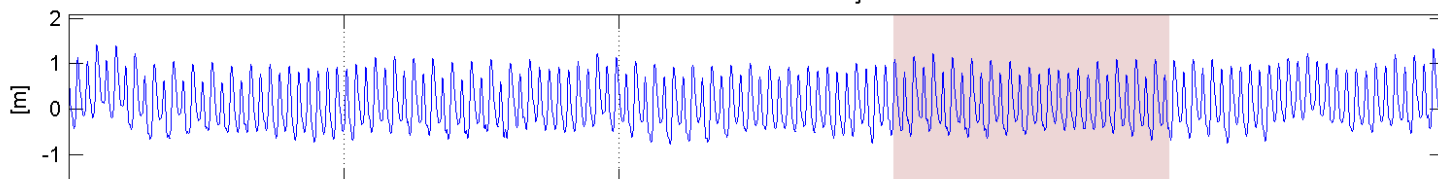
Mean difference [MERIS-Model]


x 10⁶

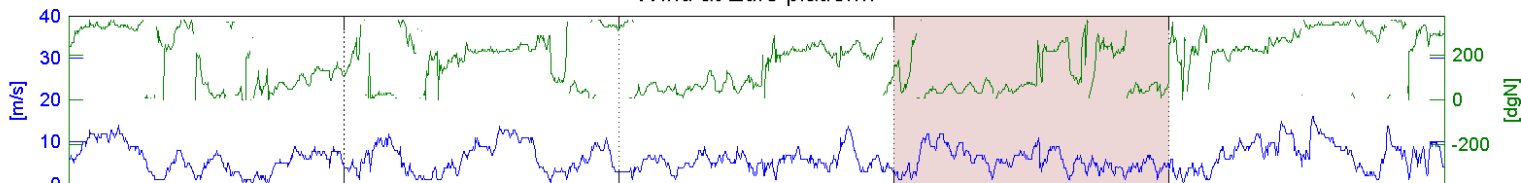
Sand mining volume for Maasvlakte 2



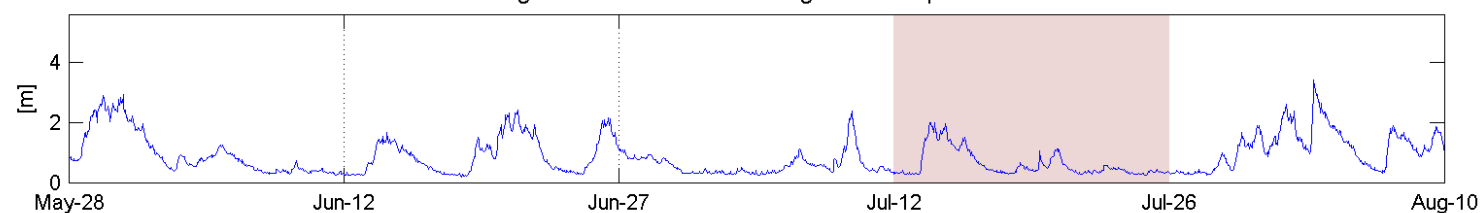
Water level at Noordwijk10



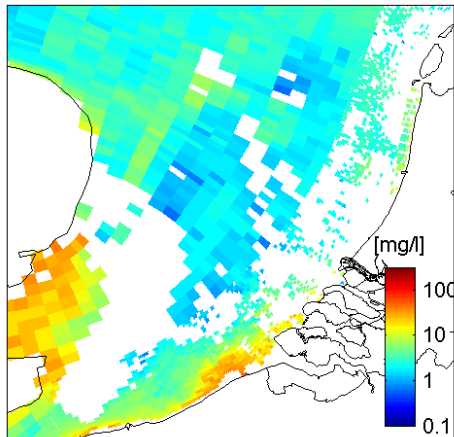
Wind at Euro platform



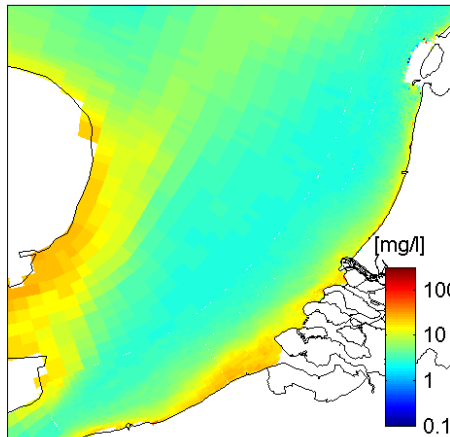
Significant surface wave height at Euro platform



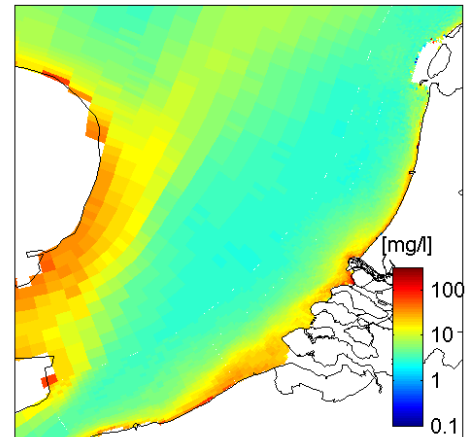
MERIS at surface layer



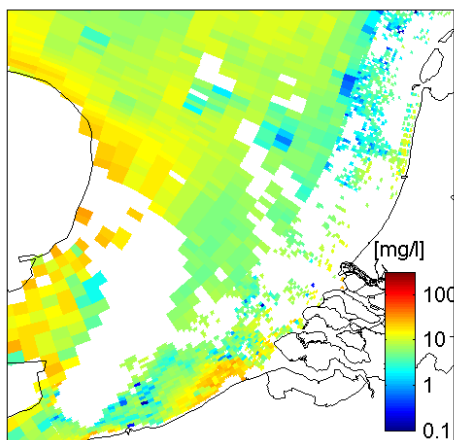
Model at surface layer



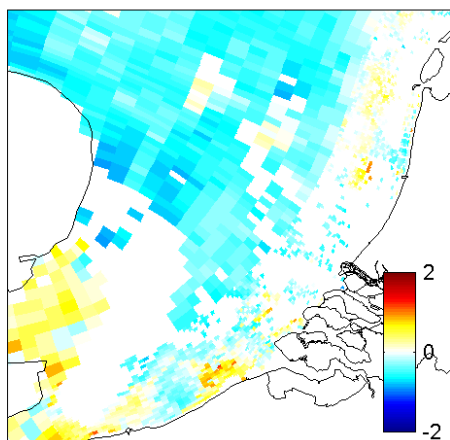
Model at bottom layer



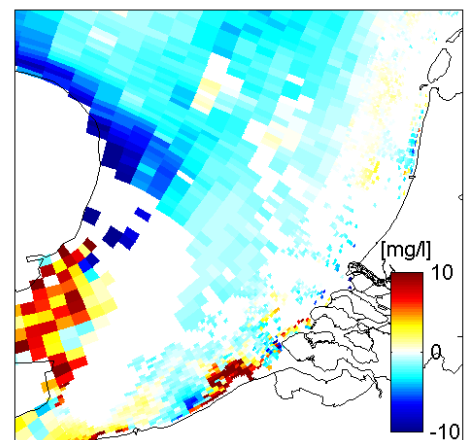
RMS difference



Relative difference [(MERIS-Model)/Model]



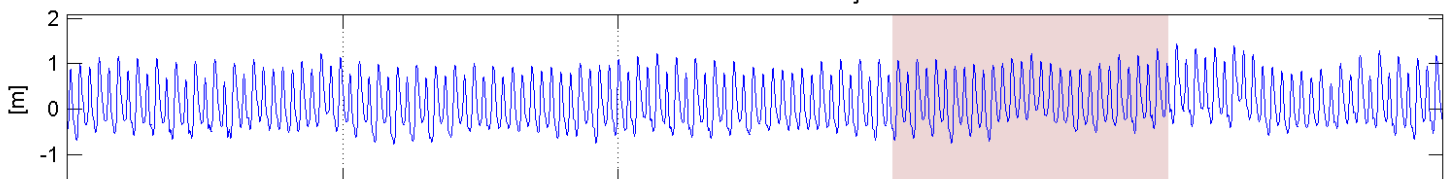
Mean difference [MERIS-Model]


x 10⁶

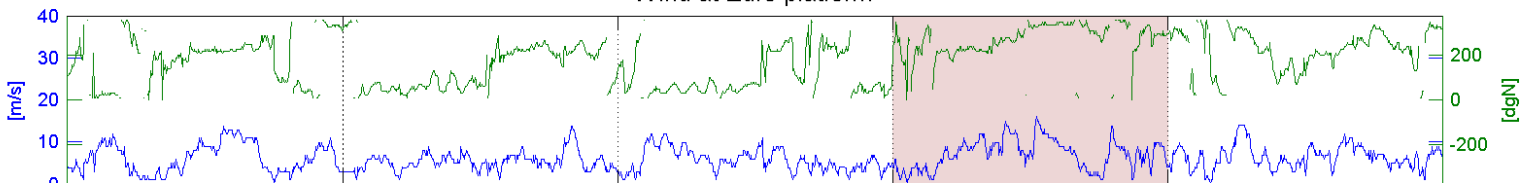
Sand mining volume for Maasvlakte 2



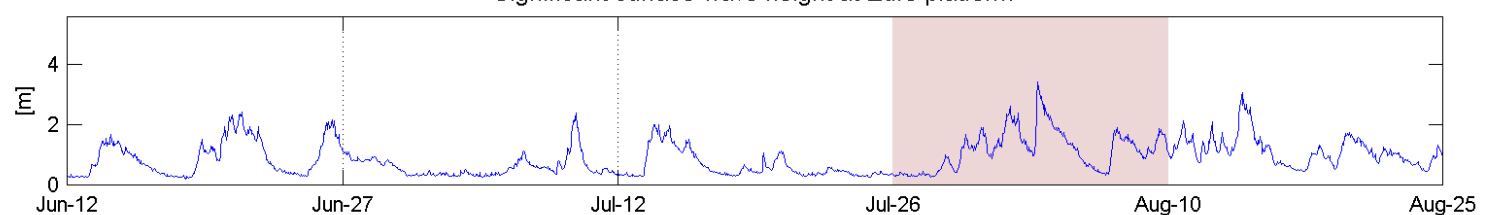
Water level at Noordwijk10



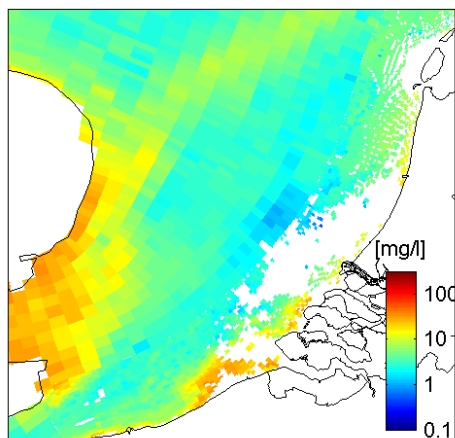
Wind at Euro platform



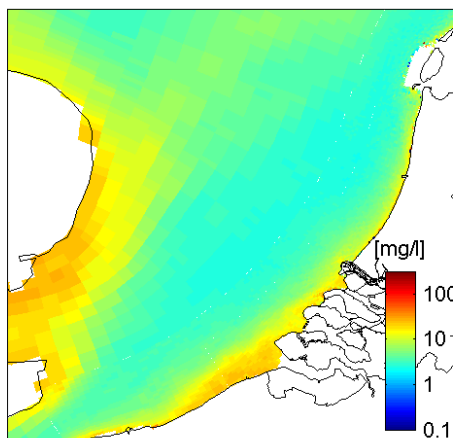
Significant surface wave height at Euro platform



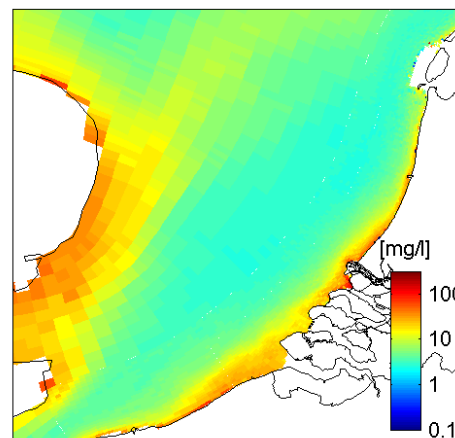
MERIS at surface layer



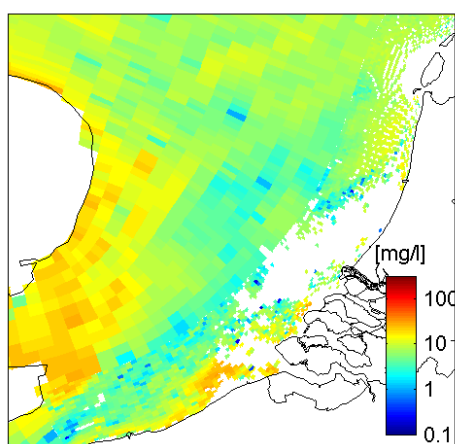
Model at surface layer



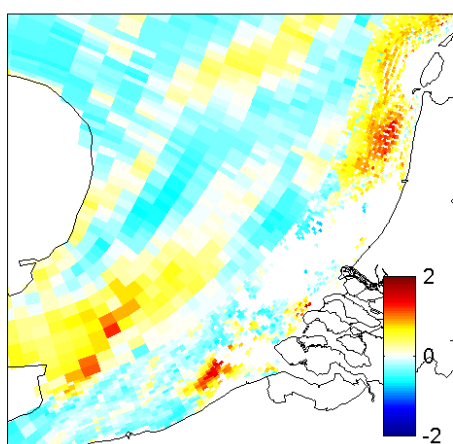
Model at bottom layer



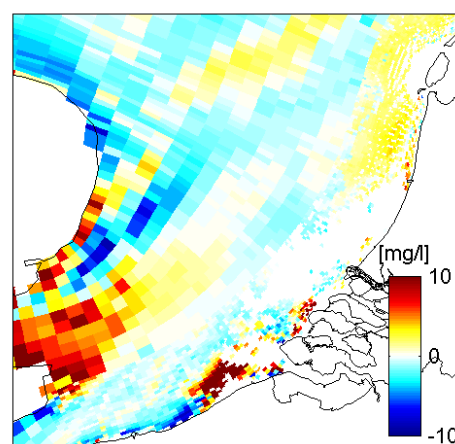
RMS difference



Relative difference [(MERIS-Model)/Model]



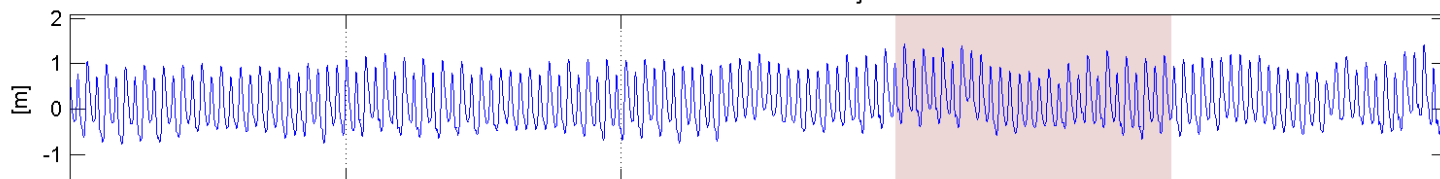
Mean difference [MERIS-Model]

 $\times 10^6$

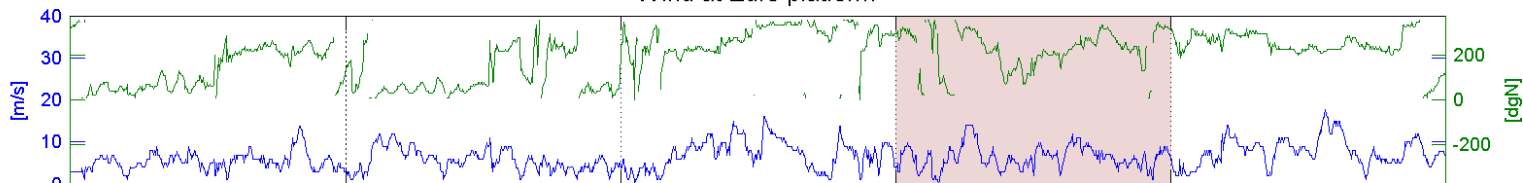
Sand mining volume for Maasvlakte 2



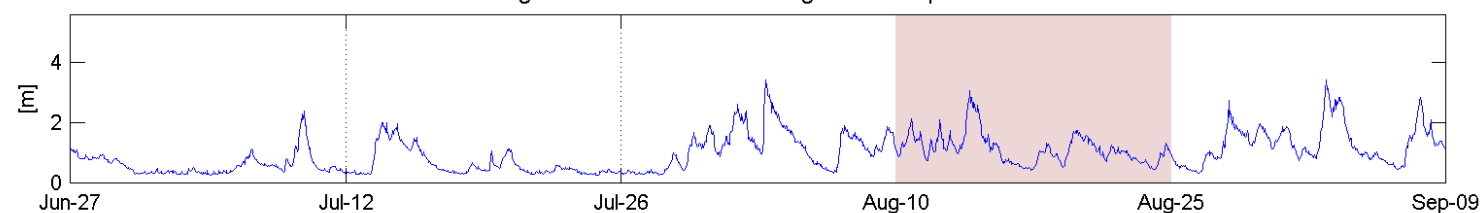
Water level at Noordwijk10



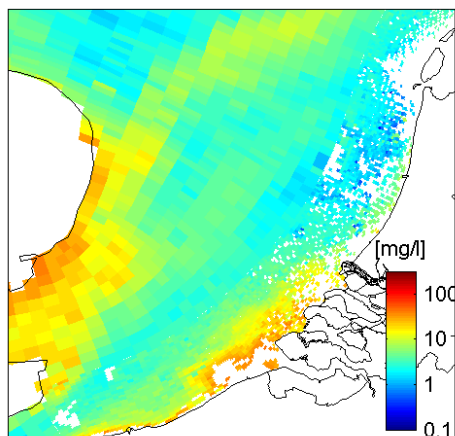
Wind at Euro platform



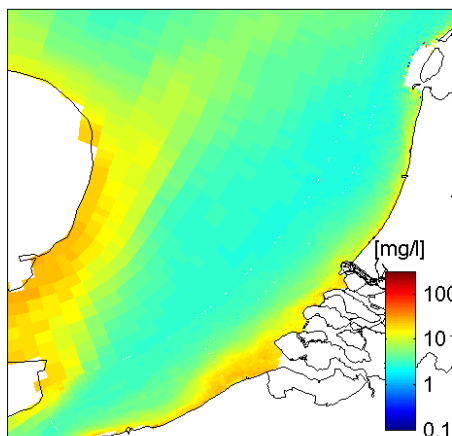
Significant surface wave height at Euro platform



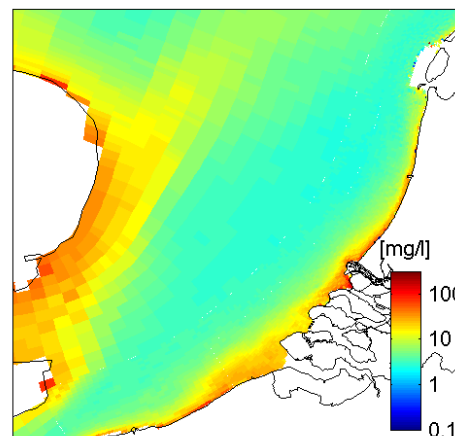
MERIS at surface layer



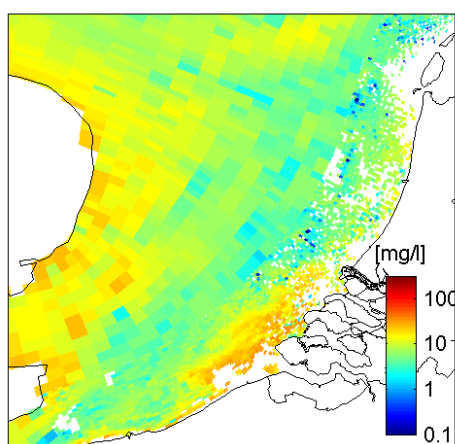
Model at surface layer



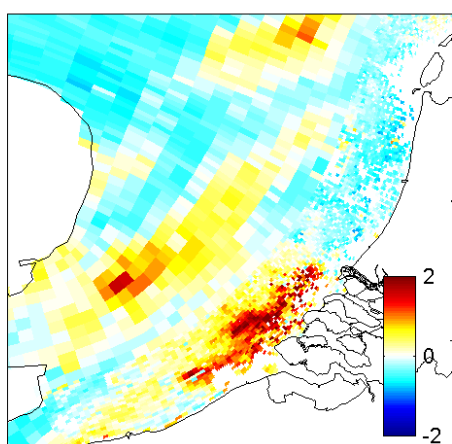
Model at bottom layer



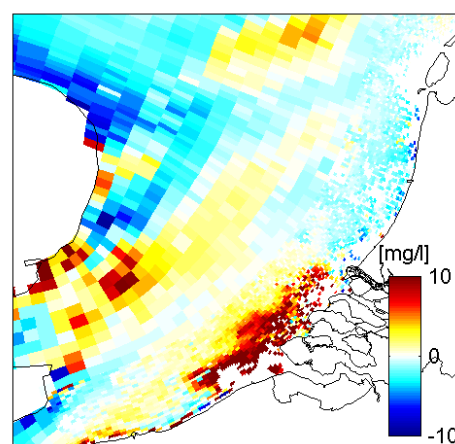
RMS difference



Relative difference [(MERIS-Model)/Model]



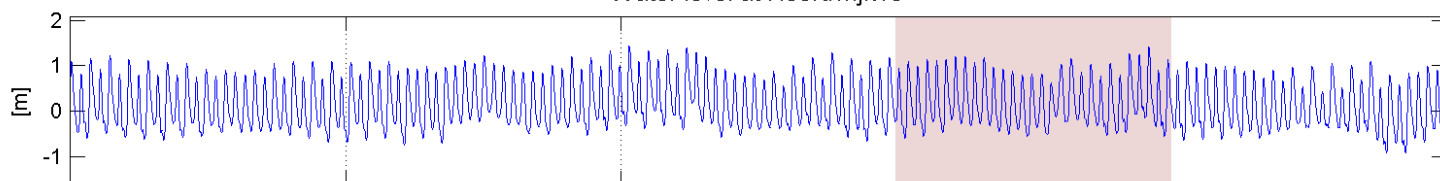
Mean difference [MERIS-Model]

 $\times 10^6$

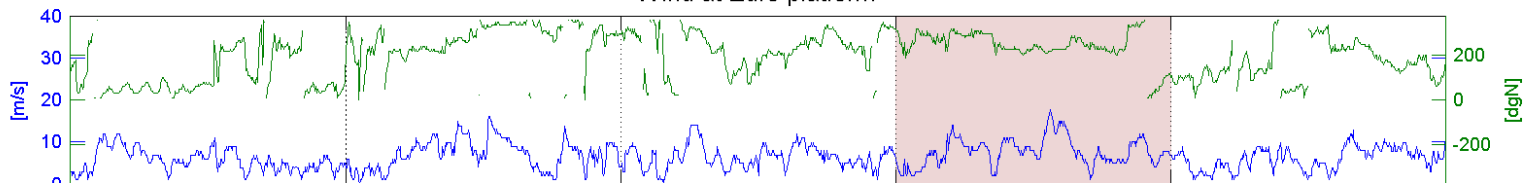
Sand mining volume for Maasvlakte 2



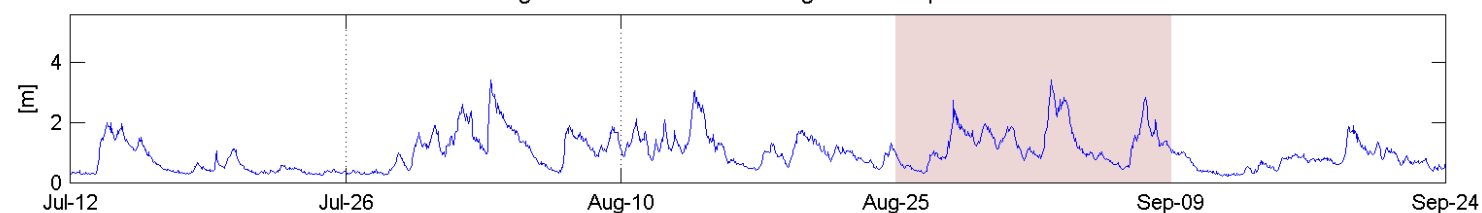
Water level at Noordwijk10



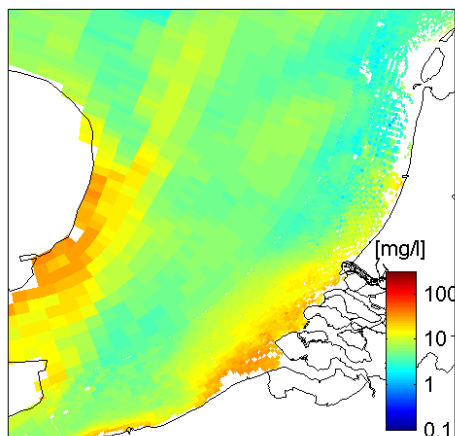
Wind at Euro platform



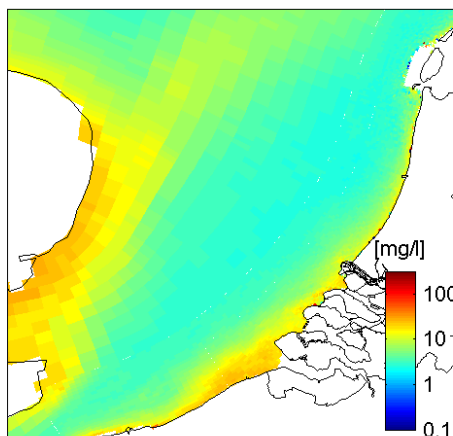
Significant surface wave height at Euro platform



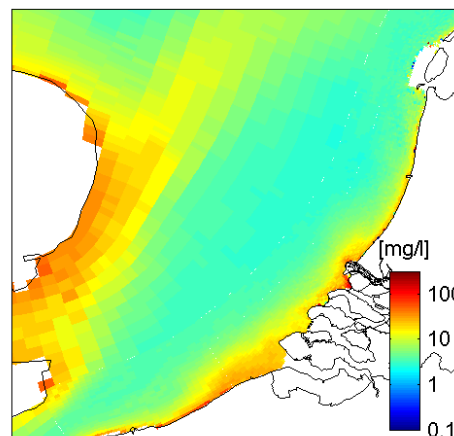
MERIS at surface layer



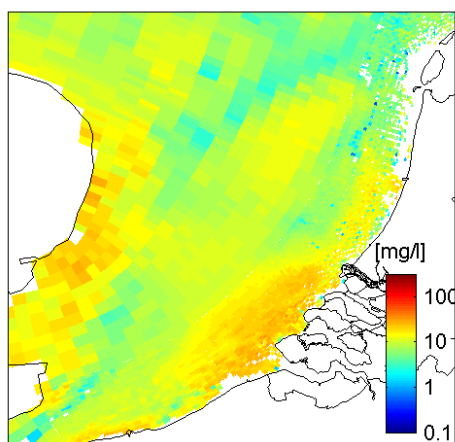
Model at surface layer



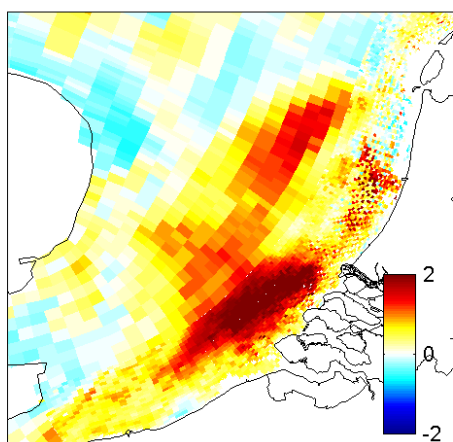
Model at bottom layer



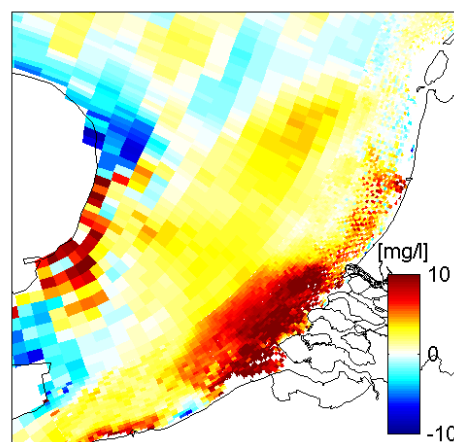
RMS difference



Relative difference [(MERIS-Model)/Model]



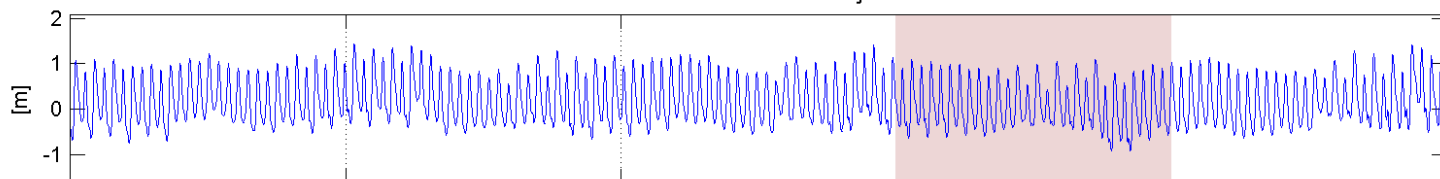
Mean difference [MERIS-Model]

x 10⁶

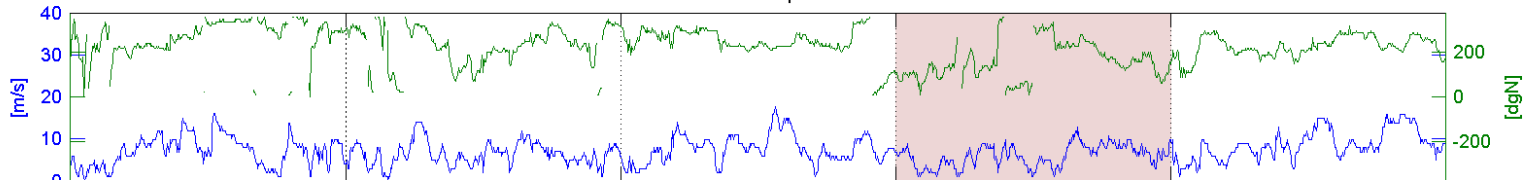
Sand mining volume for Maasvlakte 2



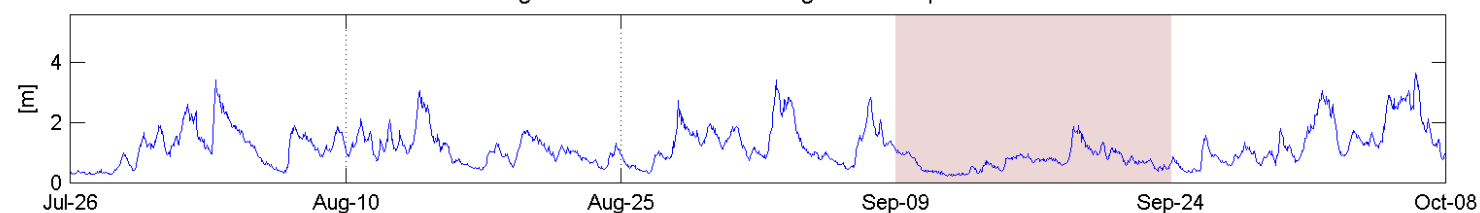
Water level at Noordwijk10



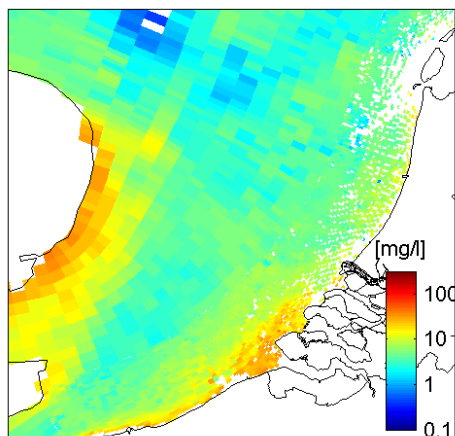
Wind at Euro platform



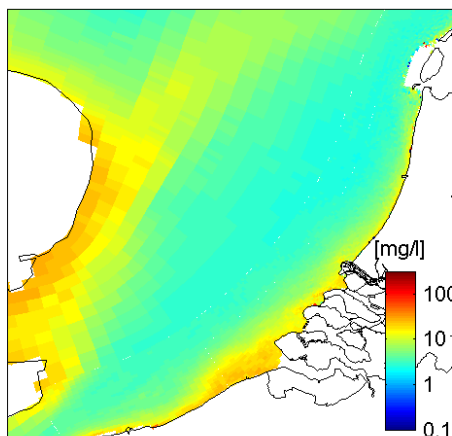
Significant surface wave height at Euro platform



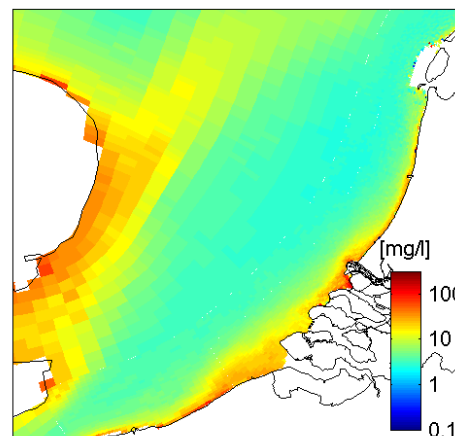
MERIS at surface layer



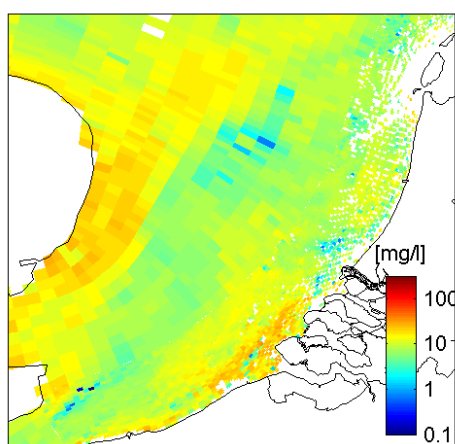
Model at surface layer



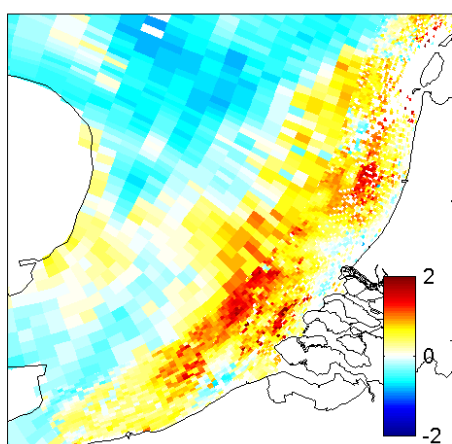
Model at bottom layer



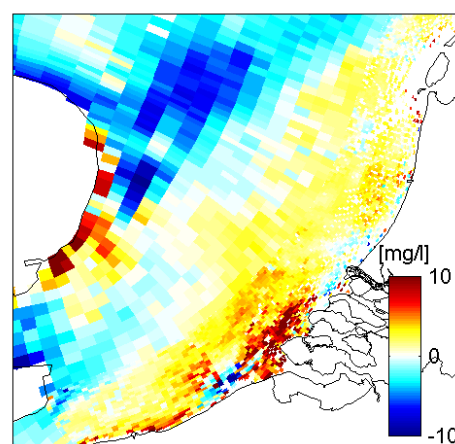
RMS difference



Relative difference [(MERIS-Model)/Model]



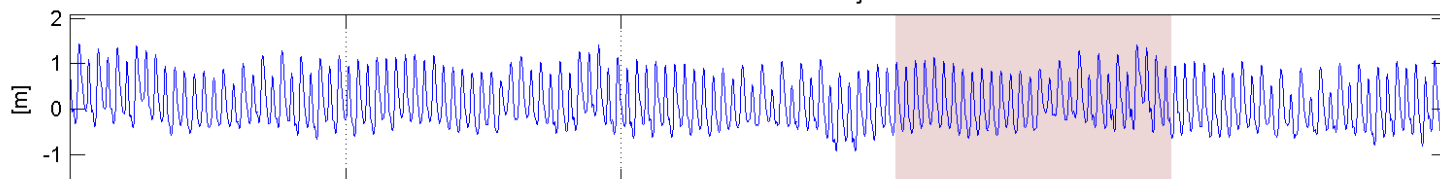
Mean difference [MERIS-Model]

 $\times 10^6$

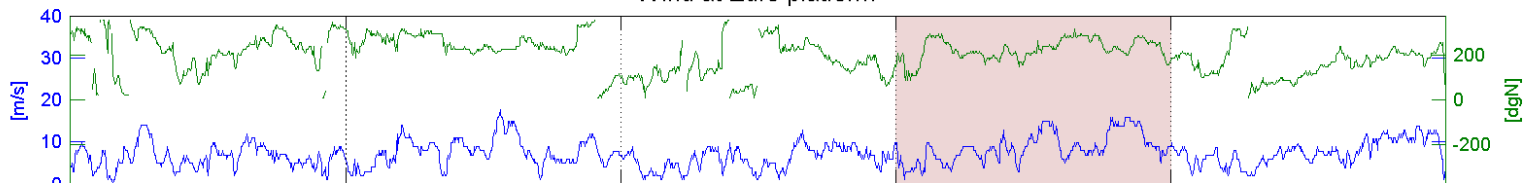
Sand mining volume for Maasvlakte 2



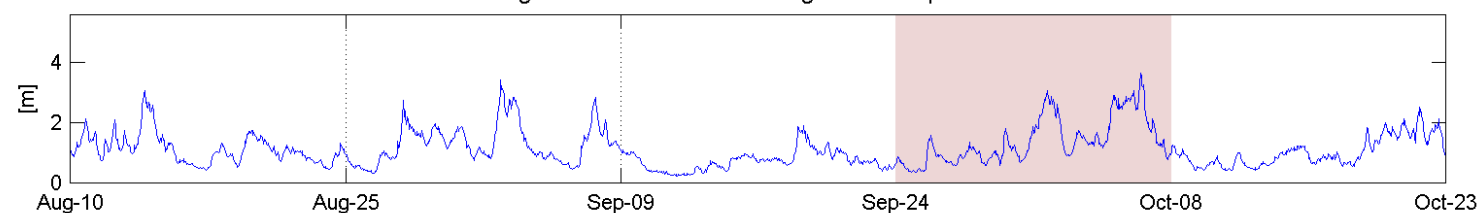
Water level at Noordwijk10



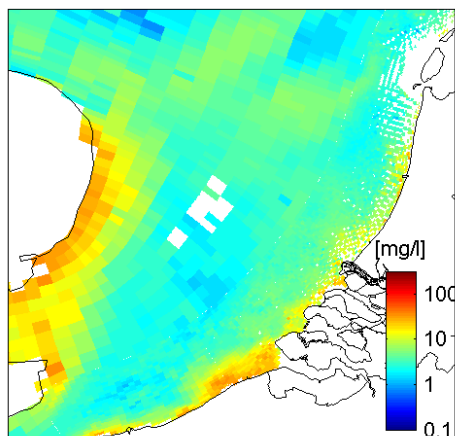
Wind at Euro platform



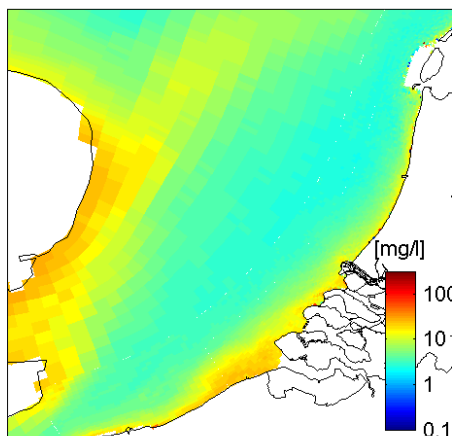
Significant surface wave height at Euro platform



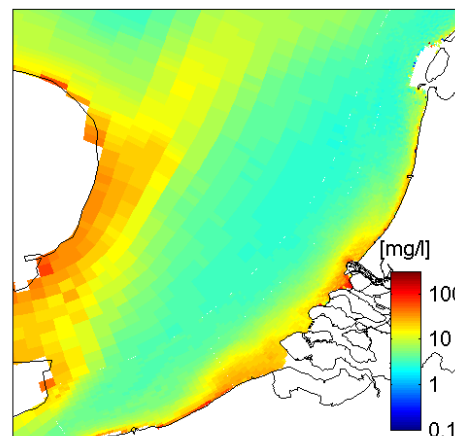
MERIS at surface layer



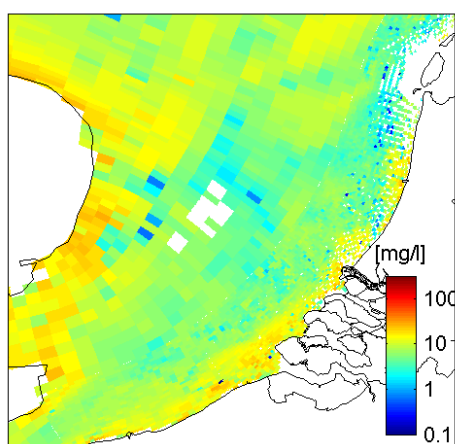
Model at surface layer



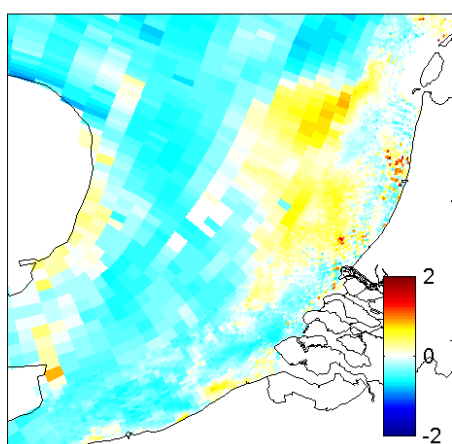
Model at bottom layer



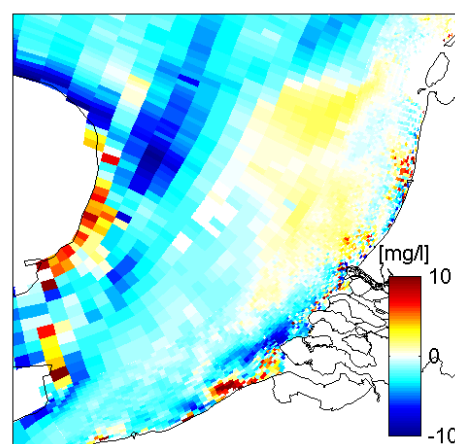
RMS difference



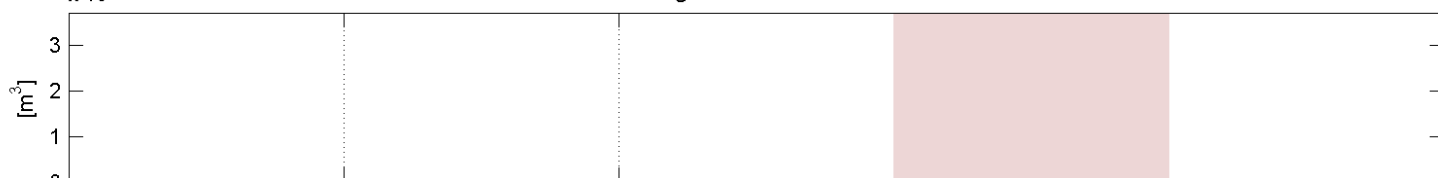
Relative difference [(MERIS-Model)/Model]



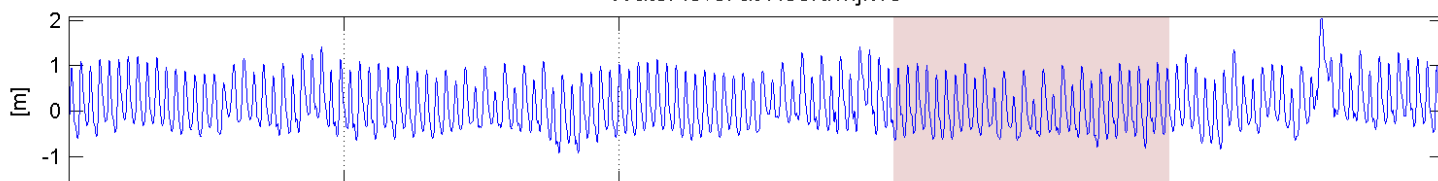
Mean difference [MERIS-Model]

 $\times 10^6$

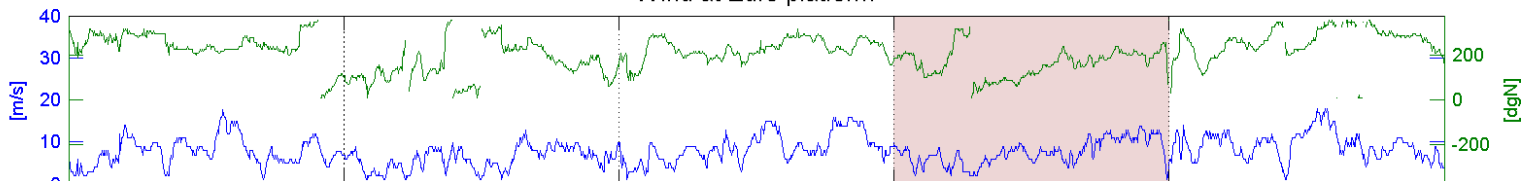
Sand mining volume for Maasvlakte 2



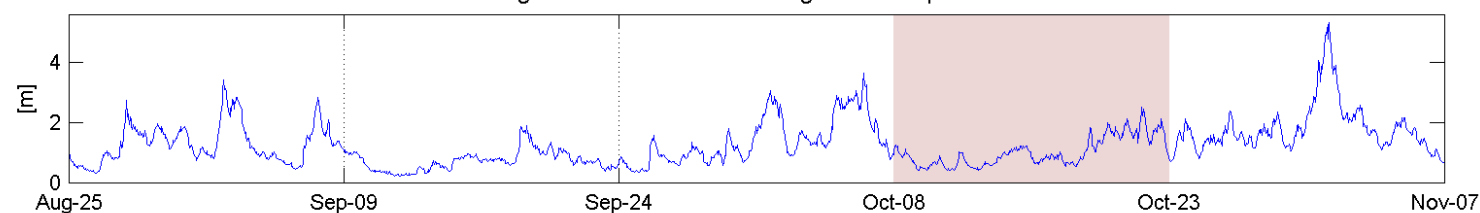
Water level at Noordwijk10



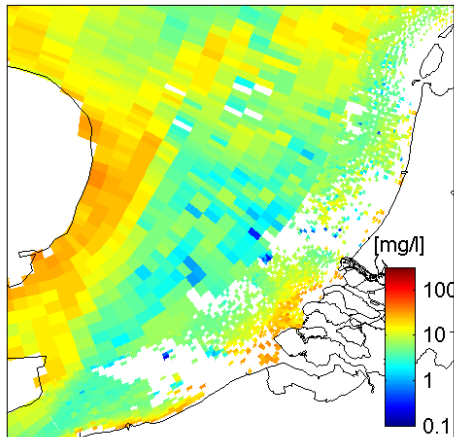
Wind at Euro platform



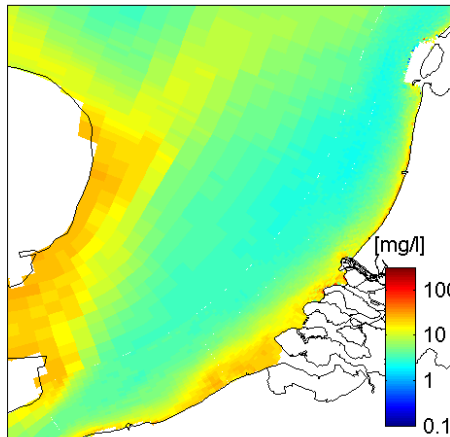
Significant surface wave height at Euro platform



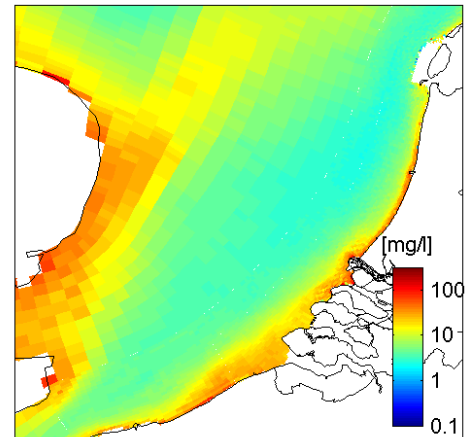
MERIS at surface layer



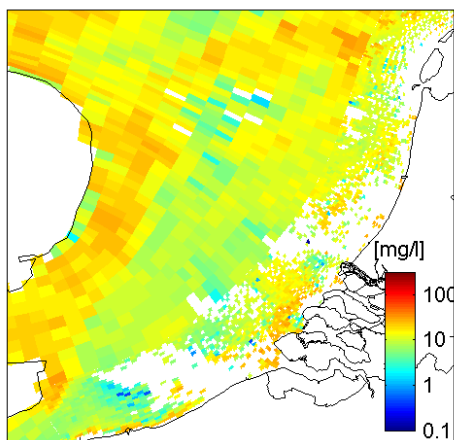
Model at surface layer



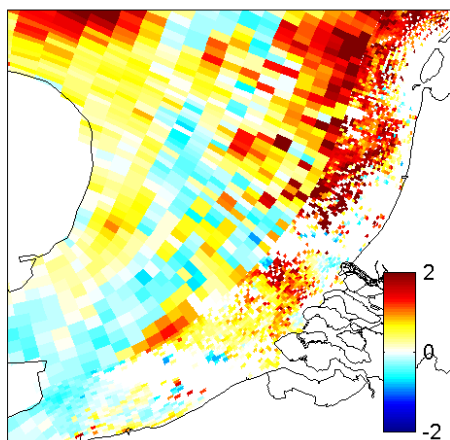
Model at bottom layer



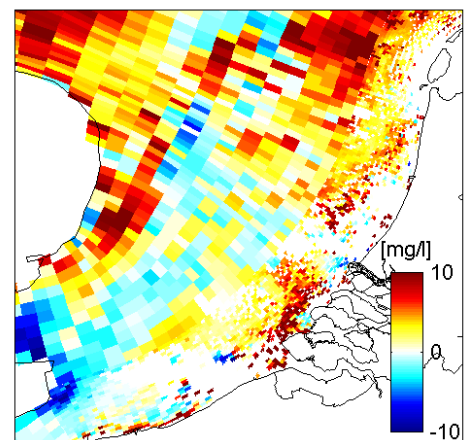
RMS difference



Relative difference [(MERIS-Model)/Model]



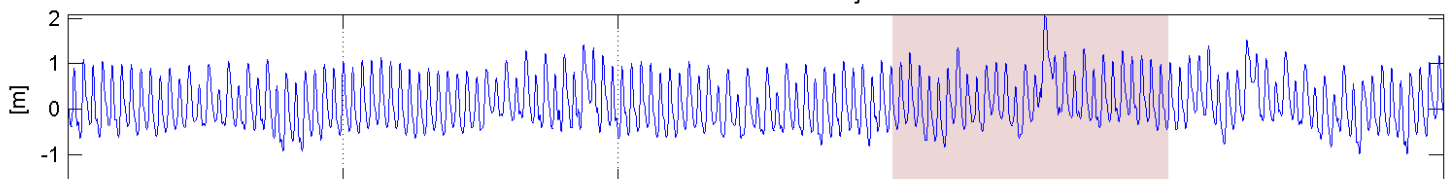
Mean difference [MERIS-Model]

 $\times 10^6$

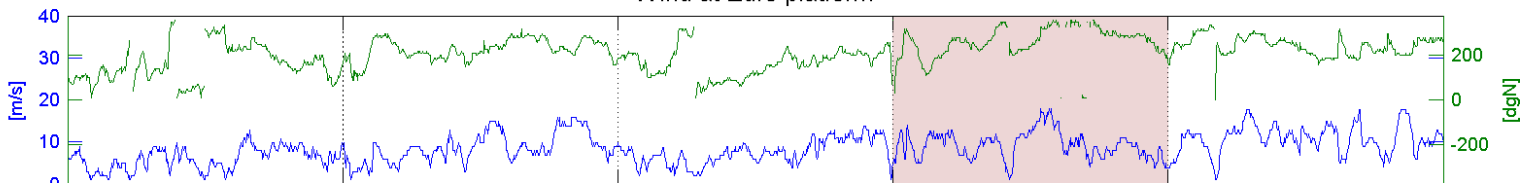
Sand mining volume for Maasvlakte 2



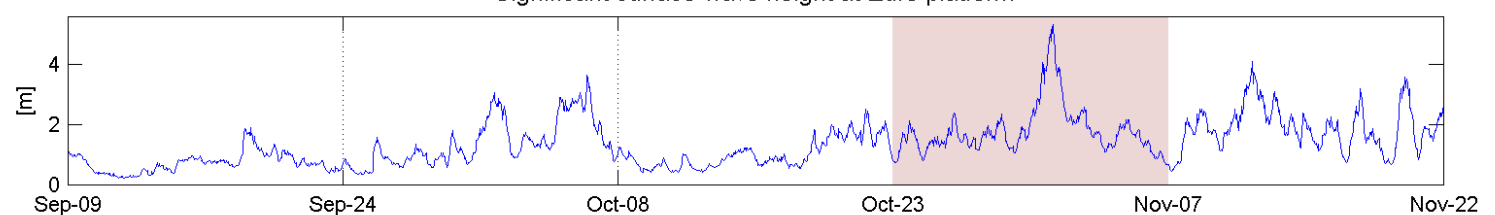
Water level at Noordwijk10



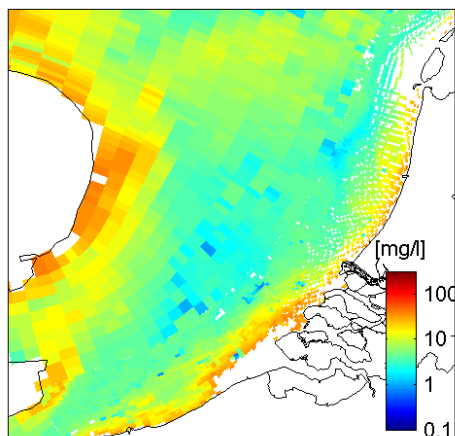
Wind at Euro platform



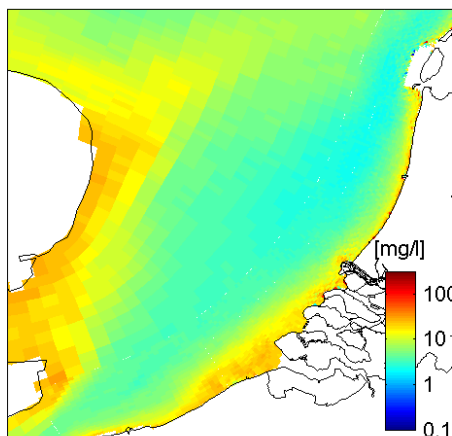
Significant surface wave height at Euro platform



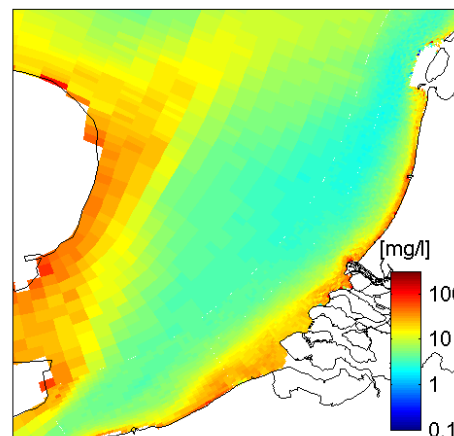
MERIS at surface layer



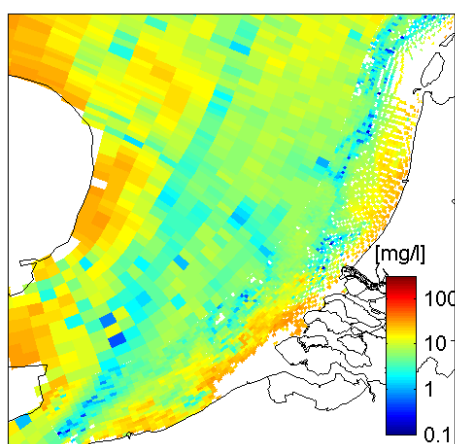
Model at surface layer



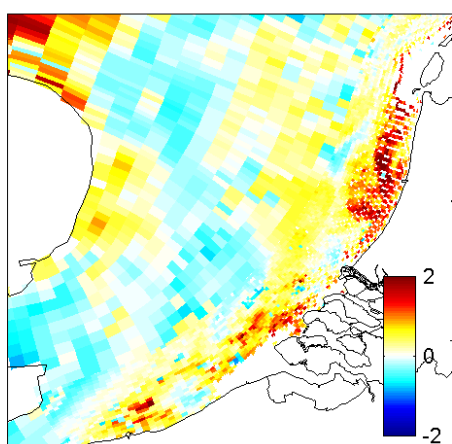
Model at bottom layer



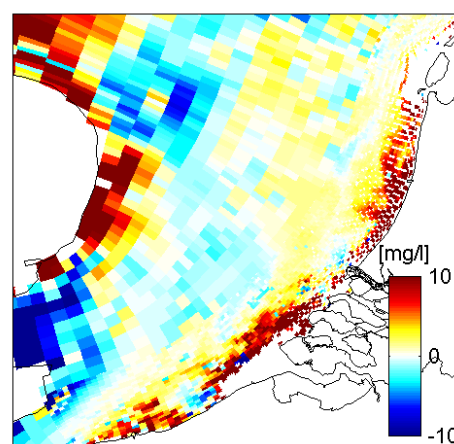
RMS difference



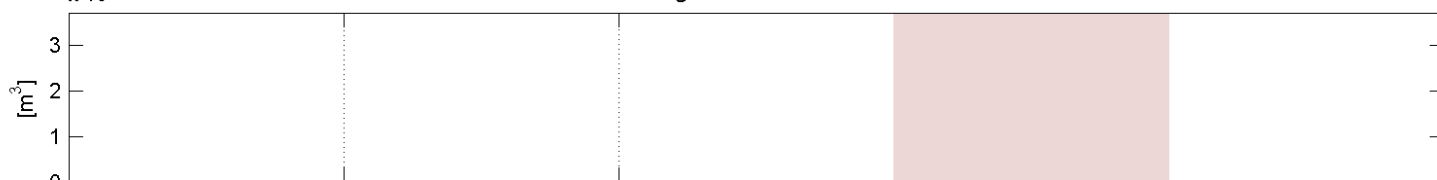
Relative difference [(MERIS-Model)/Model]



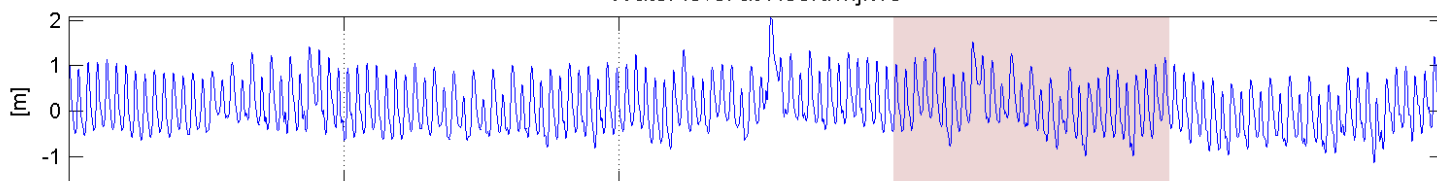
Mean difference [MERIS-Model]

x 10⁶

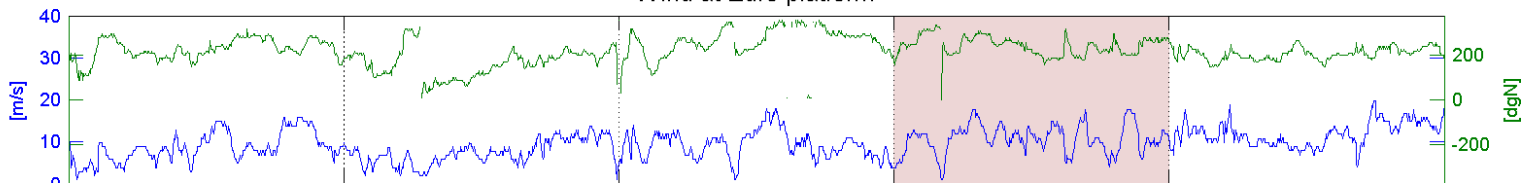
Sand mining volume for Maasvlakte 2



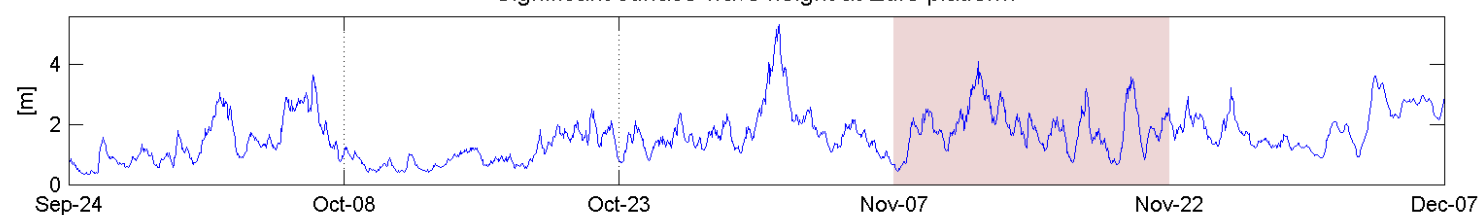
Water level at Noordwijk10



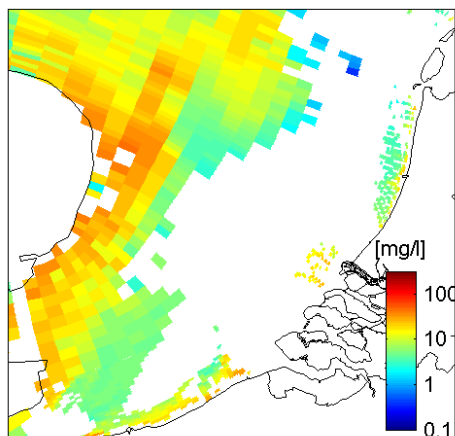
Wind at Euro platform



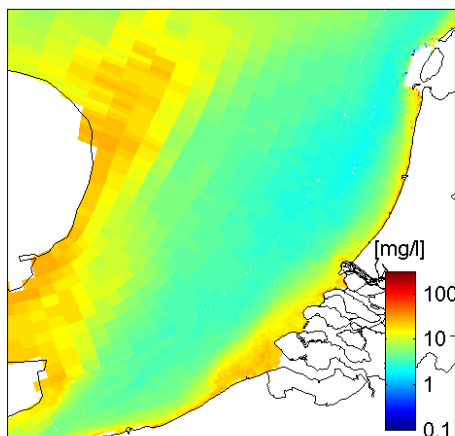
Significant surface wave height at Euro platform



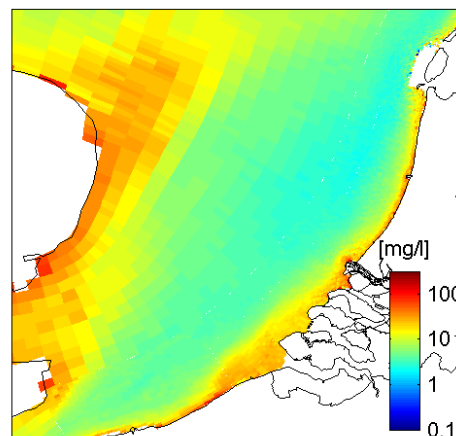
MERIS at surface layer



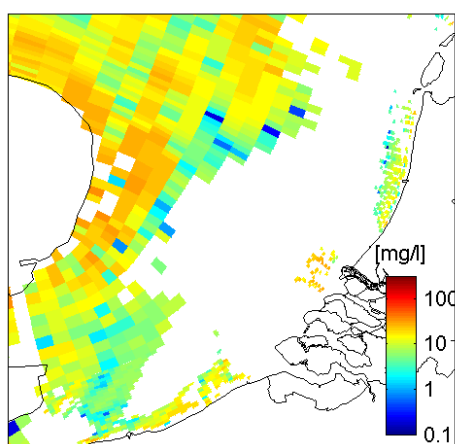
Model at surface layer



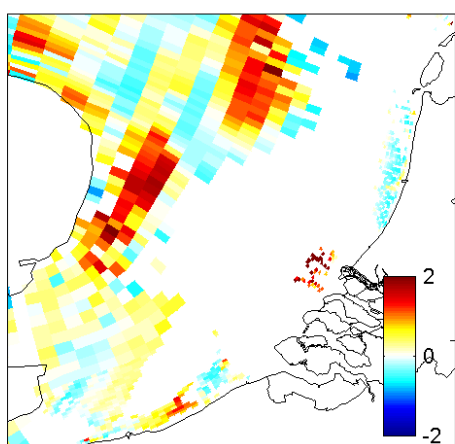
Model at bottom layer



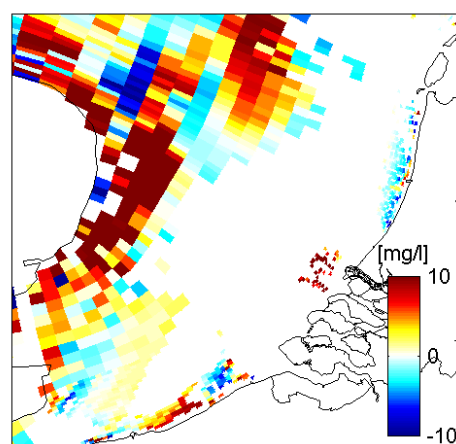
RMS difference



Relative difference [(MERIS-Model)/Model]



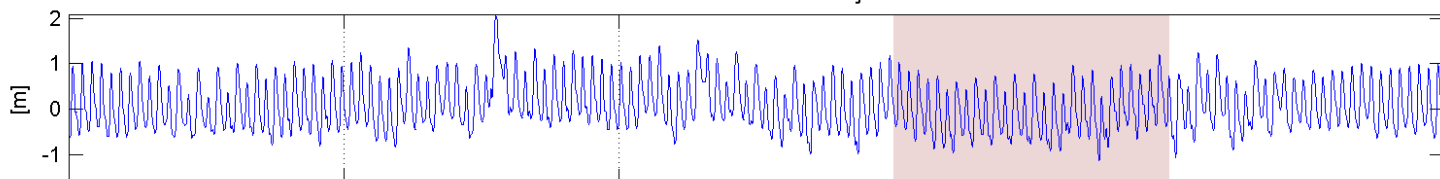
Mean difference [MERIS-Model]


x 10⁶

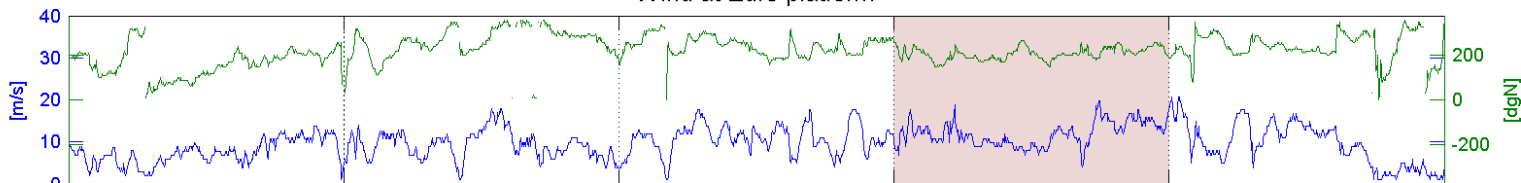
Sand mining volume for Maasvlakte 2



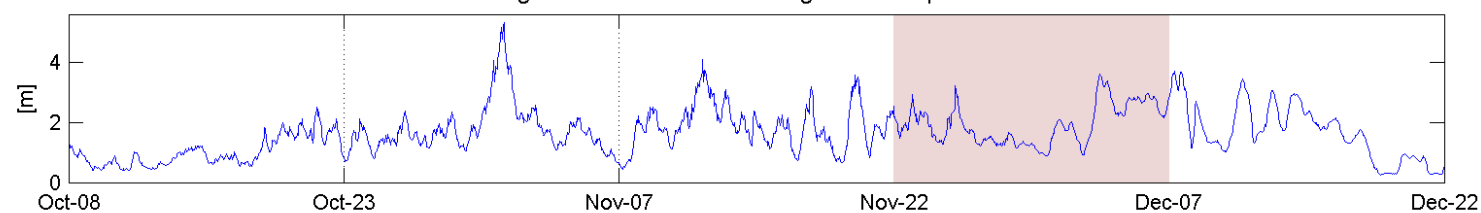
Water level at Noordwijk10



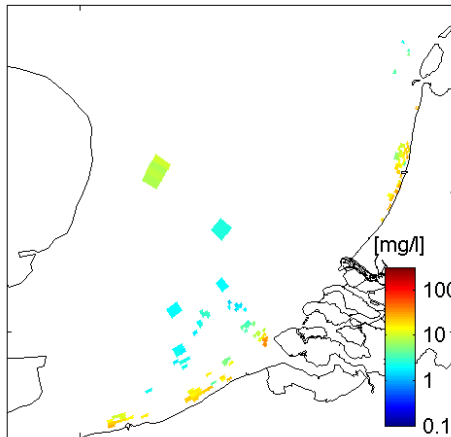
Wind at Euro platform



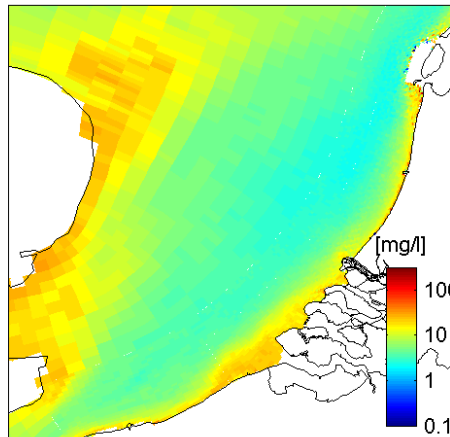
Significant surface wave height at Euro platform



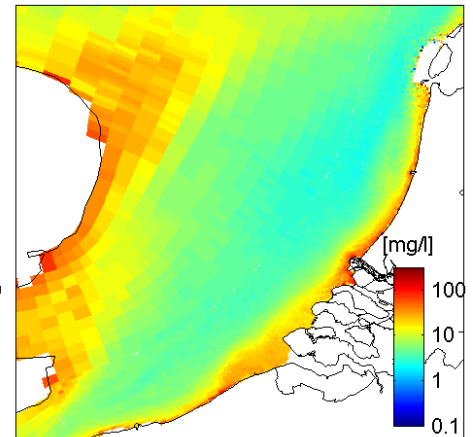
MERIS at surface layer



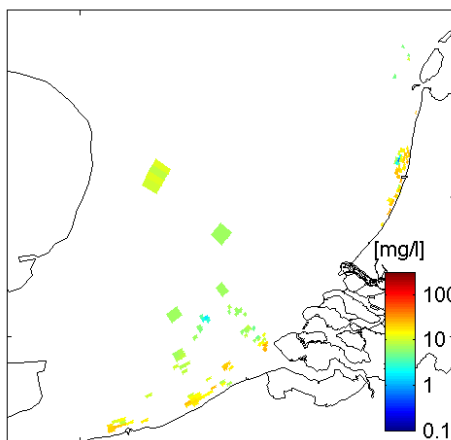
Model at surface layer



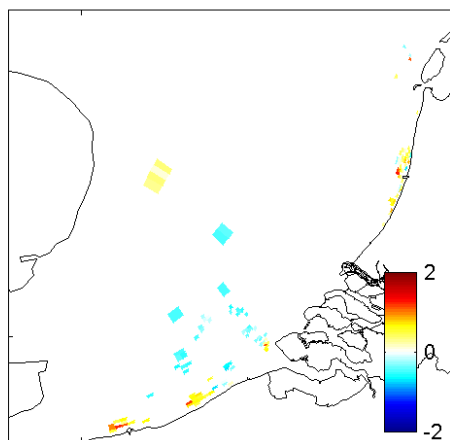
Model at bottom layer



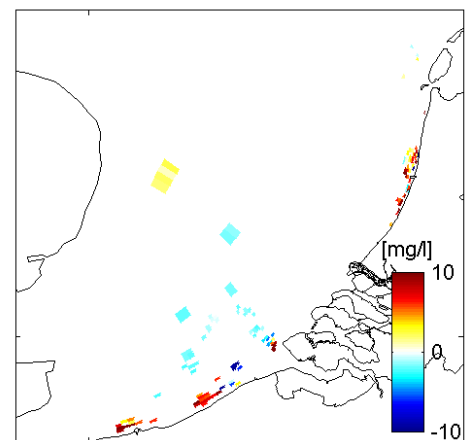
RMS difference



Relative difference [(MERIS-Model)/Model]



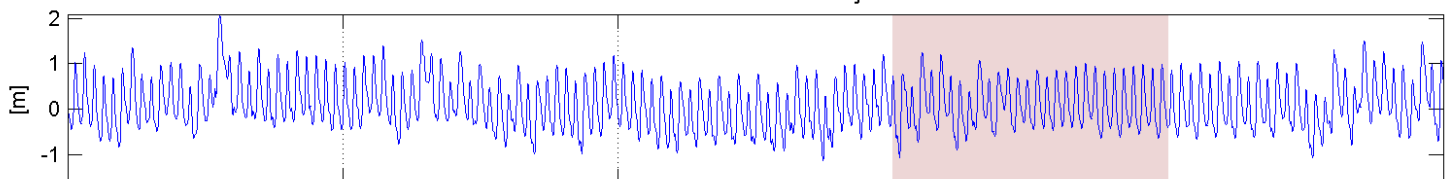
Mean difference [MERIS-Model]

 $\times 10^6$

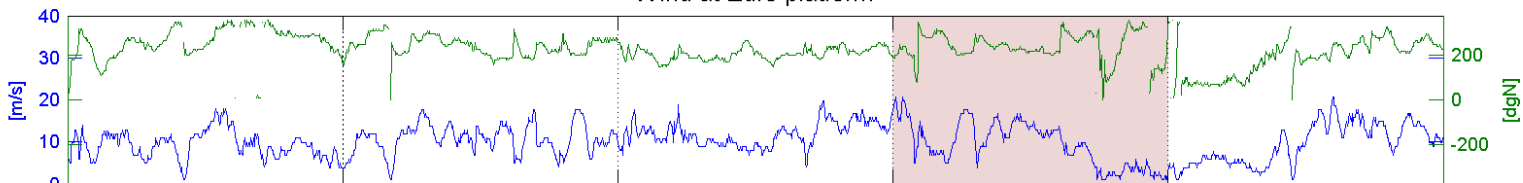
Sand mining volume for Maasvlakte 2



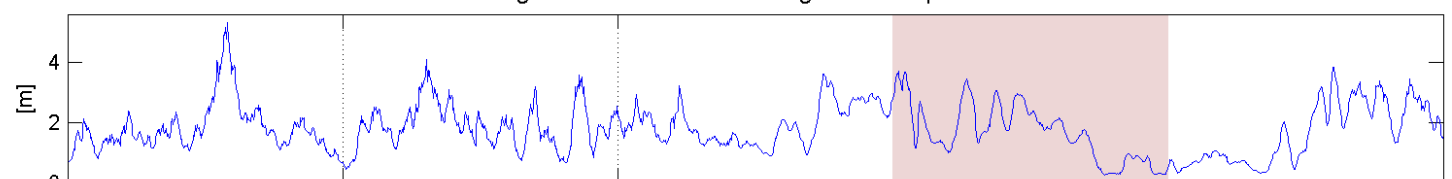
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Oct-23

Nov-07

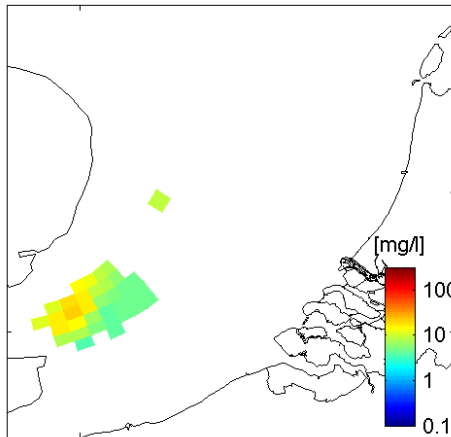
Nov-22

Dec-07

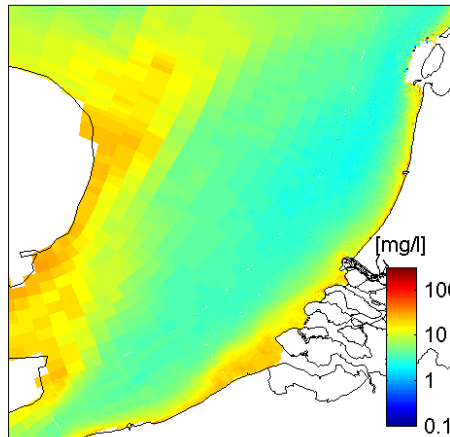
Dec-22

Jan-05

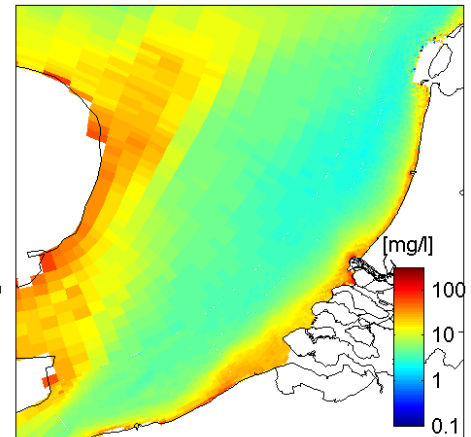
MERIS at surface layer



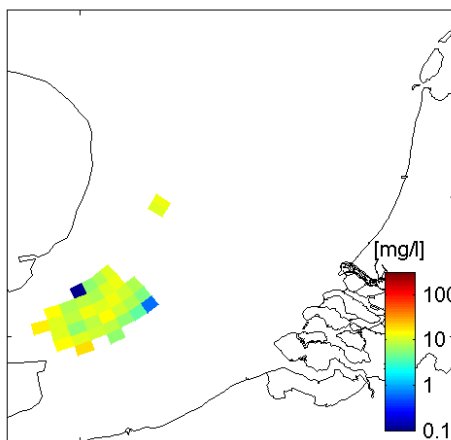
Model at surface layer



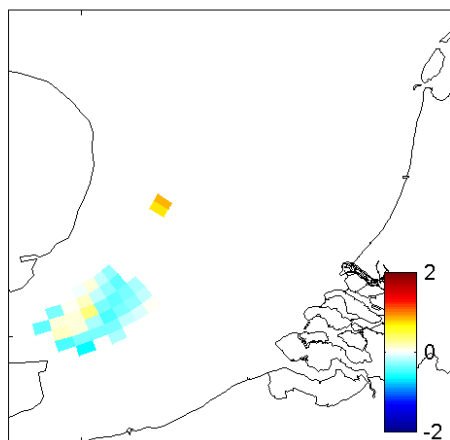
Model at bottom layer



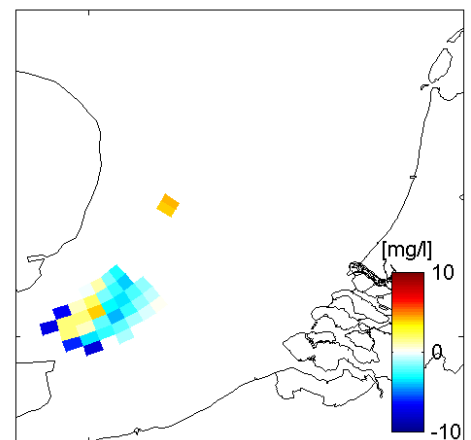
RMS difference



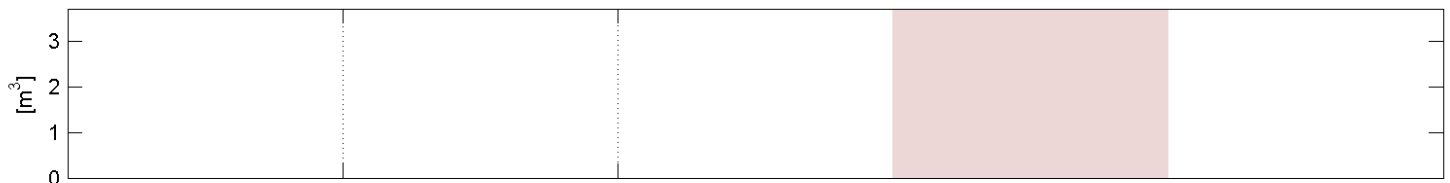
Relative difference [(MERIS-Model)/Model]



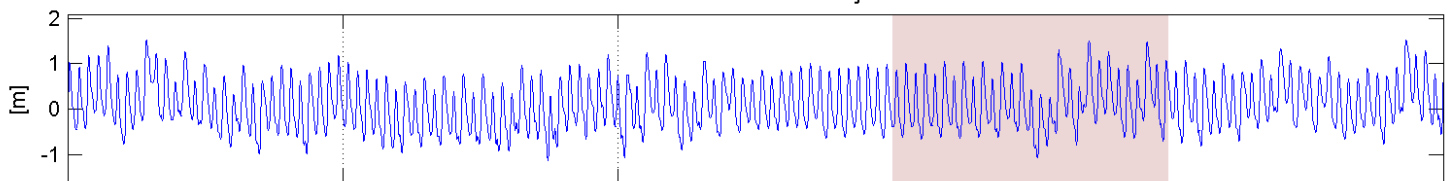
Mean difference [MERIS-Model]

 $\times 10^6$

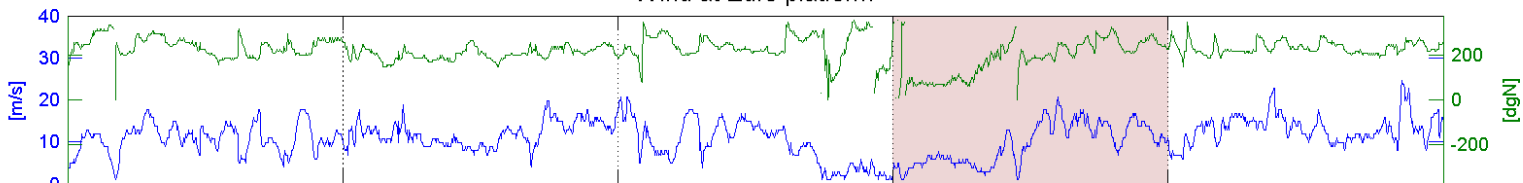
Sand mining volume for Maasvlakte 2



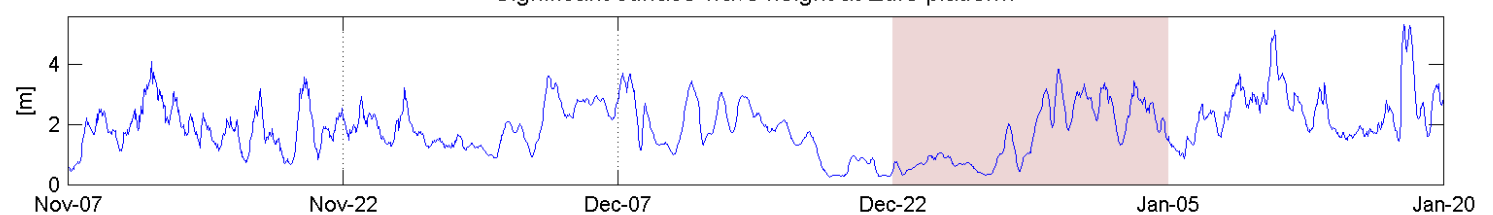
Water level at Noordwijk10



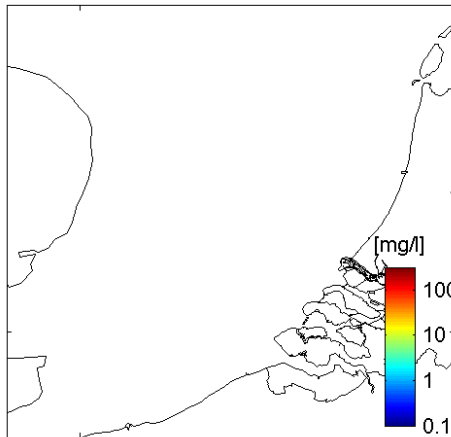
Wind at Euro platform



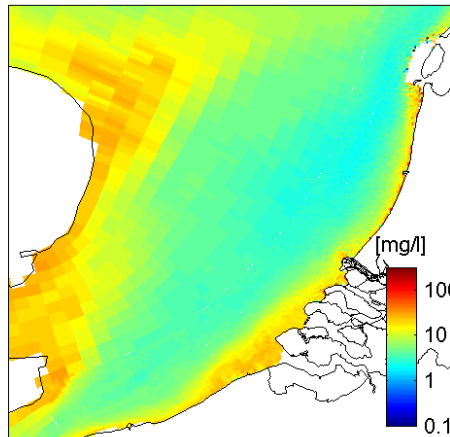
Significant surface wave height at Euro platform



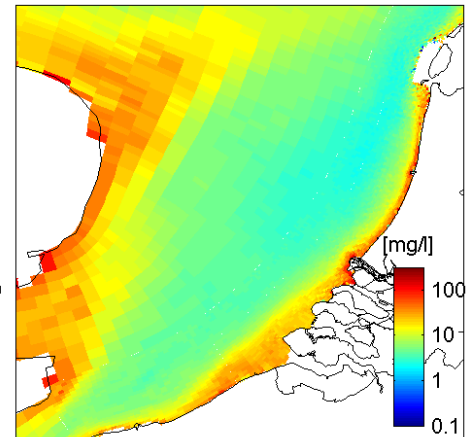
MERIS at surface layer



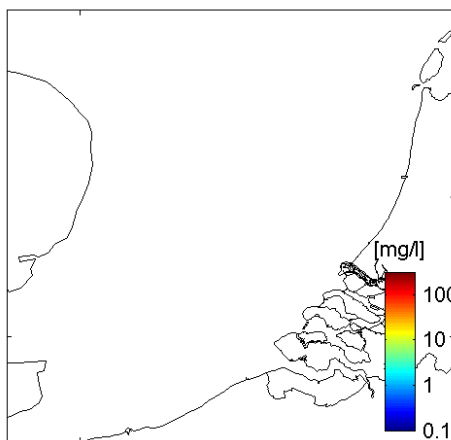
Model at surface layer



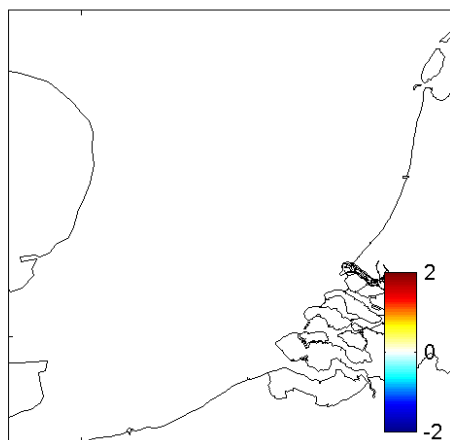
Model at bottom layer



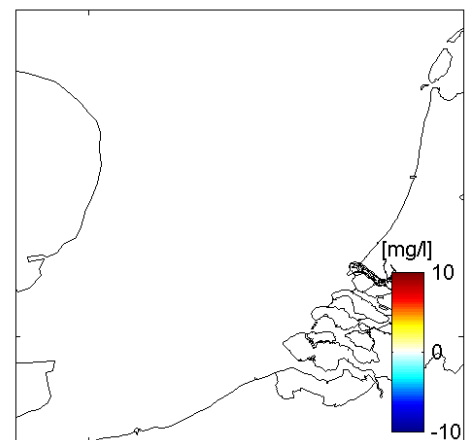
RMS difference



Relative difference [(MERIS-Model)/Model]



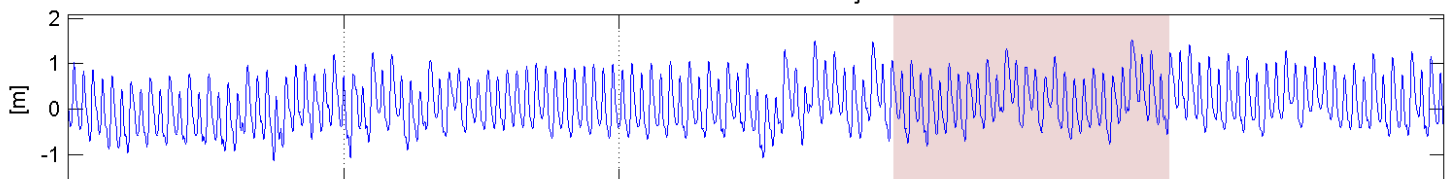
Mean difference [MERIS-Model]

 $\times 10^6$

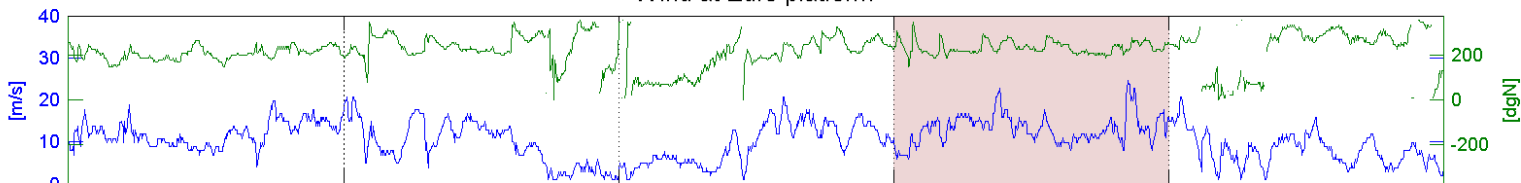
Sand mining volume for Maasvlakte 2



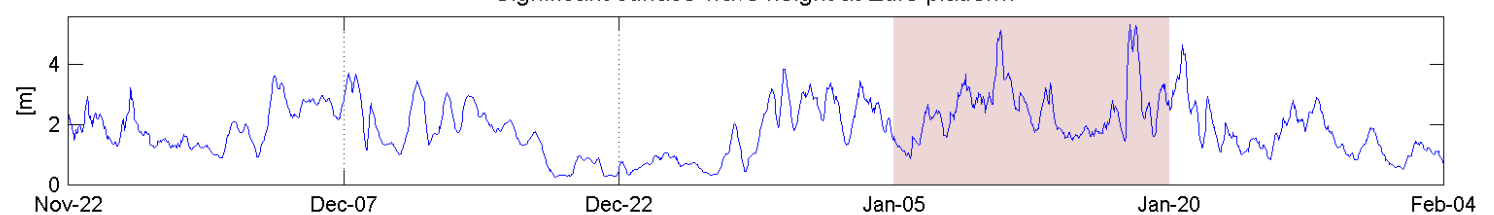
Water level at Noordwijk10



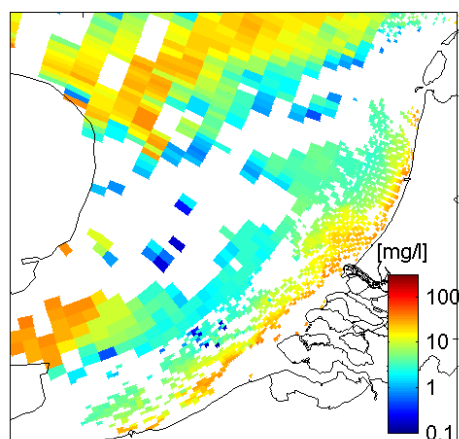
Wind at Euro platform



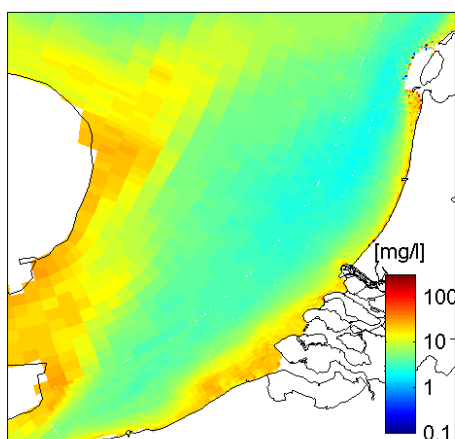
Significant surface wave height at Euro platform



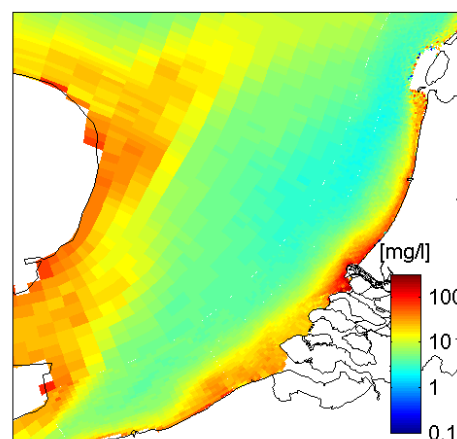
MERIS at surface layer



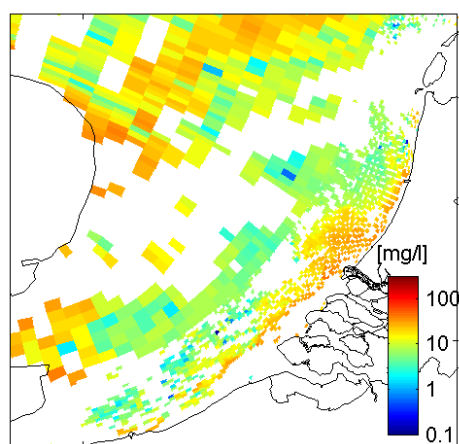
Model at surface layer



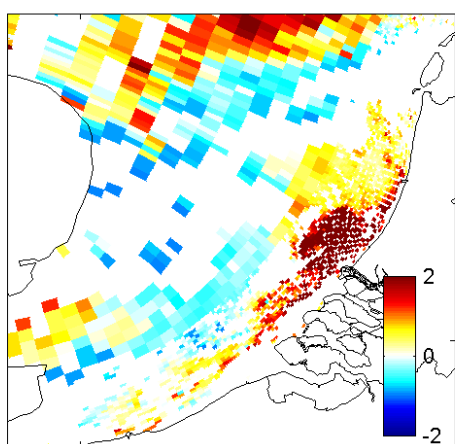
Model at bottom layer



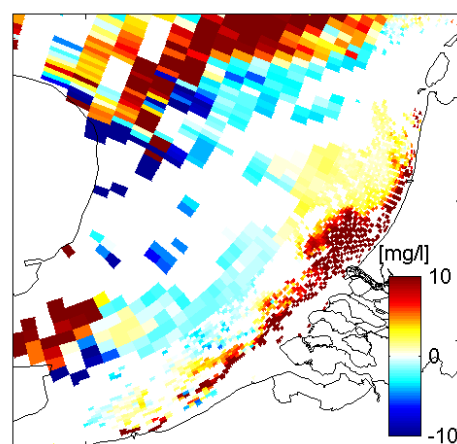
RMS difference



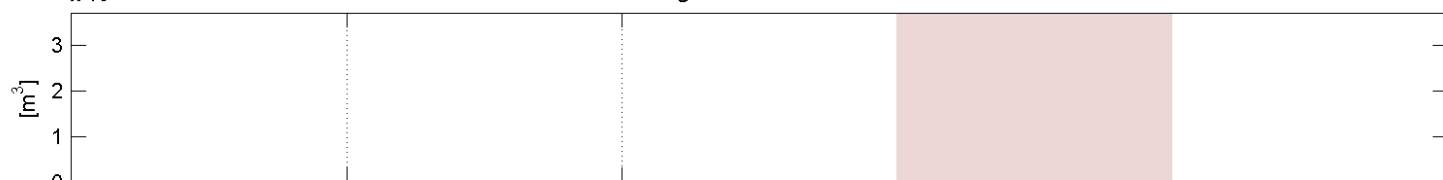
Relative difference [(MERIS-Model)/Model]



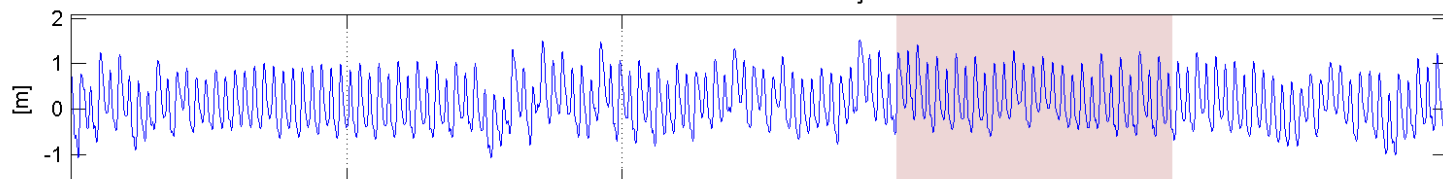
Mean difference [MERIS-Model]


 $\times 10^6$

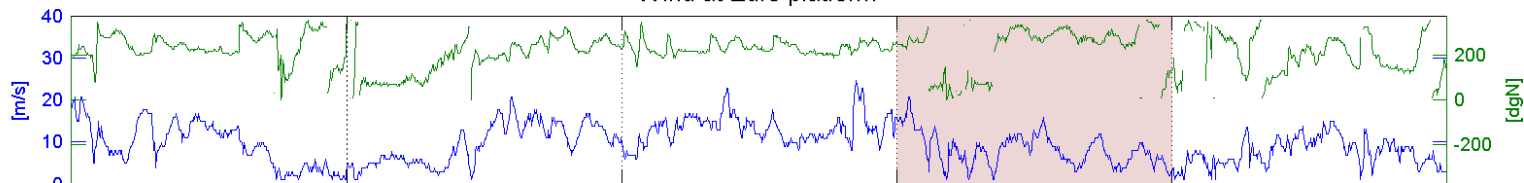
Sand mining volume for Maasvlakte 2



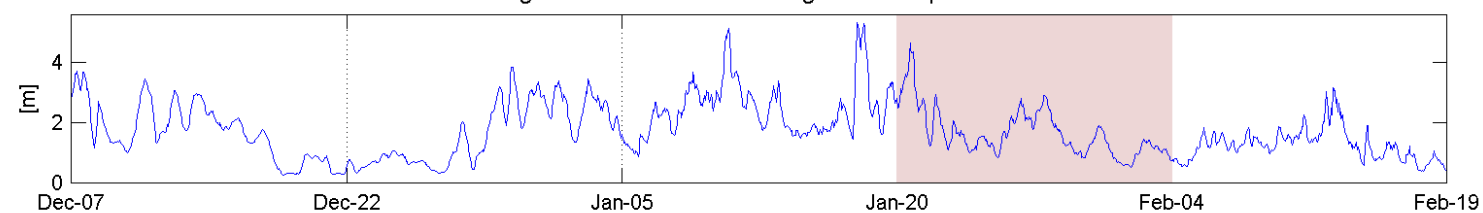
Water level at Noordwijk10



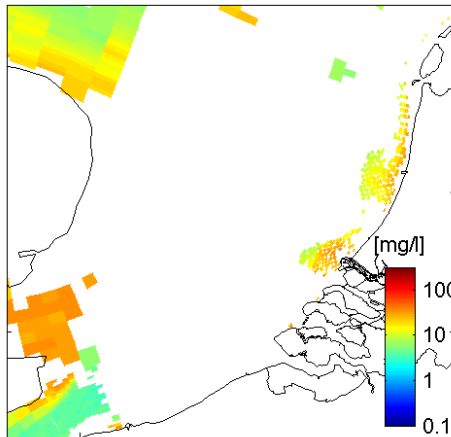
Wind at Euro platform



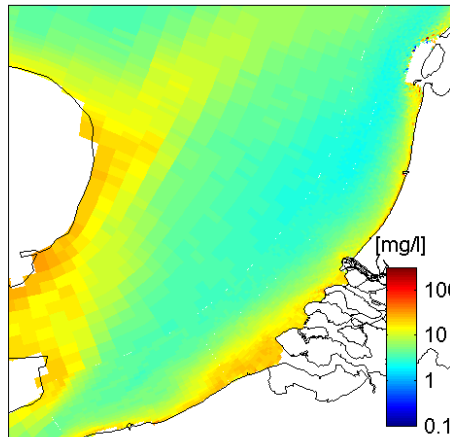
Significant surface wave height at Euro platform



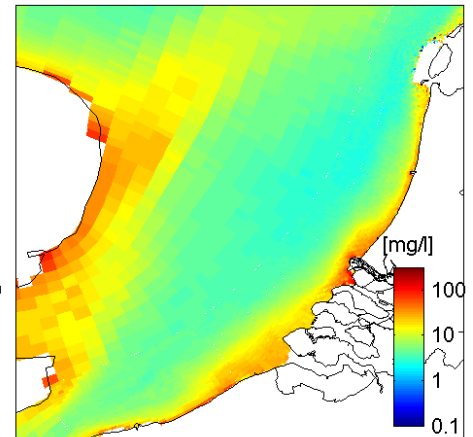
MERIS at surface layer



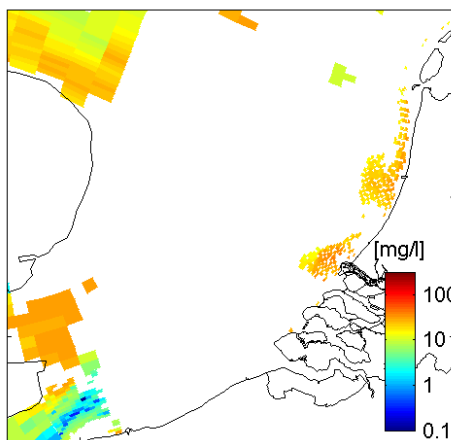
Model at surface layer



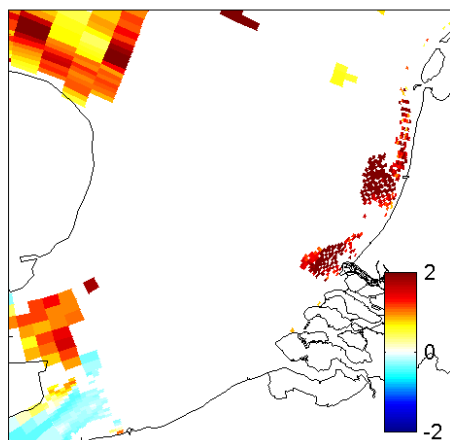
Model at bottom layer



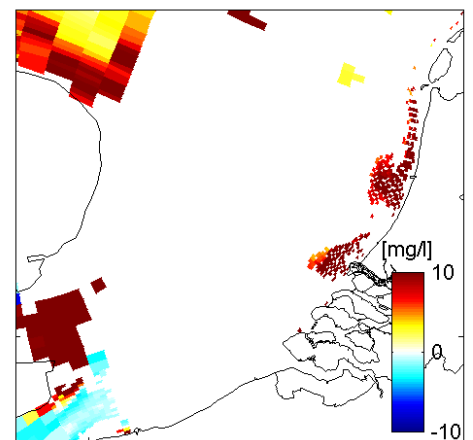
RMS difference



Relative difference [(MERIS-Model)/Model]



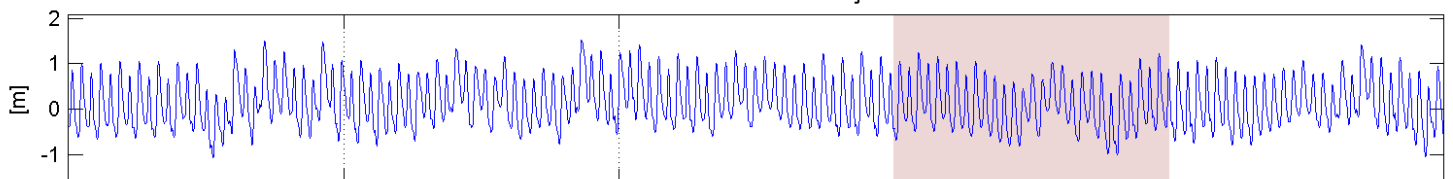
Mean difference [MERIS-Model]

 $\times 10^6$

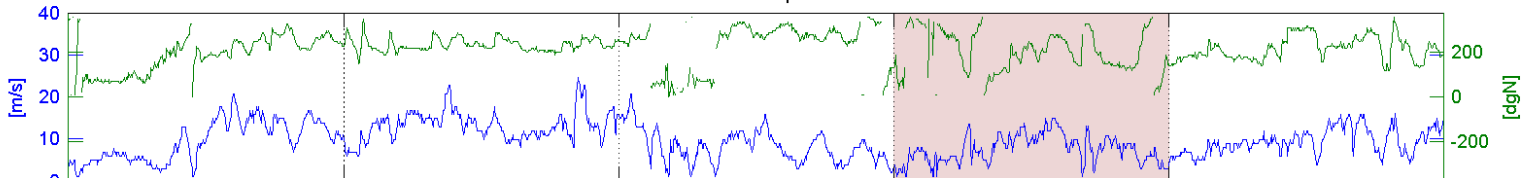
Sand mining volume for Maasvlakte 2



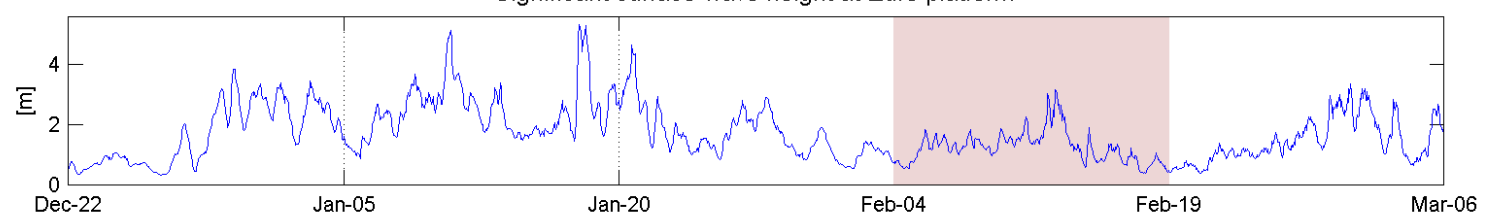
Water level at Noordwijk10



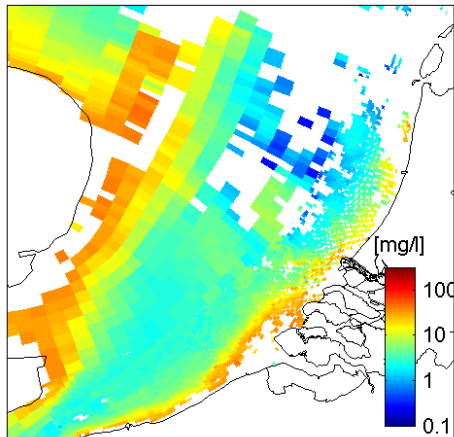
Wind at Euro platform



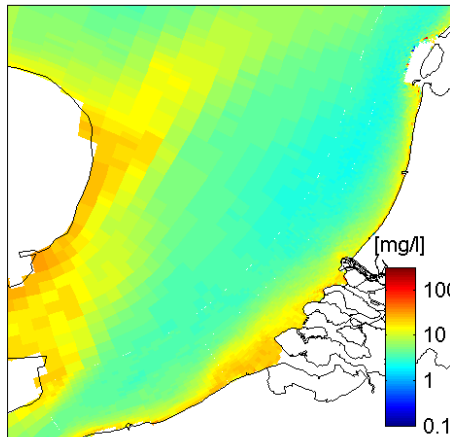
Significant surface wave height at Euro platform



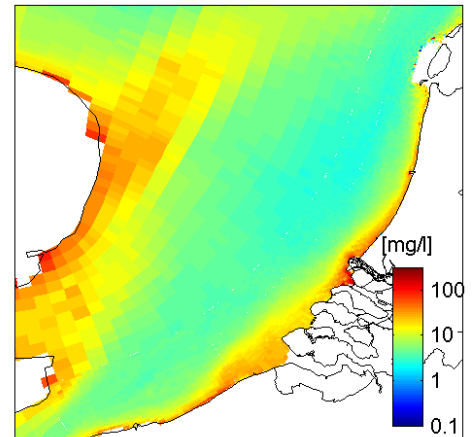
MERIS at surface layer



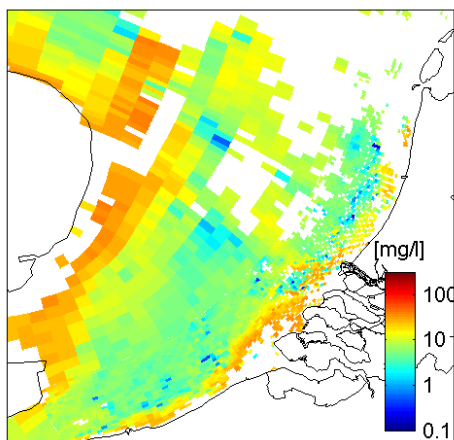
Model at surface layer



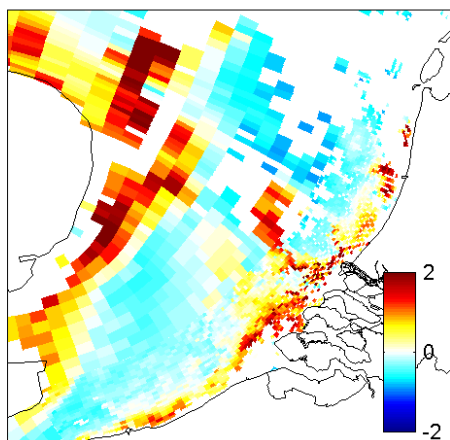
Model at bottom layer



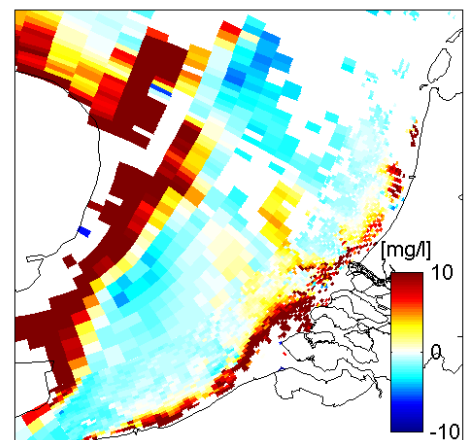
RMS difference



Relative difference [(MERIS-Model)/Model]



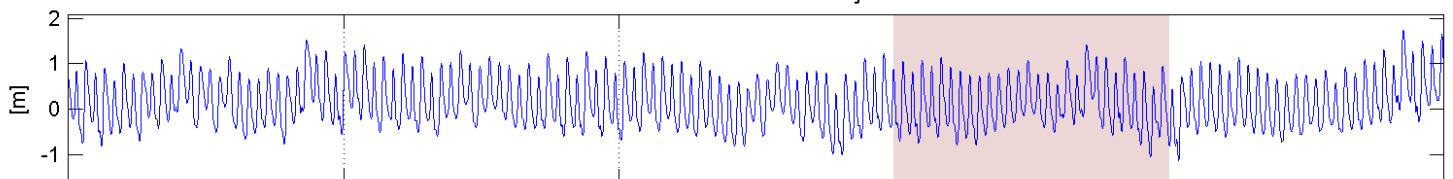
Mean difference [MERIS-Model]

 $\times 10^6$

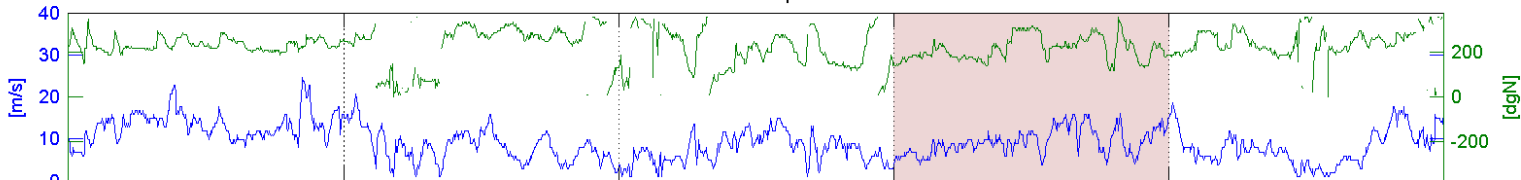
Sand mining volume for Maasvlakte 2



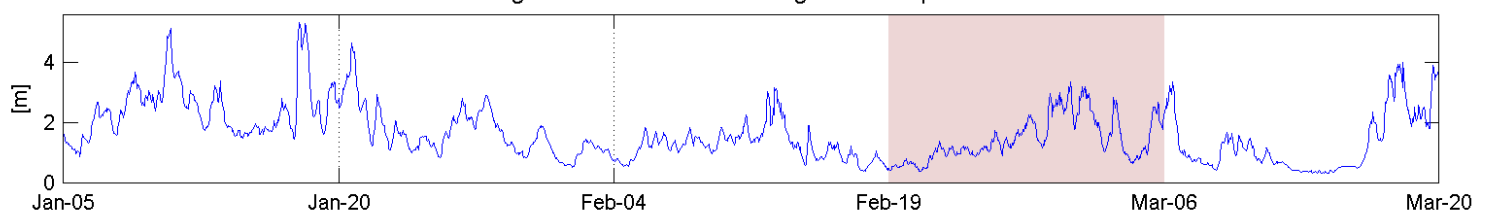
Water level at Noordwijk10



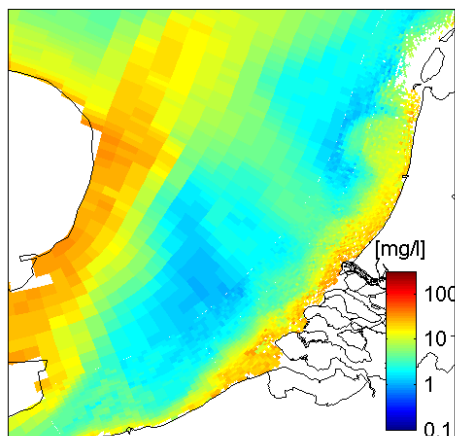
Wind at Euro platform



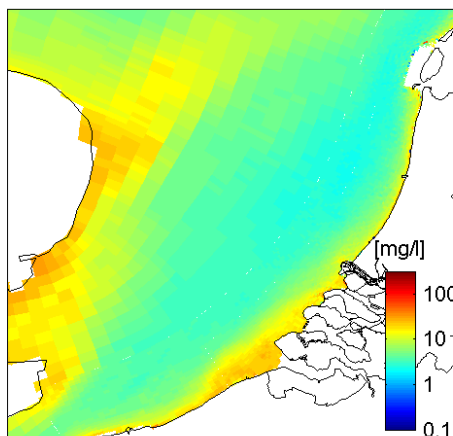
Significant surface wave height at Euro platform



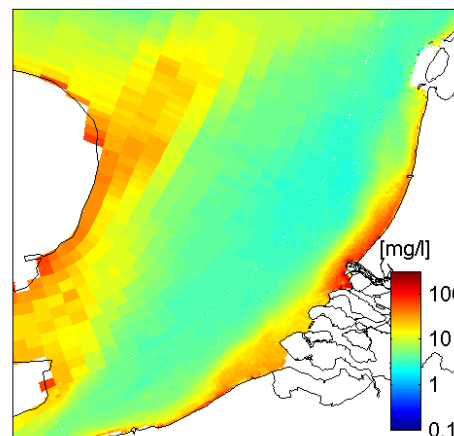
MERIS at surface layer



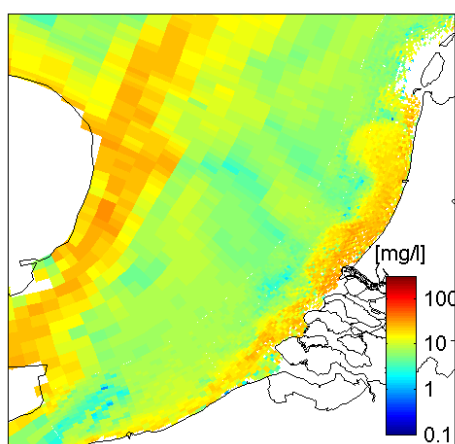
Model at surface layer



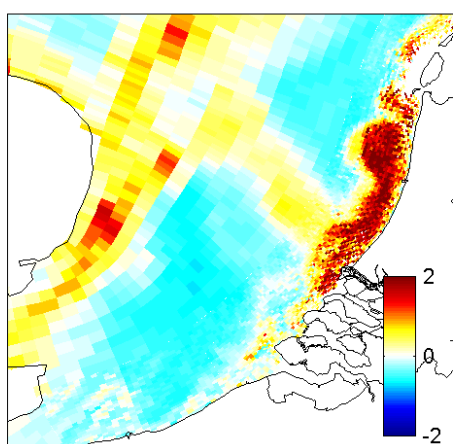
Model at bottom layer



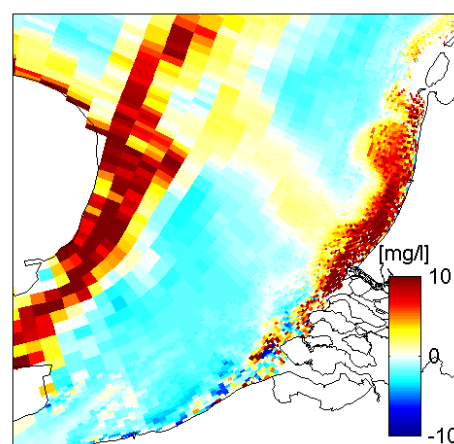
RMS difference



Relative difference [(MERIS-Model)/Model]



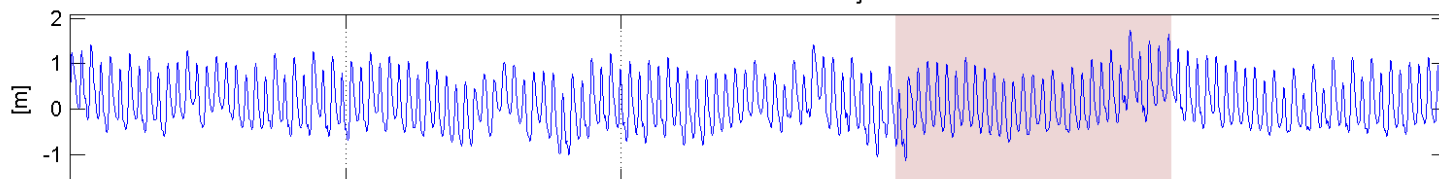
Mean difference [MERIS-Model]


x 10⁶

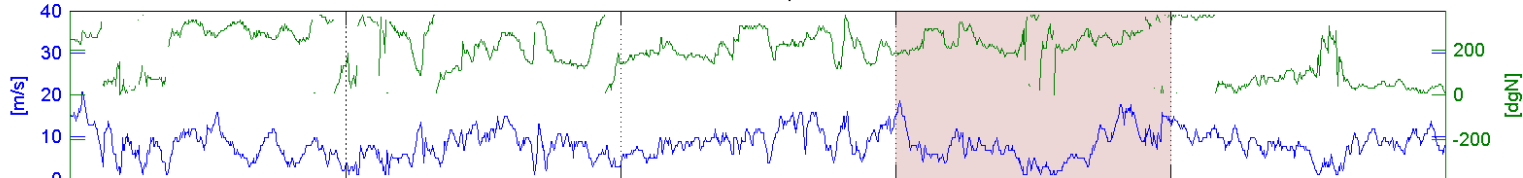
Sand mining volume for Maasvlakte 2



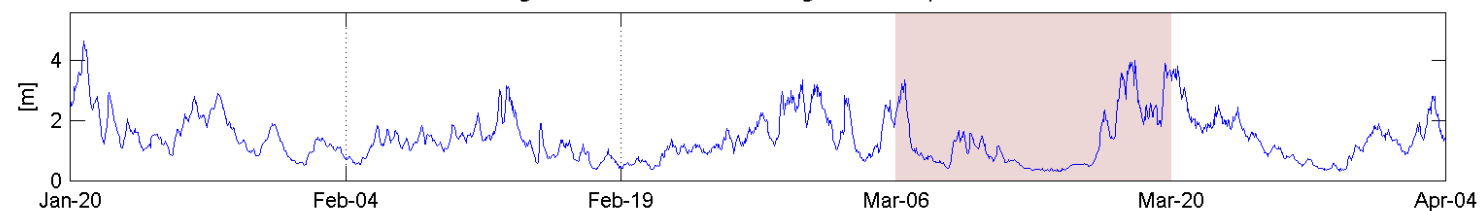
Water level at Noordwijk10



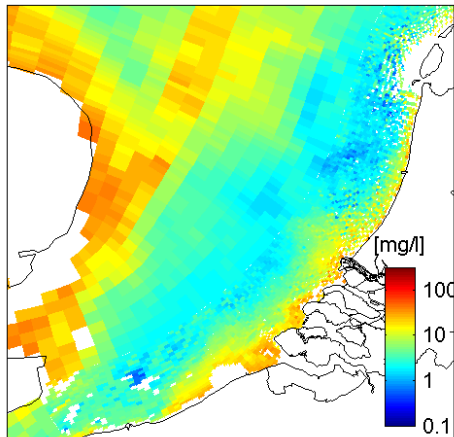
Wind at Euro platform



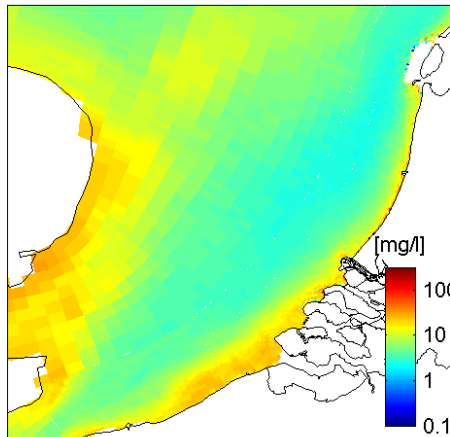
Significant surface wave height at Euro platform



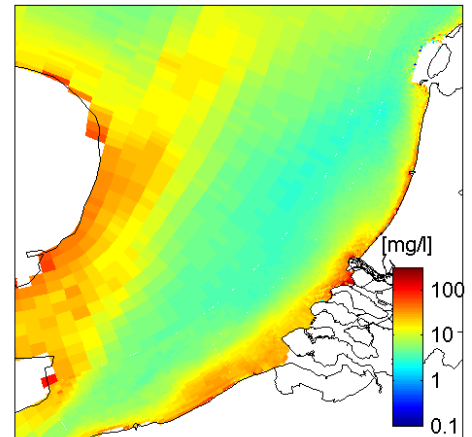
MERIS at surface layer



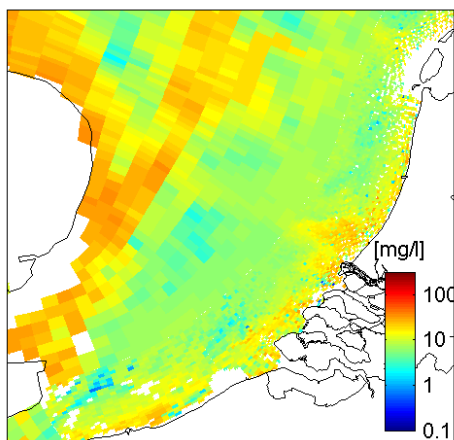
Model at surface layer



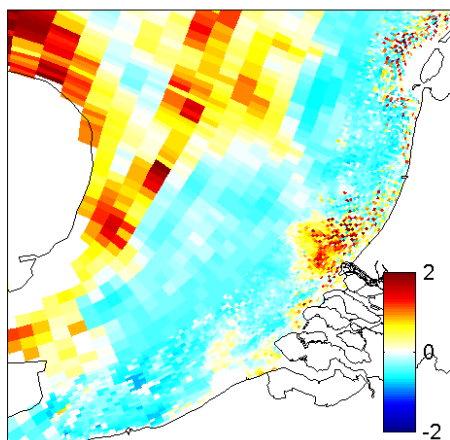
Model at bottom layer



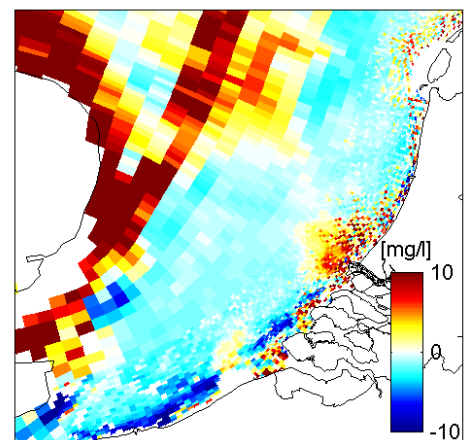
RMS difference



Relative difference [(MERIS-Model)/Model]



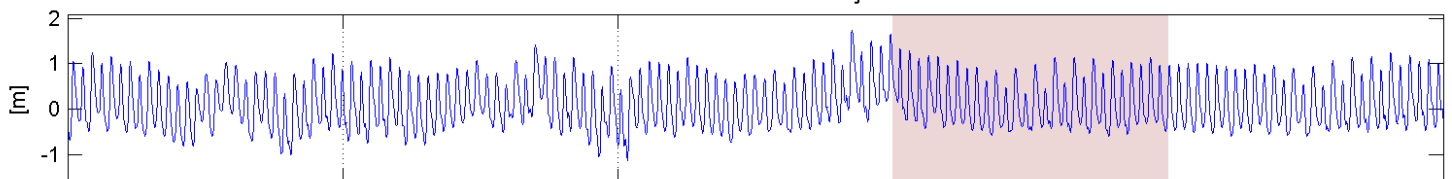
Mean difference [MERIS-Model]

 $\times 10^6$

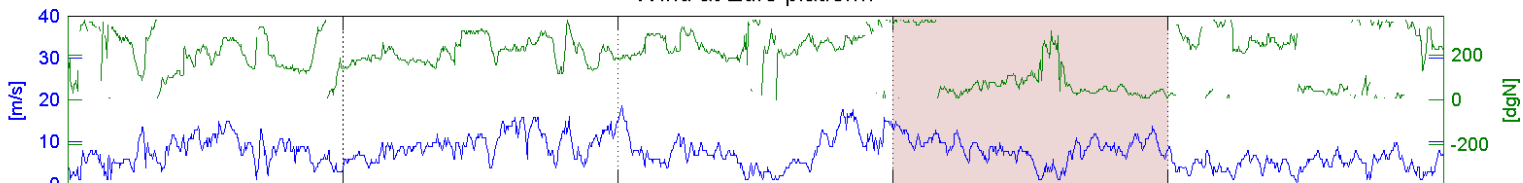
Sand mining volume for Maasvlakte 2



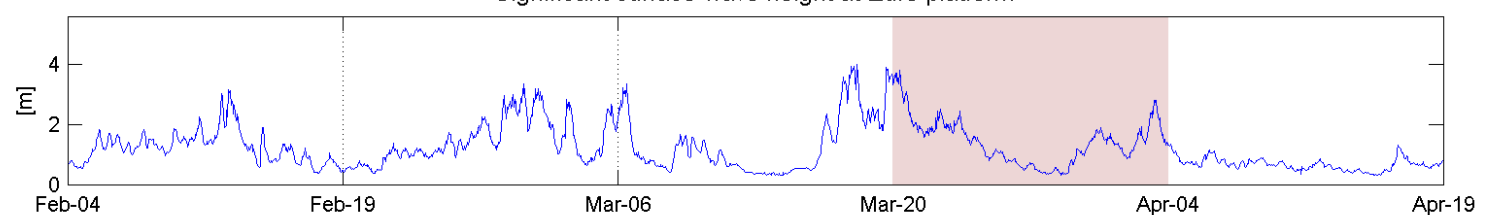
Water level at Noordwijk10



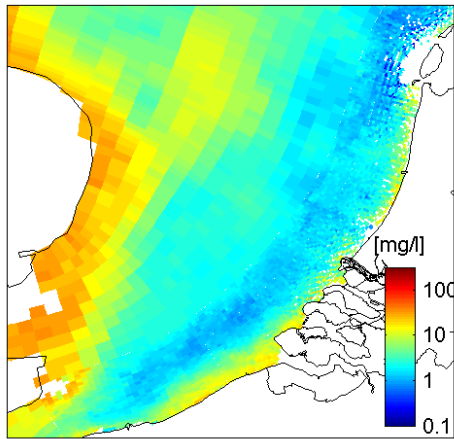
Wind at Euro platform



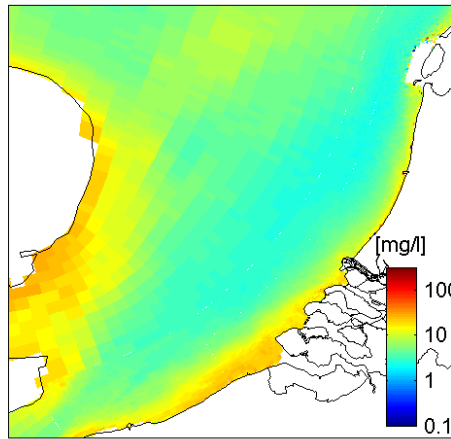
Significant surface wave height at Euro platform



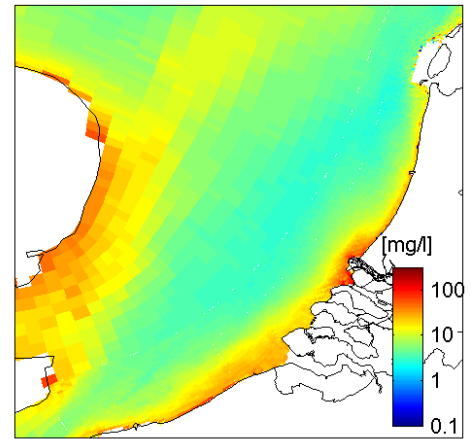
MERIS at surface layer



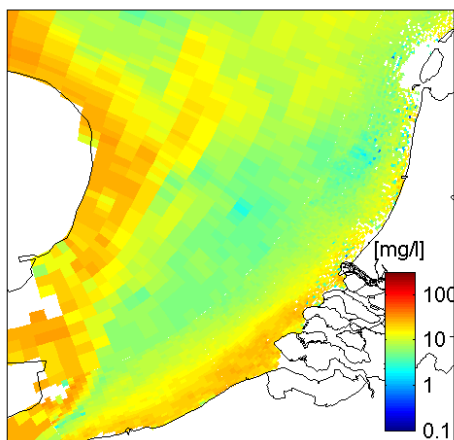
Model at surface layer



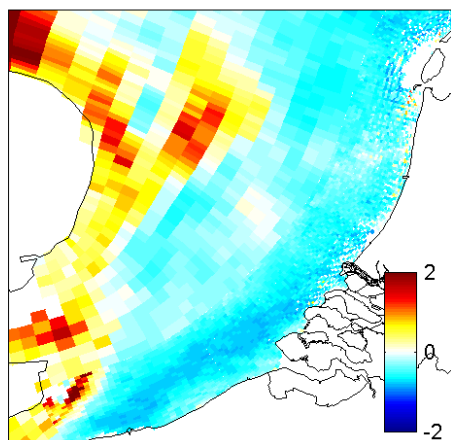
Model at bottom layer



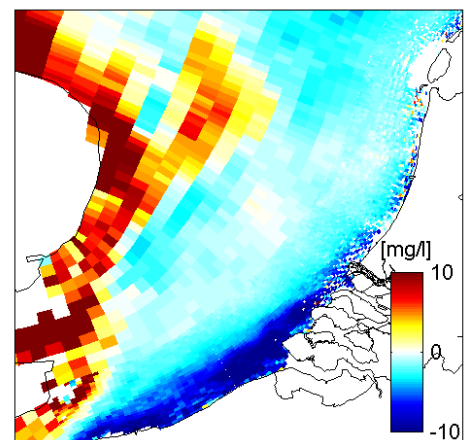
RMS difference



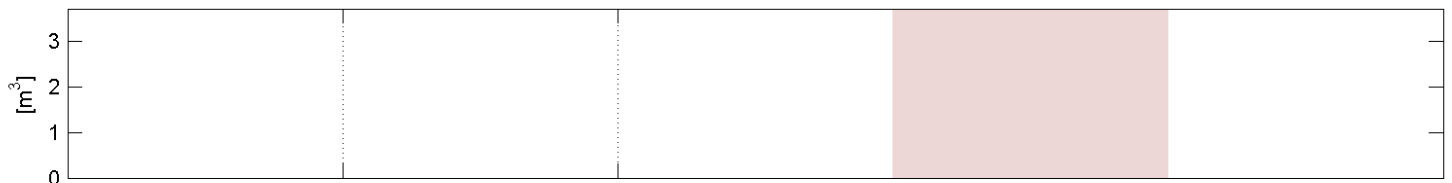
Relative difference [(MERIS-Model)/Model]



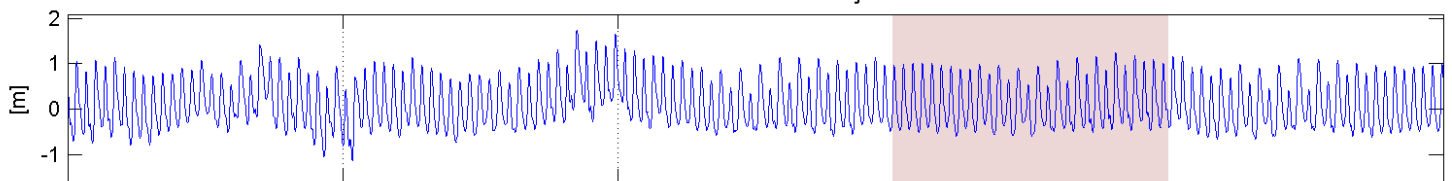
Mean difference [MERIS-Model]

x 10⁶

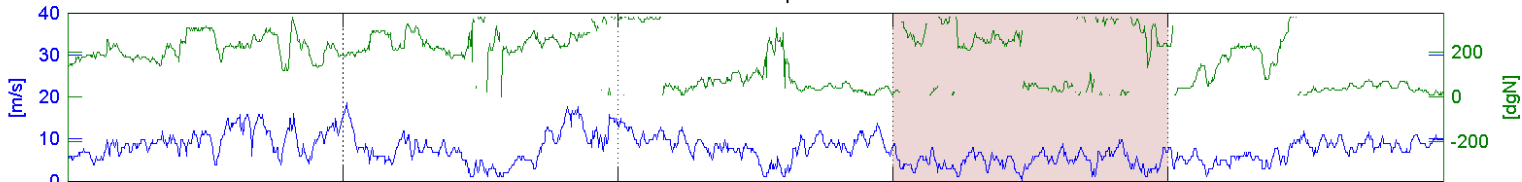
Sand mining volume for Maasvlakte 2



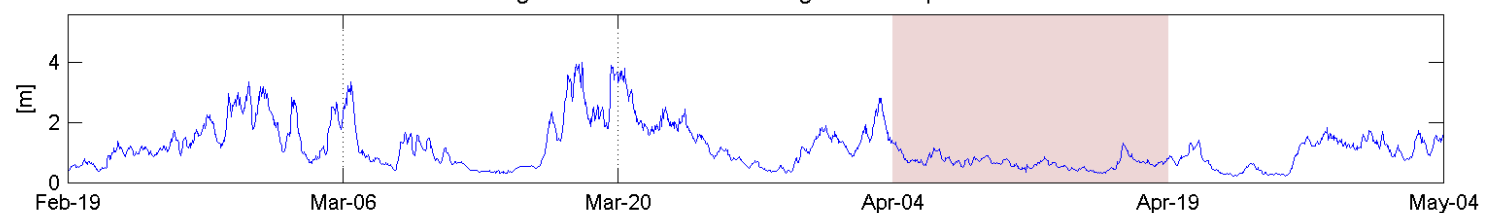
Water level at Noordwijk10



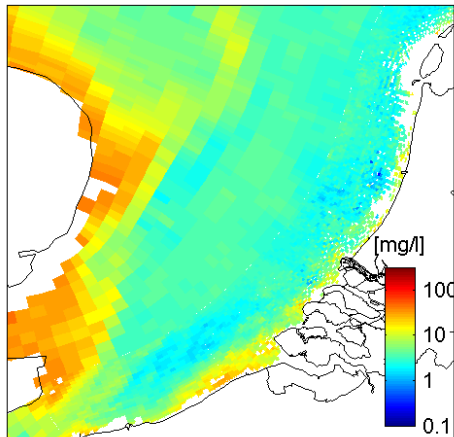
Wind at Euro platform



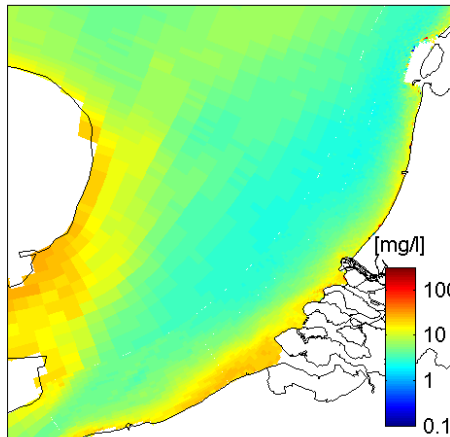
Significant surface wave height at Euro platform



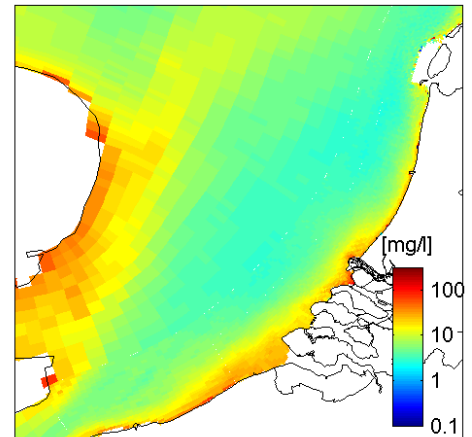
MERIS at surface layer



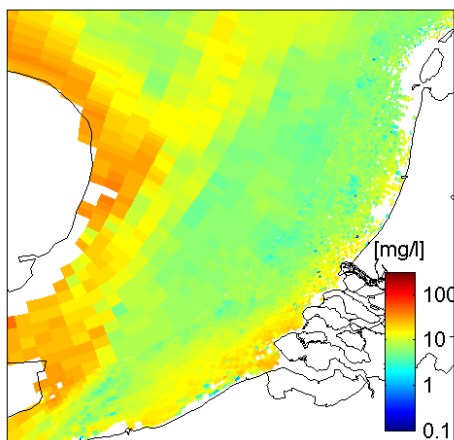
Model at surface layer



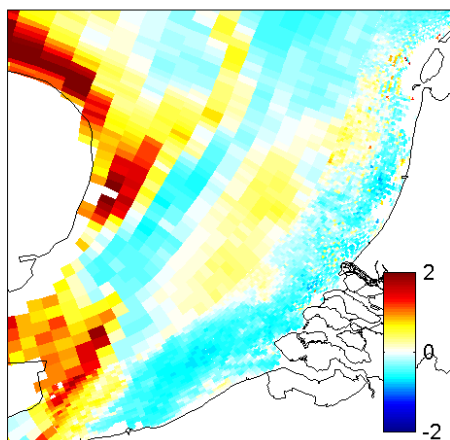
Model at bottom layer



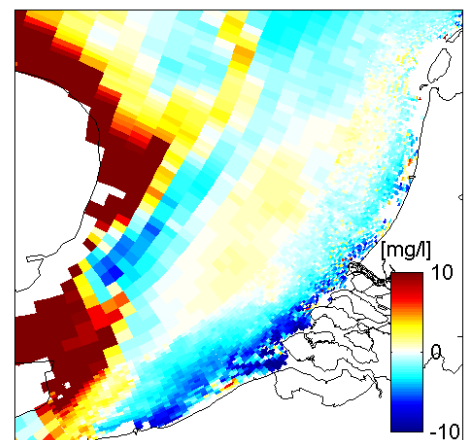
RMS difference



Relative difference [(MERIS-Model)/Model]



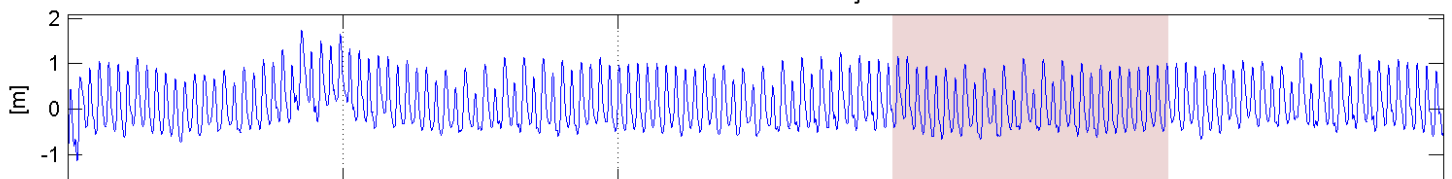
Mean difference [MERIS-Model]

 $\times 10^6$

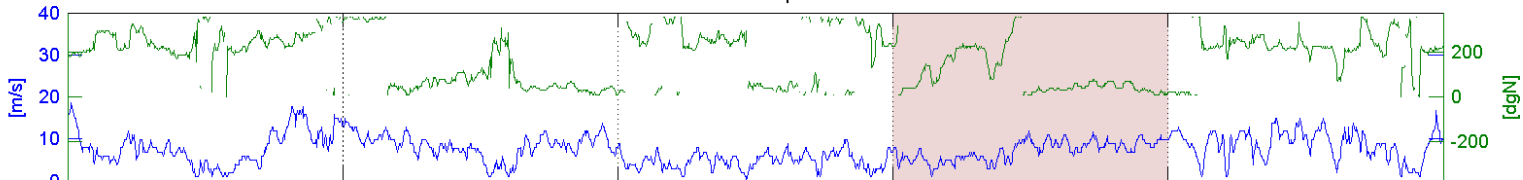
Sand mining volume for Maasvlakte 2



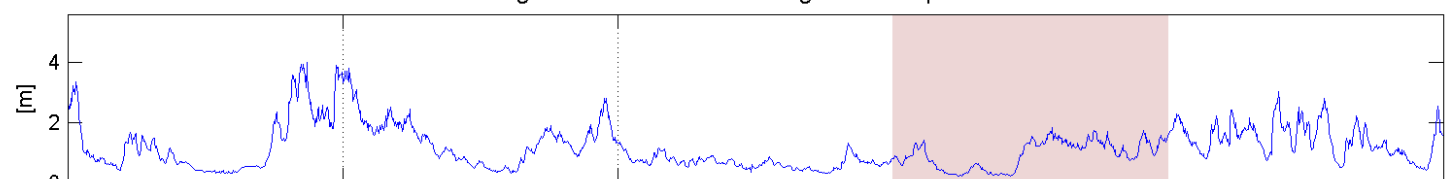
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Mar-06

Mar-20

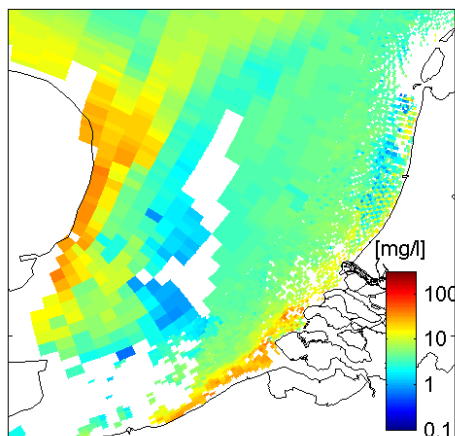
Apr-04

Apr-19

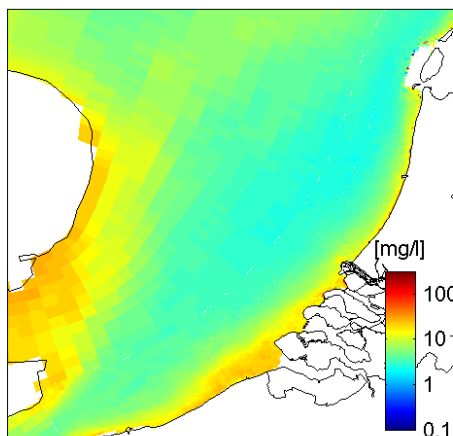
May-04

May-19

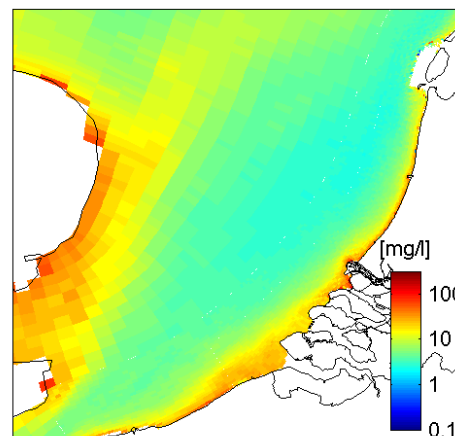
MERIS at surface layer



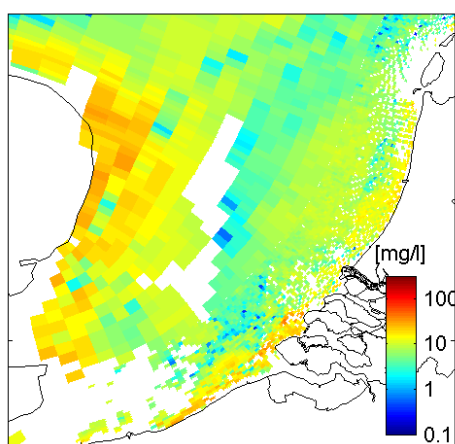
Model at surface layer



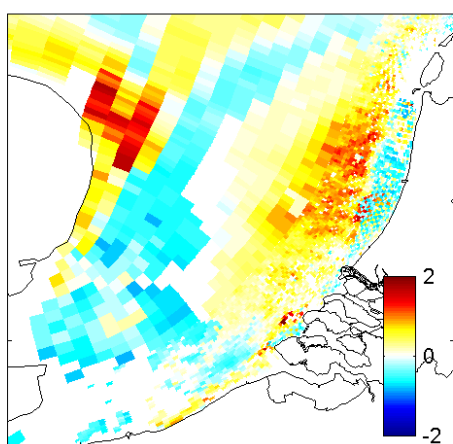
Model at bottom layer



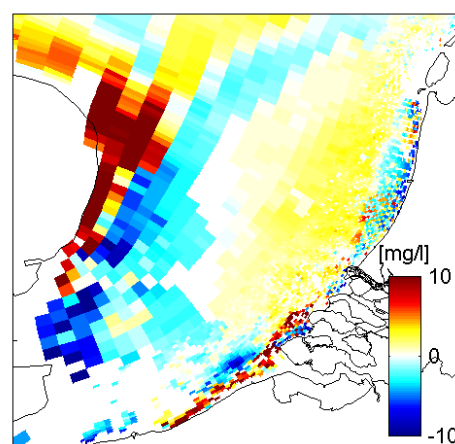
RMS difference



Relative difference [(MERIS-Model)/Model]



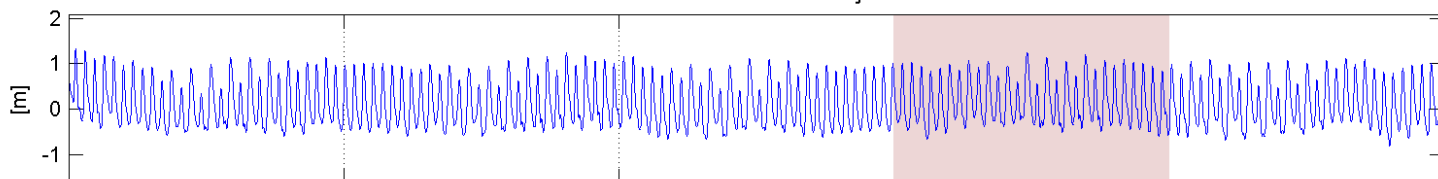
Mean difference [MERIS-Model]


x 10⁶

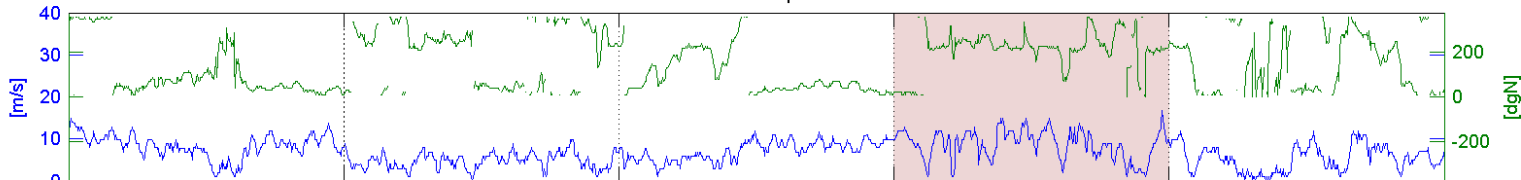
Sand mining volume for Maasvlakte 2



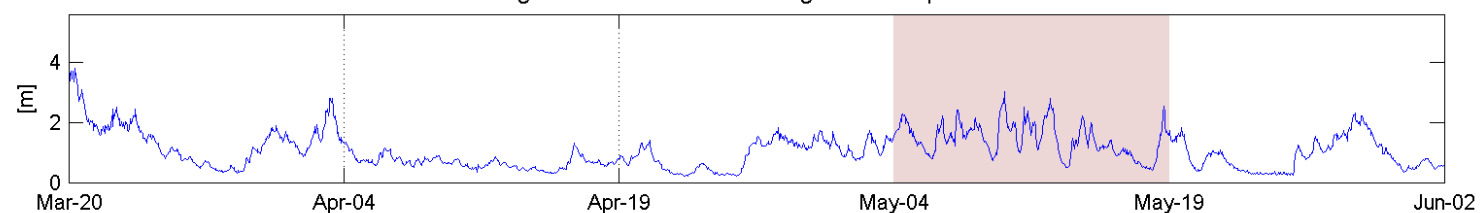
Water level at Noordwijk10



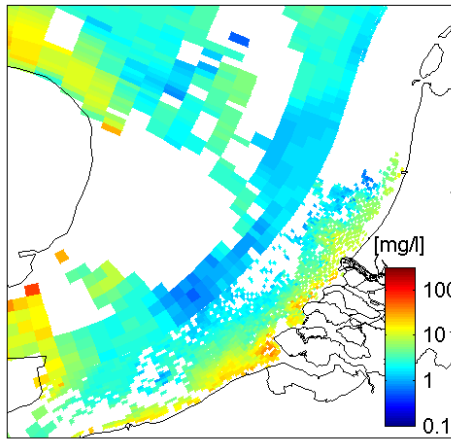
Wind at Euro platform



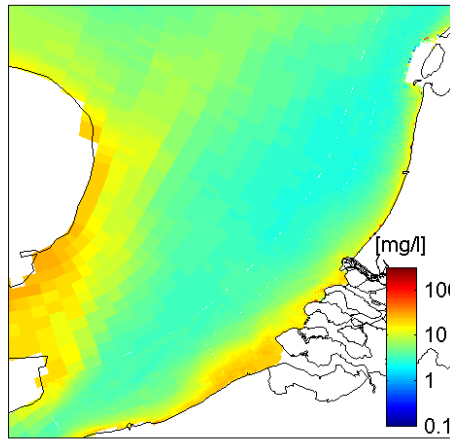
Significant surface wave height at Euro platform



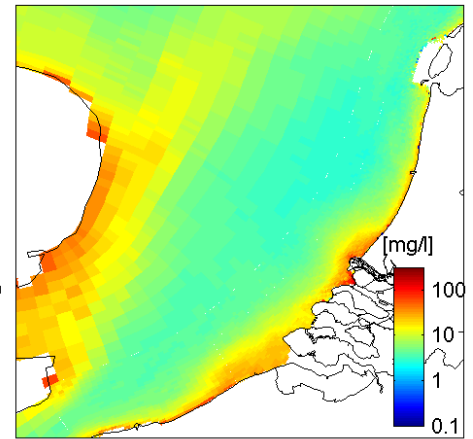
MERIS at surface layer



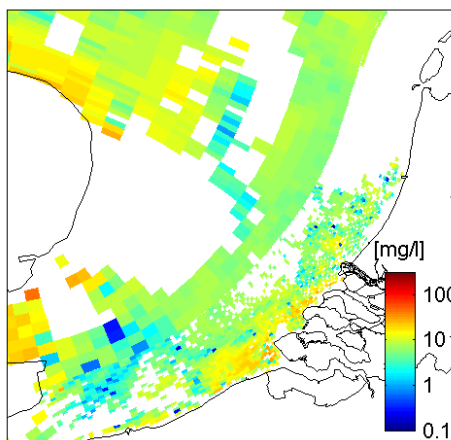
Model at surface layer



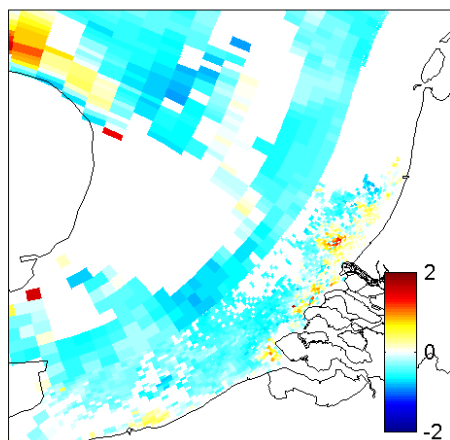
Model at bottom layer



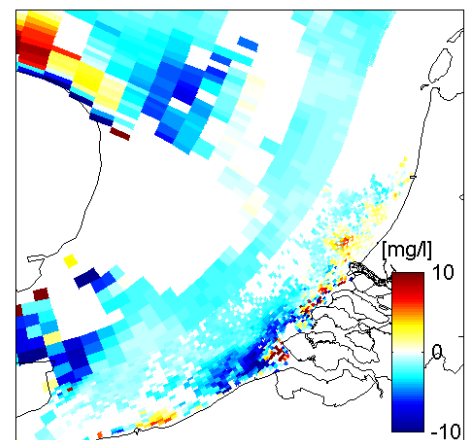
RMS difference



Relative difference [(MERIS-Model)/Model]



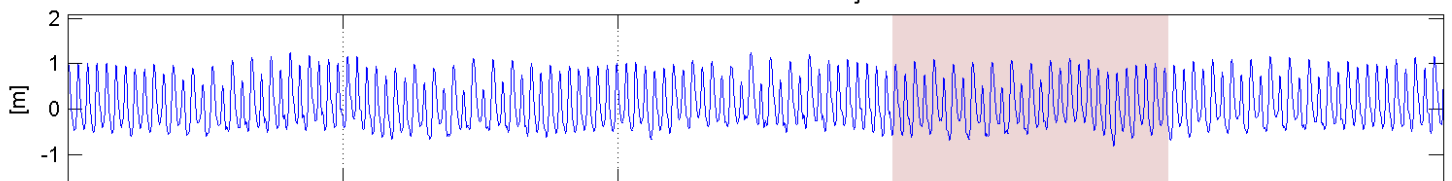
Mean difference [MERIS-Model]

 $\times 10^6$

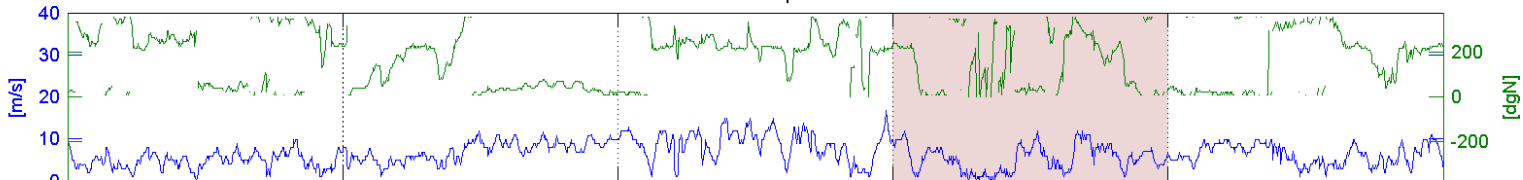
Sand mining volume for Maasvlakte 2



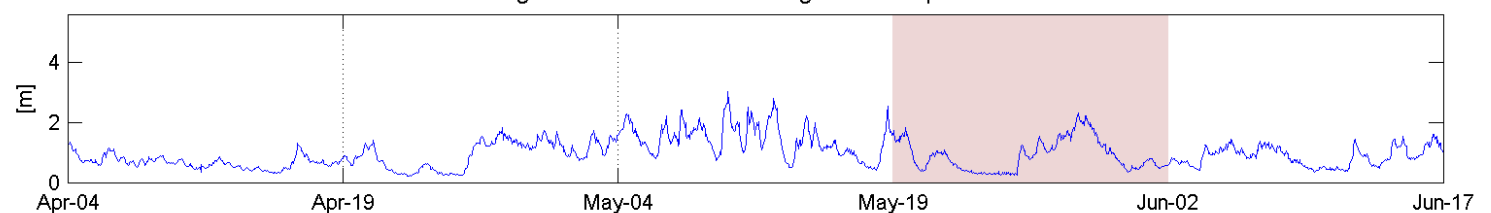
Water level at Noordwijk10



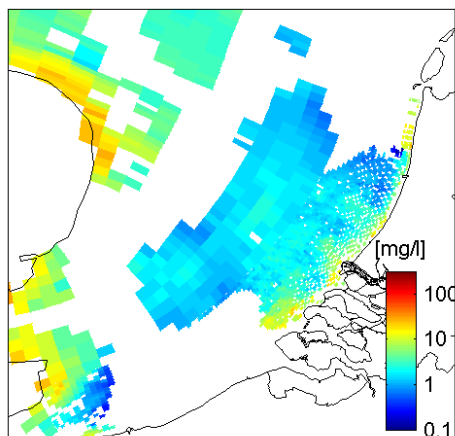
Wind at Euro platform



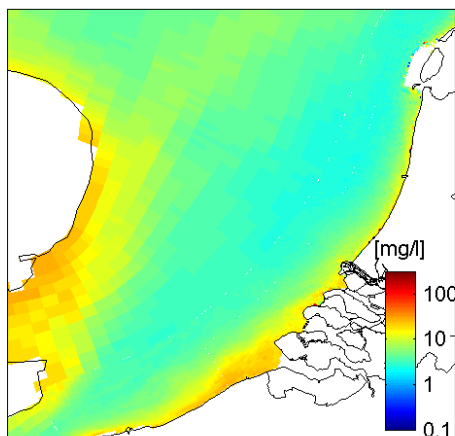
Significant surface wave height at Euro platform



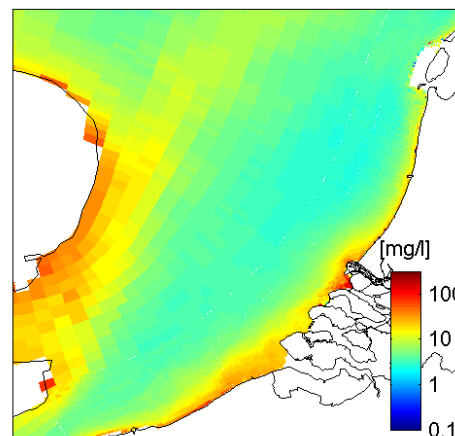
MERIS at surface layer



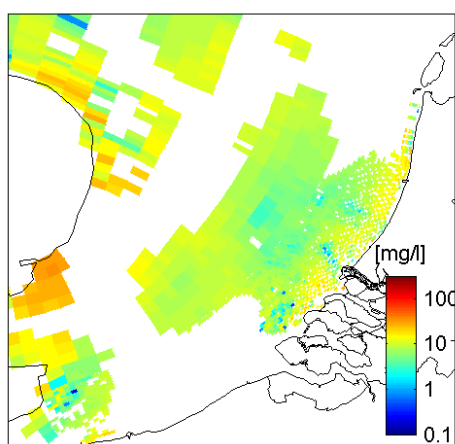
Model at surface layer



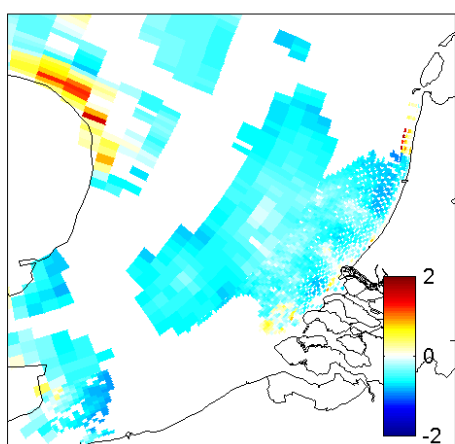
Model at bottom layer



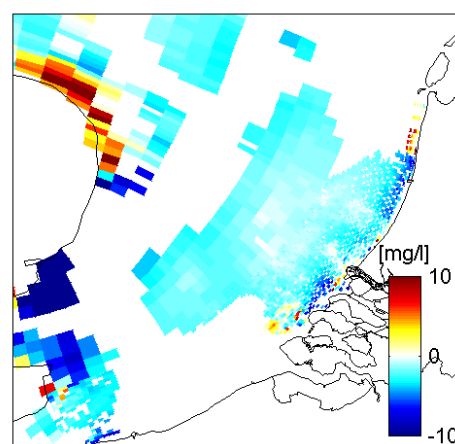
RMS difference



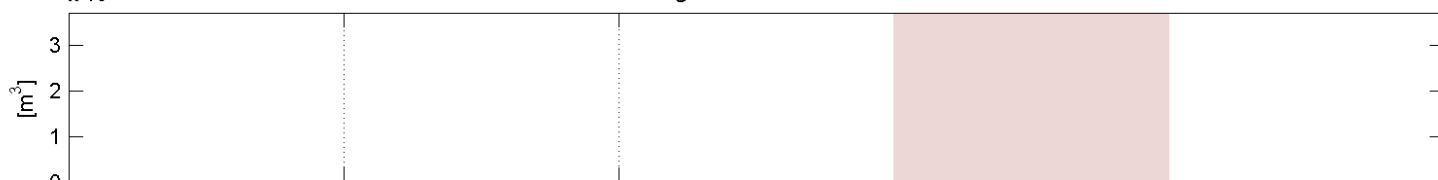
Relative difference [(MERIS-Model)/Model]



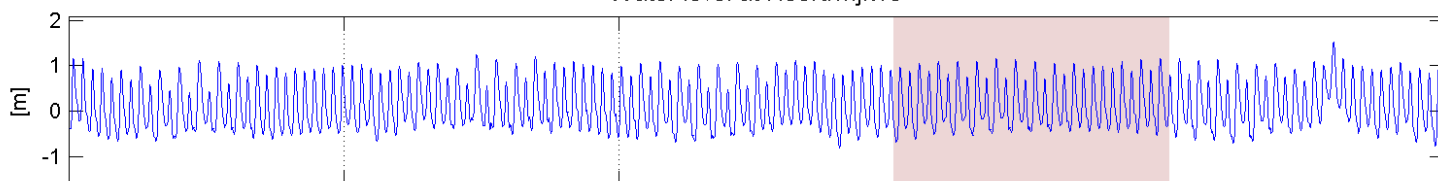
Mean difference [MERIS-Model]


 $\times 10^6$

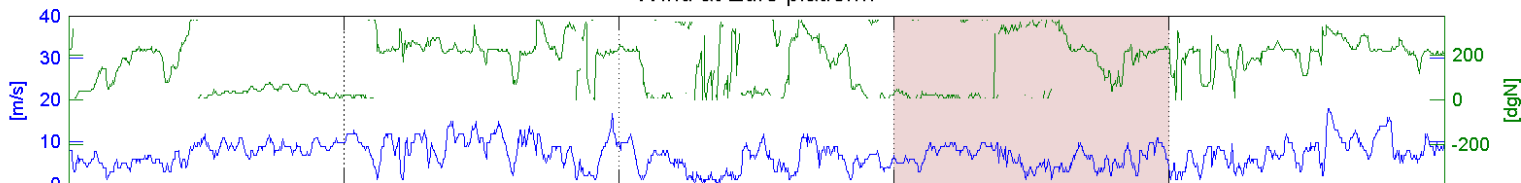
Sand mining volume for Maasvlakte 2



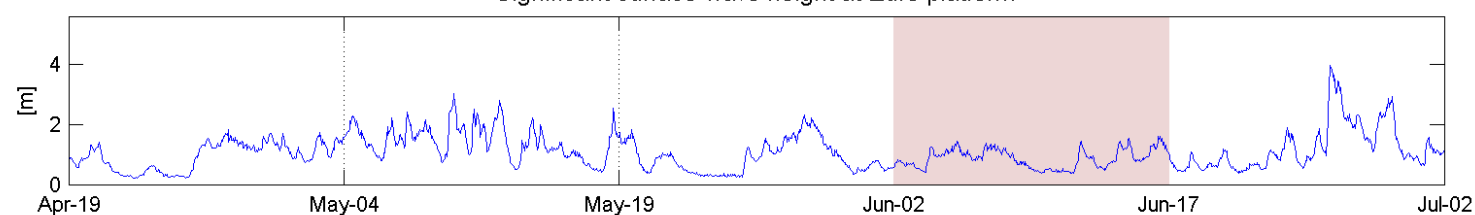
Water level at Noordwijk10



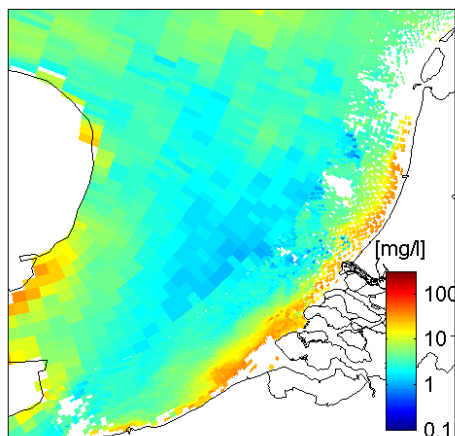
Wind at Euro platform



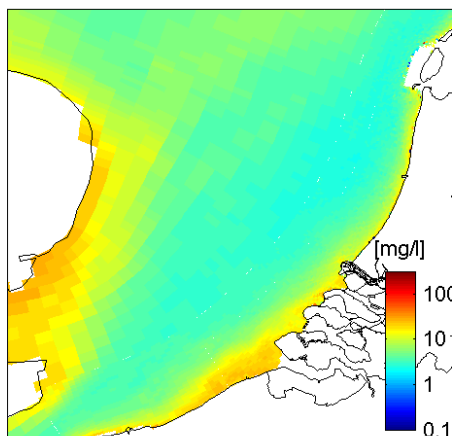
Significant surface wave height at Euro platform



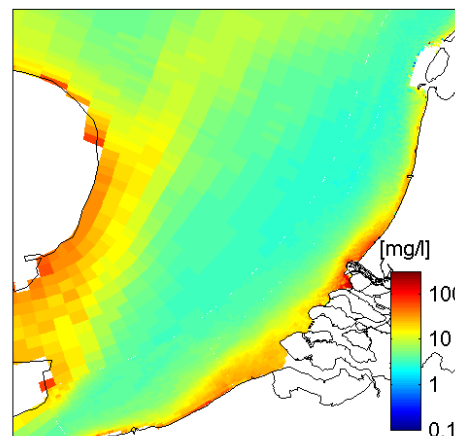
MERIS at surface layer



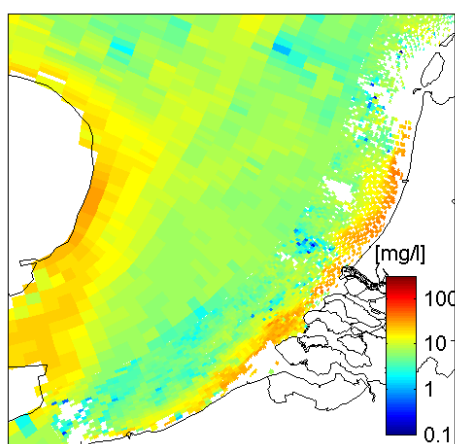
Model at surface layer



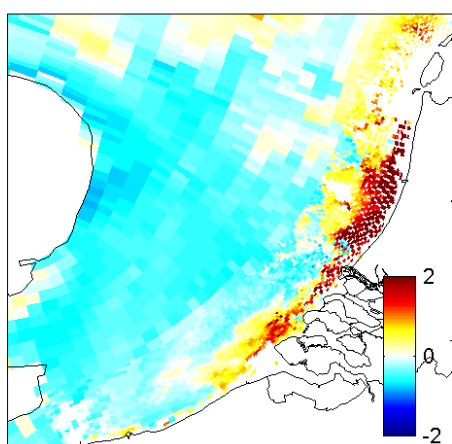
Model at bottom layer



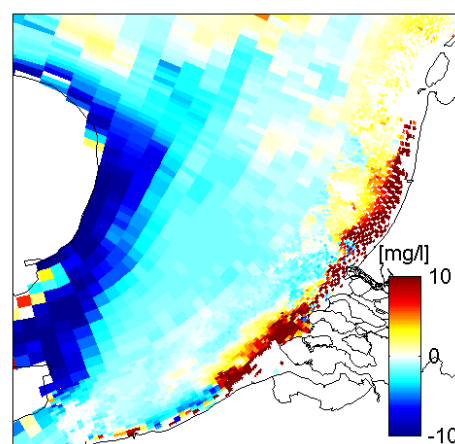
RMS difference



Relative difference [(MERIS-Model)/Model]



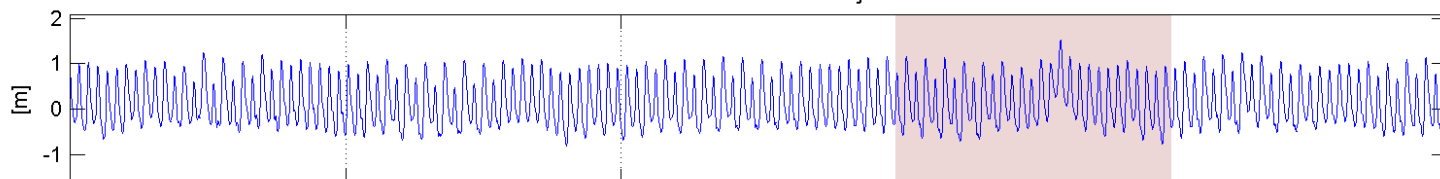
Mean difference [MERIS-Model]

 $\times 10^6$

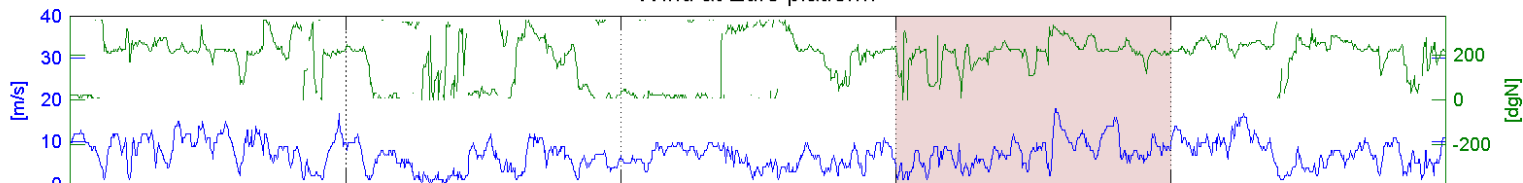
Sand mining volume for Maasvlakte 2



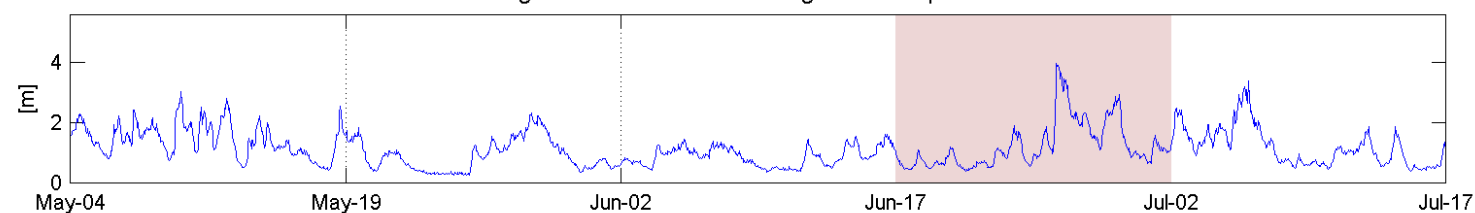
Water level at Noordwijk10



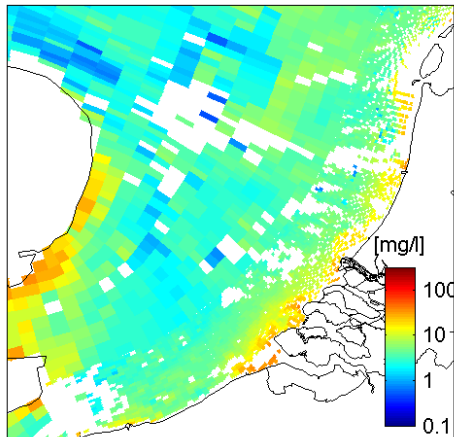
Wind at Euro platform



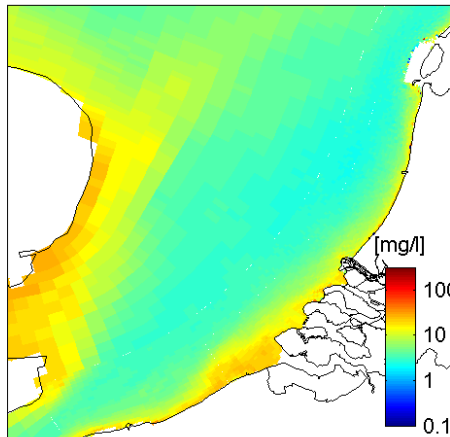
Significant surface wave height at Euro platform



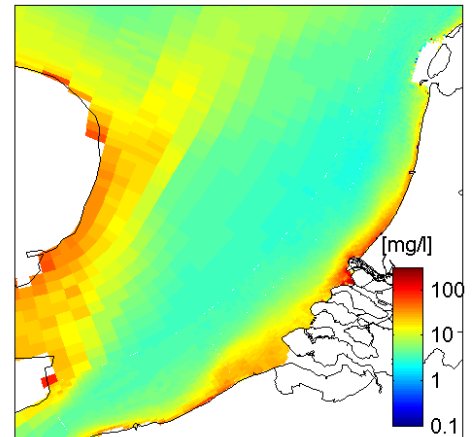
MERIS at surface layer



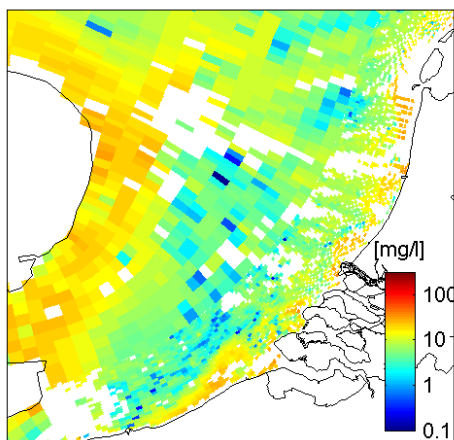
Model at surface layer



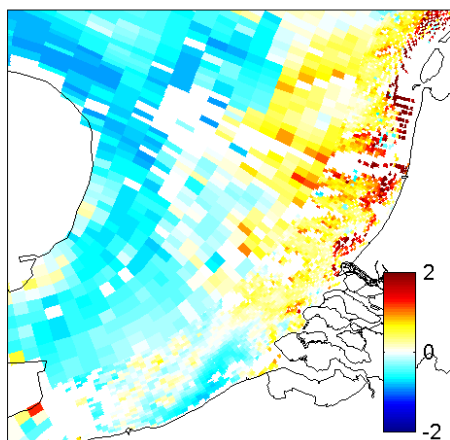
Model at bottom layer



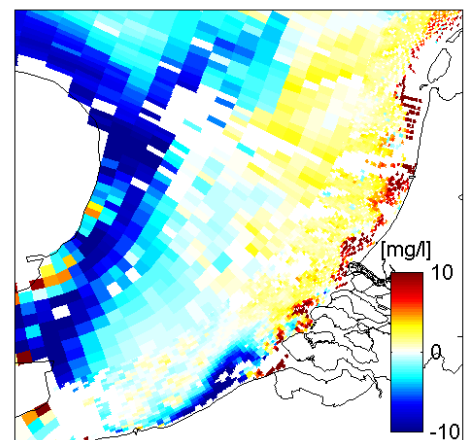
RMS difference



Relative difference [(MERIS-Model)/Model]



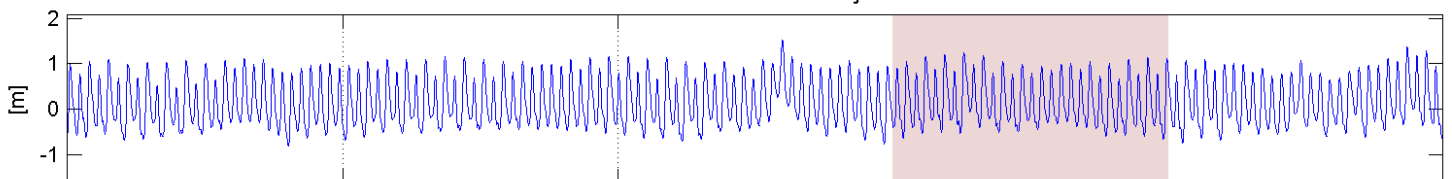
Mean difference [MERIS-Model]

x 10⁶

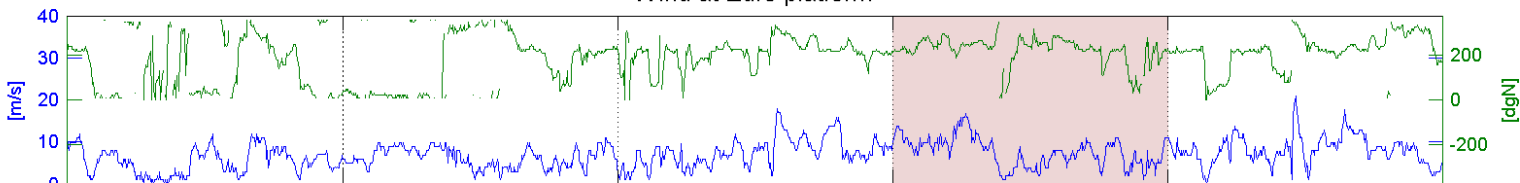
Sand mining volume for Maasvlakte 2



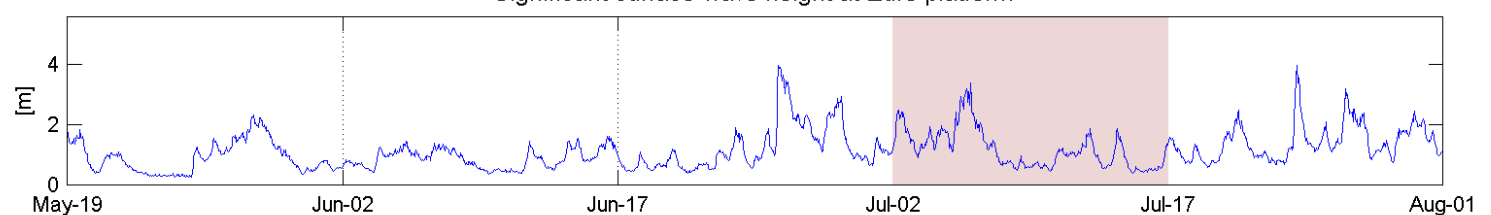
Water level at Noordwijk10



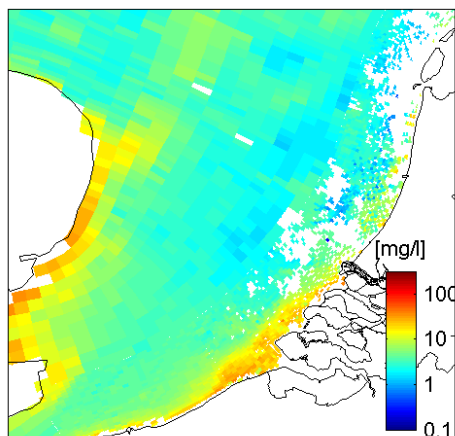
Wind at Euro platform



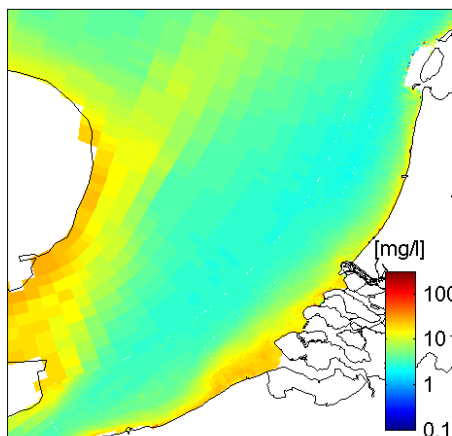
Significant surface wave height at Euro platform



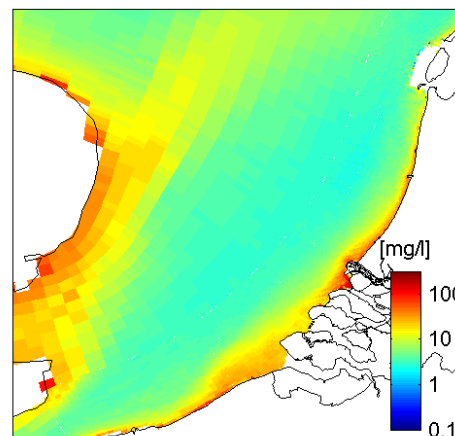
MERIS at surface layer



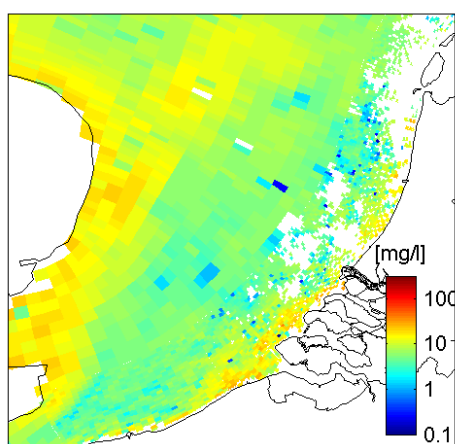
Model at surface layer



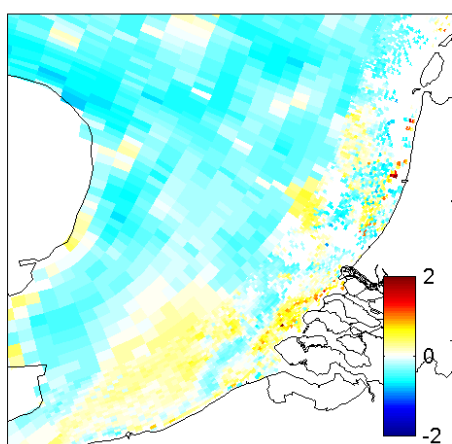
Model at bottom layer



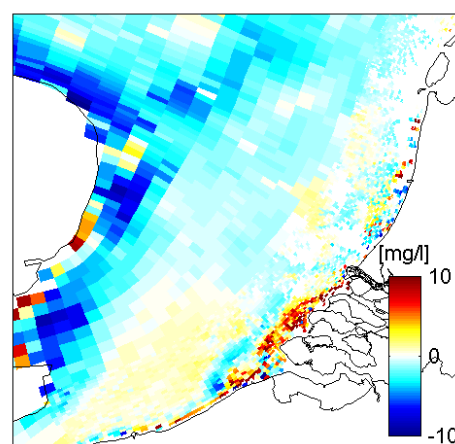
RMS difference



Relative difference [(MERIS-Model)/Model]



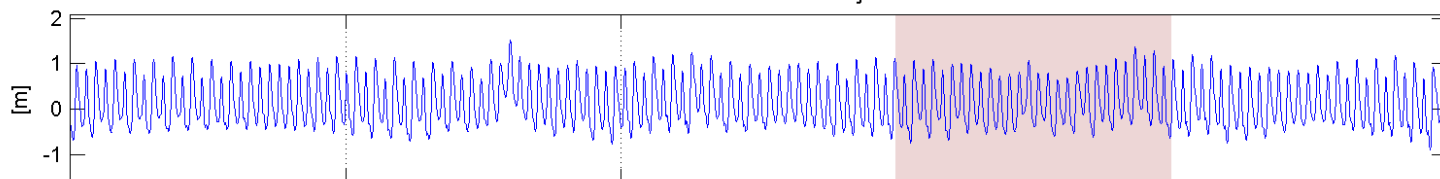
Mean difference [MERIS-Model]

 $\times 10^6$

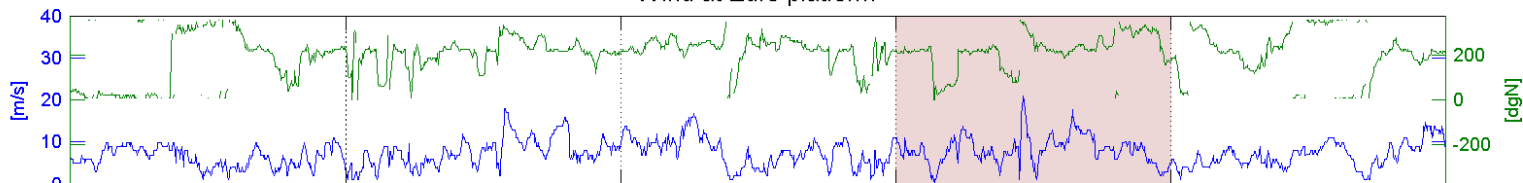
Sand mining volume for Maasvlakte 2



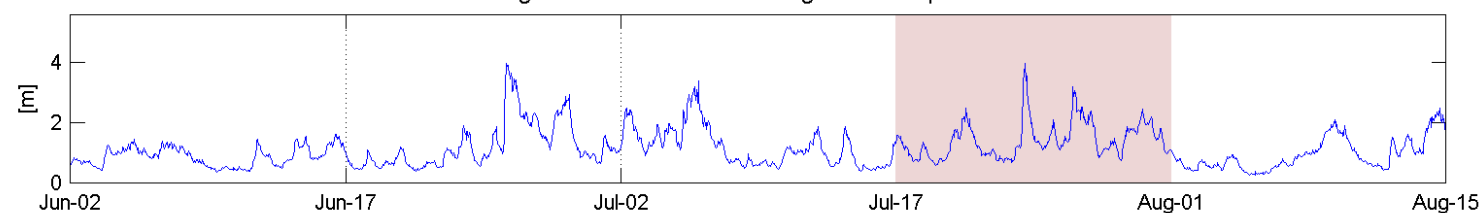
Water level at Noordwijk10



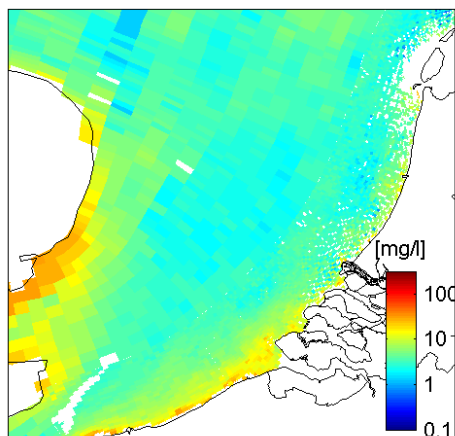
Wind at Euro platform



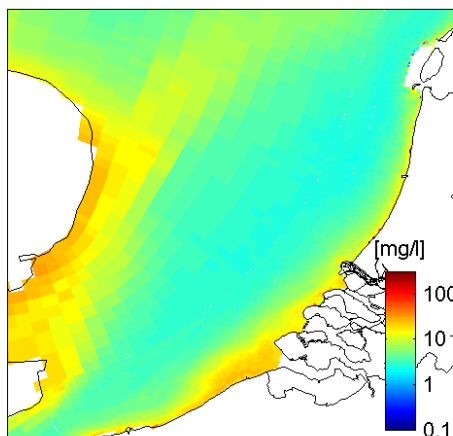
Significant surface wave height at Euro platform



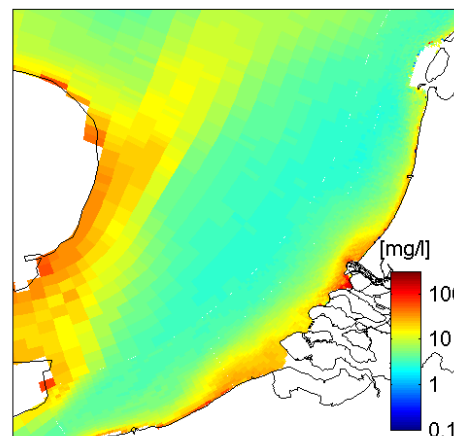
MERIS at surface layer



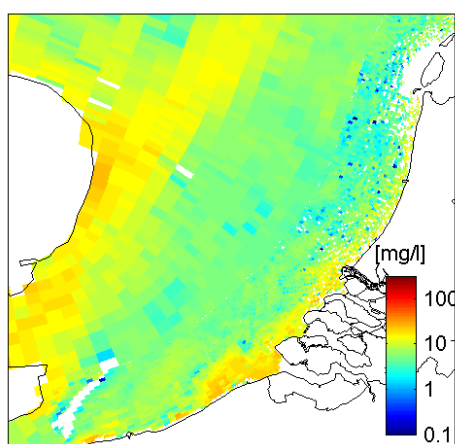
Model at surface layer



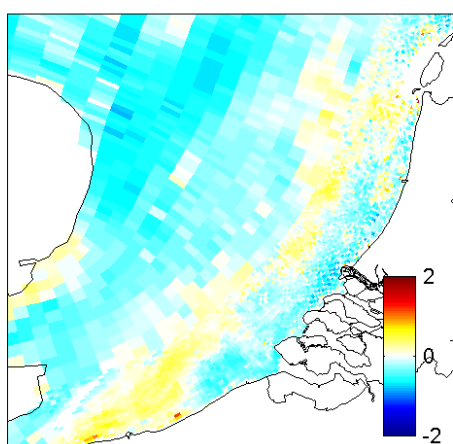
Model at bottom layer



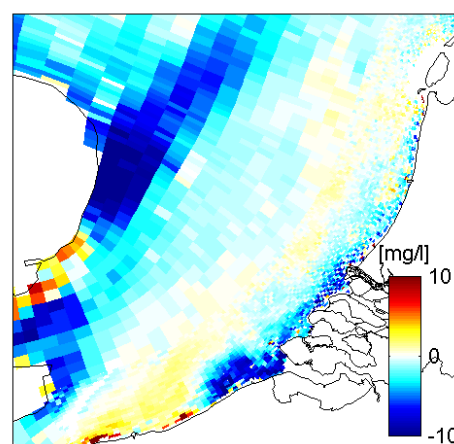
RMS difference



Relative difference [(MERIS-Model)/Model]



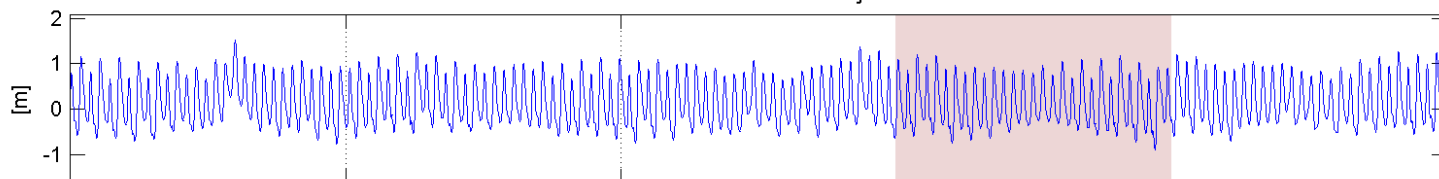
Mean difference [MERIS-Model]


x 10⁶

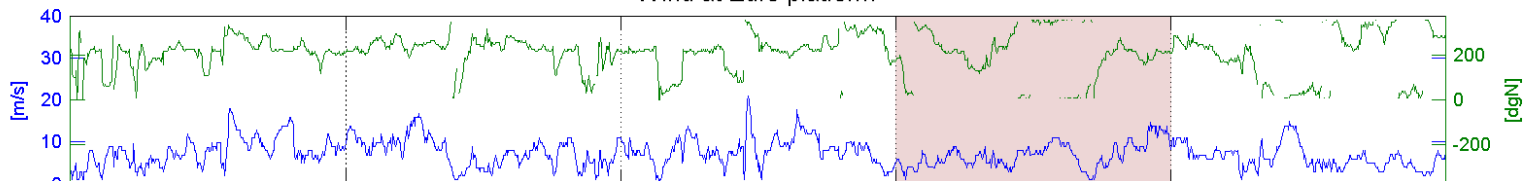
Sand mining volume for Maasvlakte 2



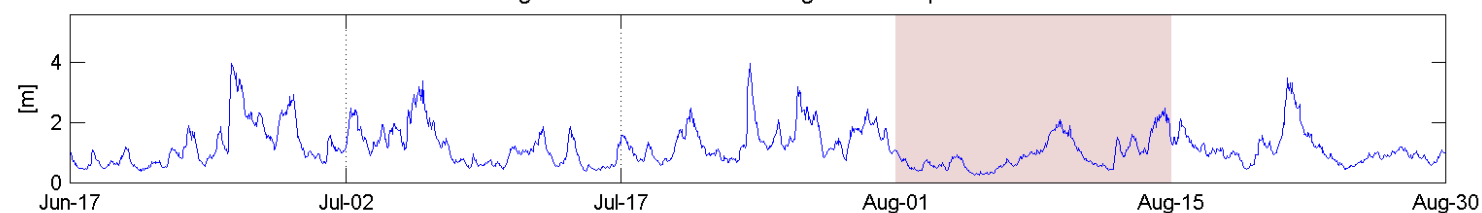
Water level at Noordwijk10



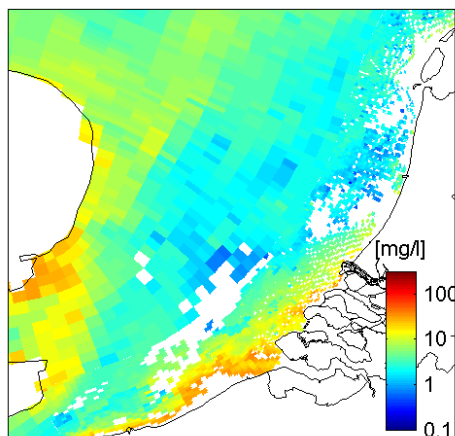
Wind at Euro platform



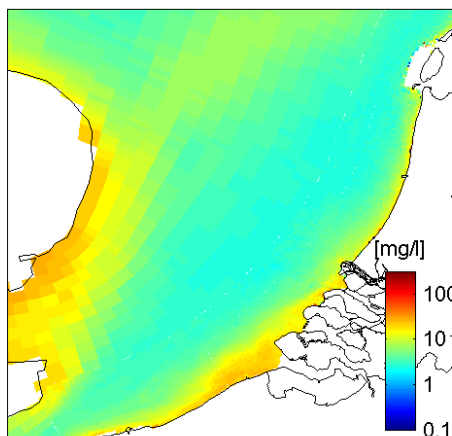
Significant surface wave height at Euro platform



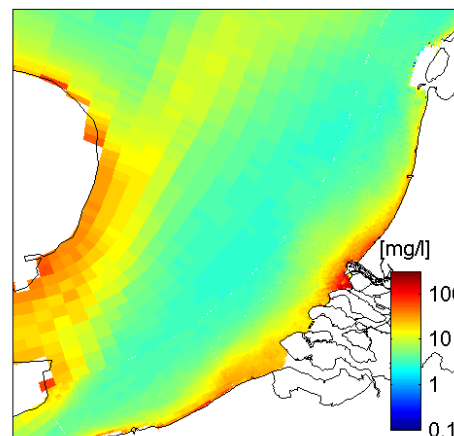
MERIS at surface layer



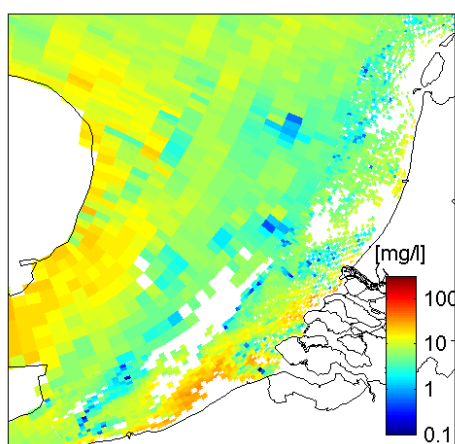
Model at surface layer



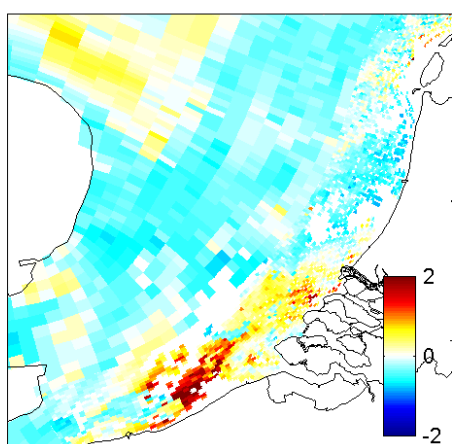
Model at bottom layer



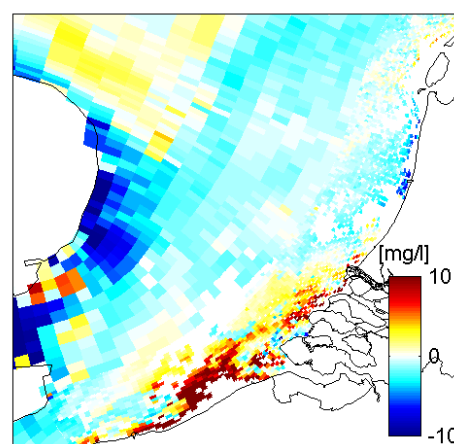
RMS difference



Relative difference [(MERIS-Model)/Model]



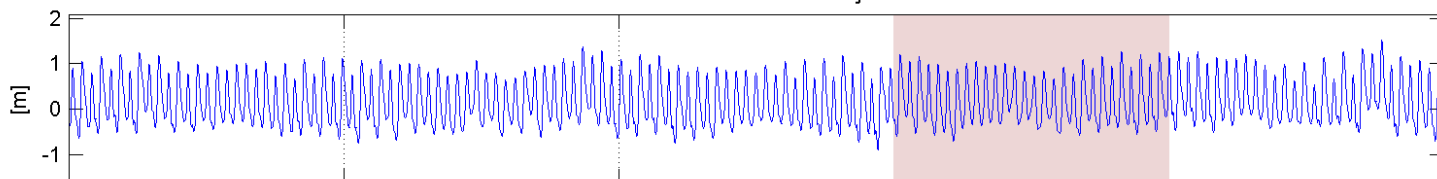
Mean difference [MERIS-Model]


x 10⁶

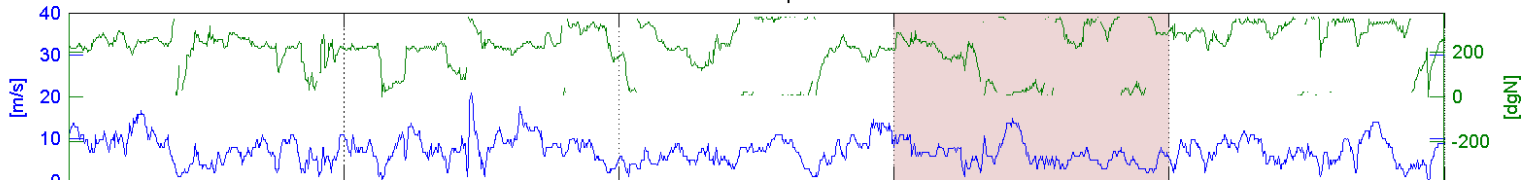
Sand mining volume for Maasvlakte 2



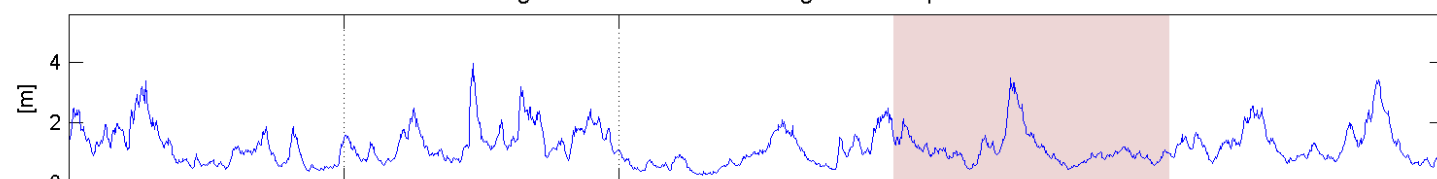
Water level at Noordwijk10



Wind at Euro platform

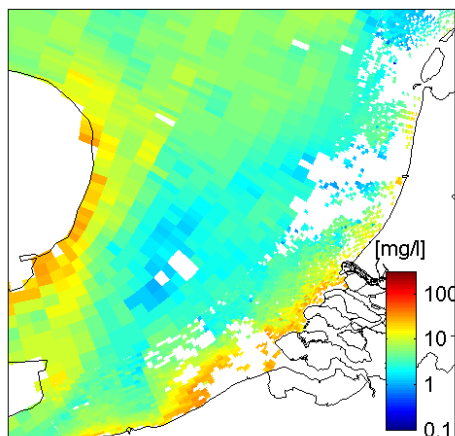


Significant surface wave height at Euro platform

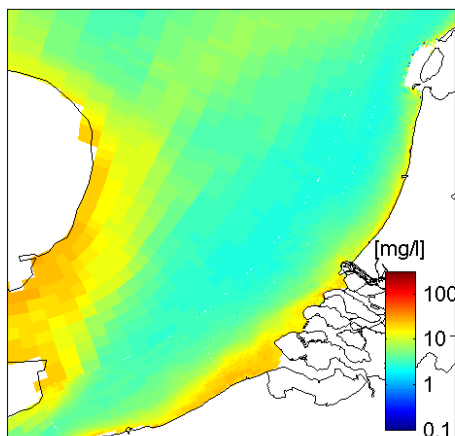


Jul-02 Jul-17 Aug-01 Aug-15 Aug-30 Sep-14

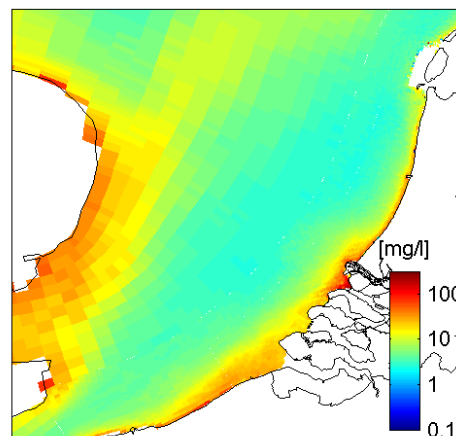
MERIS at surface layer



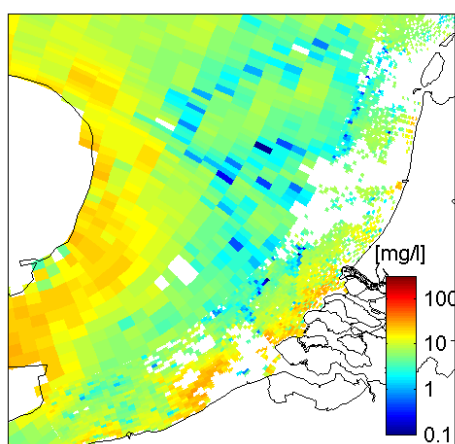
Model at surface layer



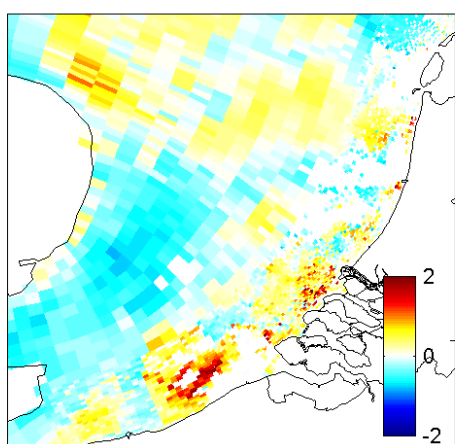
Model at bottom layer



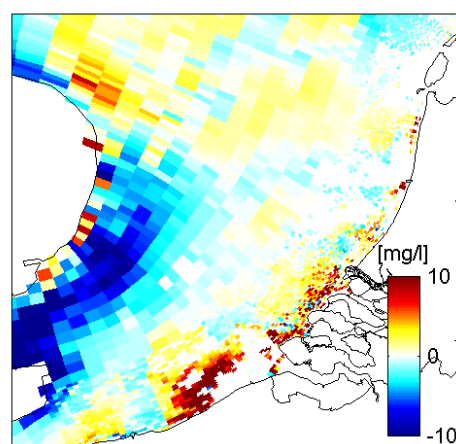
RMS difference



Relative difference [(MERIS-Model)/Model]



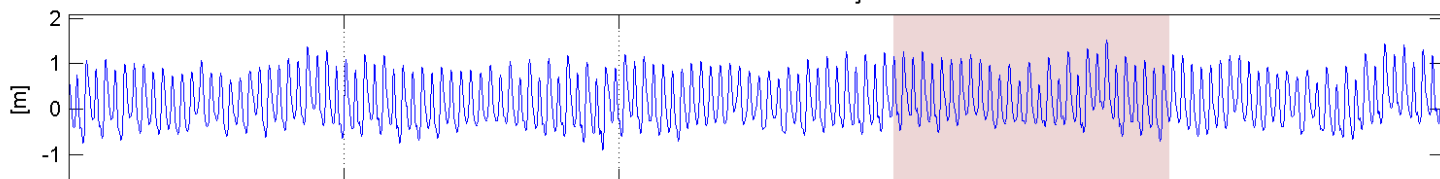
Mean difference [MERIS-Model]


x 10⁶

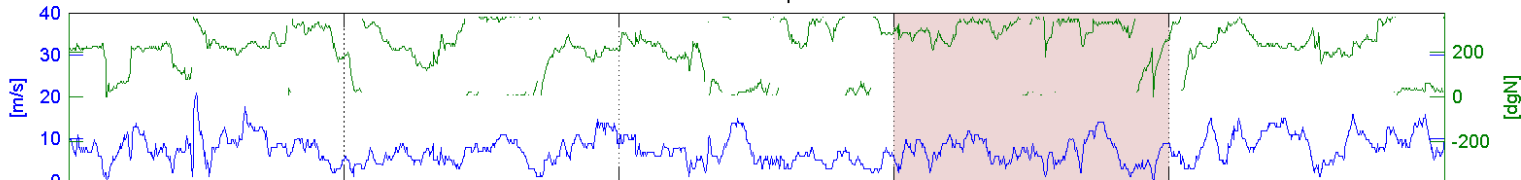
Sand mining volume for Maasvlakte 2



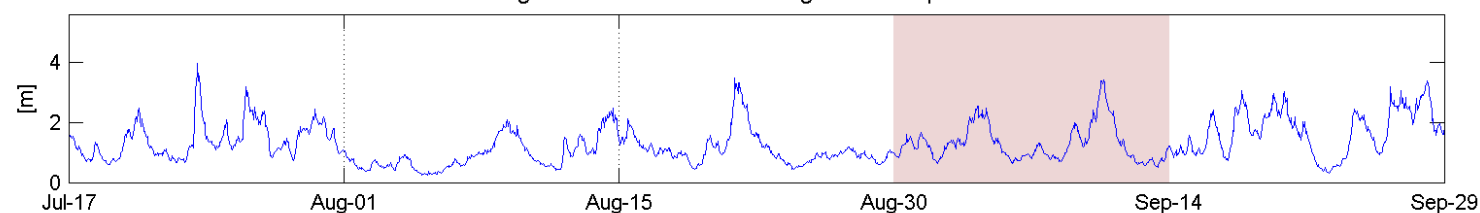
Water level at Noordwijk10



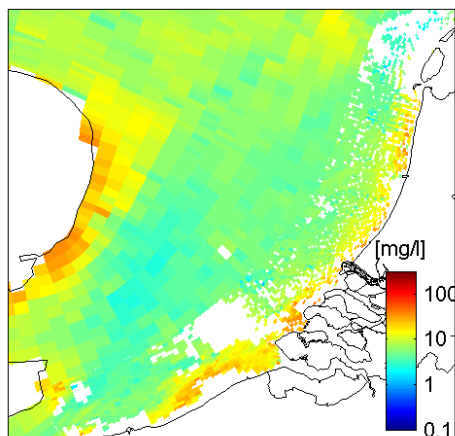
Wind at Euro platform



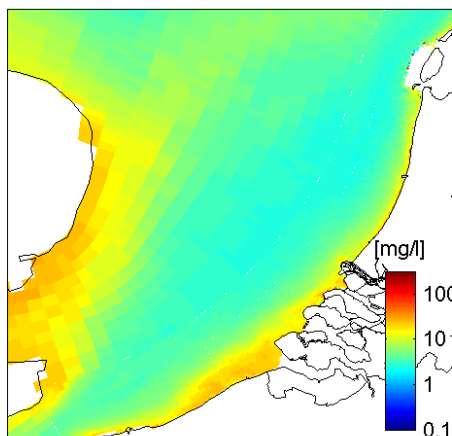
Significant surface wave height at Euro platform



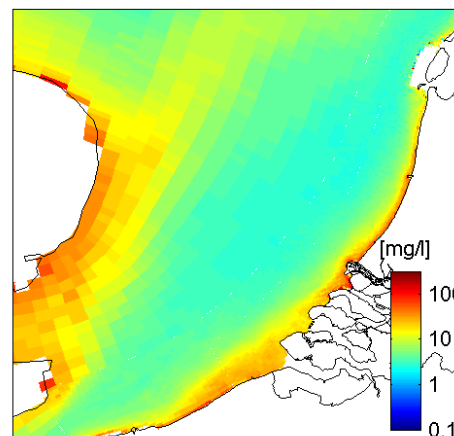
MERIS at surface layer



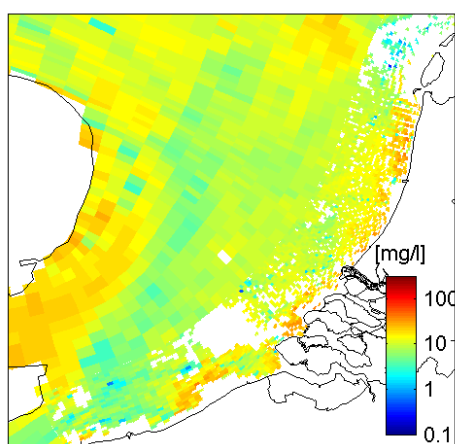
Model at surface layer



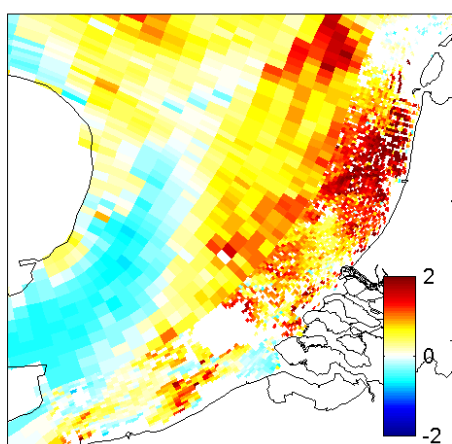
Model at bottom layer



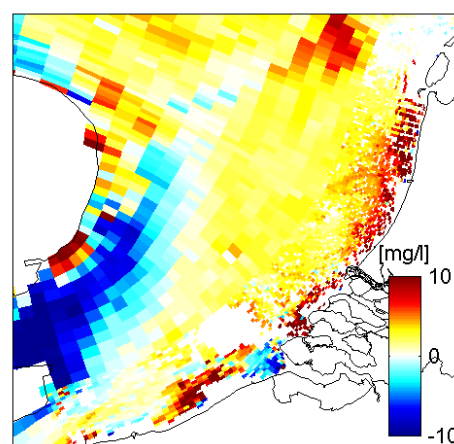
RMS difference



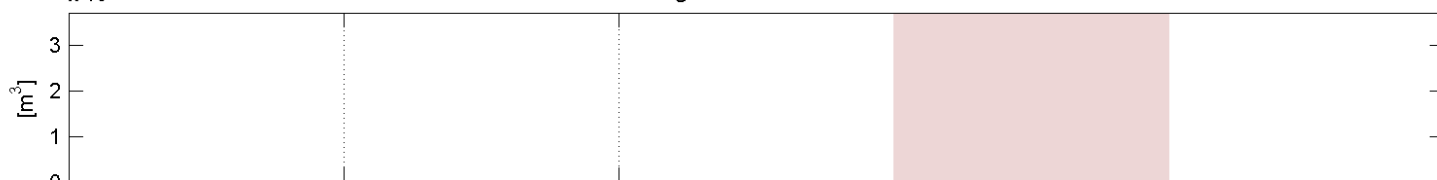
Relative difference [(MERIS-Model)/Model]



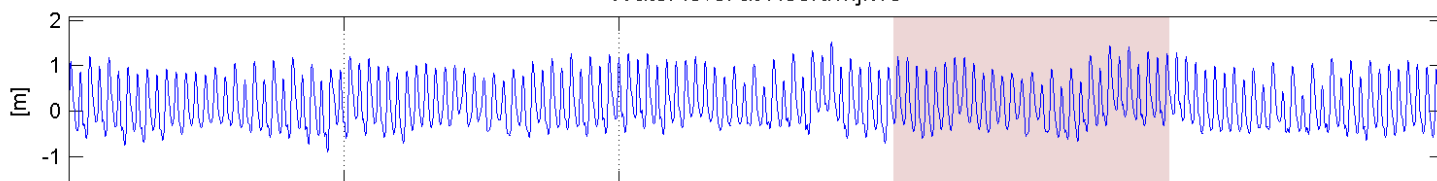
Mean difference [MERIS-Model]


x 10⁶

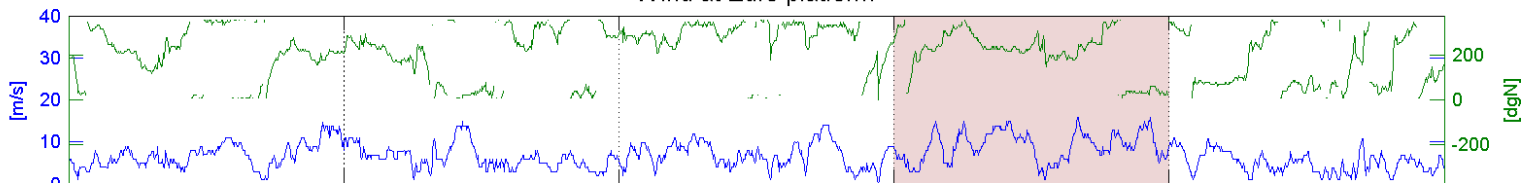
Sand mining volume for Maasvlakte 2



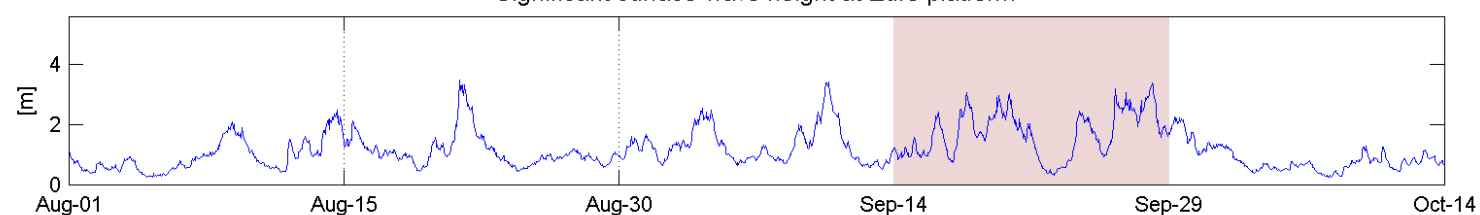
Water level at Noordwijk10



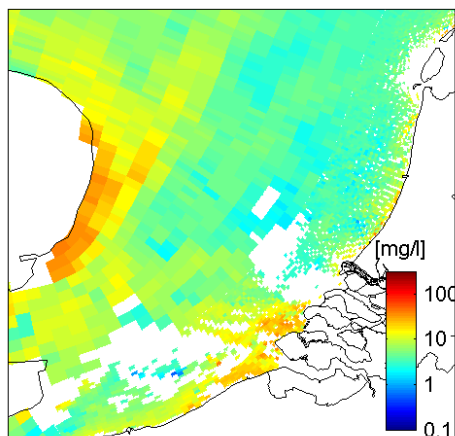
Wind at Euro platform



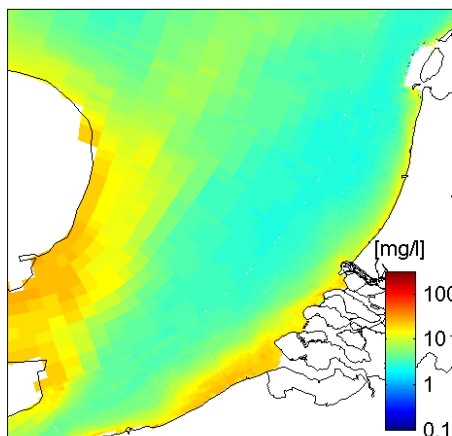
Significant surface wave height at Euro platform



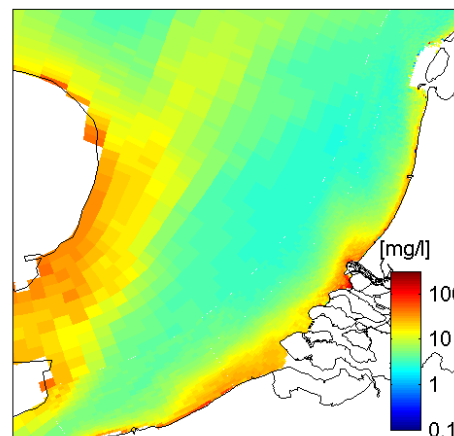
MERIS at surface layer



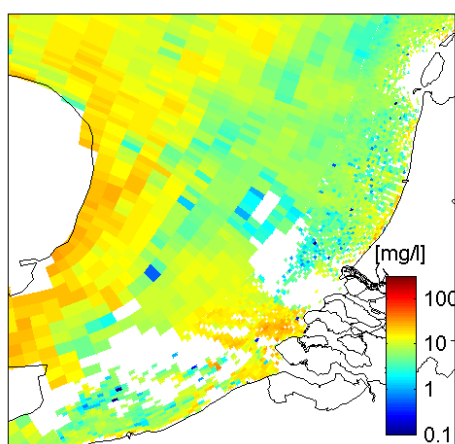
Model at surface layer



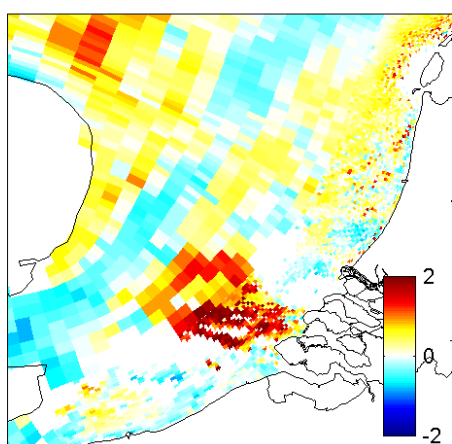
Model at bottom layer



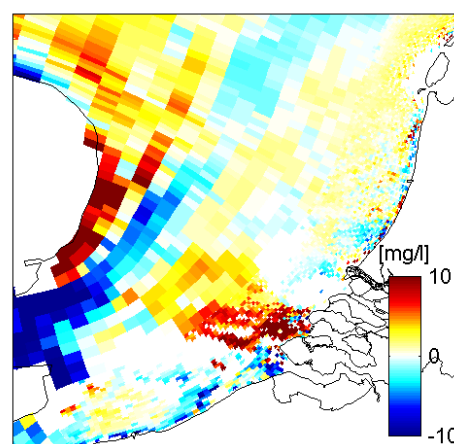
RMS difference



Relative difference [(MERIS-Model)/Model]



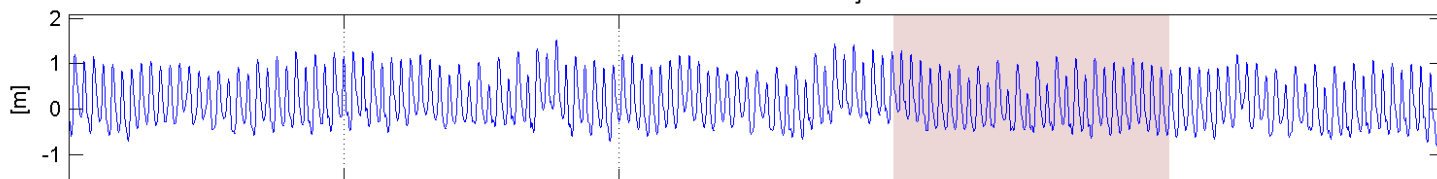
Mean difference [MERIS-Model]

 $\times 10^6$

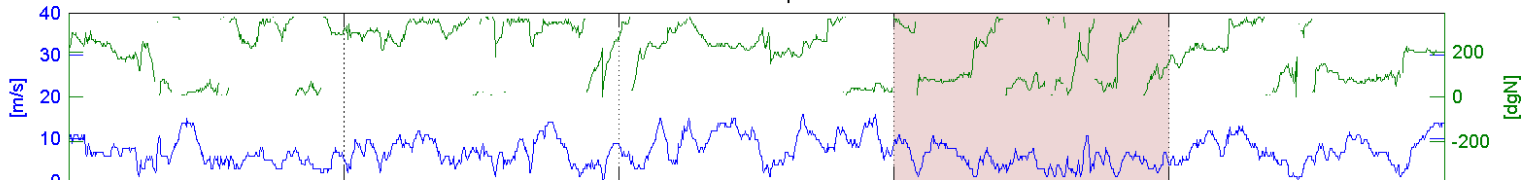
Sand mining volume for Maasvlakte 2



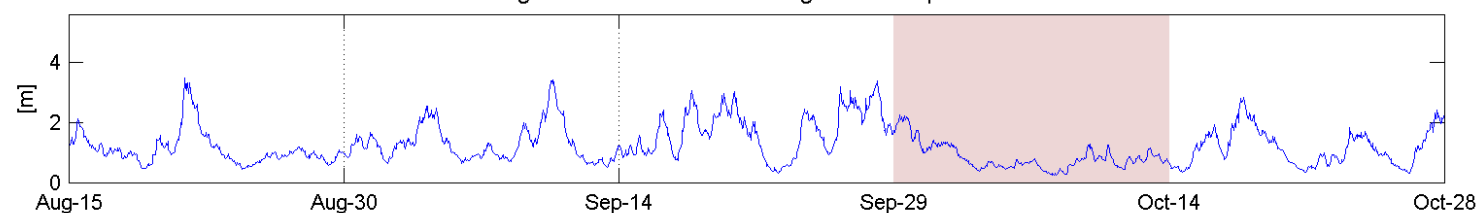
Water level at Noordwijk10



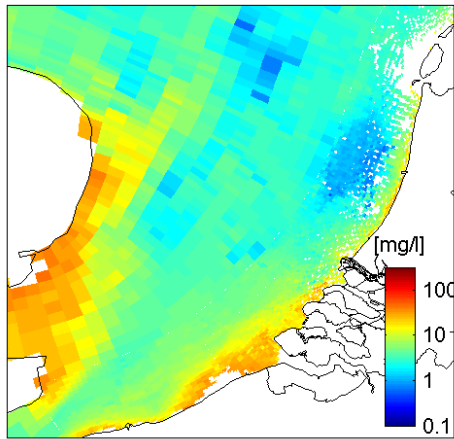
Wind at Euro platform



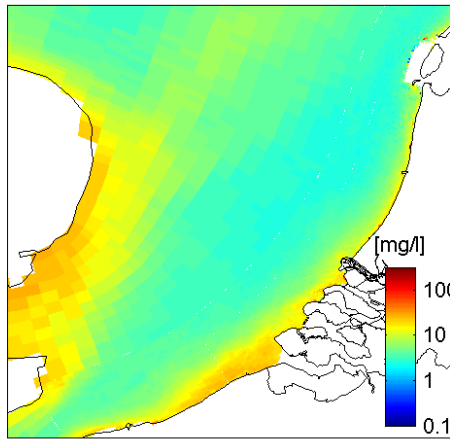
Significant surface wave height at Euro platform



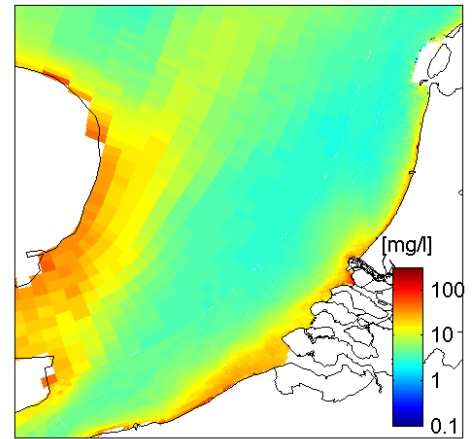
MERIS at surface layer



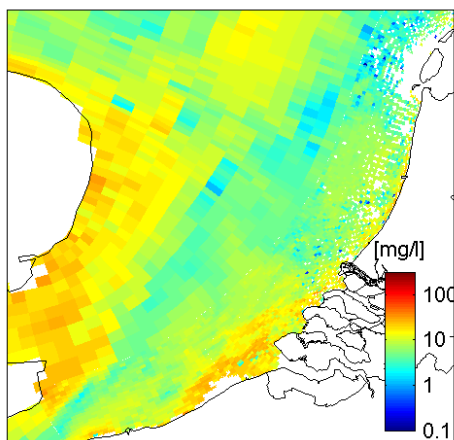
Model at surface layer



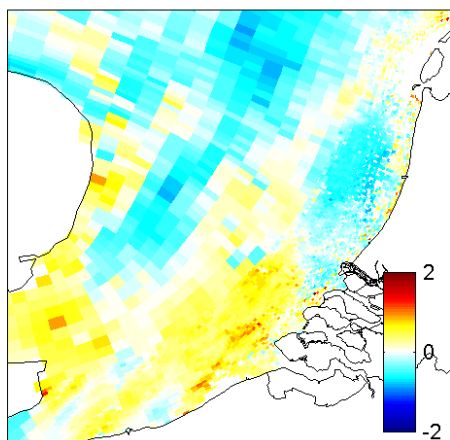
Model at bottom layer



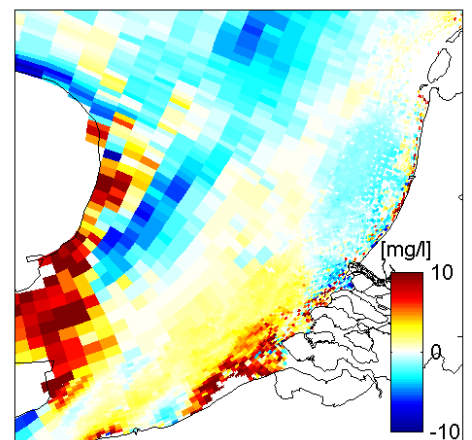
RMS difference



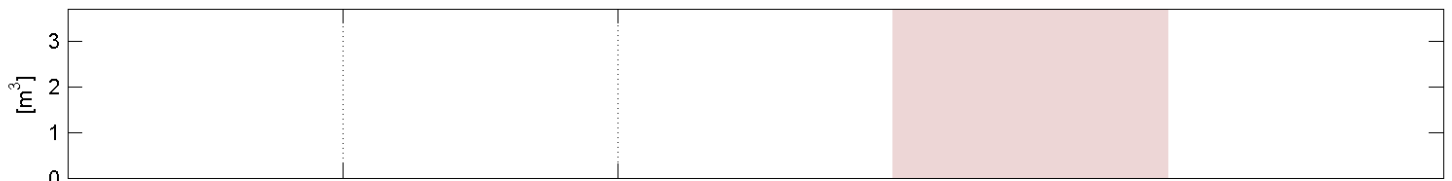
Relative difference [(MERIS-Model)/Model]



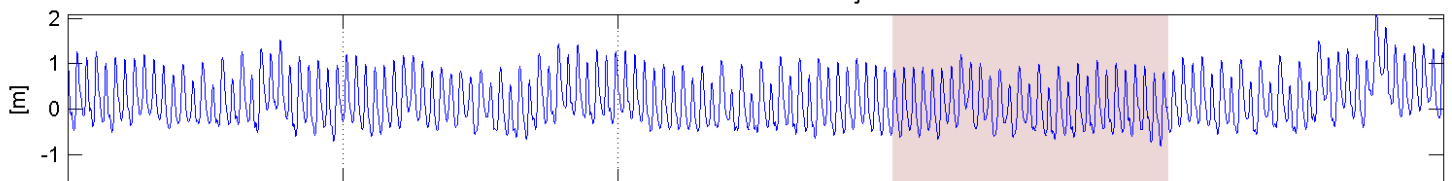
Mean difference [MERIS-Model]

x 10⁶

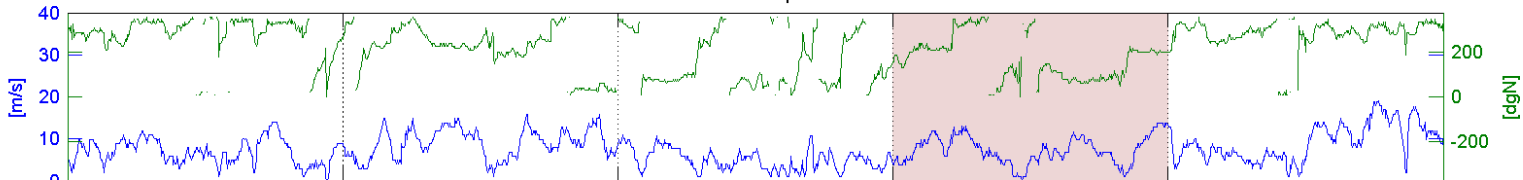
Sand mining volume for Maasvlakte 2



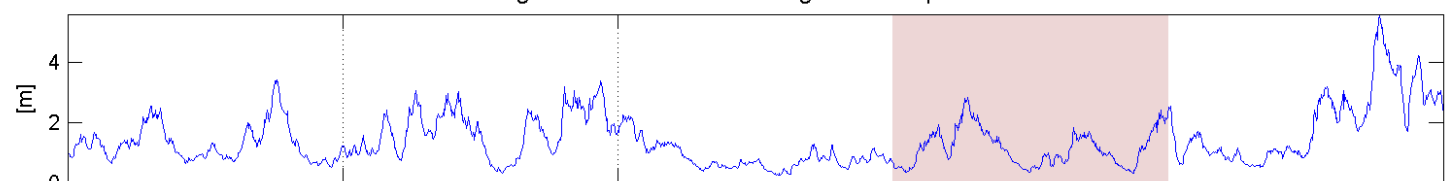
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Aug-30

Sep-14

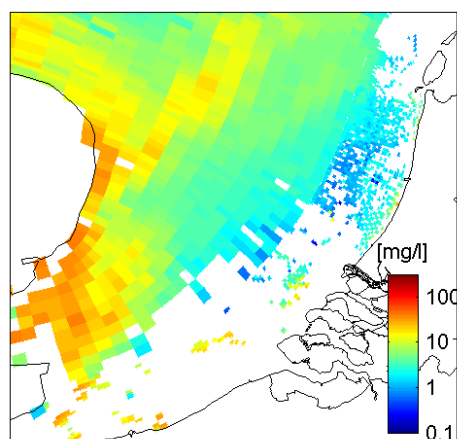
Sep-29

Oct-14

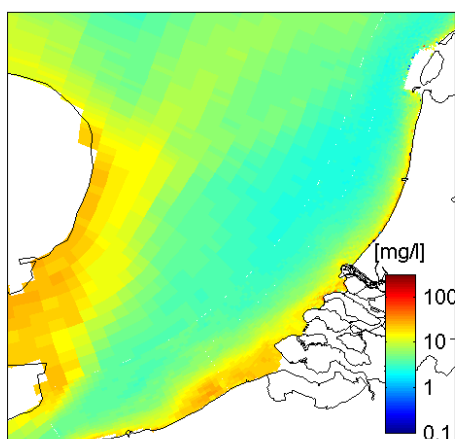
Oct-28

Nov-12

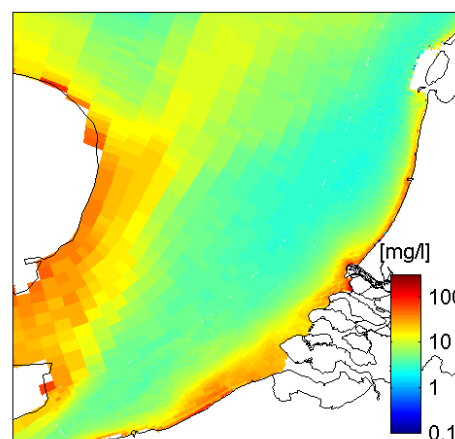
MERIS at surface layer



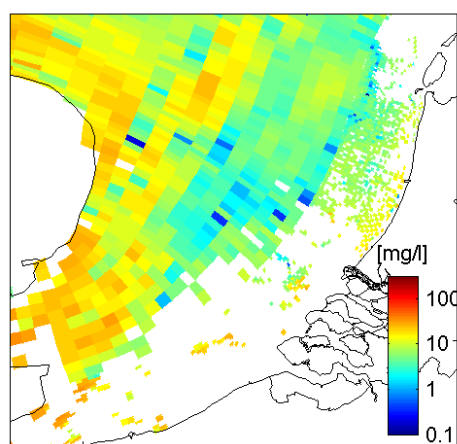
Model at surface layer



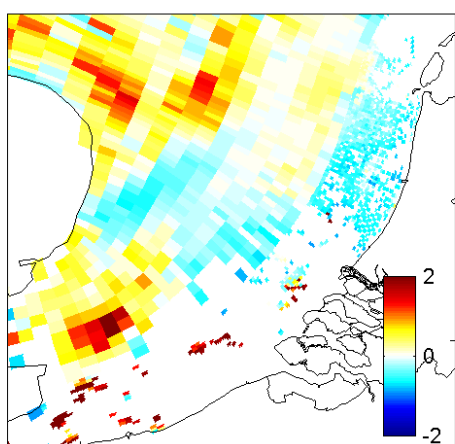
Model at bottom layer



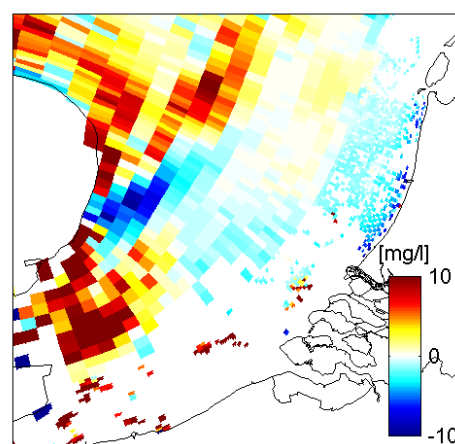
RMS difference



Relative difference [(MERIS-Model)/Model]



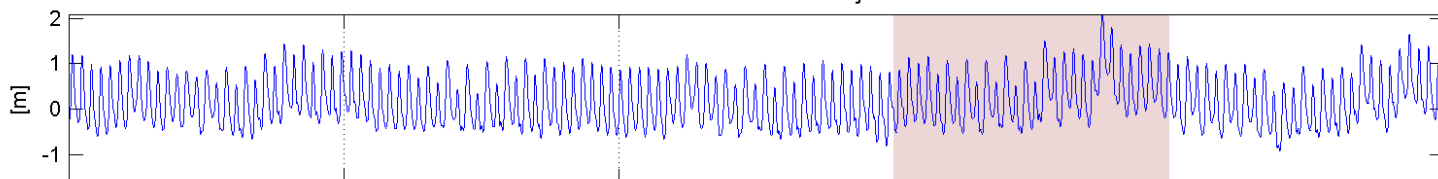
Mean difference [MERIS-Model]


x 10⁶

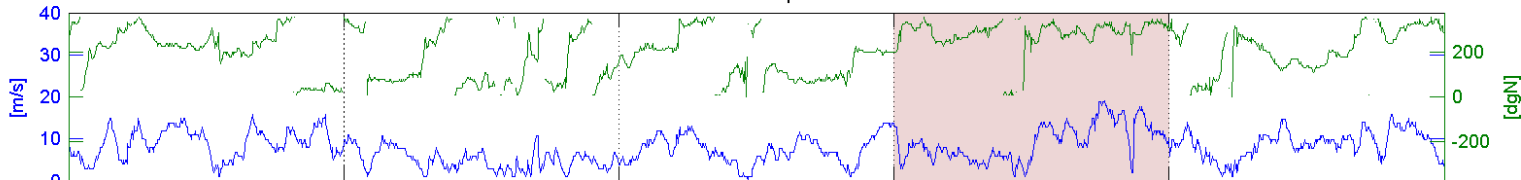
Sand mining volume for Maasvlakte 2



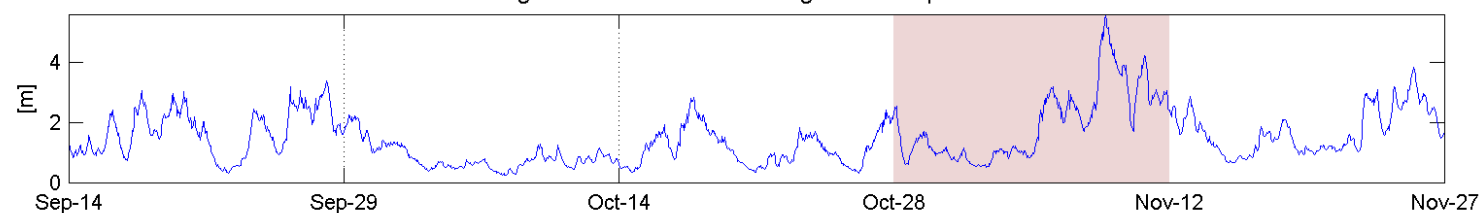
Water level at Noordwijk10



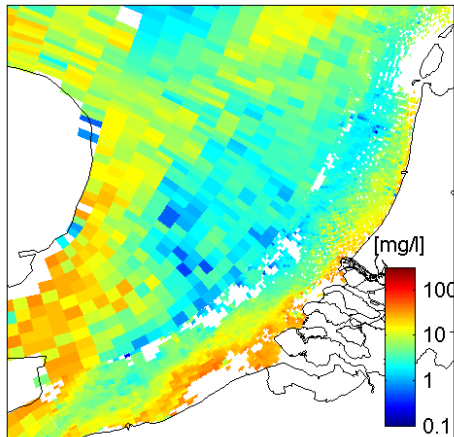
Wind at Euro platform



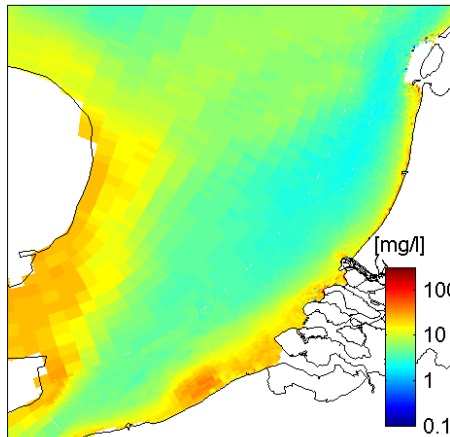
Significant surface wave height at Euro platform



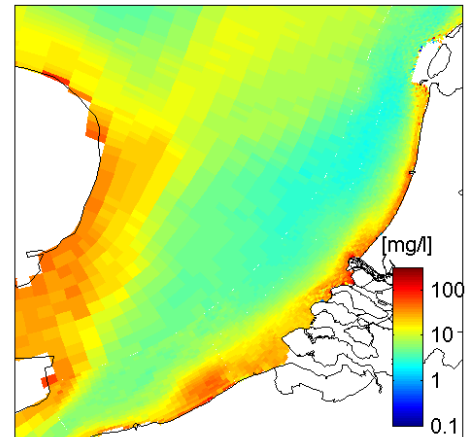
MERIS at surface layer



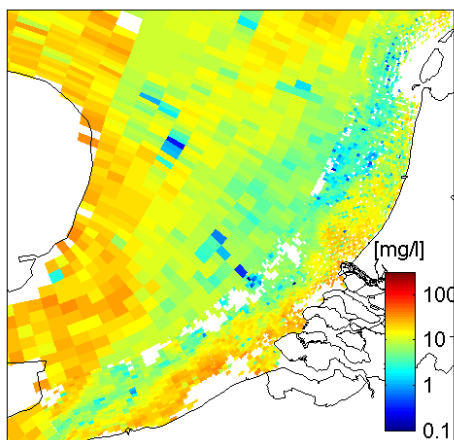
Model at surface layer



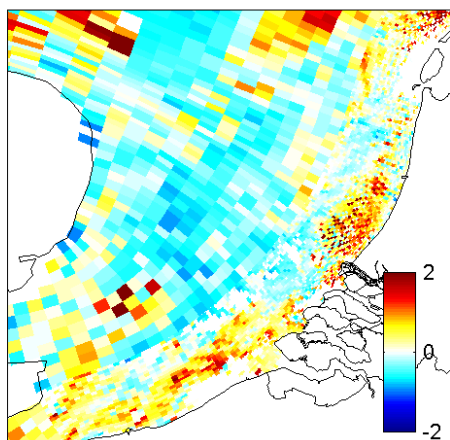
Model at bottom layer



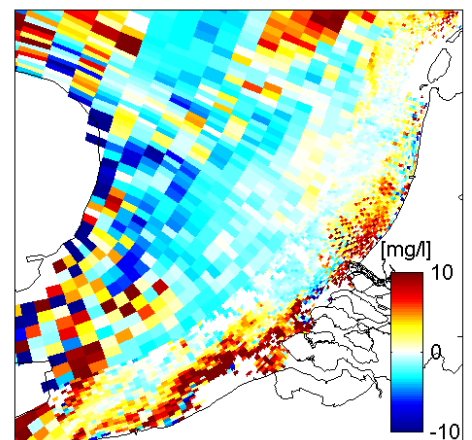
RMS difference



Relative difference [(MERIS-Model)/Model]



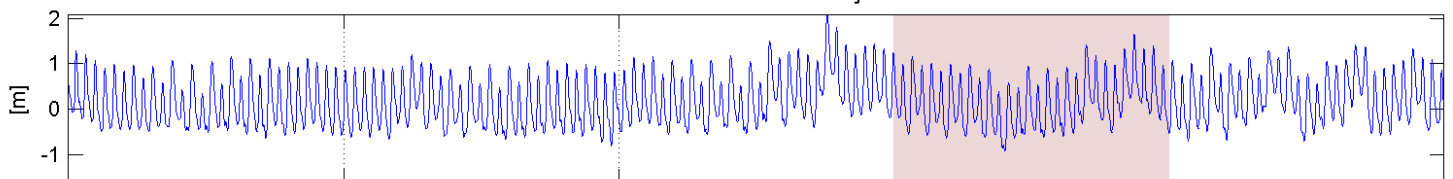
Mean difference [MERIS-Model]

 $\times 10^6$

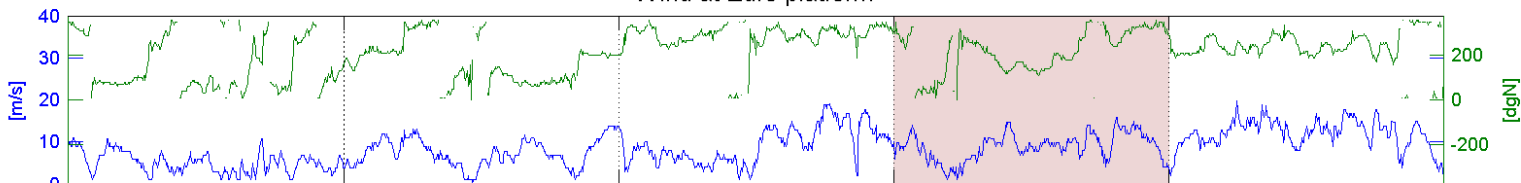
Sand mining volume for Maasvlakte 2



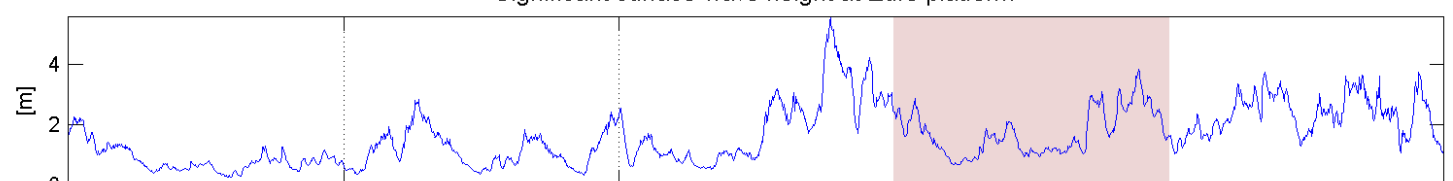
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Sep-29

Oct-14

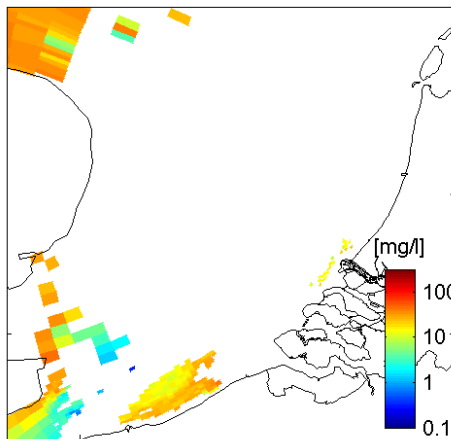
Oct-28

Nov-12

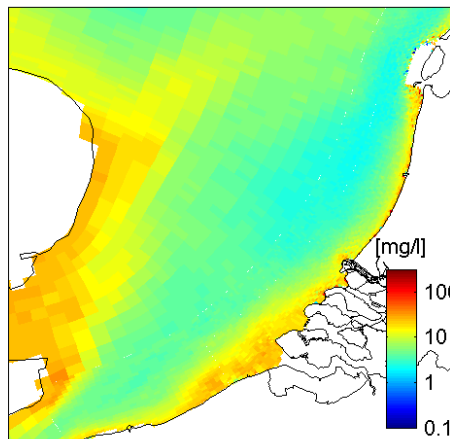
Nov-27

Dec-12

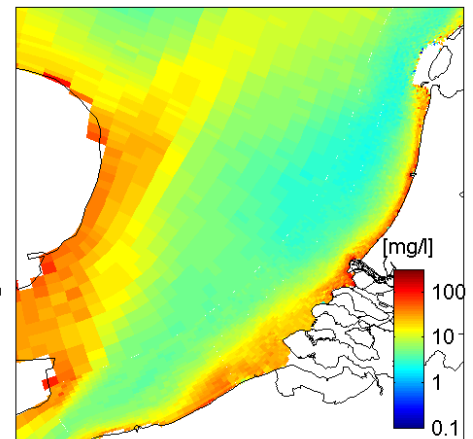
MERIS at surface layer



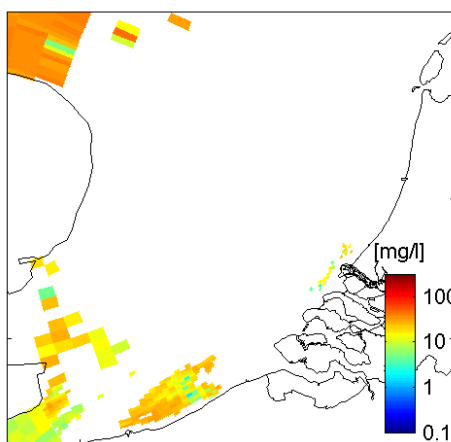
Model at surface layer



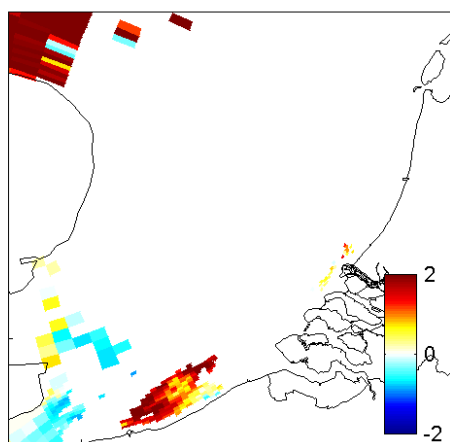
Model at bottom layer



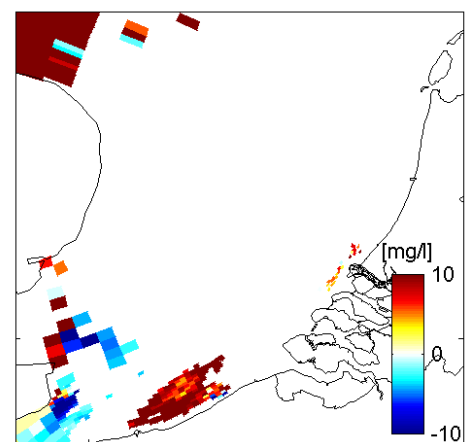
RMS difference



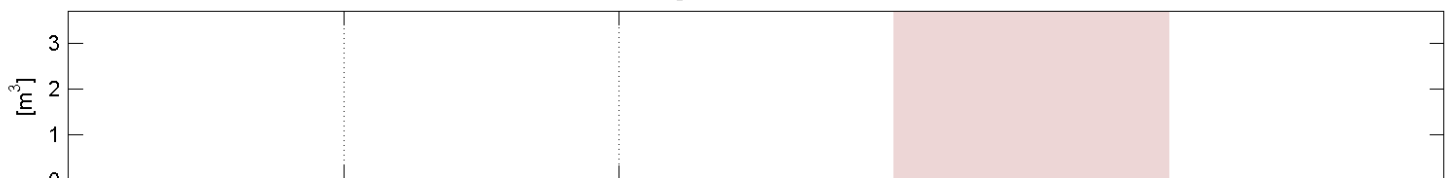
Relative difference [(MERIS-Model)/Model]



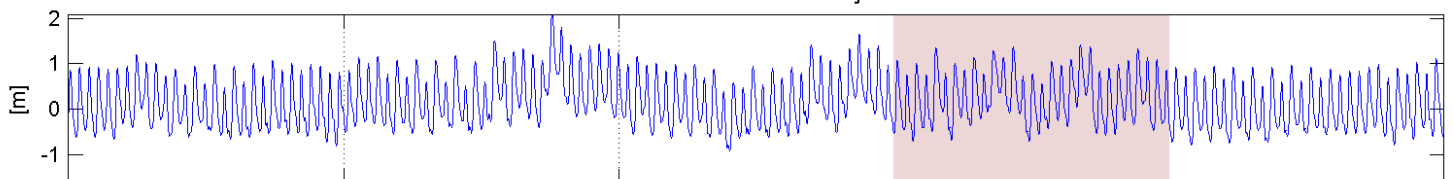
Mean difference [MERIS-Model]

 $\times 10^6$

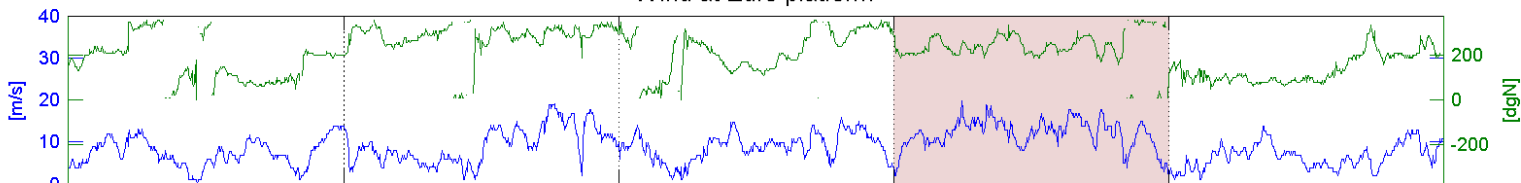
Sand mining volume for Maasvlakte 2



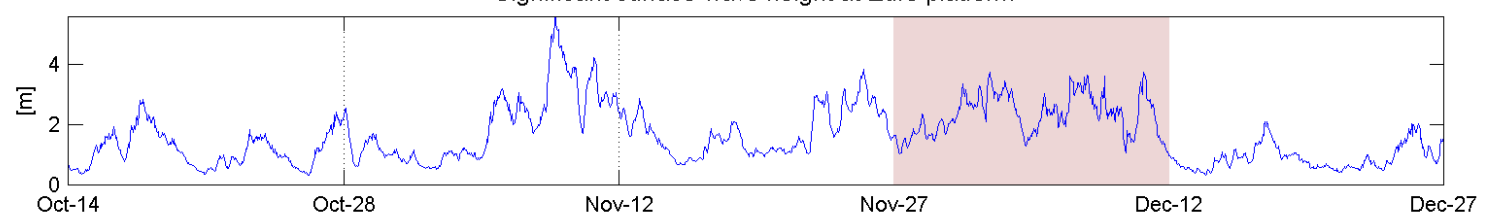
Water level at Noordwijk10



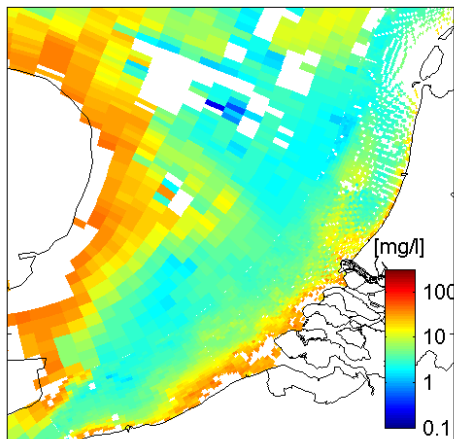
Wind at Euro platform



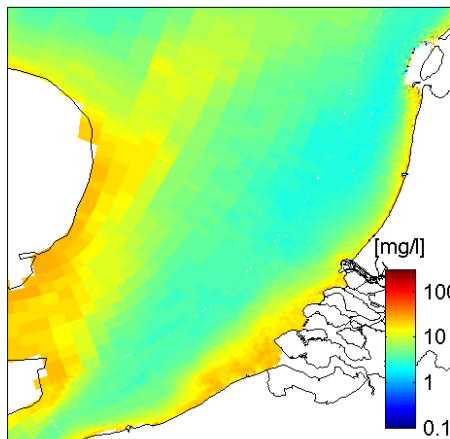
Significant surface wave height at Euro platform



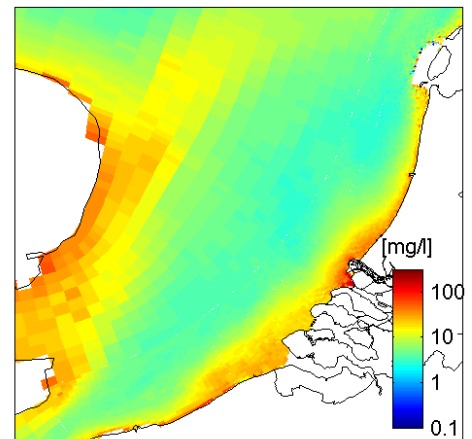
MERIS at surface layer



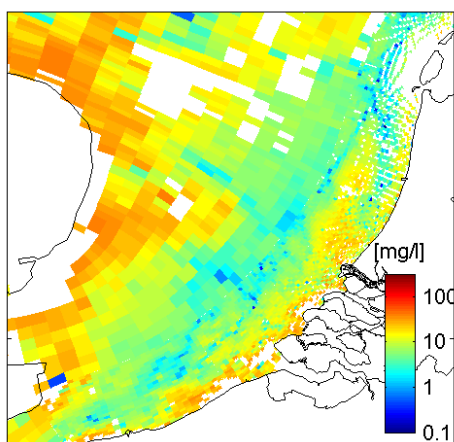
Model at surface layer



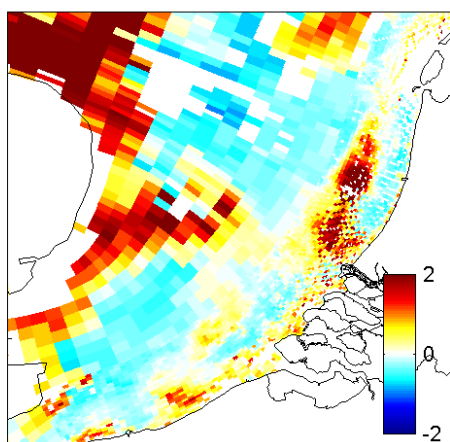
Model at bottom layer



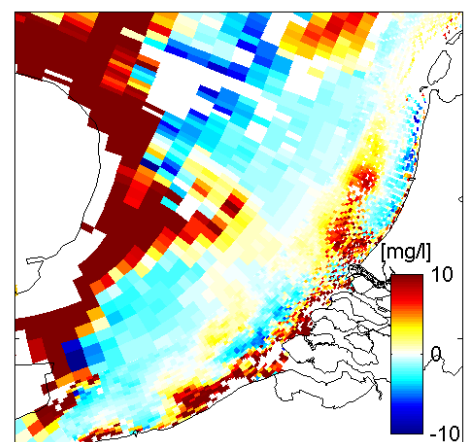
RMS difference



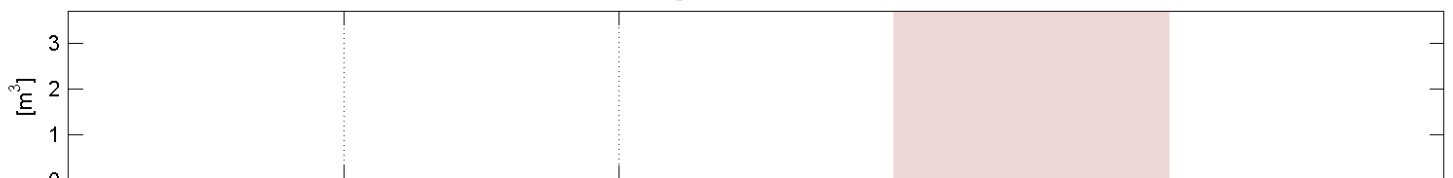
Relative difference [(MERIS-Model)/Model]



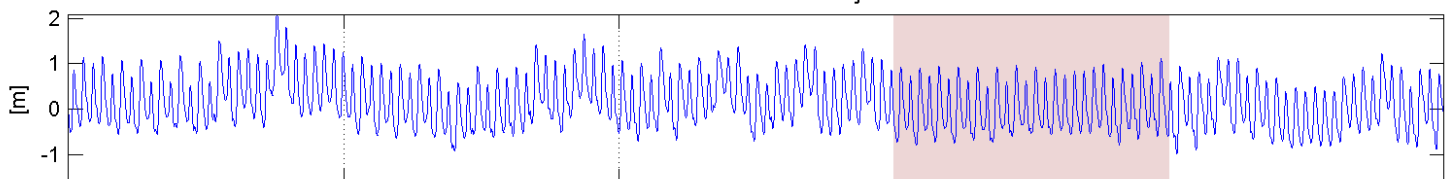
Mean difference [MERIS-Model]

 $\times 10^6$

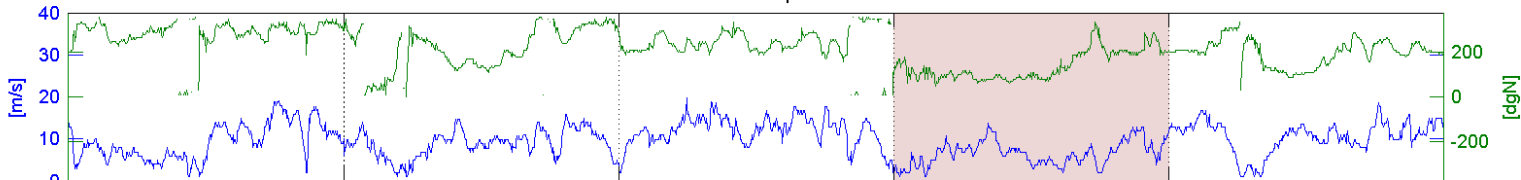
Sand mining volume for Maasvlakte 2



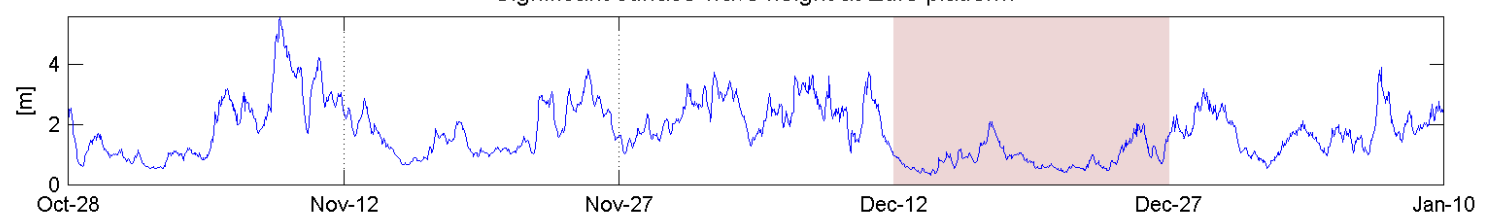
Water level at Noordwijk10



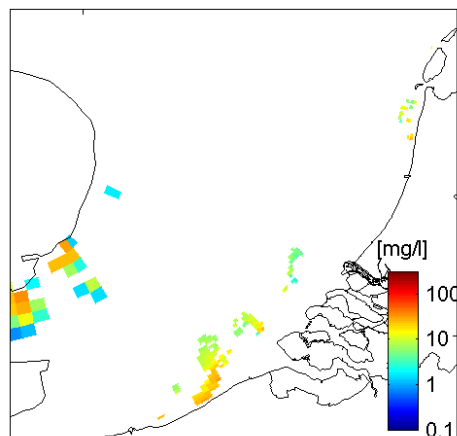
Wind at Euro platform



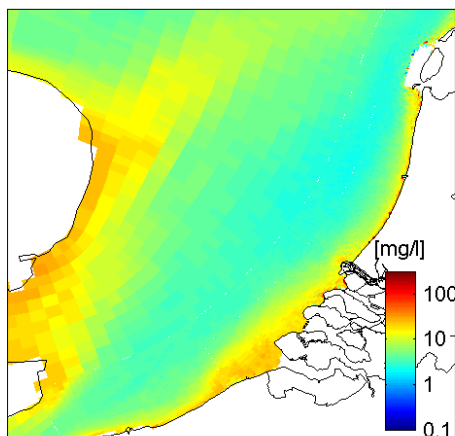
Significant surface wave height at Euro platform



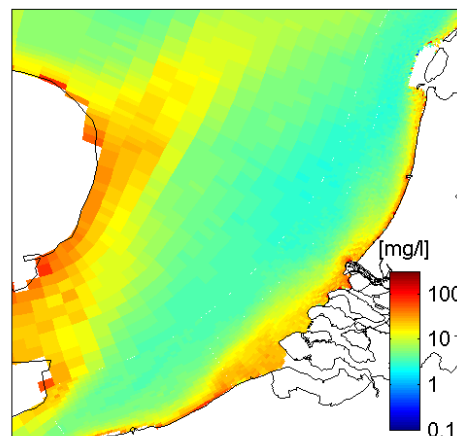
MERIS at surface layer



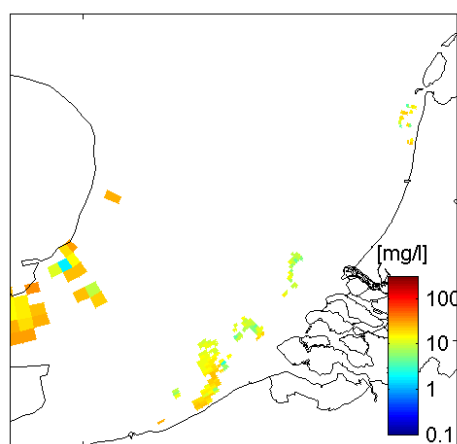
Model at surface layer



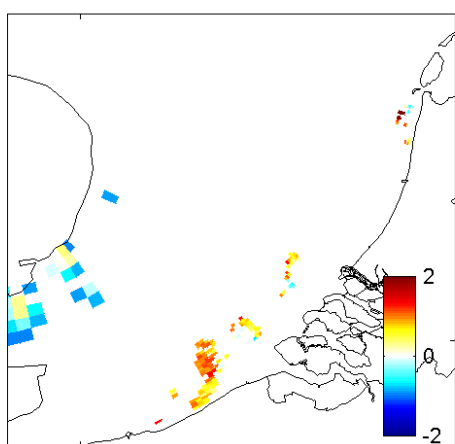
Model at bottom layer



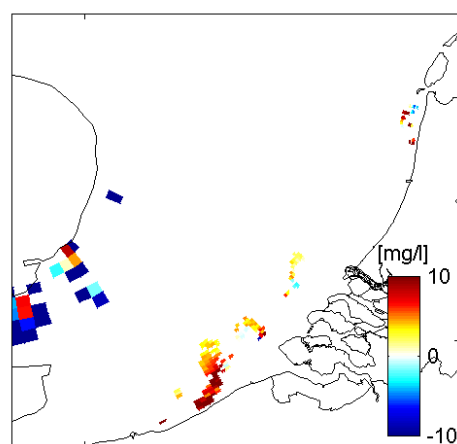
RMS difference



Relative difference [(MERIS-Model)/Model]



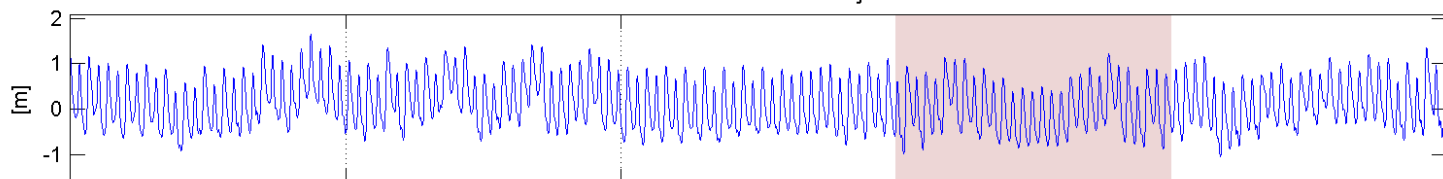
Mean difference [MERIS-Model]


x 10⁶

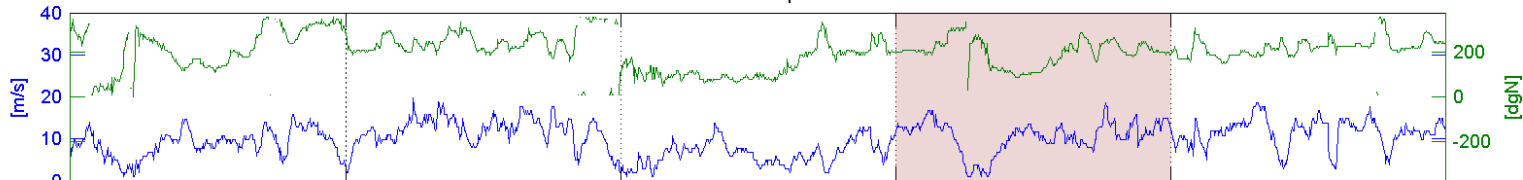
Sand mining volume for Maasvlakte 2



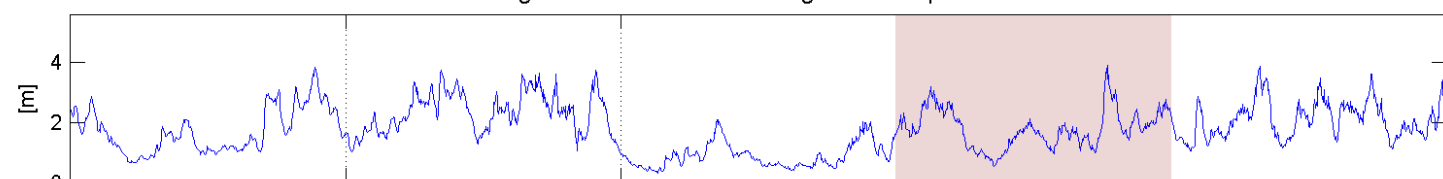
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Nov-12

Nov-27

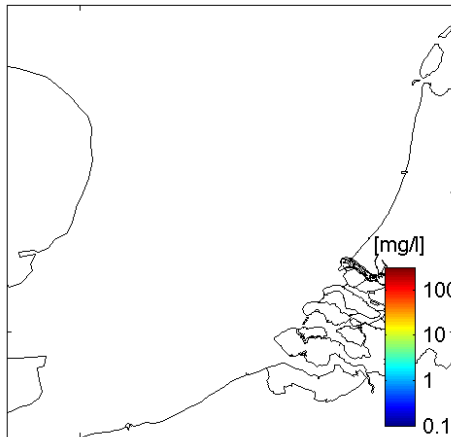
Dec-12

Dec-27

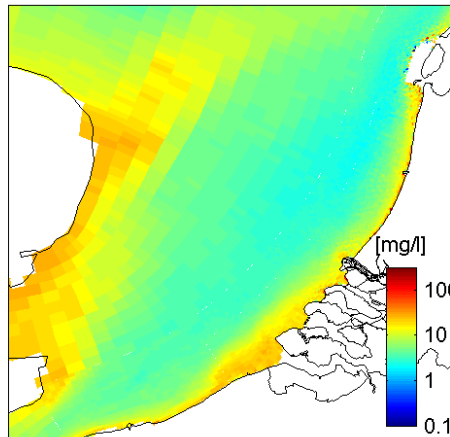
Jan-10

Jan-25

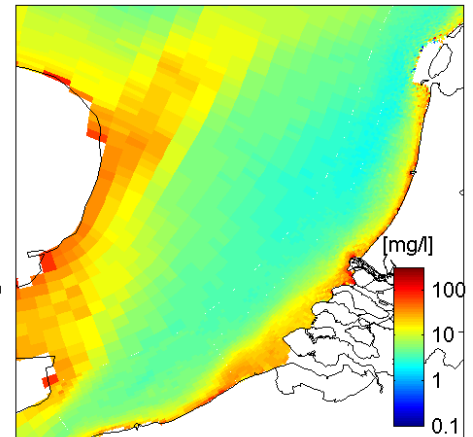
MERIS at surface layer



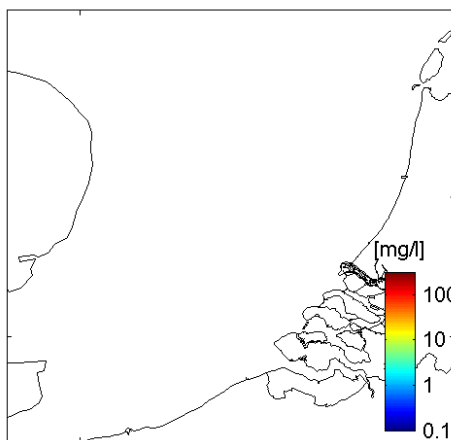
Model at surface layer



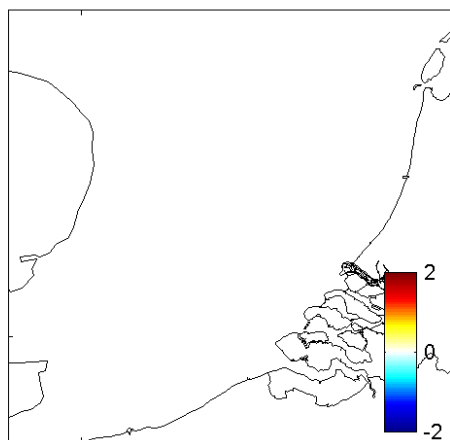
Model at bottom layer



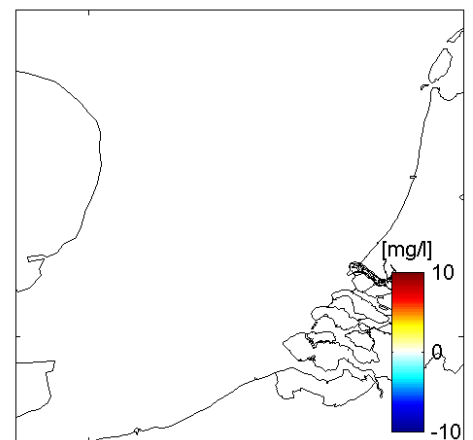
RMS difference



Relative difference [(MERIS-Model)/Model]



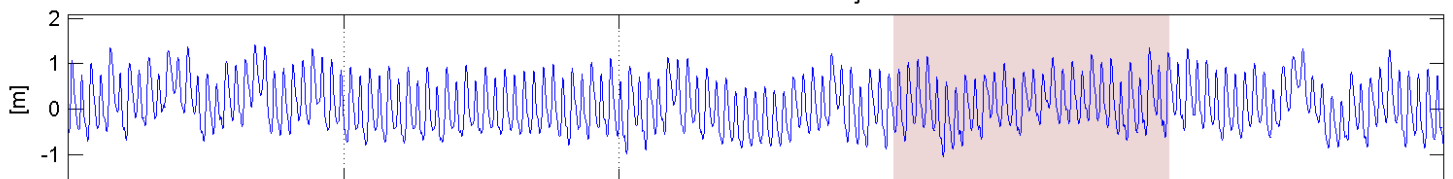
Mean difference [MERIS-Model]

 $\times 10^6$

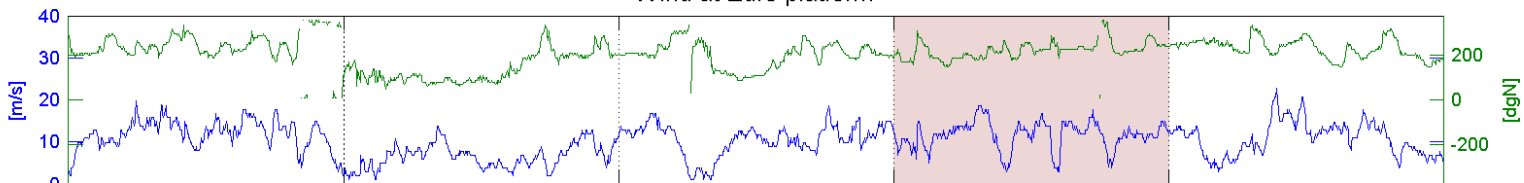
Sand mining volume for Maasvlakte 2



Water level at Noordwijk10



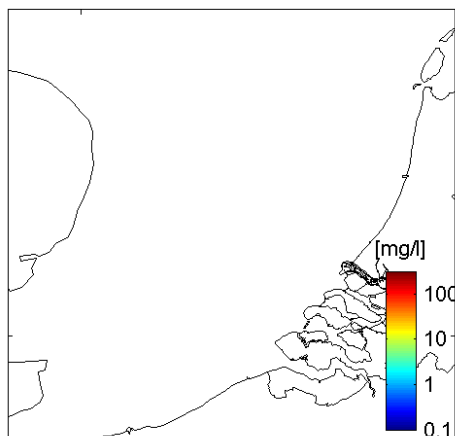
Wind at Euro platform



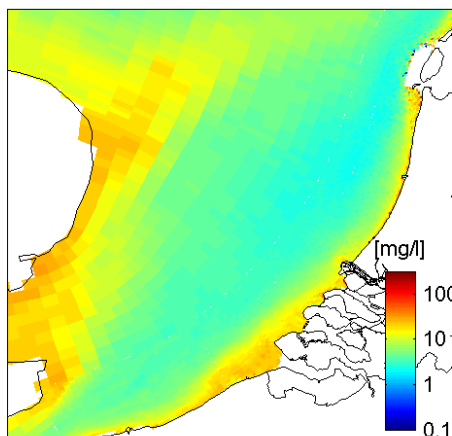
Significant surface wave height at Euro platform



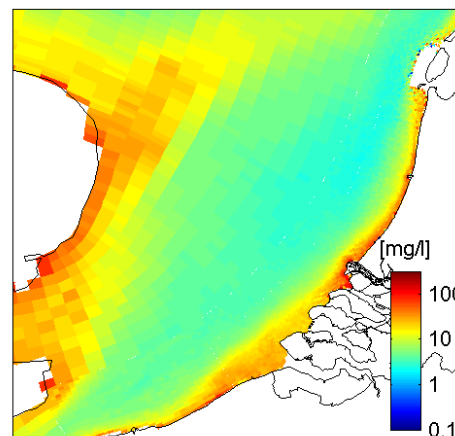
MERIS at surface layer



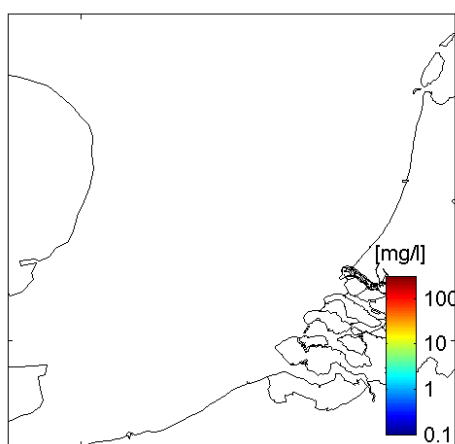
Model at surface layer



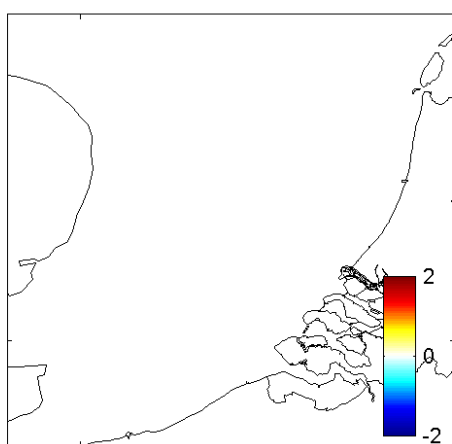
Model at bottom layer



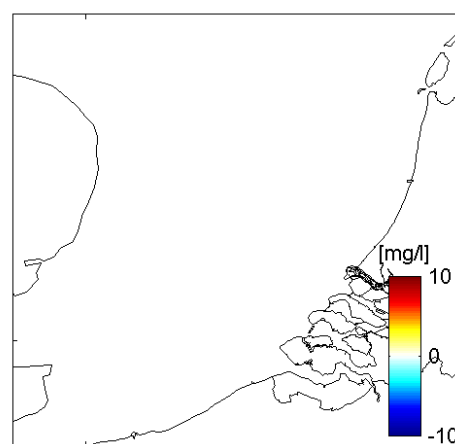
RMS difference



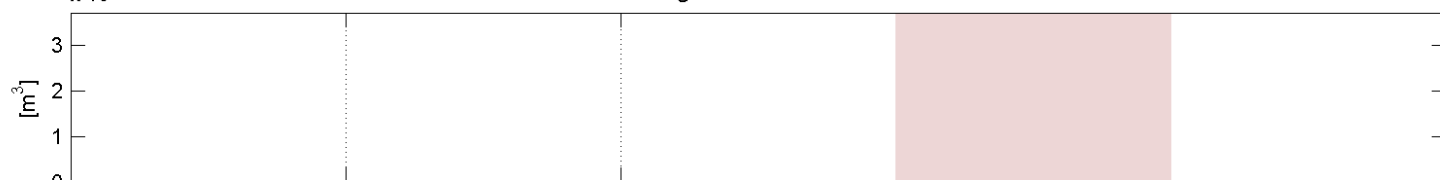
Relative difference [(MERIS-Model)/Model]



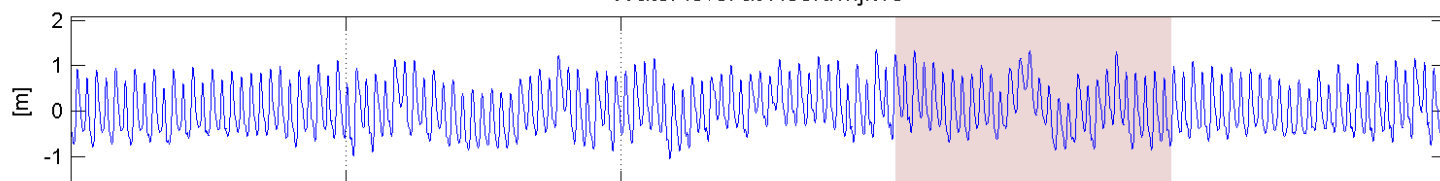
Mean difference [MERIS-Model]

 $\times 10^6$

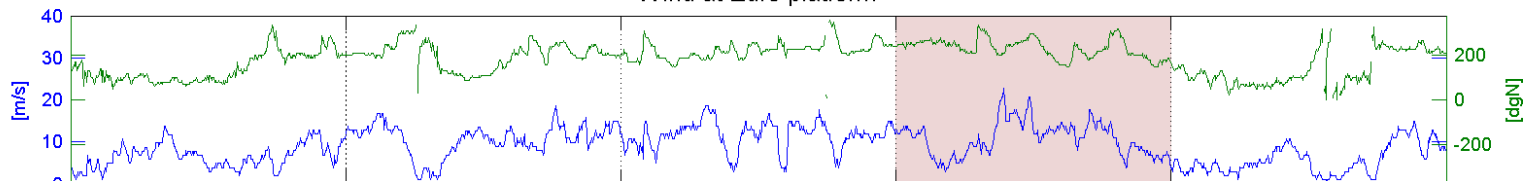
Sand mining volume for Maasvlakte 2



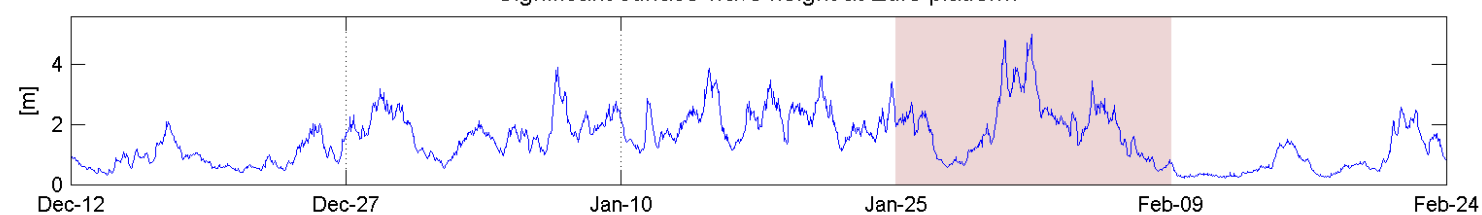
Water level at Noordwijk10



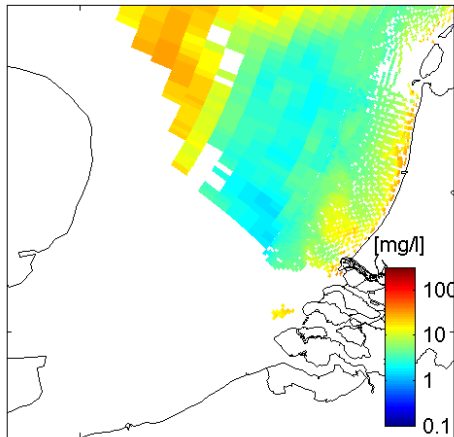
Wind at Euro platform



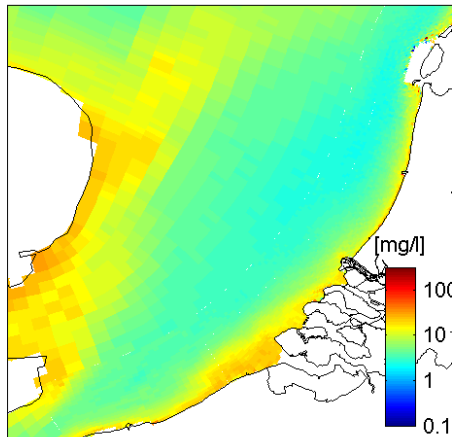
Significant surface wave height at Euro platform



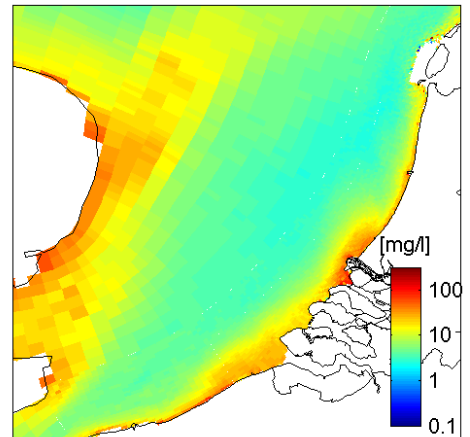
MERIS at surface layer



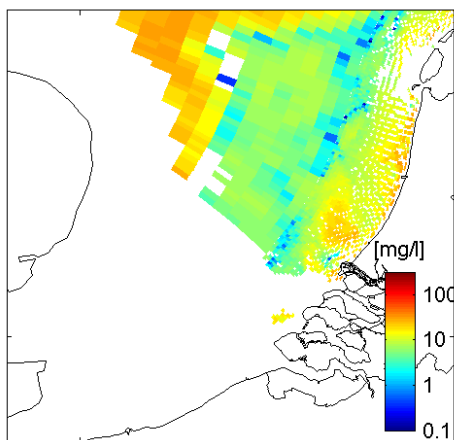
Model at surface layer



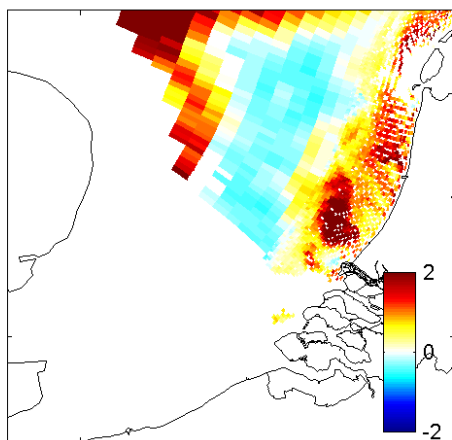
Model at bottom layer



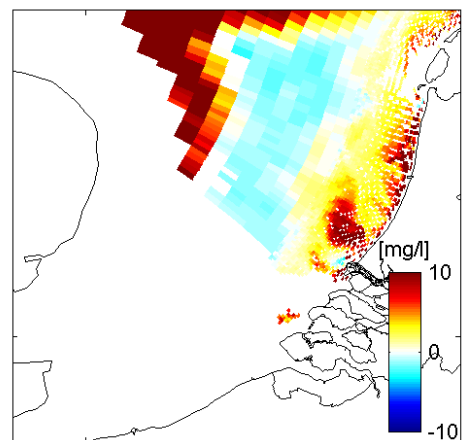
RMS difference



Relative difference [(MERIS-Model)/Model]



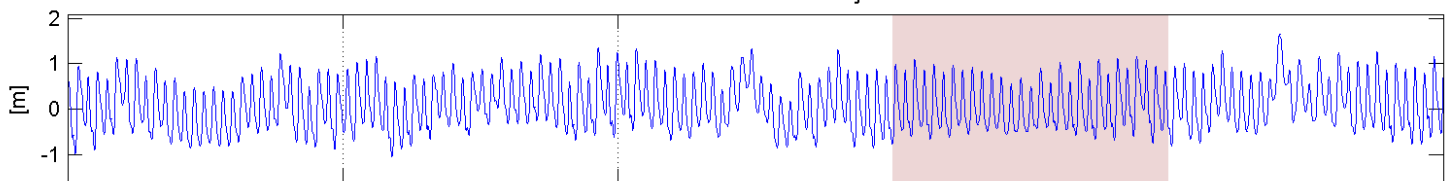
Mean difference [MERIS-Model]

 $\times 10^6$

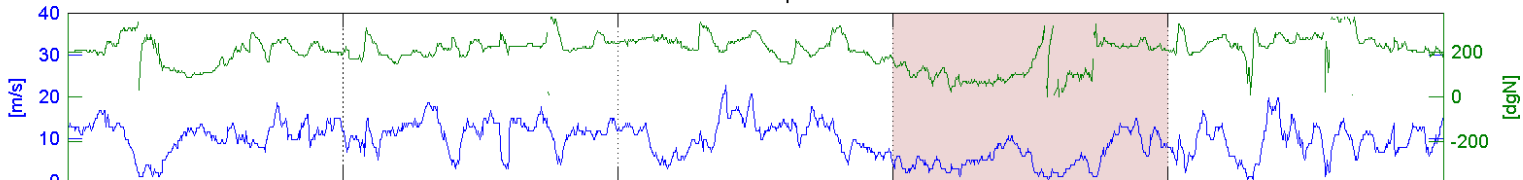
Sand mining volume for Maasvlakte 2



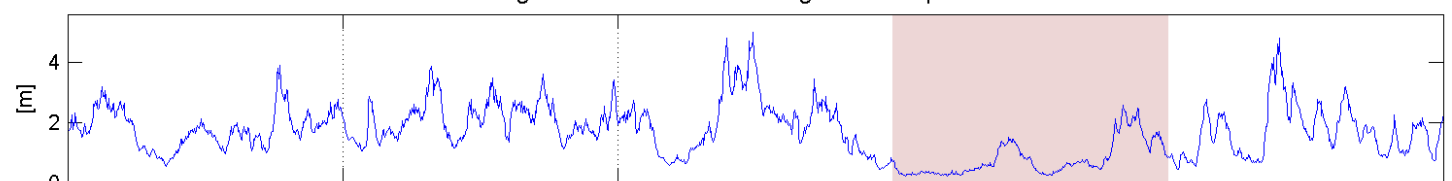
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Dec-27

Jan-10

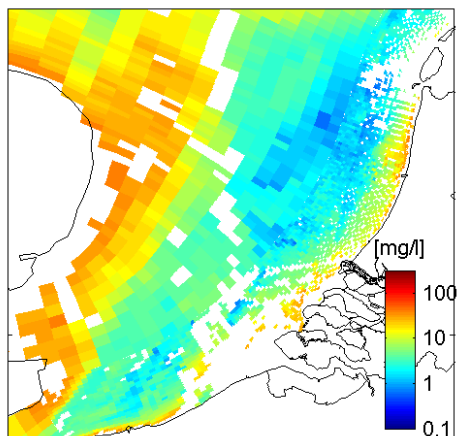
Jan-25

Feb-09

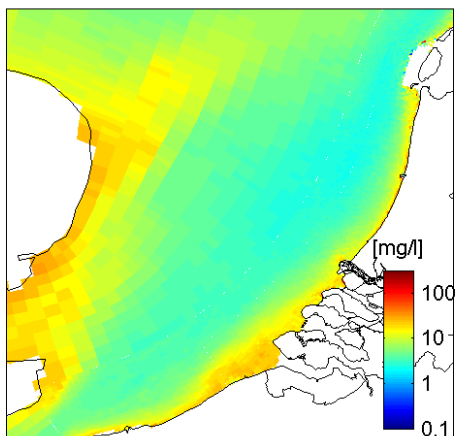
Feb-24

Mar-10

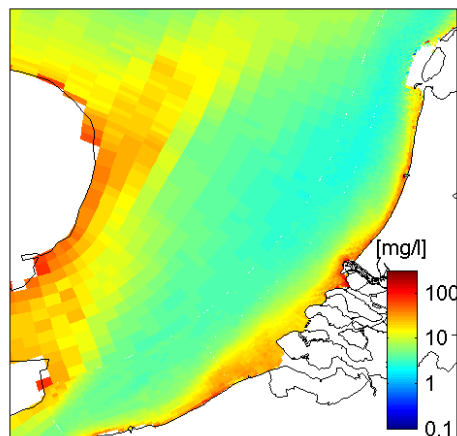
MERIS at surface layer



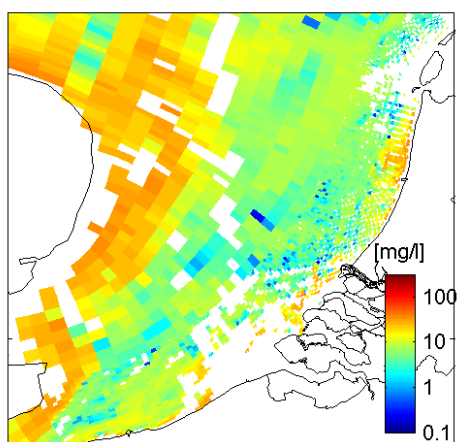
Model at surface layer



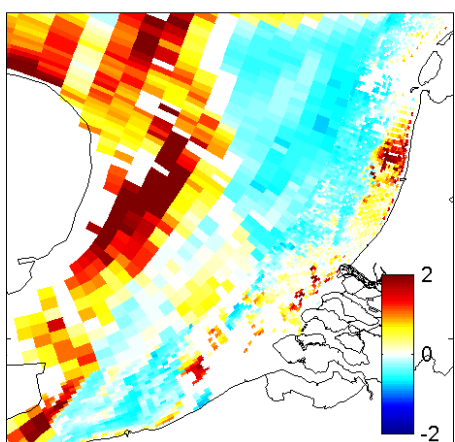
Model at bottom layer



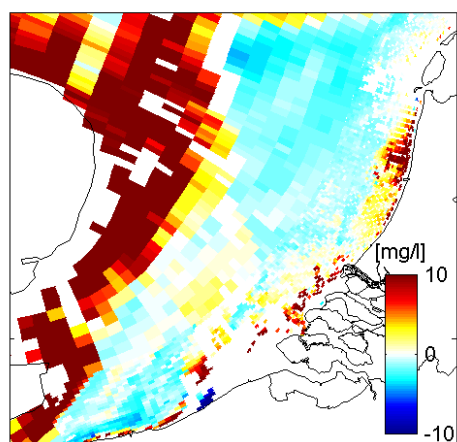
RMS difference



Relative difference [(MERIS-Model)/Model]



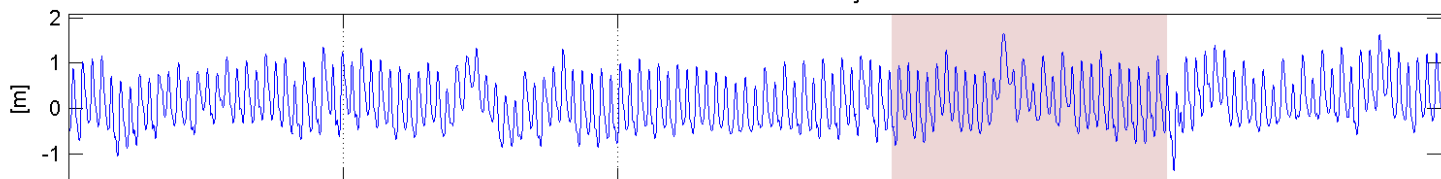
Mean difference [MERIS-Model]


x 10⁶

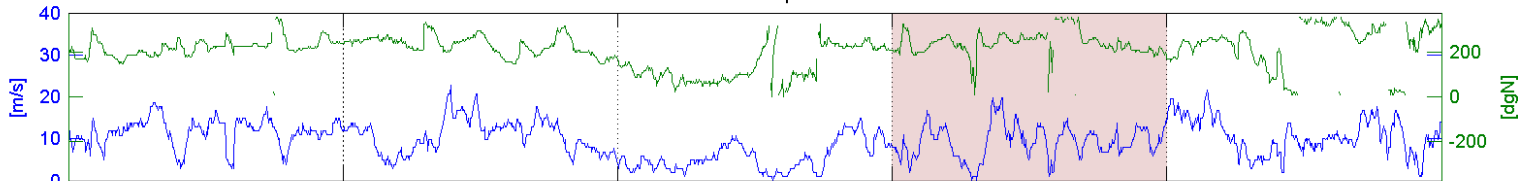
Sand mining volume for Maasvlakte 2



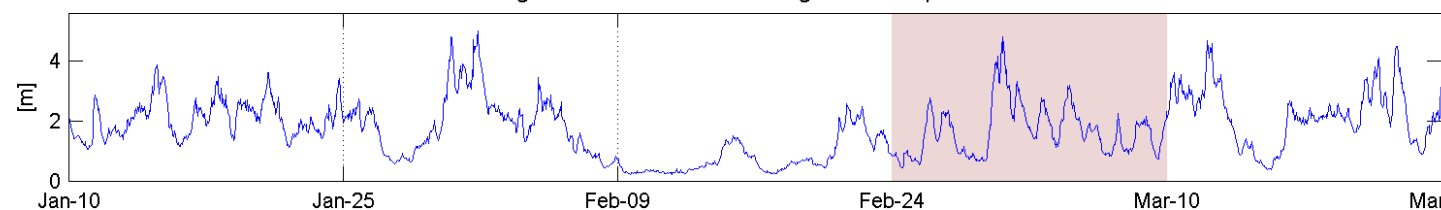
Water level at Noordwijk10



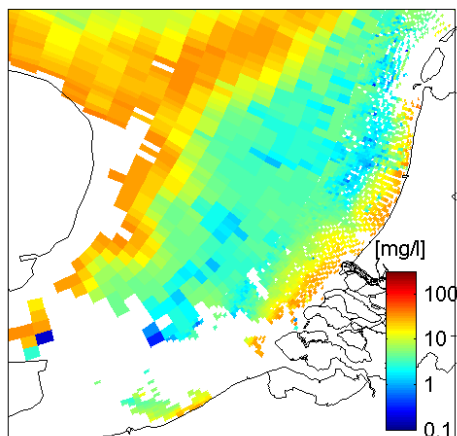
Wind at Euro platform



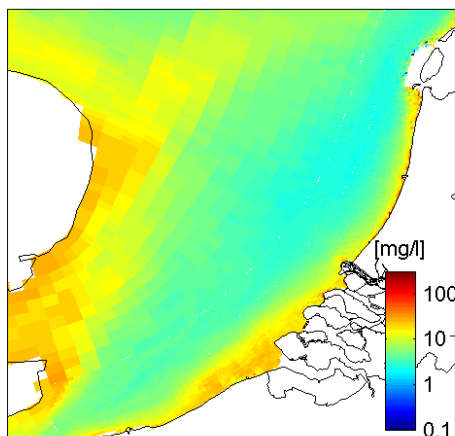
Significant surface wave height at Euro platform



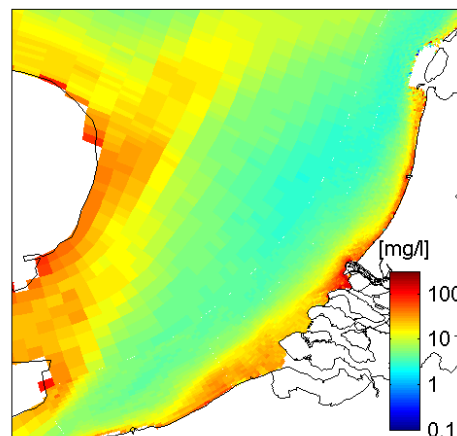
MERIS at surface layer



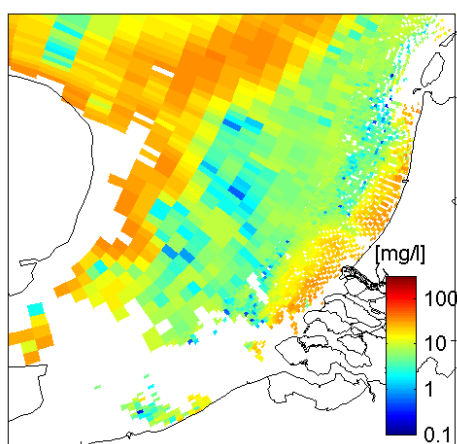
Model at surface layer



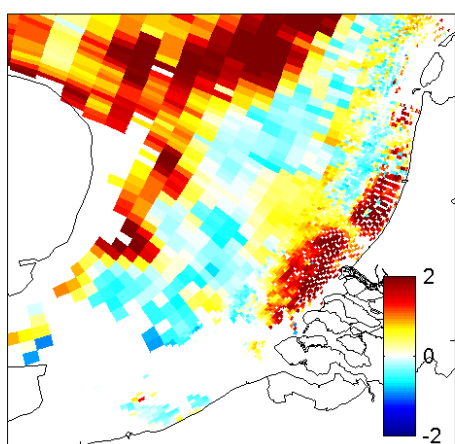
Model at bottom layer



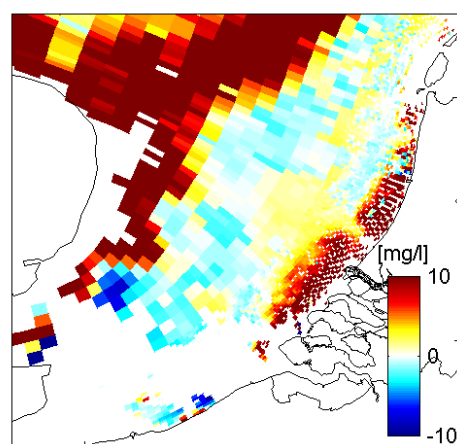
RMS difference



Relative difference [(MERIS-Model)/Model]



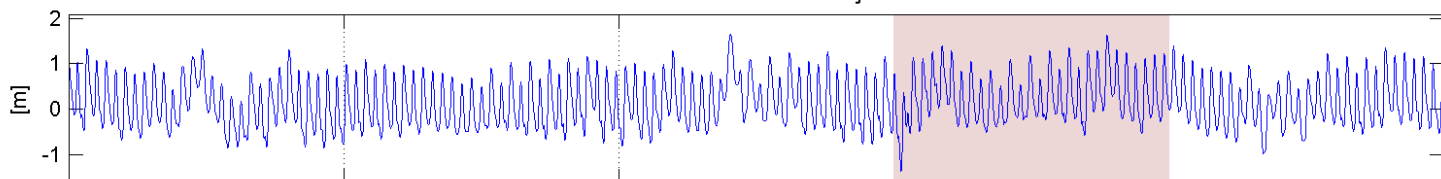
Mean difference [MERIS-Model]


x 10⁶

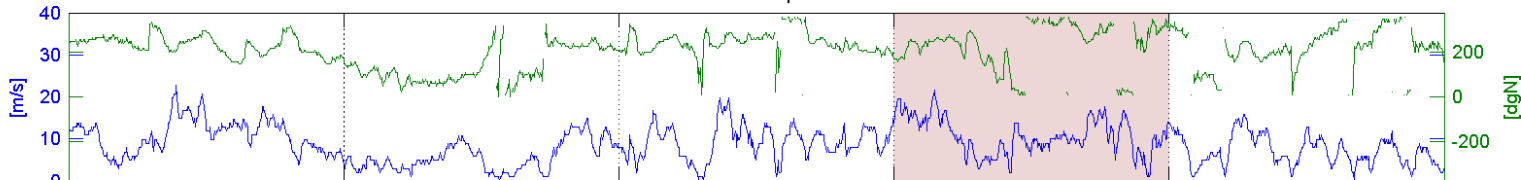
Sand mining volume for Maasvlakte 2



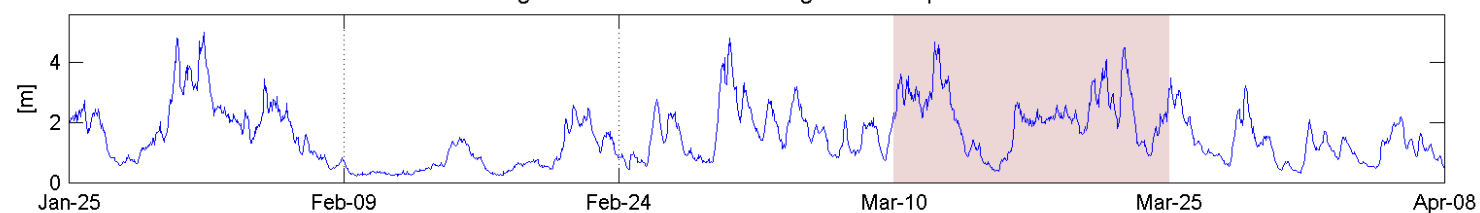
Water level at Noordwijk10



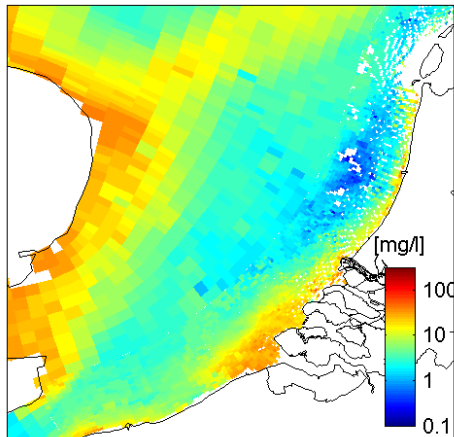
Wind at Euro platform



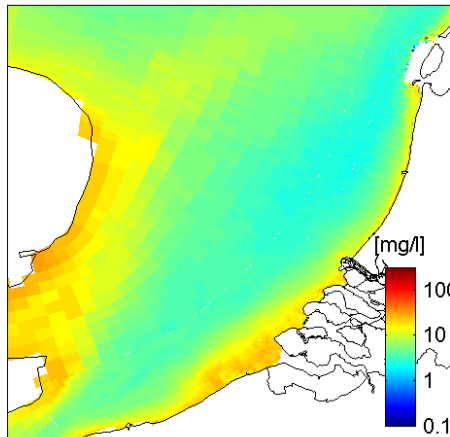
Significant surface wave height at Euro platform



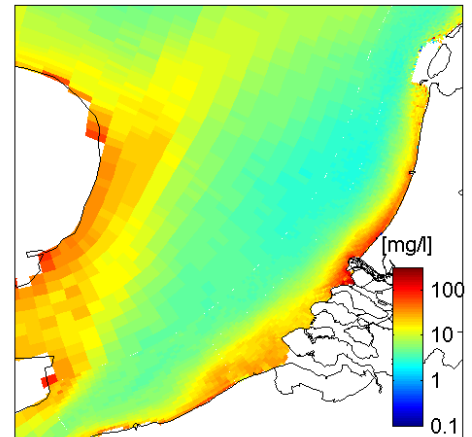
MERIS at surface layer



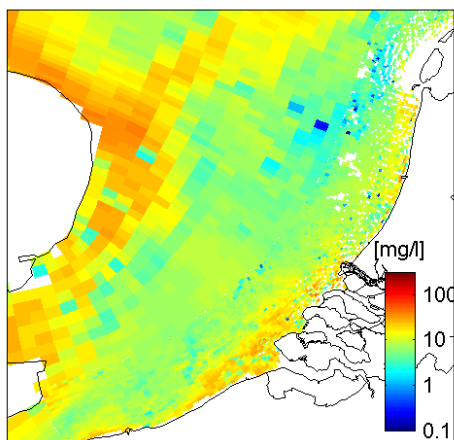
Model at surface layer



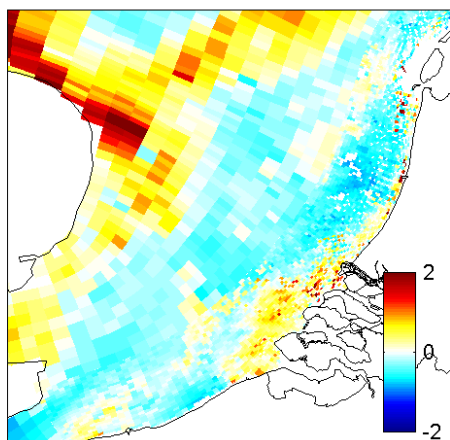
Model at bottom layer



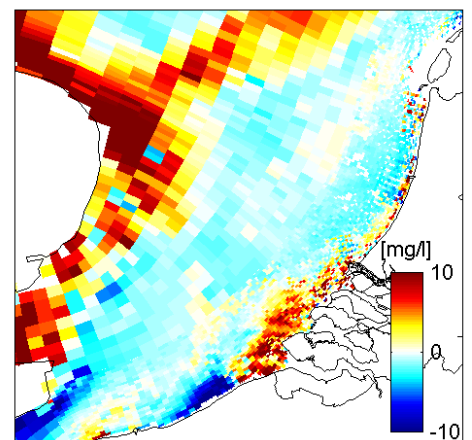
RMS difference



Relative difference [(MERIS-Model)/Model]



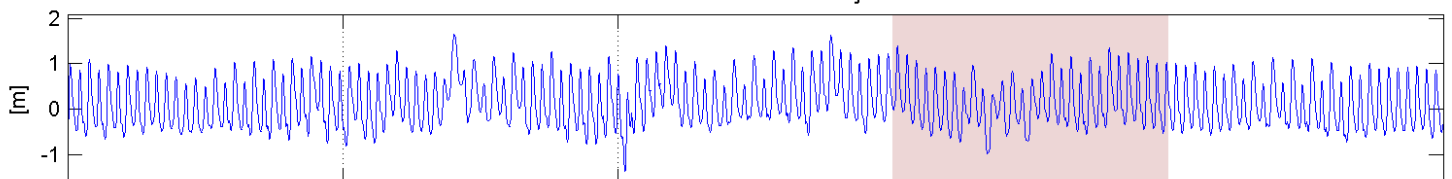
Mean difference [MERIS-Model]

 $\times 10^6$

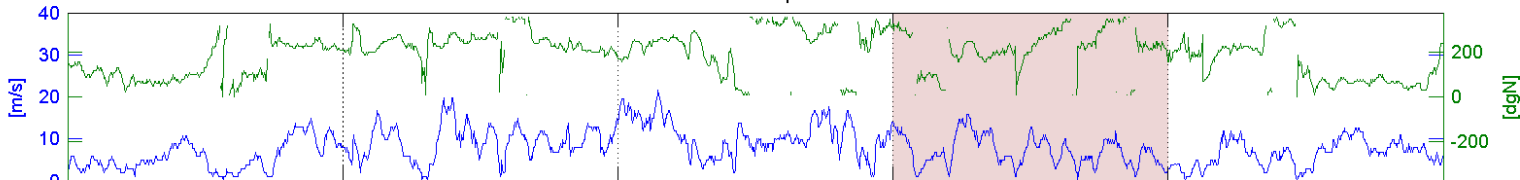
Sand mining volume for Maasvlakte 2



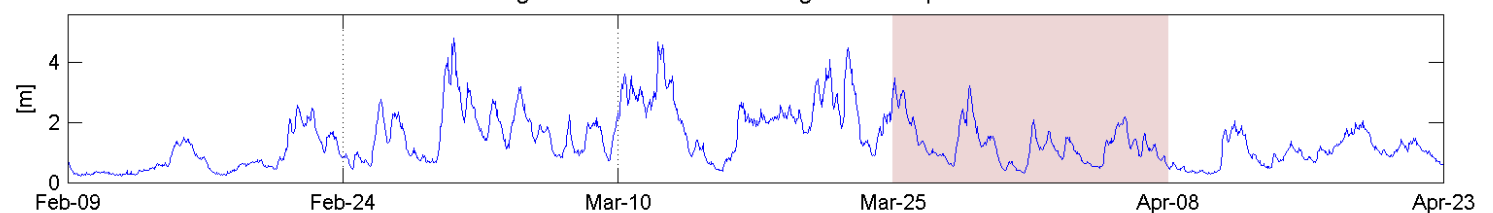
Water level at Noordwijk10



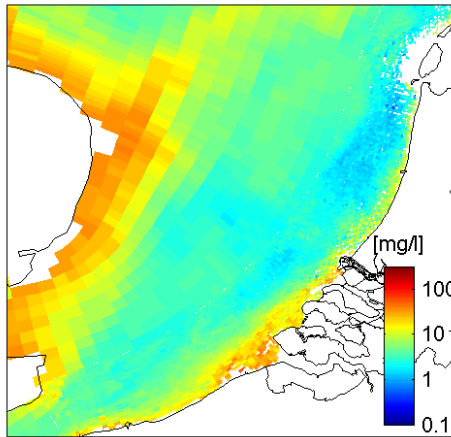
Wind at Euro platform



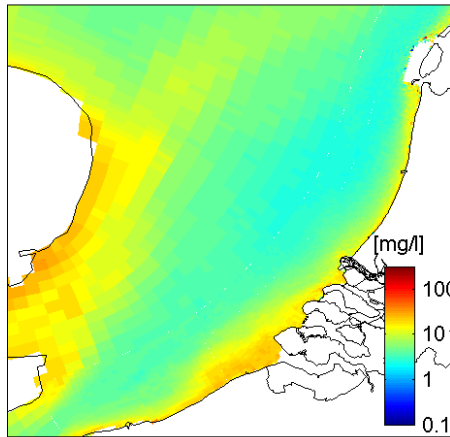
Significant surface wave height at Euro platform



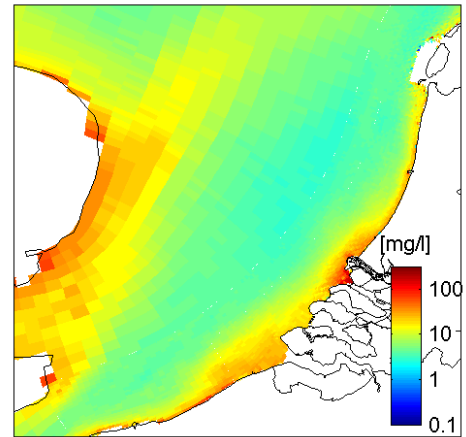
MERIS at surface layer



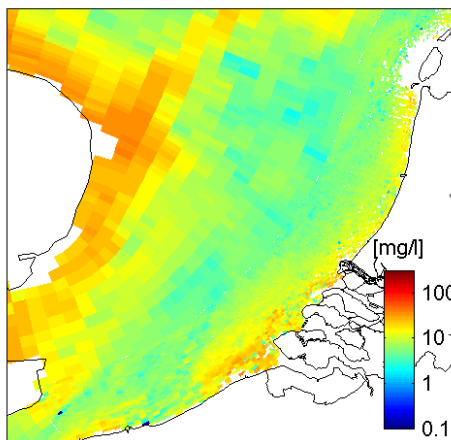
Model at surface layer



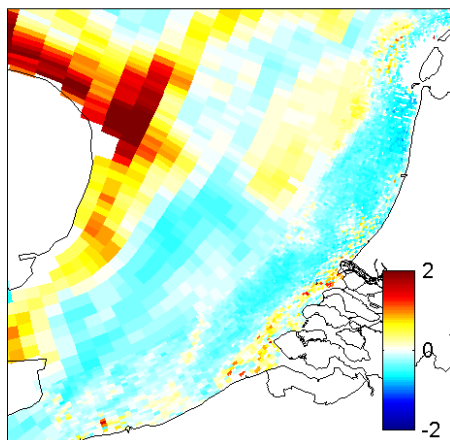
Model at bottom layer



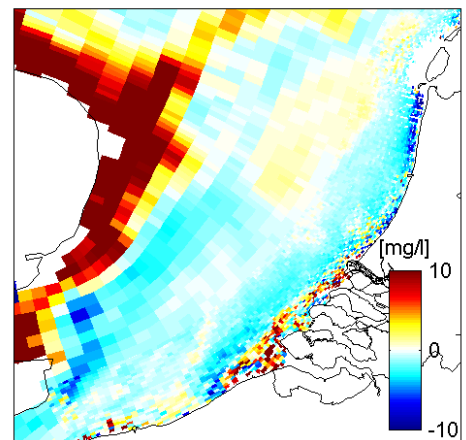
RMS difference



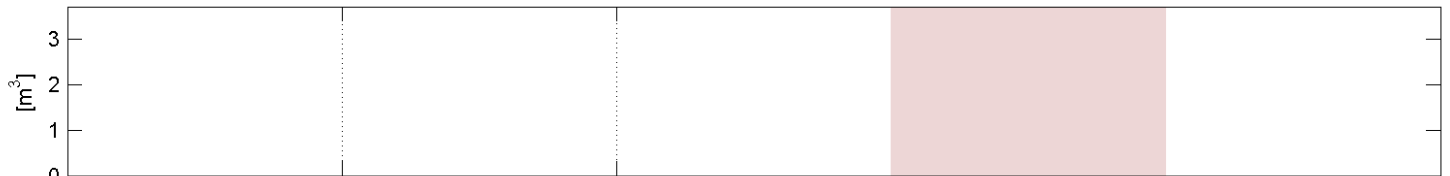
Relative difference [(MERIS-Model)/Model]



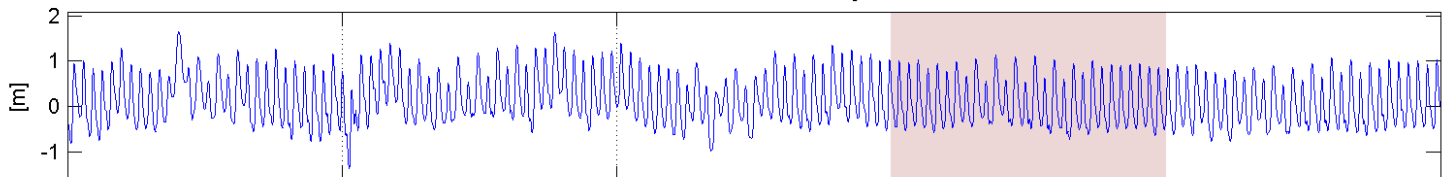
Mean difference [MERIS-Model]

 $\times 10^6$

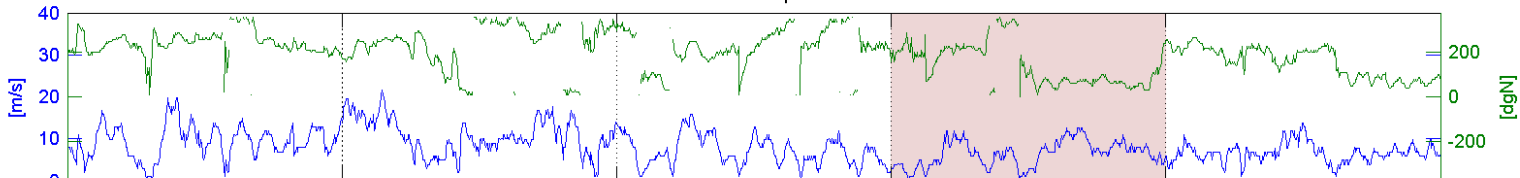
Sand mining volume for Maasvlakte 2



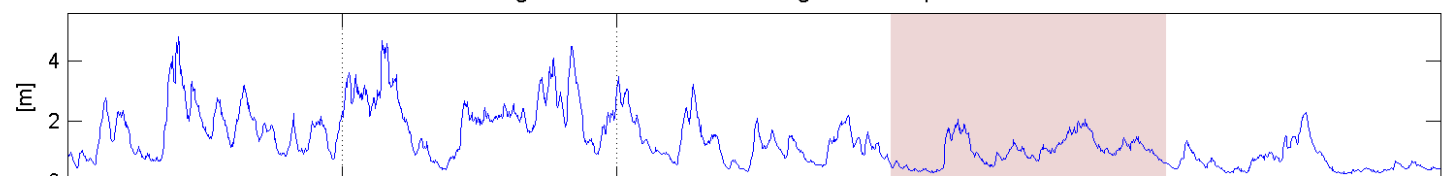
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Feb-24

Mar-10

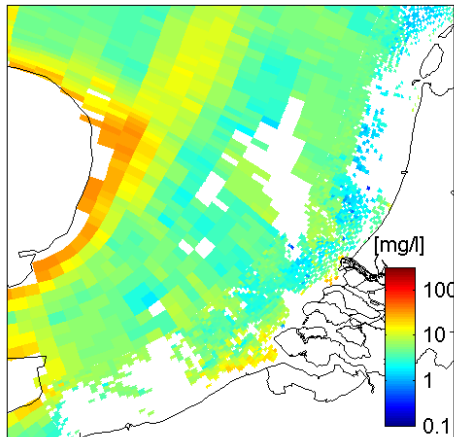
Mar-25

Apr-08

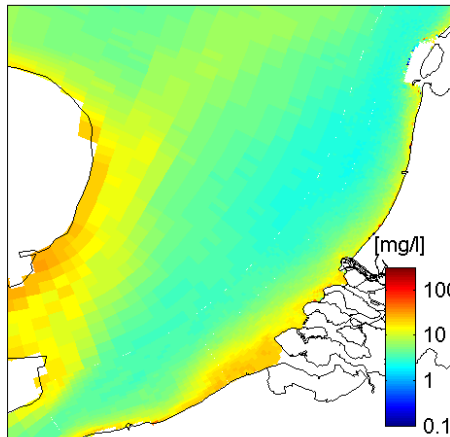
Apr-23

May-08

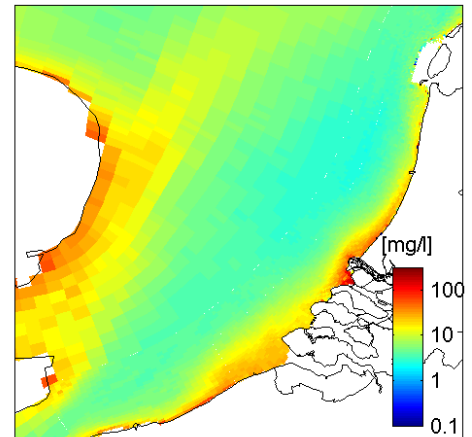
MERIS at surface layer



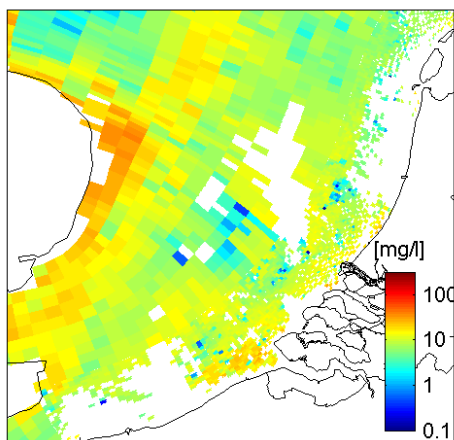
Model at surface layer



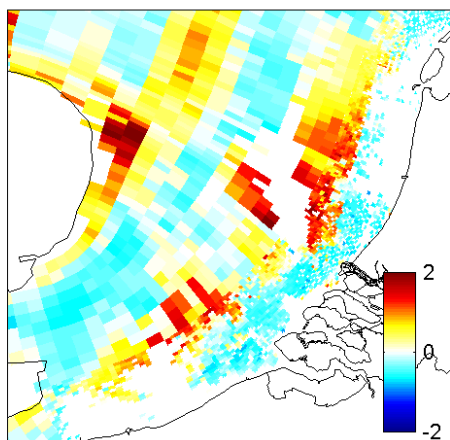
Model at bottom layer



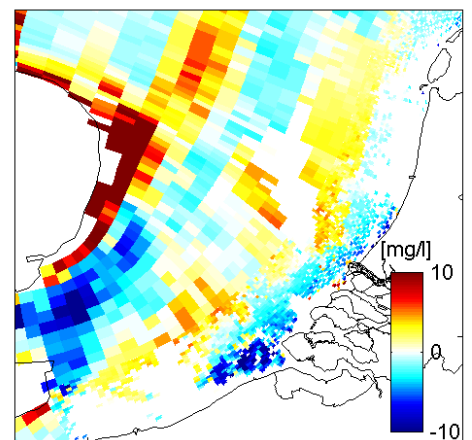
RMS difference



Relative difference [(MERIS-Model)/Model]



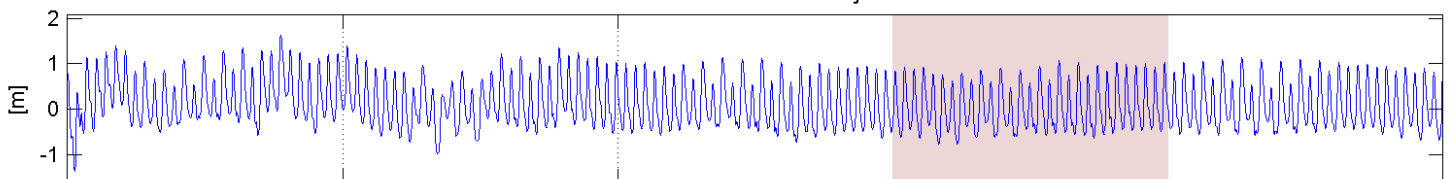
Mean difference [MERIS-Model]

 $\times 10^6$

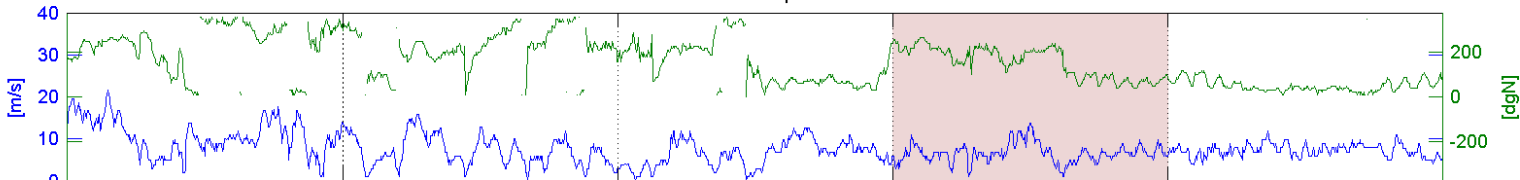
Sand mining volume for Maasvlakte 2



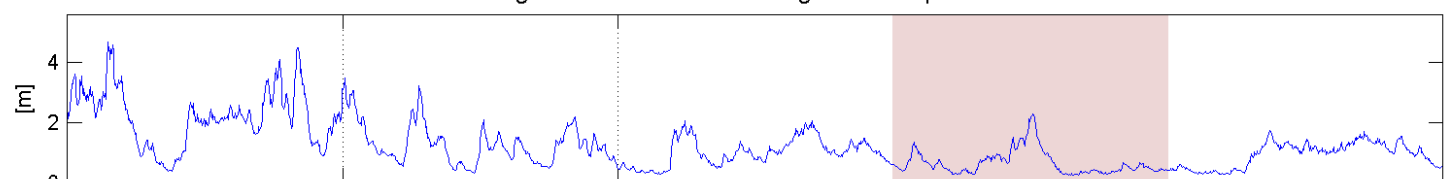
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Mar-10

Mar-25

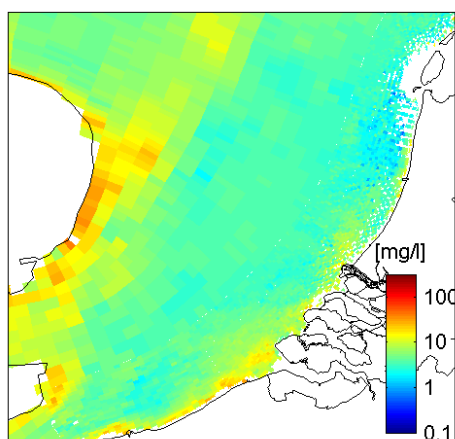
Apr-08

Apr-23

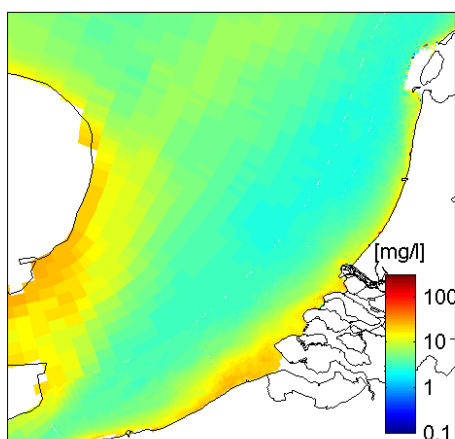
May-08

May-23

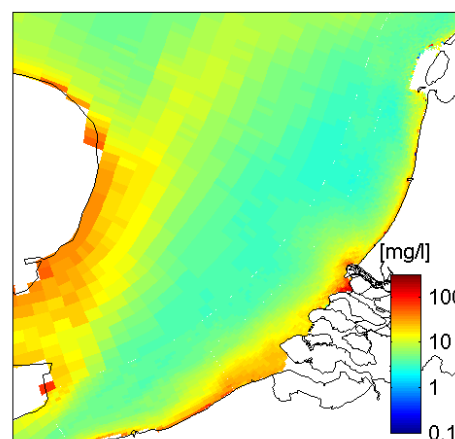
MERIS at surface layer



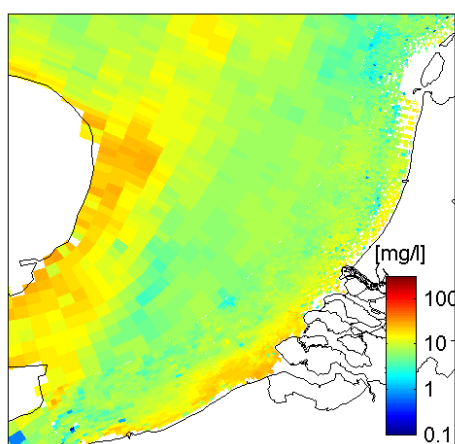
Model at surface layer



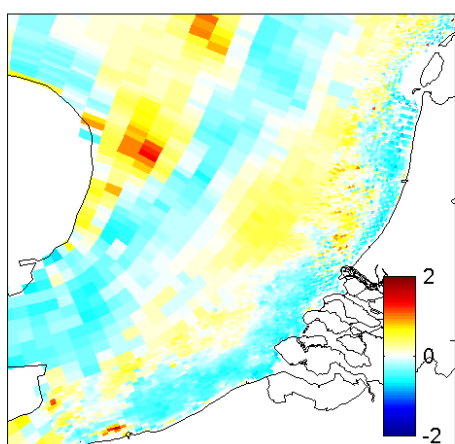
Model at bottom layer



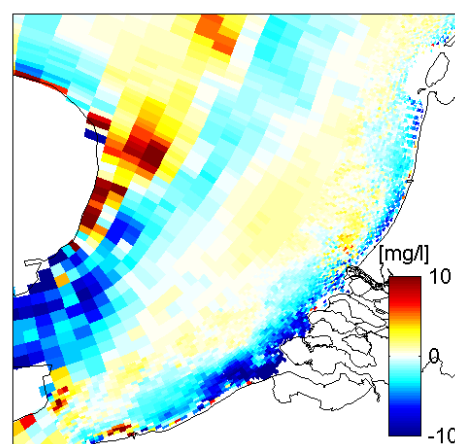
RMS difference



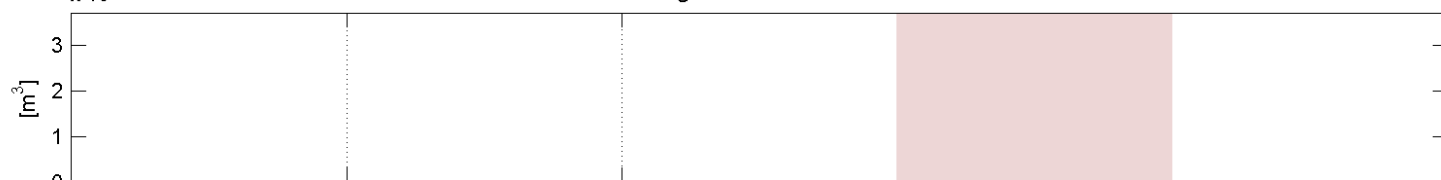
Relative difference [(MERIS-Model)/Model]



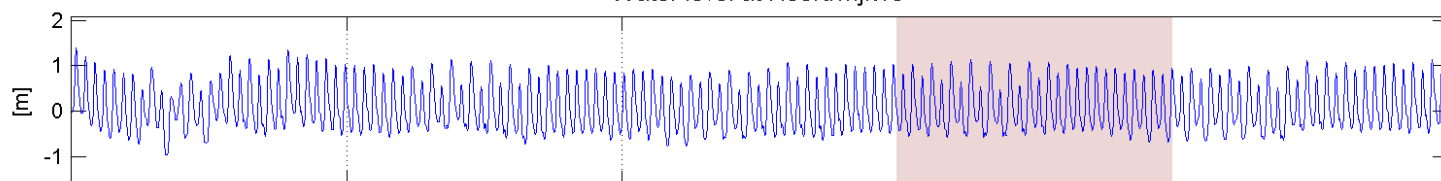
Mean difference [MERIS-Model]

 $\times 10^6$

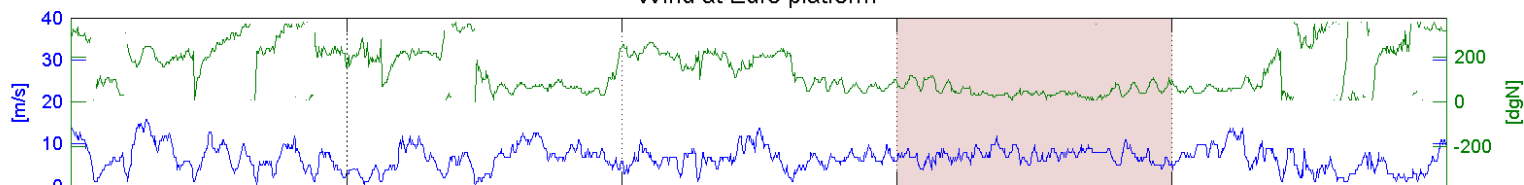
Sand mining volume for Maasvlakte 2



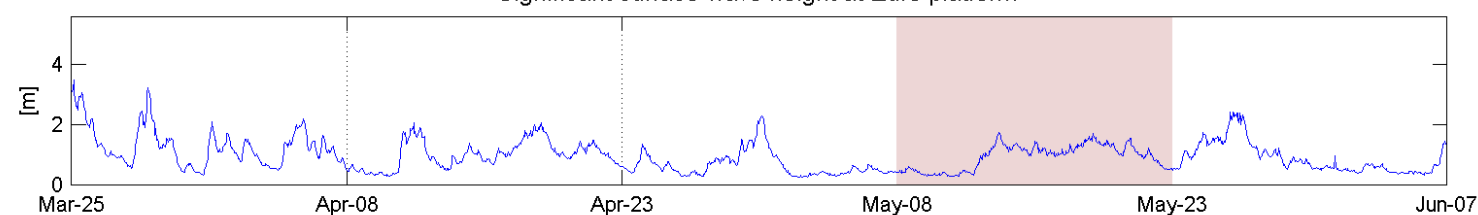
Water level at Noordwijk10



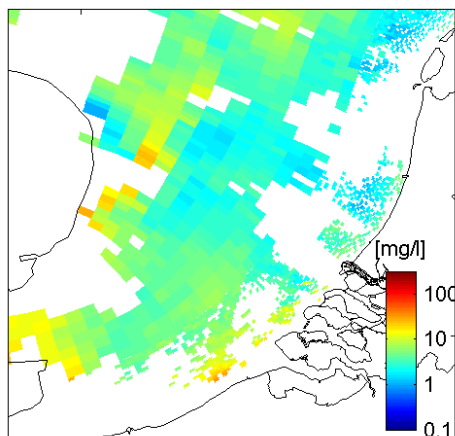
Wind at Euro platform



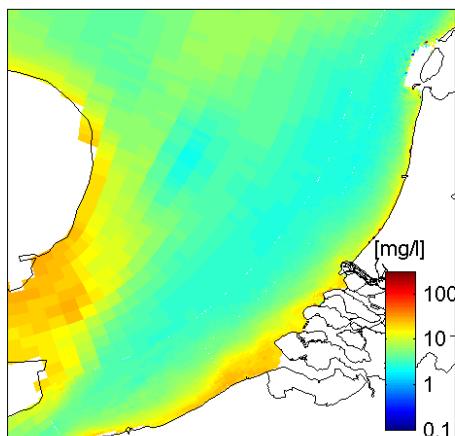
Significant surface wave height at Euro platform



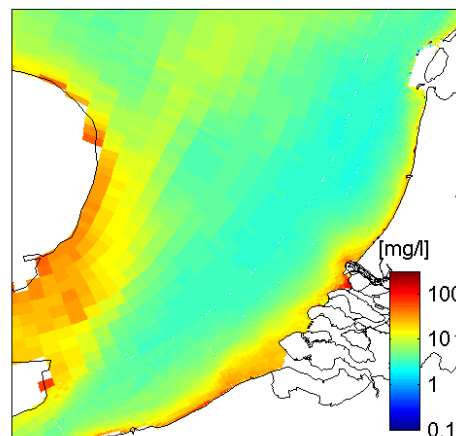
MERIS at surface layer



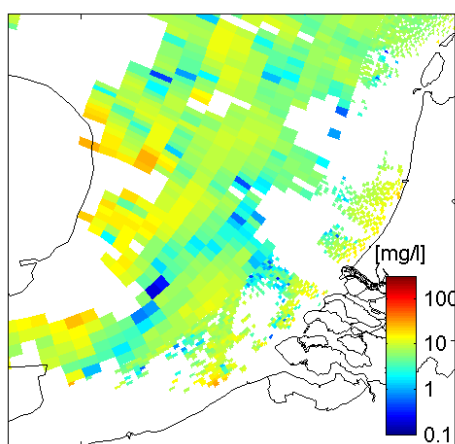
Model at surface layer



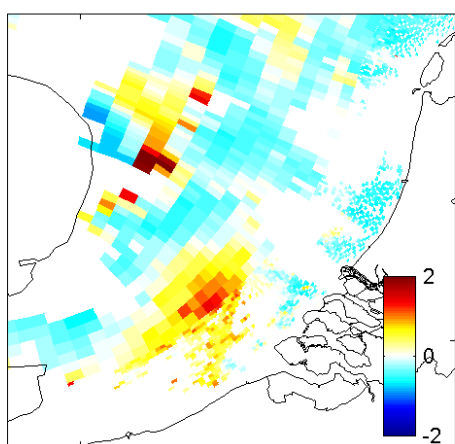
Model at bottom layer



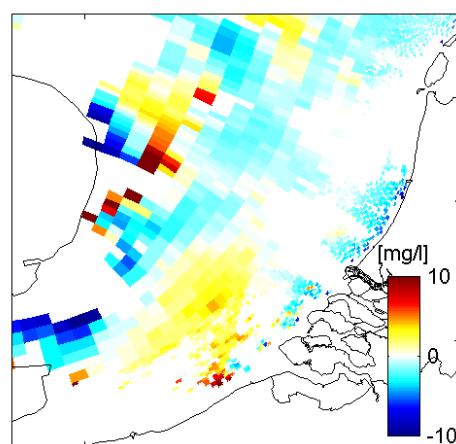
RMS difference



Relative difference [(MERIS-Model)/Model]



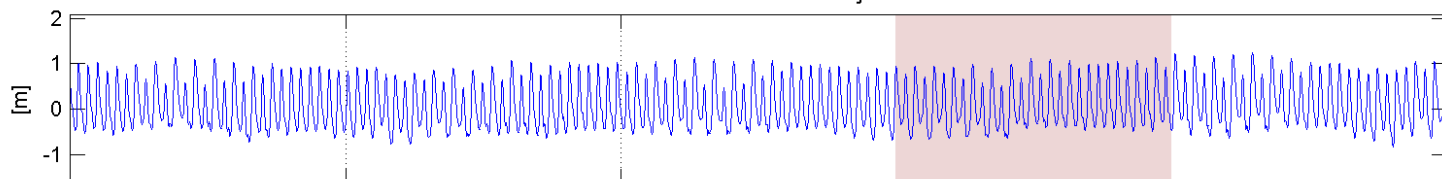
Mean difference [MERIS-Model]


 $\times 10^6$

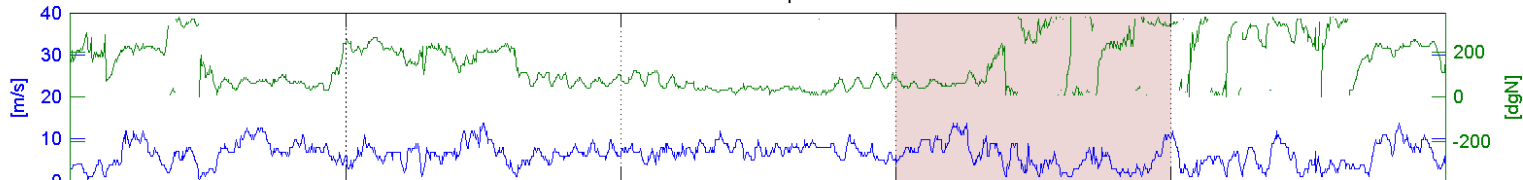
Sand mining volume for Maasvlakte 2



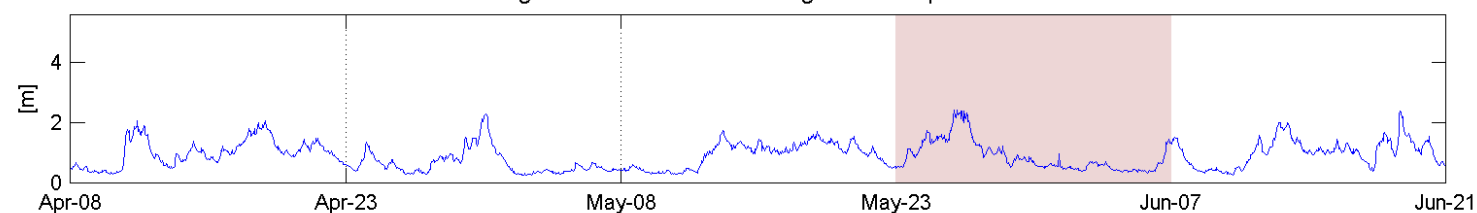
Water level at Noordwijk10



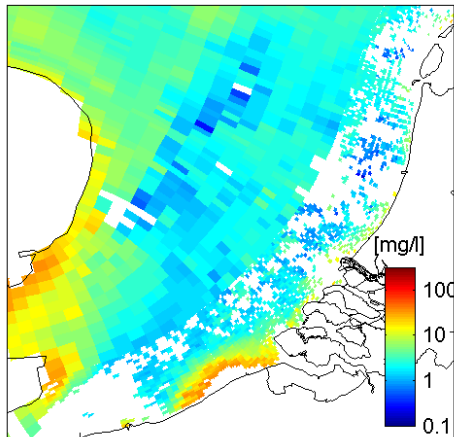
Wind at Euro platform



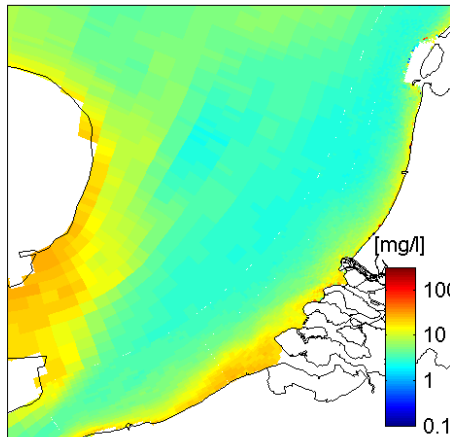
Significant surface wave height at Euro platform



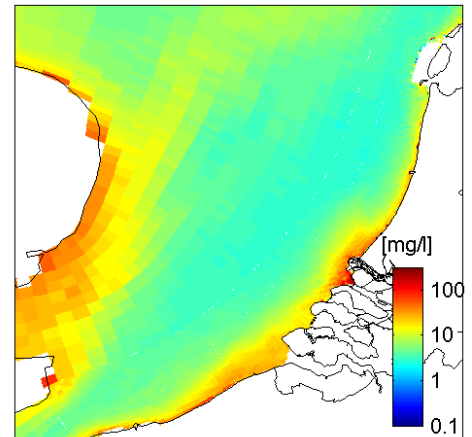
MERIS at surface layer



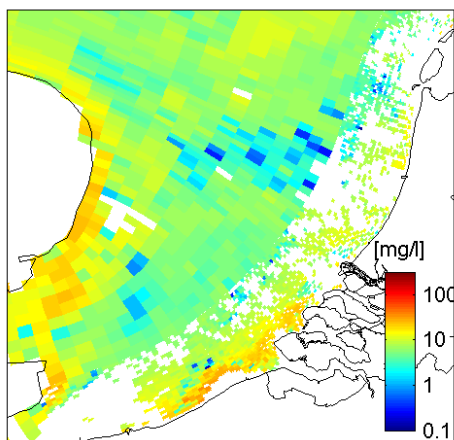
Model at surface layer



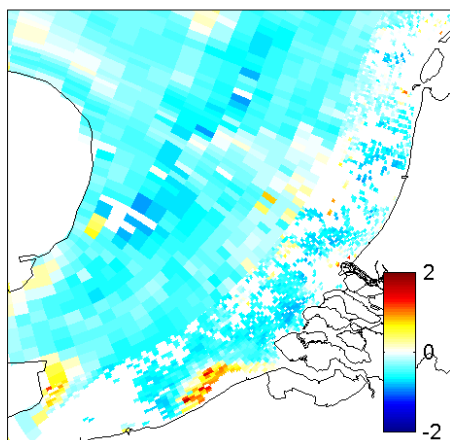
Model at bottom layer



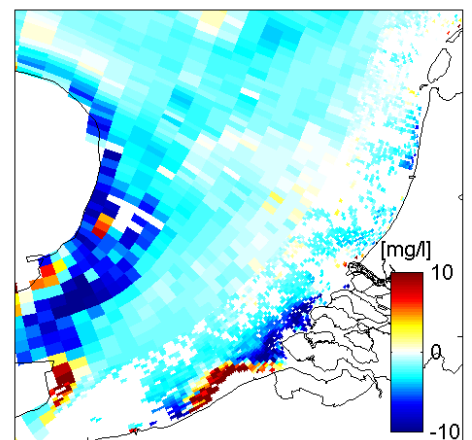
RMS difference



Relative difference [(MERIS-Model)/Model]



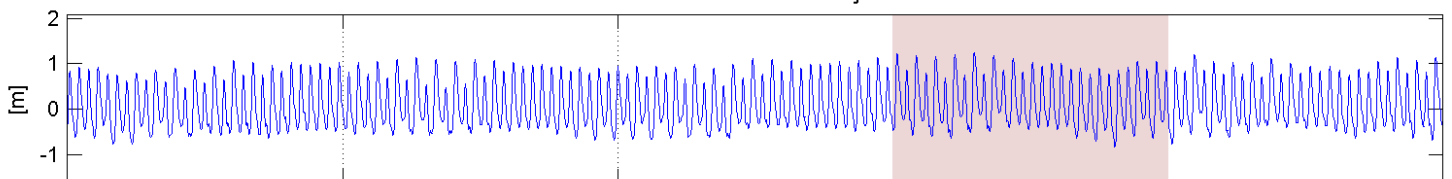
Mean difference [MERIS-Model]

 $\times 10^6$

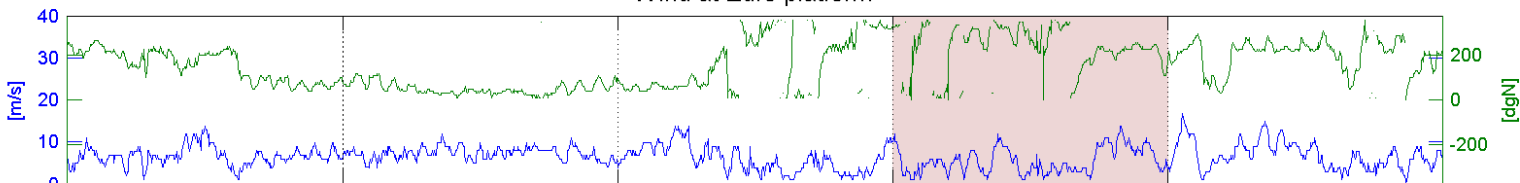
Sand mining volume for Maasvlakte 2



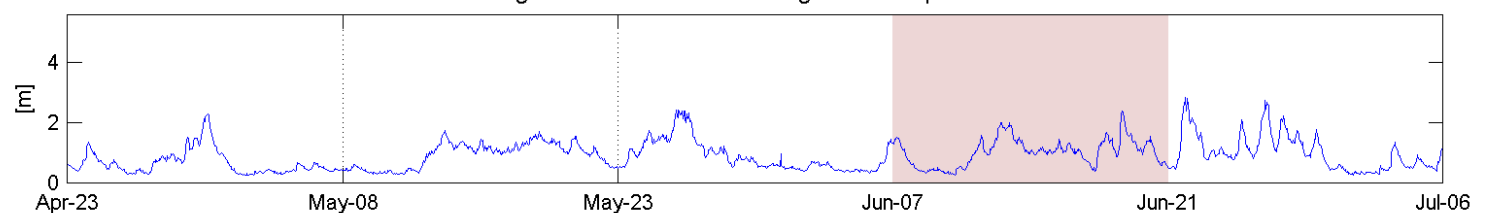
Water level at Noordwijk10



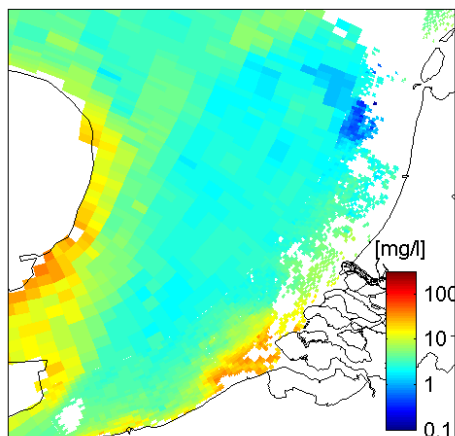
Wind at Euro platform



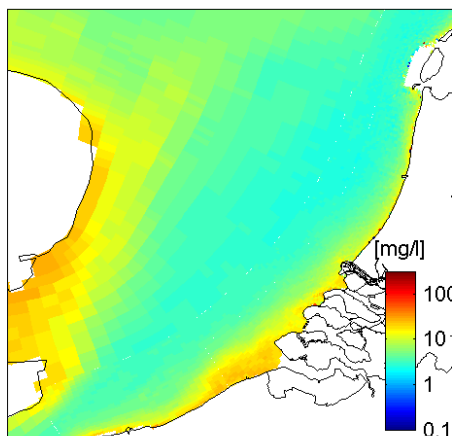
Significant surface wave height at Euro platform



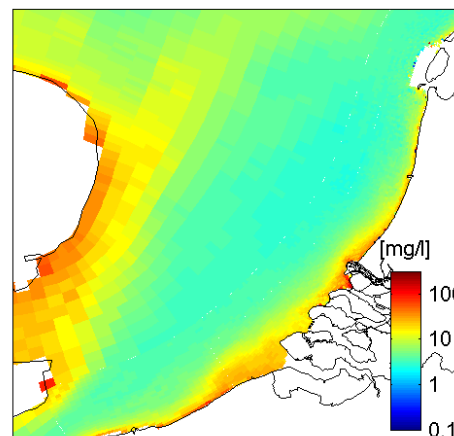
MERIS at surface layer



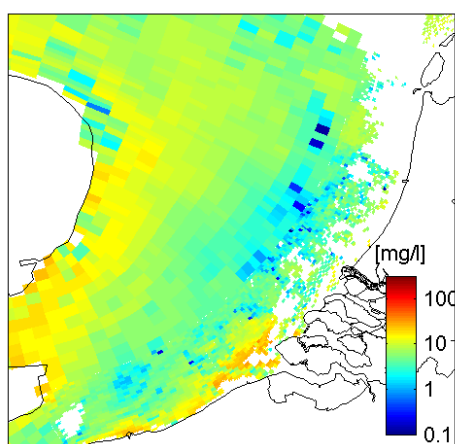
Model at surface layer



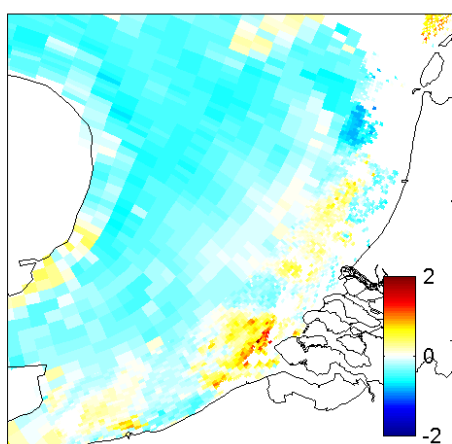
Model at bottom layer



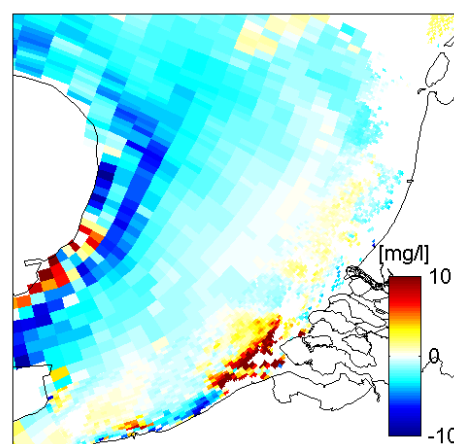
RMS difference



Relative difference [(MERIS-Model)/Model]



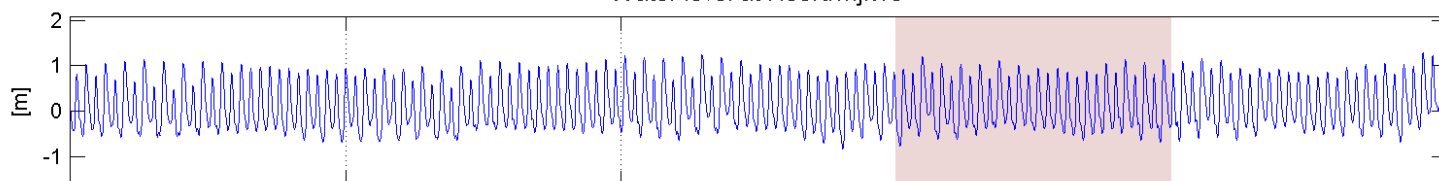
Mean difference [MERIS-Model]

 $\times 10^6$

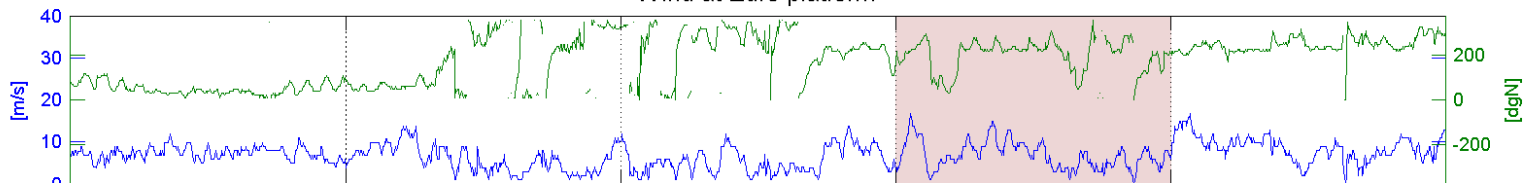
Sand mining volume for Maasvlakte 2



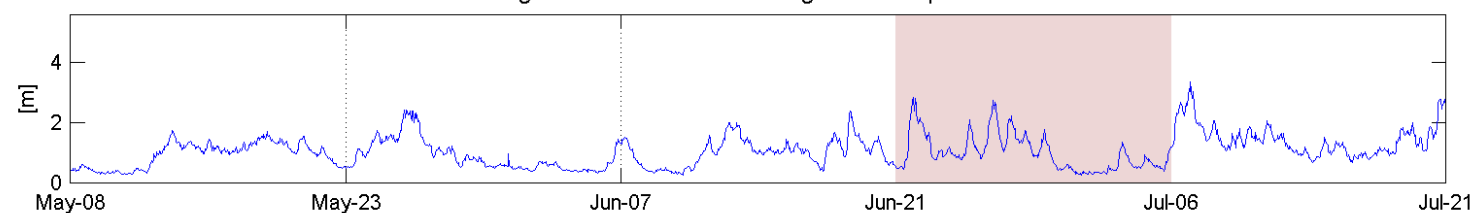
Water level at Noordwijk10



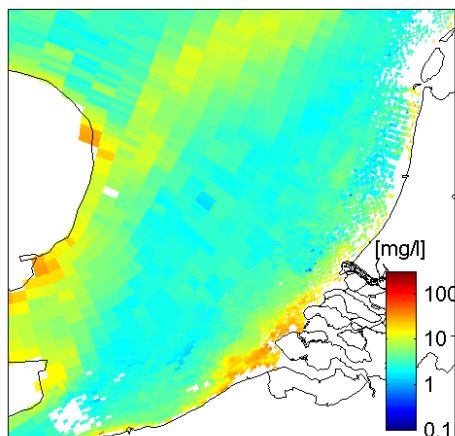
Wind at Euro platform



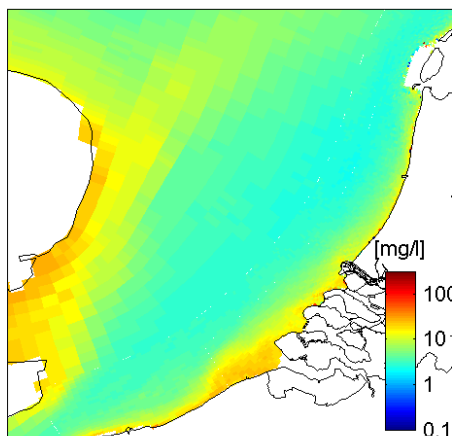
Significant surface wave height at Euro platform



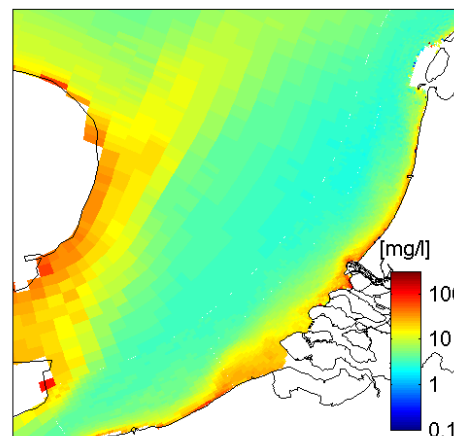
MERIS at surface layer



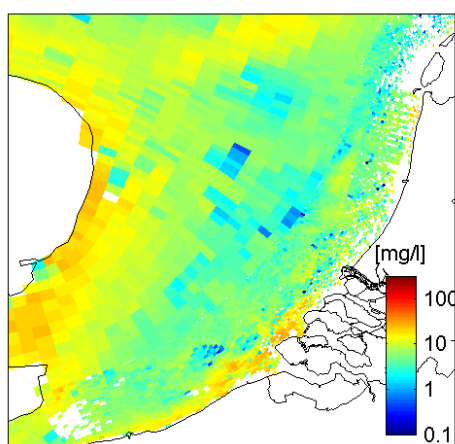
Model at surface layer



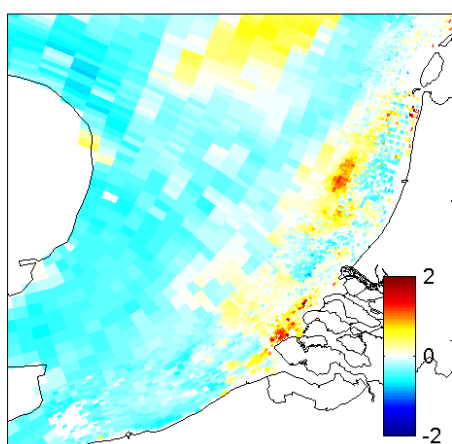
Model at bottom layer



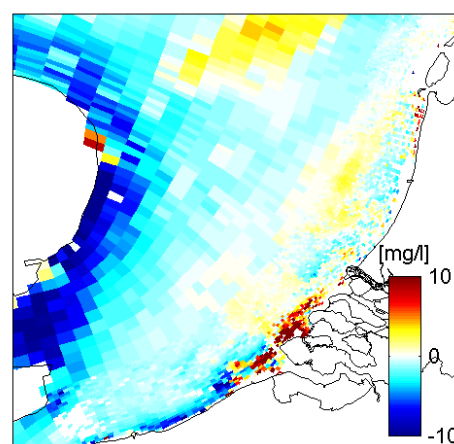
RMS difference



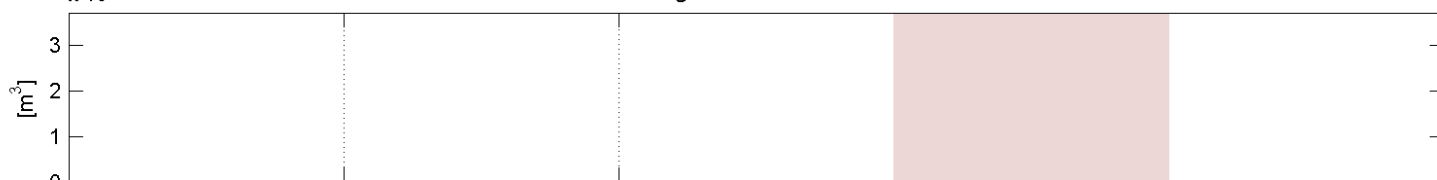
Relative difference [(MERIS-Model)/Model]



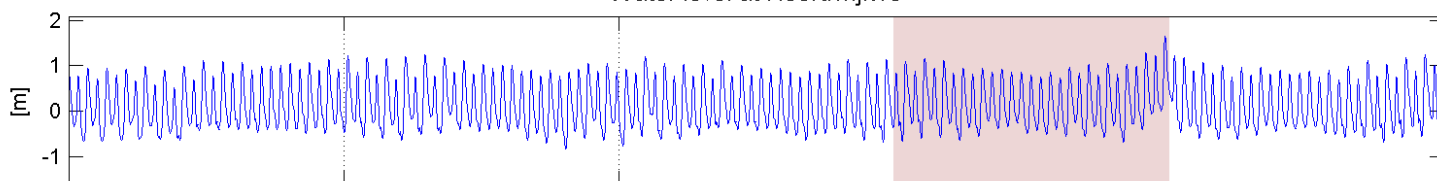
Mean difference [MERIS-Model]

x 10⁶

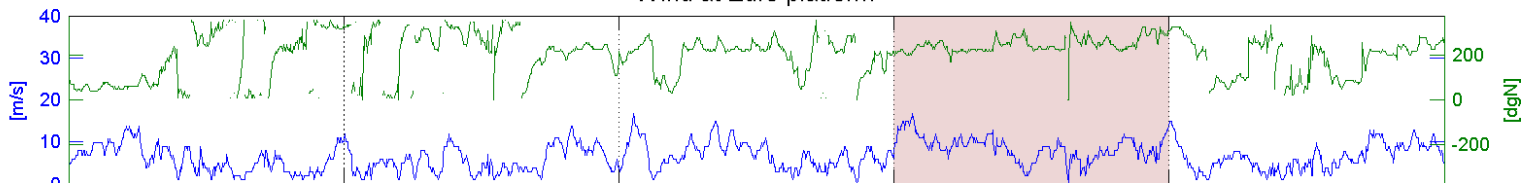
Sand mining volume for Maasvlakte 2



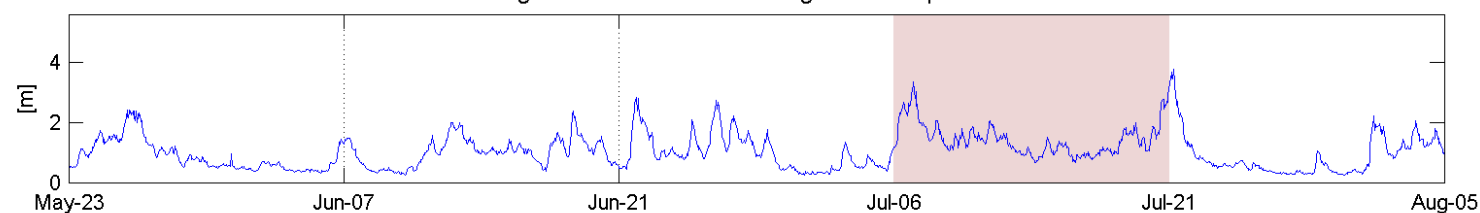
Water level at Noordwijk10



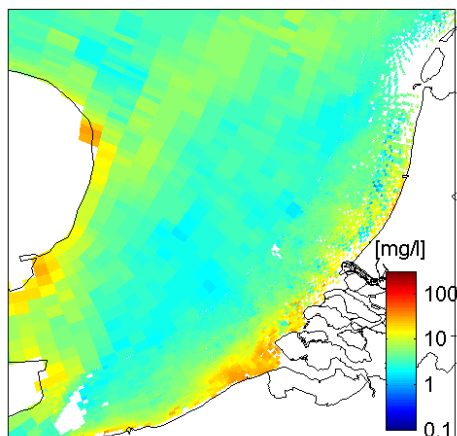
Wind at Euro platform



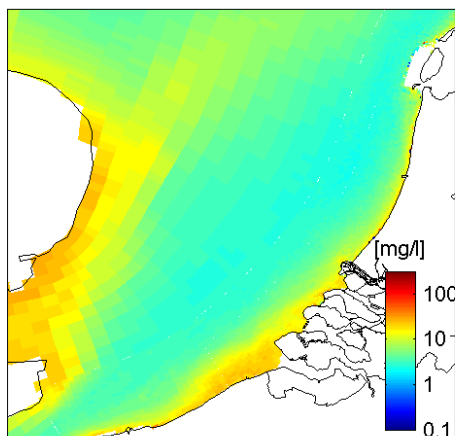
Significant surface wave height at Euro platform



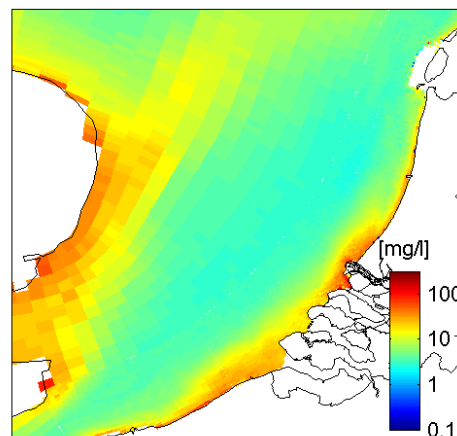
MERIS at surface layer



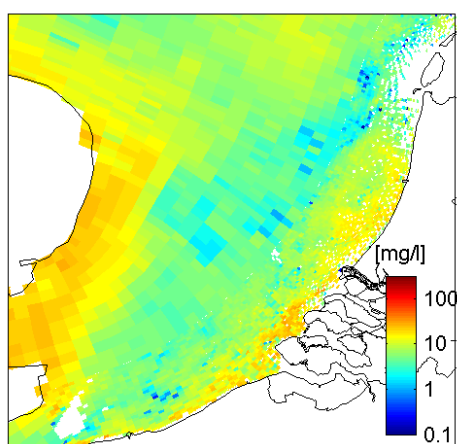
Model at surface layer



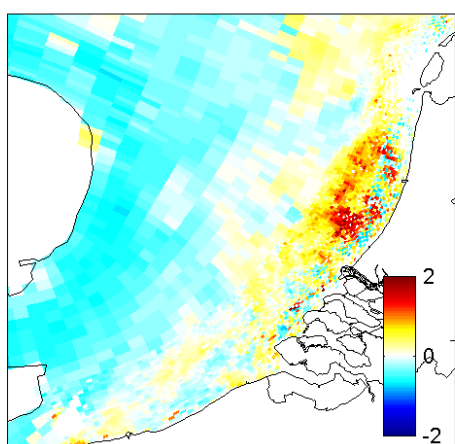
Model at bottom layer



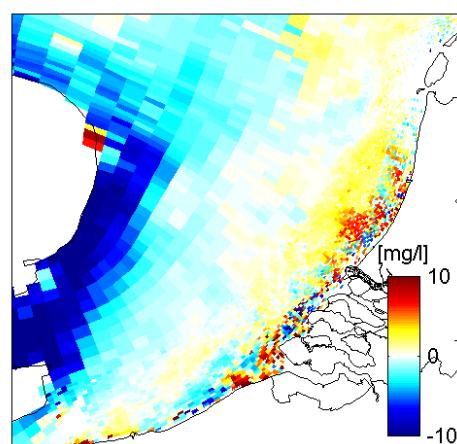
RMS difference



Relative difference [(MERIS-Model)/Model]



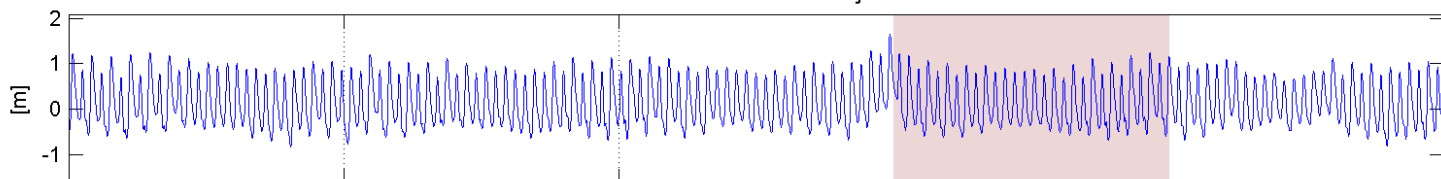
Mean difference [MERIS-Model]


x 10⁶

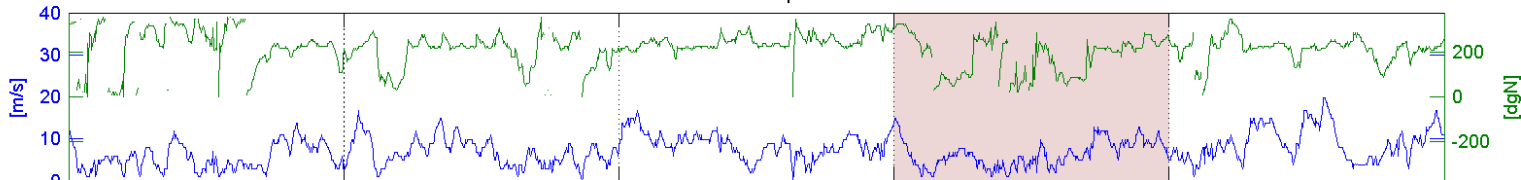
Sand mining volume for Maasvlakte 2



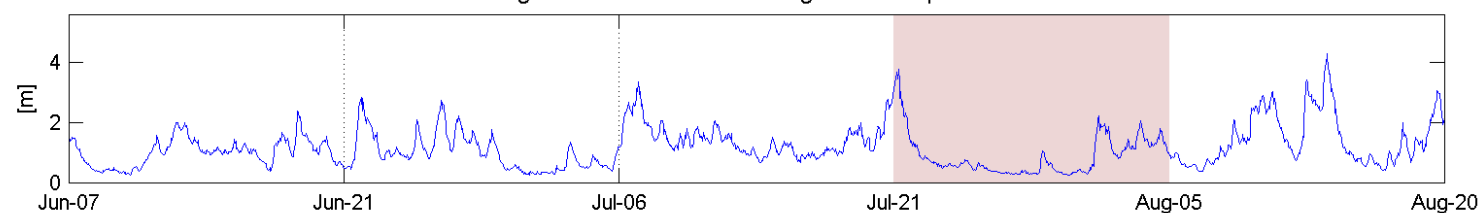
Water level at Noordwijk10



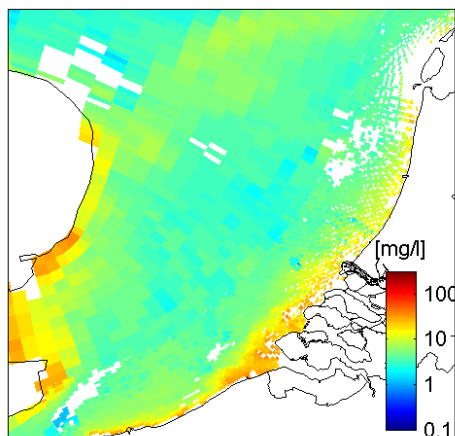
Wind at Euro platform



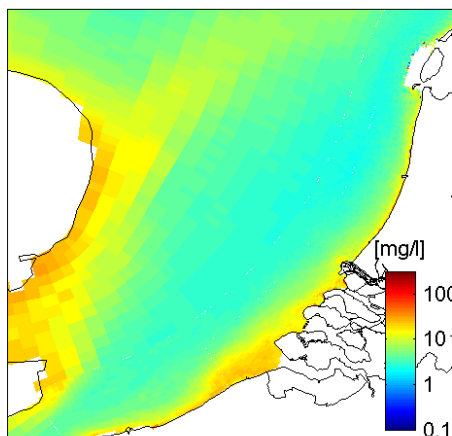
Significant surface wave height at Euro platform



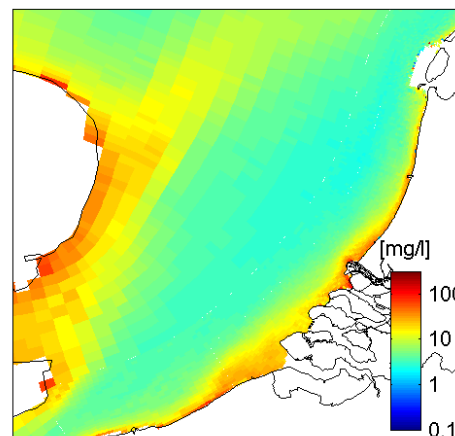
MERIS at surface layer



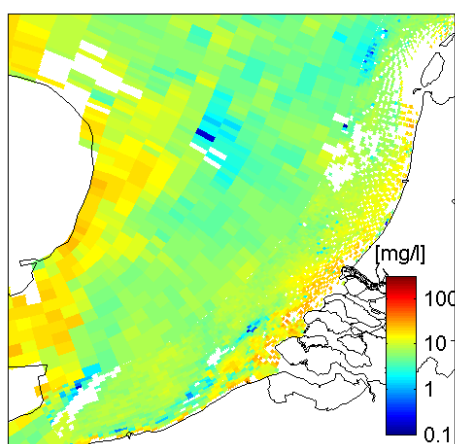
Model at surface layer



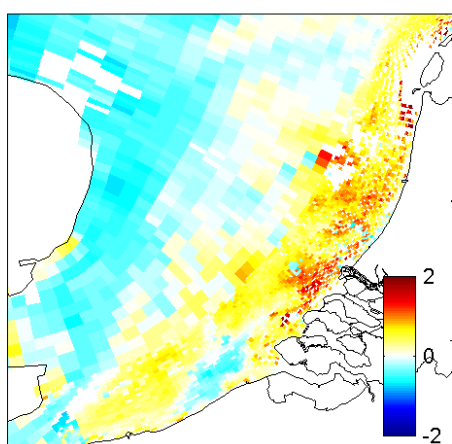
Model at bottom layer



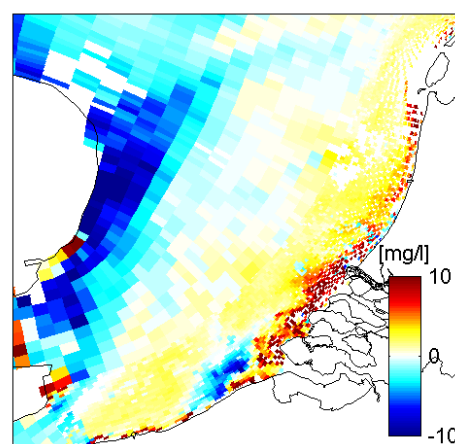
RMS difference



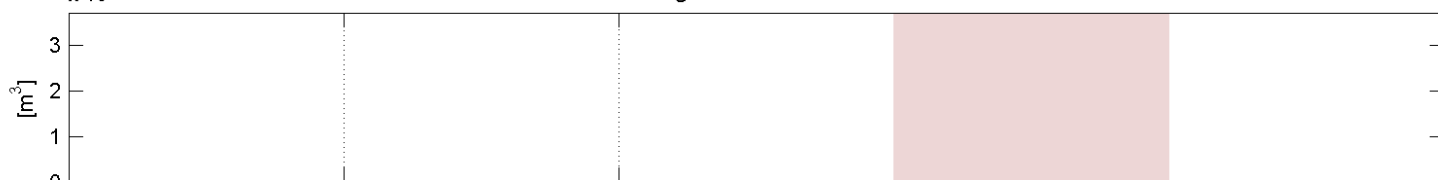
Relative difference [(MERIS-Model)/Model]



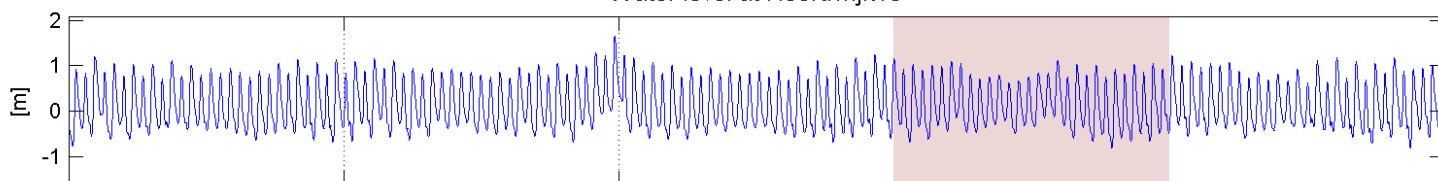
Mean difference [MERIS-Model]

x 10⁶

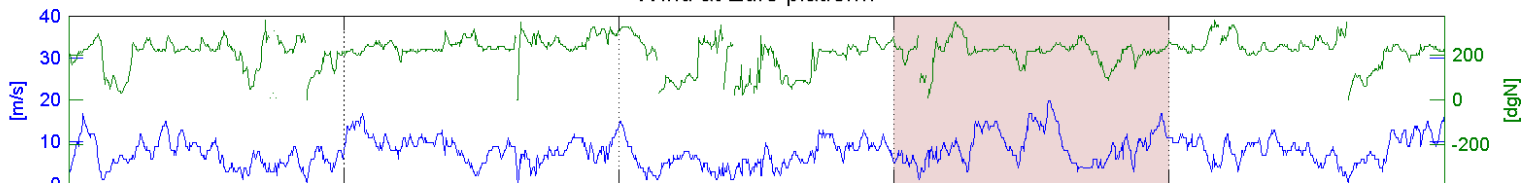
Sand mining volume for Maasvlakte 2



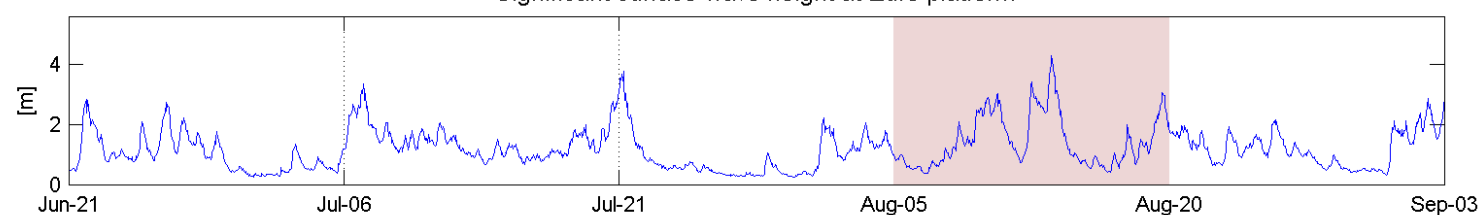
Water level at Noordwijk10



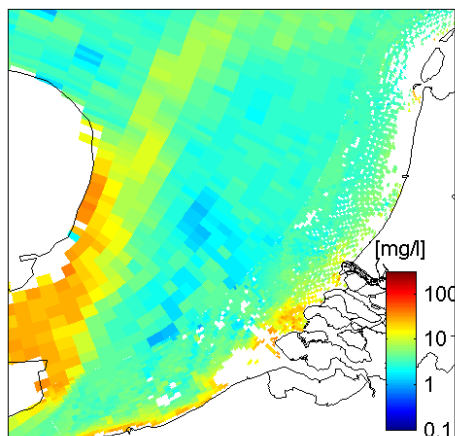
Wind at Euro platform



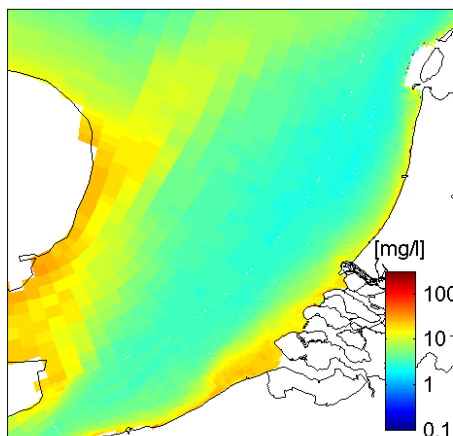
Significant surface wave height at Euro platform



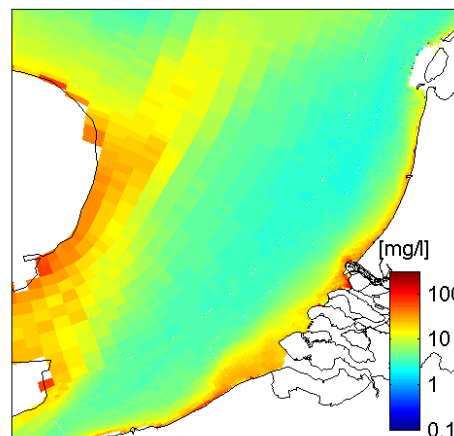
MERIS at surface layer



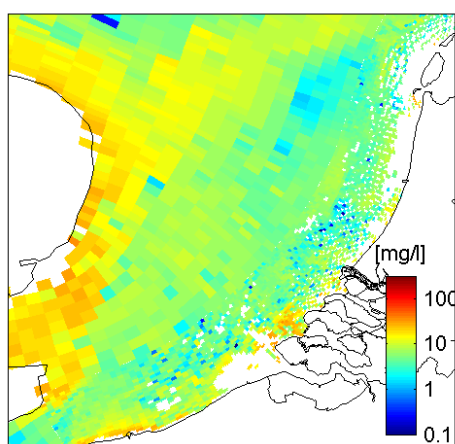
Model at surface layer



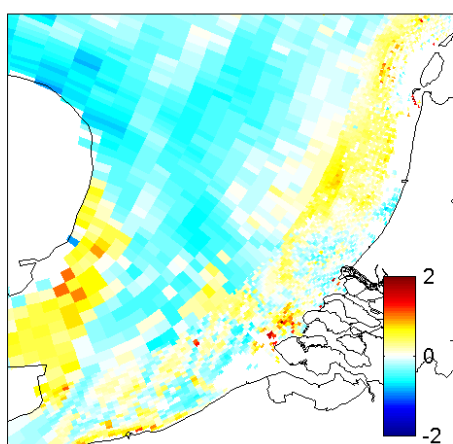
Model at bottom layer



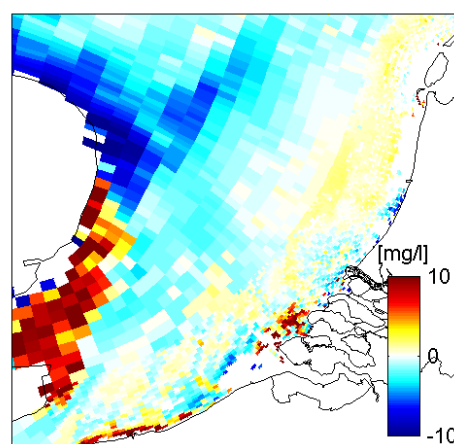
RMS difference



Relative difference [(MERIS-Model)/Model]



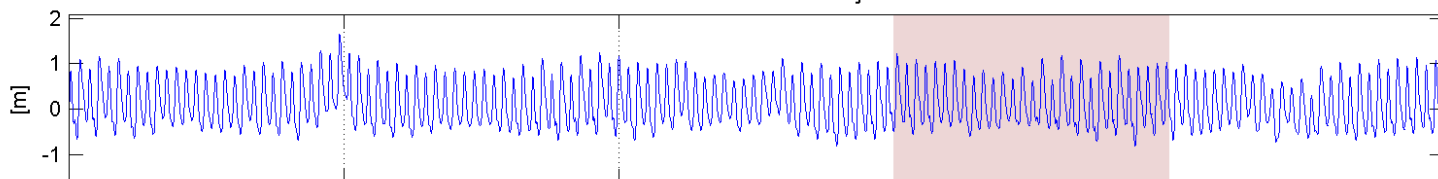
Mean difference [MERIS-Model]

x 10⁶

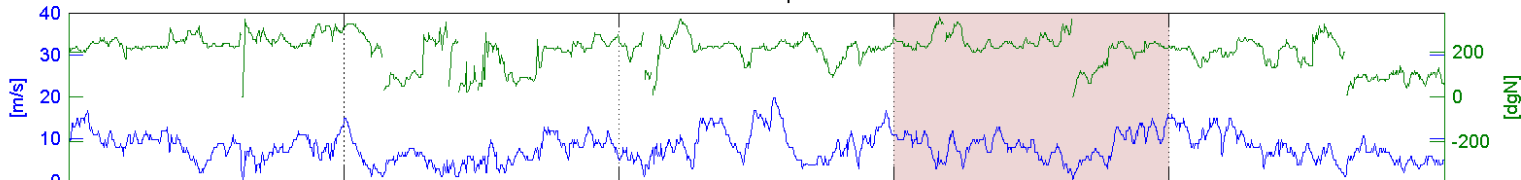
Sand mining volume for Maasvlakte 2



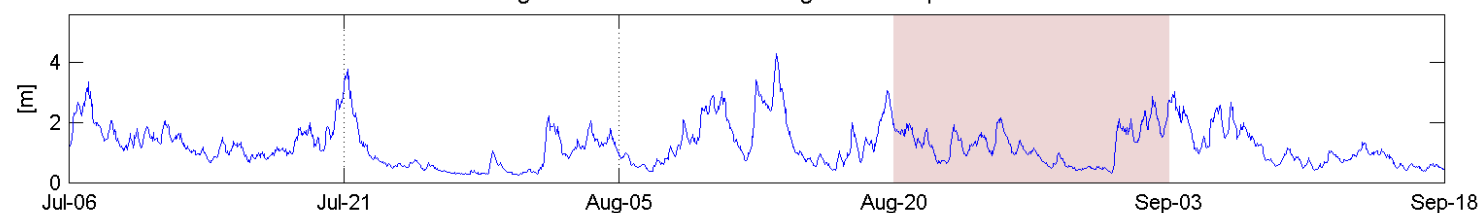
Water level at Noordwijk10



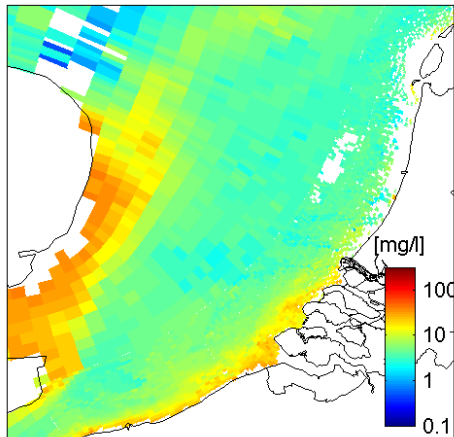
Wind at Euro platform



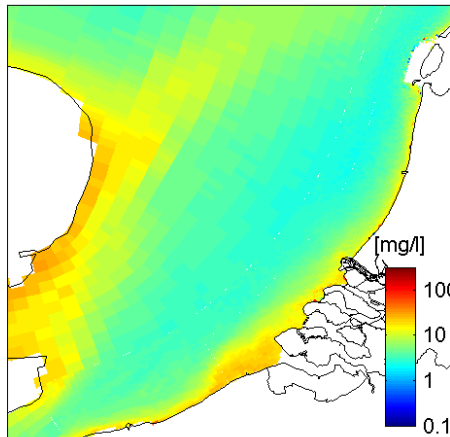
Significant surface wave height at Euro platform



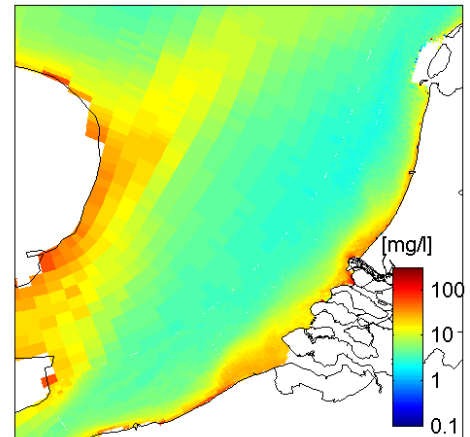
MERIS at surface layer



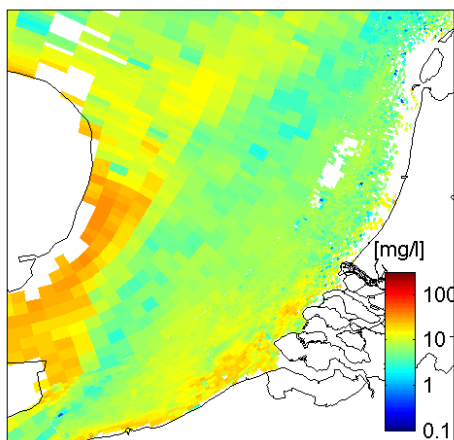
Model at surface layer



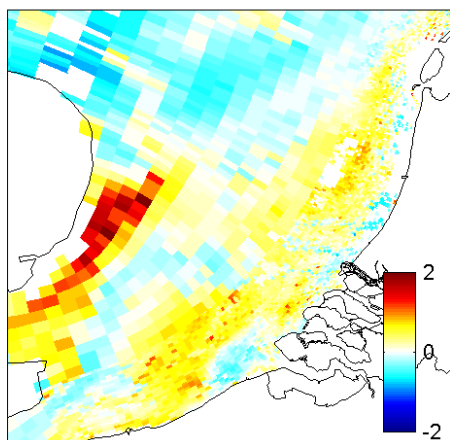
Model at bottom layer



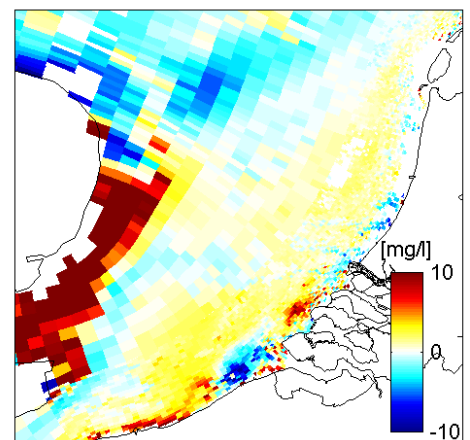
RMS difference



Relative difference [(MERIS-Model)/Model]



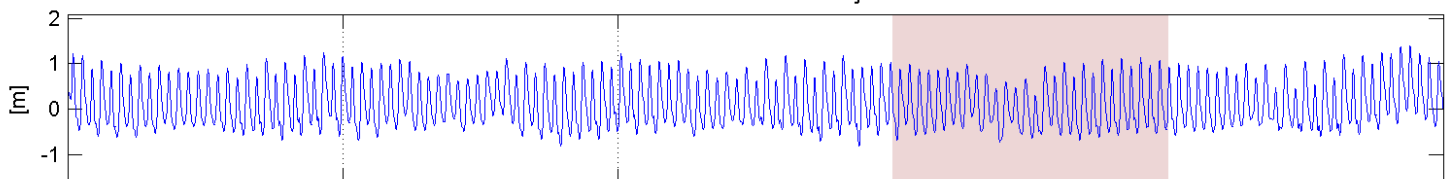
Mean difference [MERIS-Model]

x 10⁶

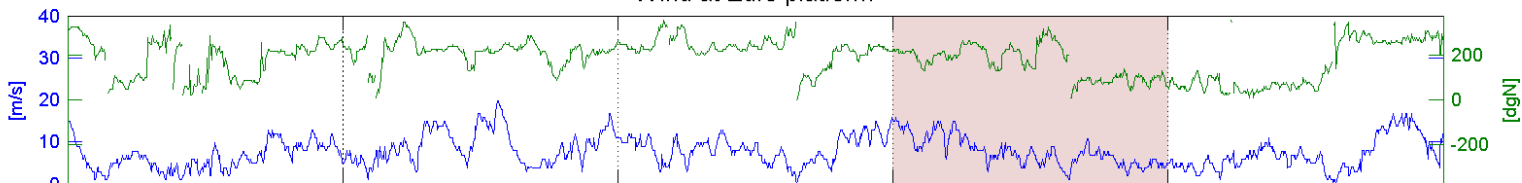
Sand mining volume for Maasvlakte 2



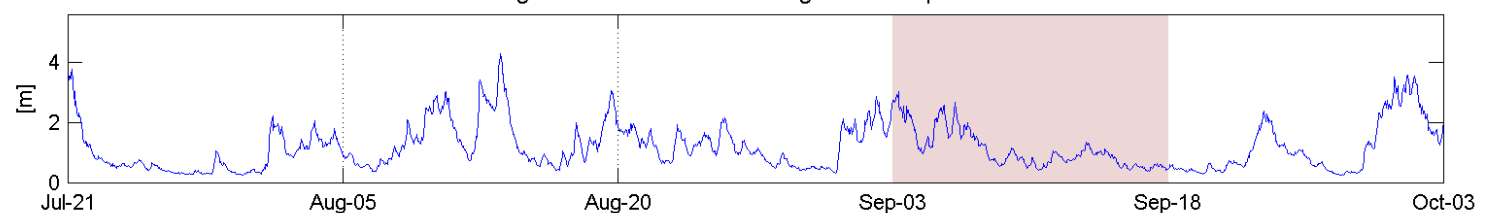
Water level at Noordwijk10



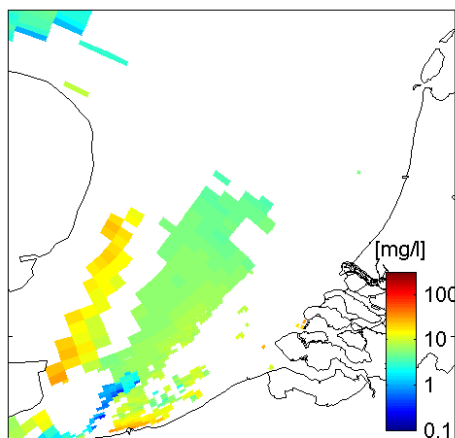
Wind at Euro platform



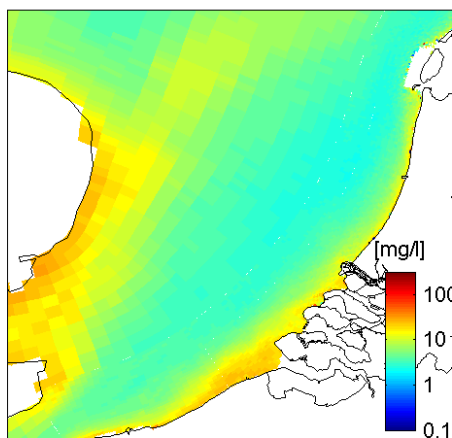
Significant surface wave height at Euro platform



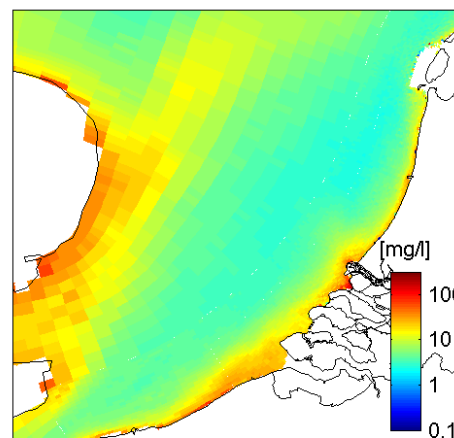
MERIS at surface layer



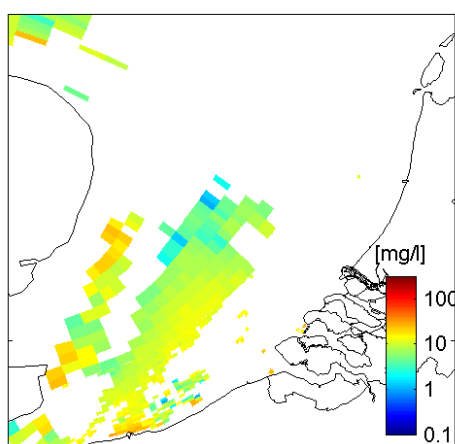
Model at surface layer



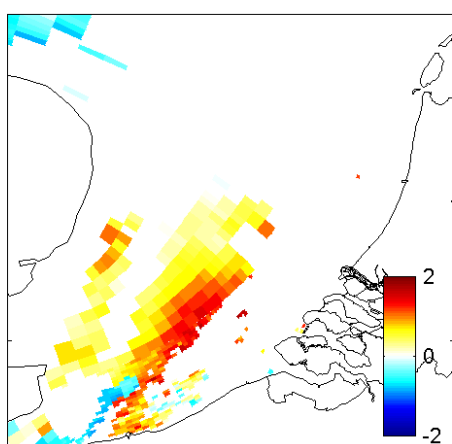
Model at bottom layer



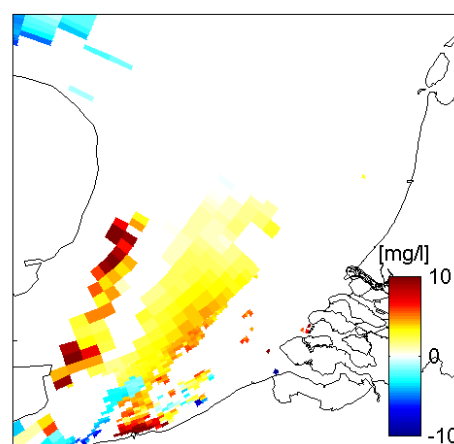
RMS difference



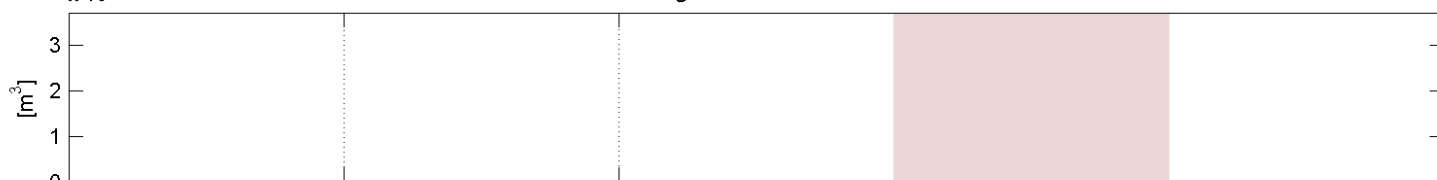
Relative difference [(MERIS-Model)/Model]



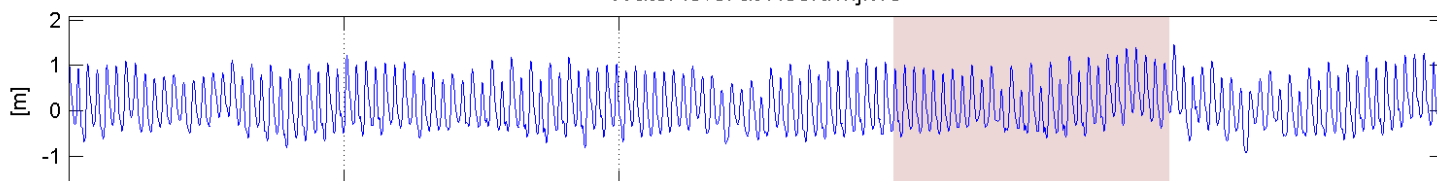
Mean difference [MERIS-Model]

x 10⁶

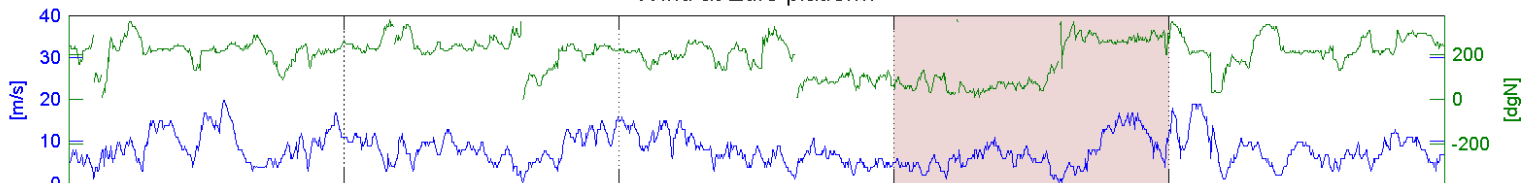
Sand mining volume for Maasvlakte 2



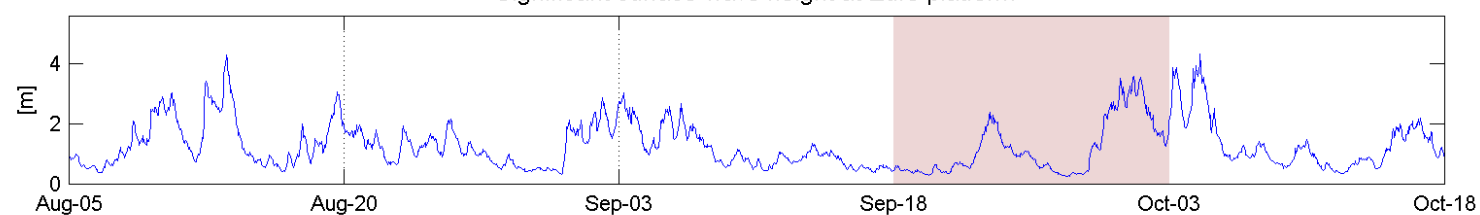
Water level at Noordwijk10



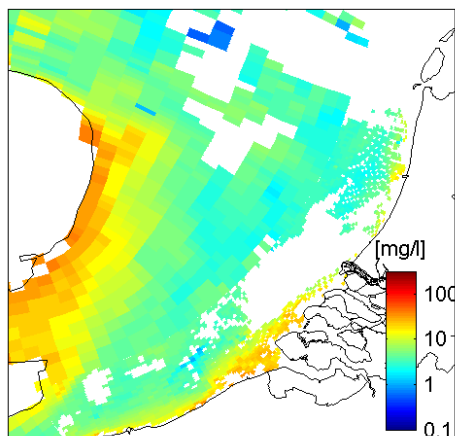
Wind at Euro platform



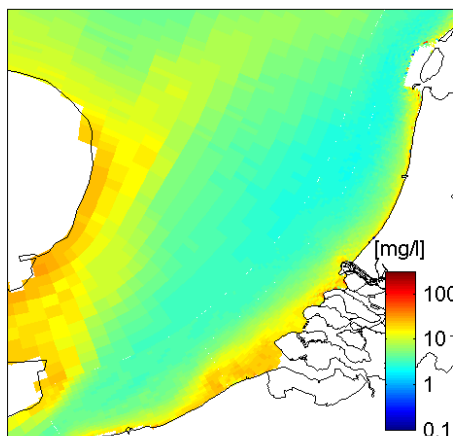
Significant surface wave height at Euro platform



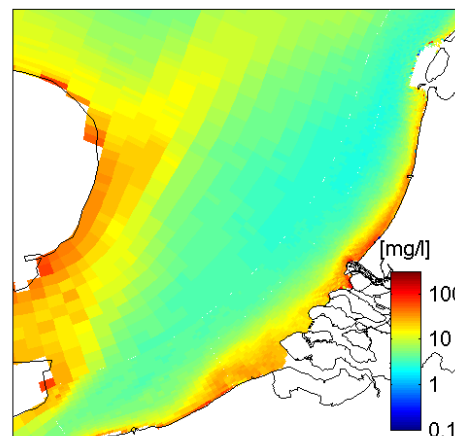
MERIS at surface layer



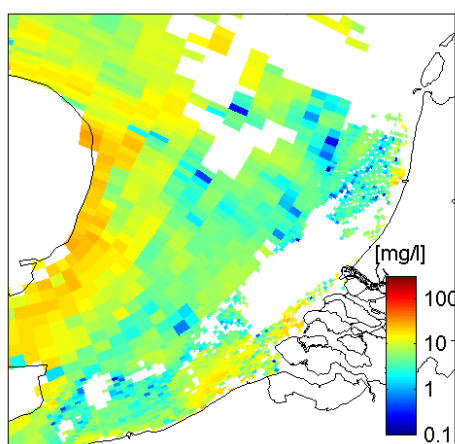
Model at surface layer



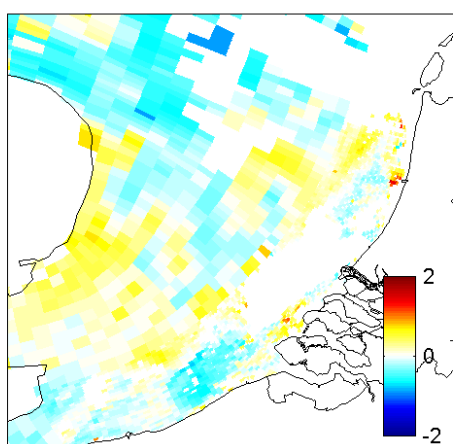
Model at bottom layer



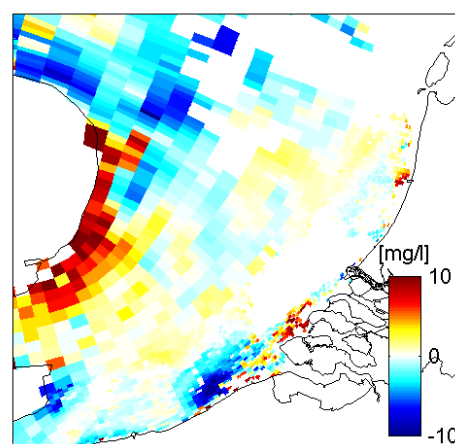
RMS difference



Relative difference [(MERIS-Model)/Model]



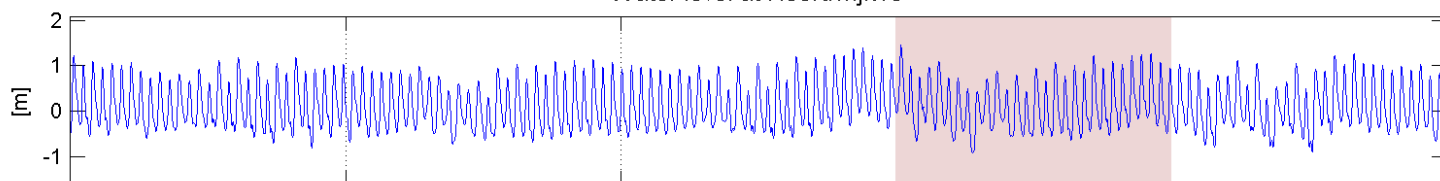
Mean difference [MERIS-Model]

 $\times 10^6$

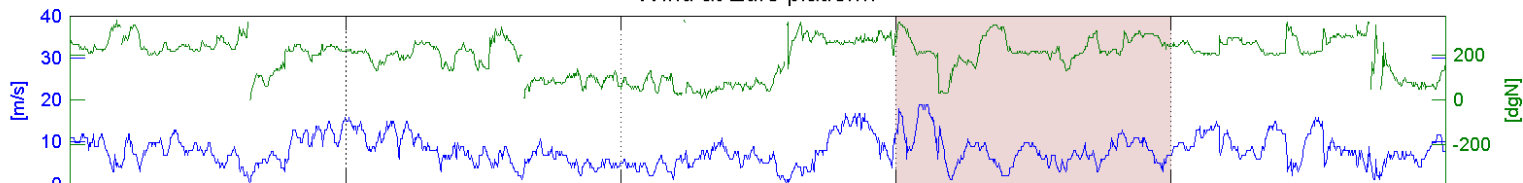
Sand mining volume for Maasvlakte 2



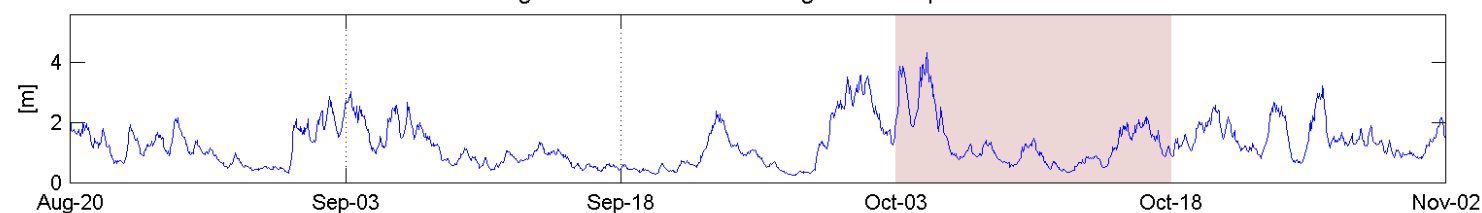
Water level at Noordwijk10



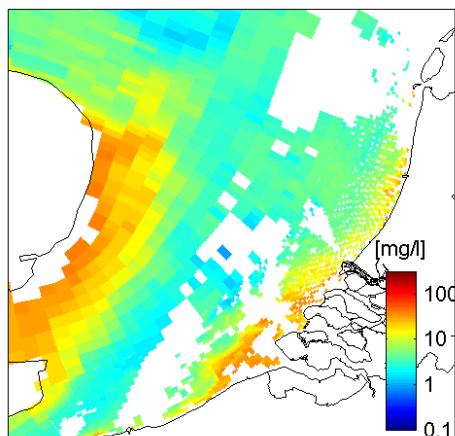
Wind at Euro platform



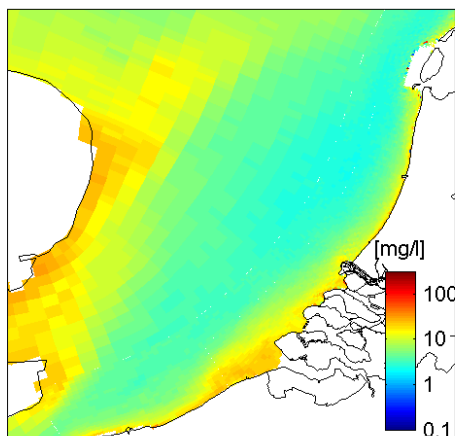
Significant surface wave height at Euro platform



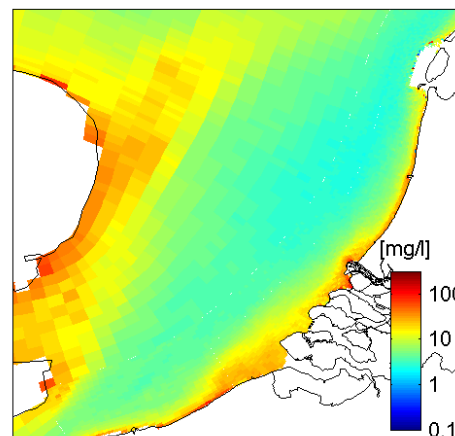
MERIS at surface layer



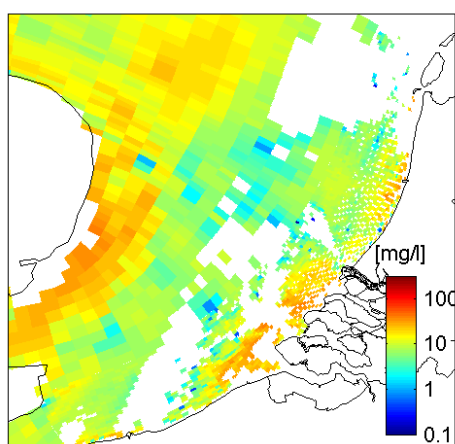
Model at surface layer



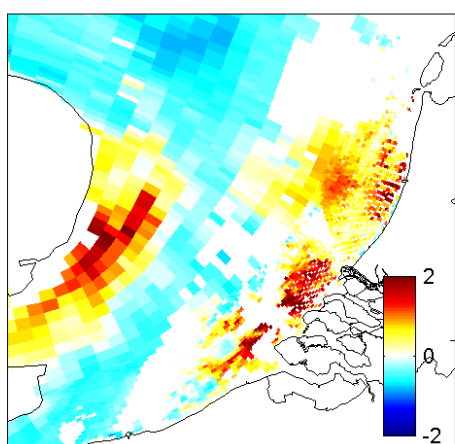
Model at bottom layer



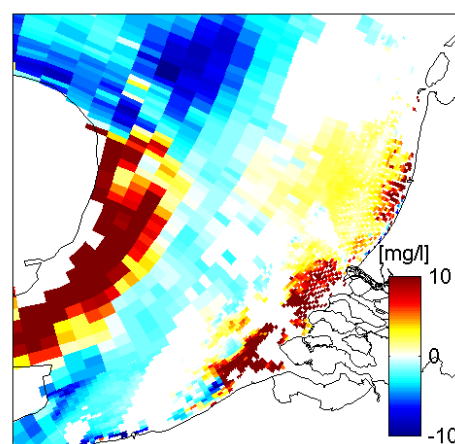
RMS difference



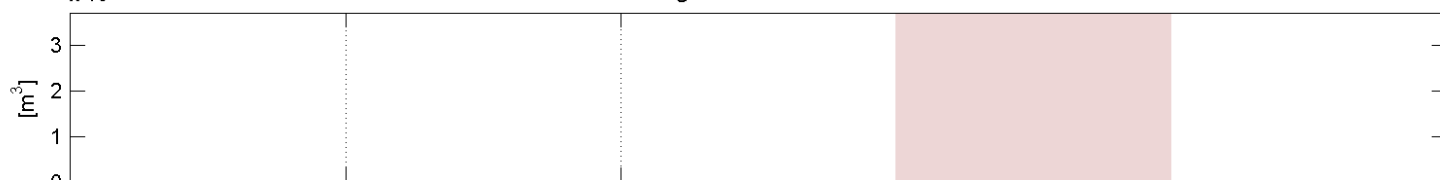
Relative difference [(MERIS-Model)/Model]



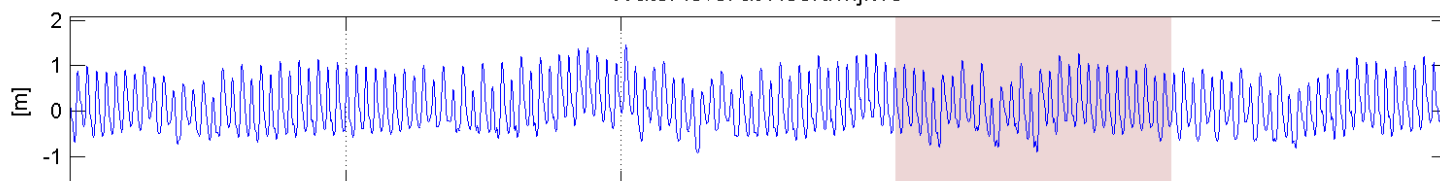
Mean difference [MERIS-Model]


 $\times 10^6$

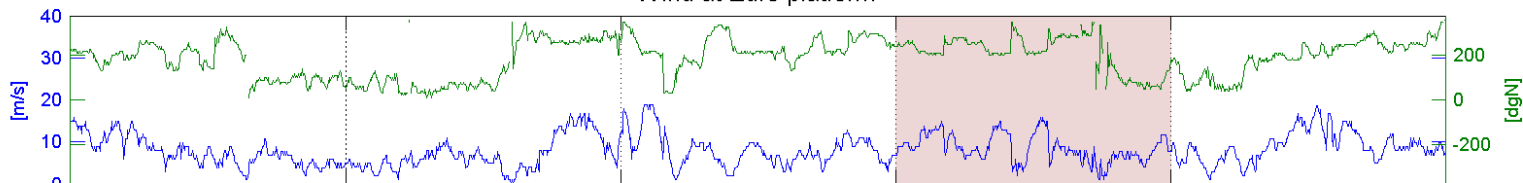
Sand mining volume for Maasvlakte 2



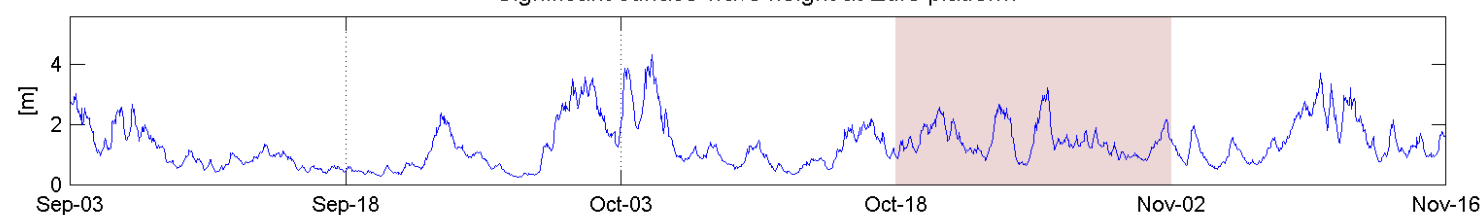
Water level at Noordwijk10



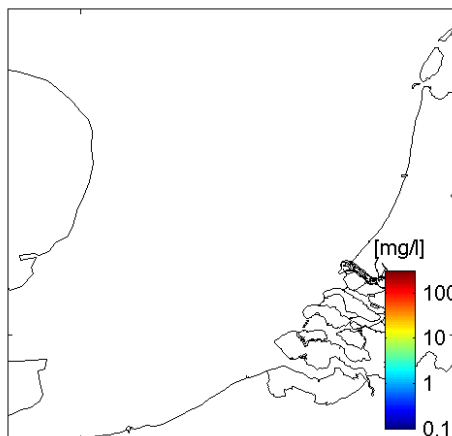
Wind at Euro platform



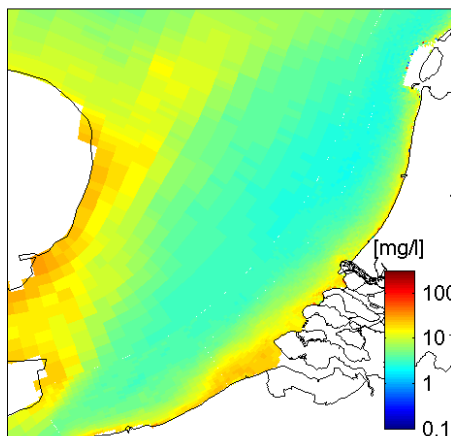
Significant surface wave height at Euro platform



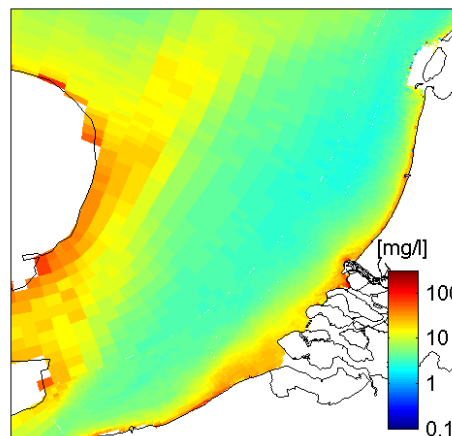
MERIS at surface layer



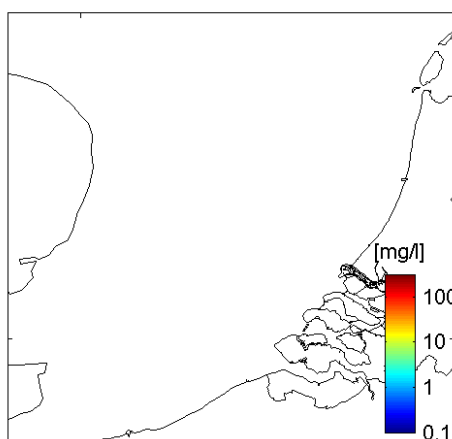
Model at surface layer



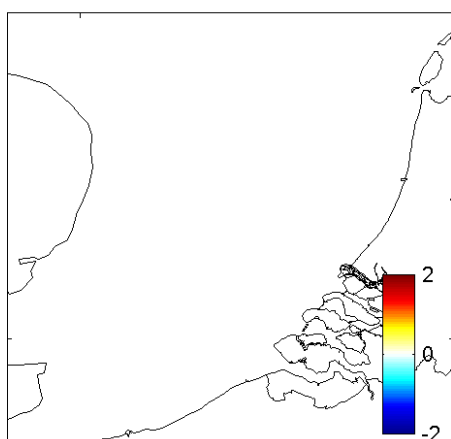
Model at bottom layer



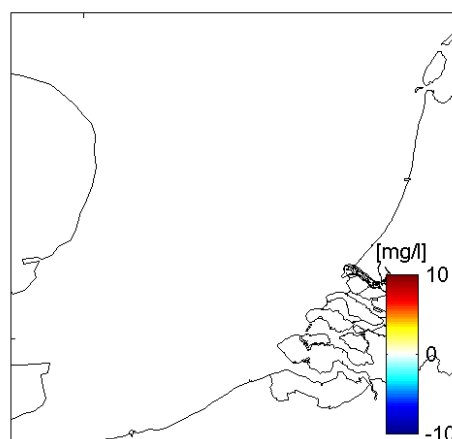
RMS difference



Relative difference [(MERIS-Model)/Model]



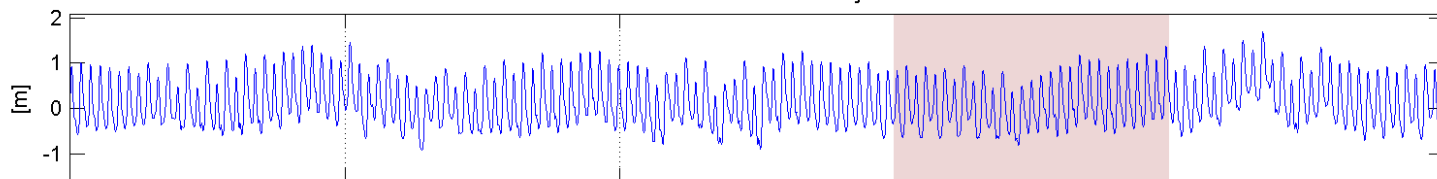
Mean difference [MERIS-Model]


 $\times 10^6$

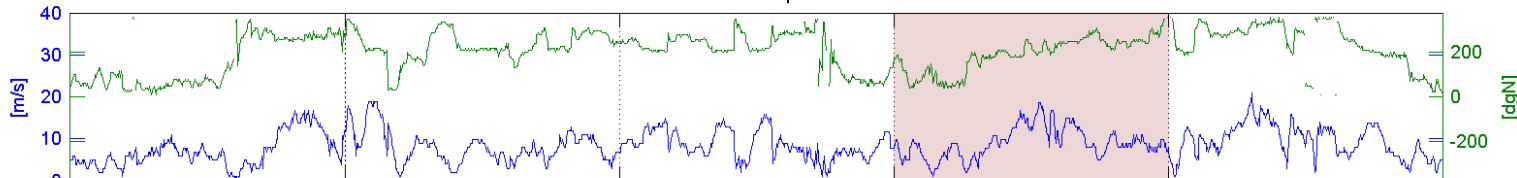
Sand mining volume for Maasvlakte 2



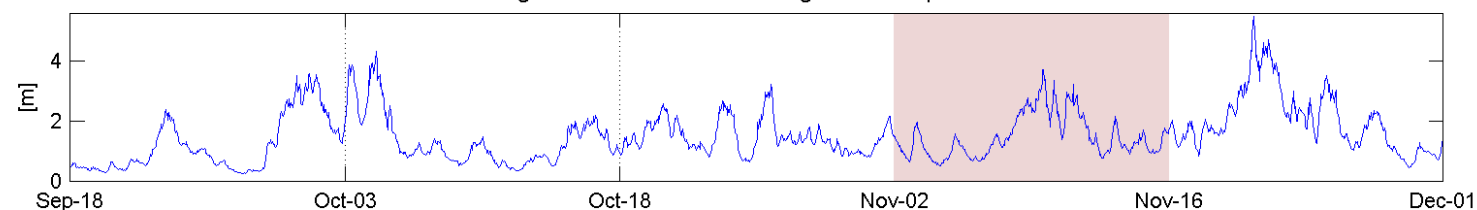
Water level at Noordwijk10



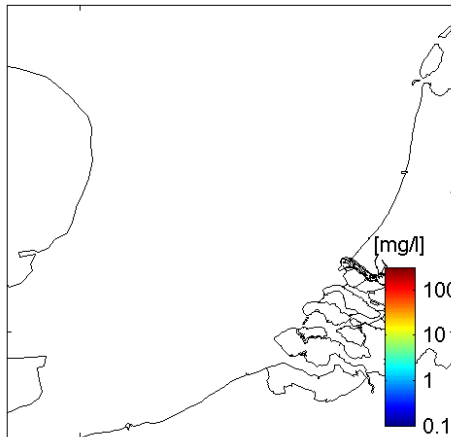
Wind at Euro platform



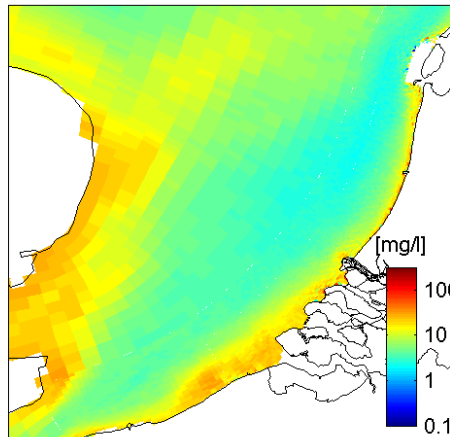
Significant surface wave height at Euro platform



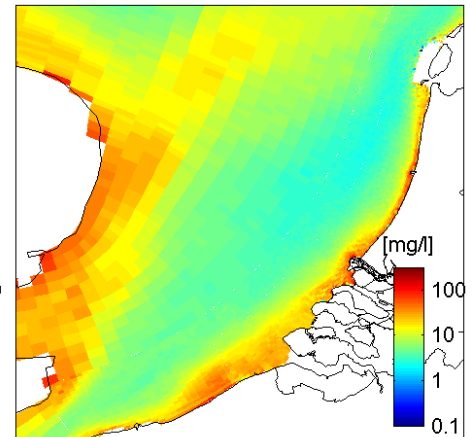
MERIS at surface layer



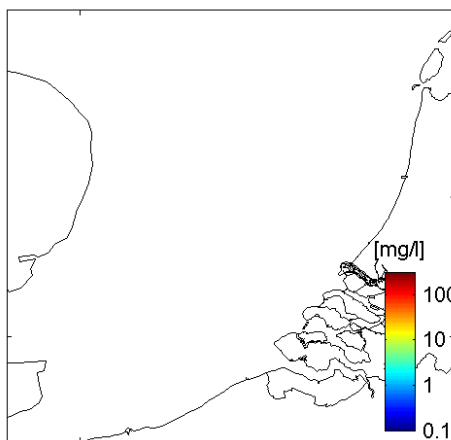
Model at surface layer



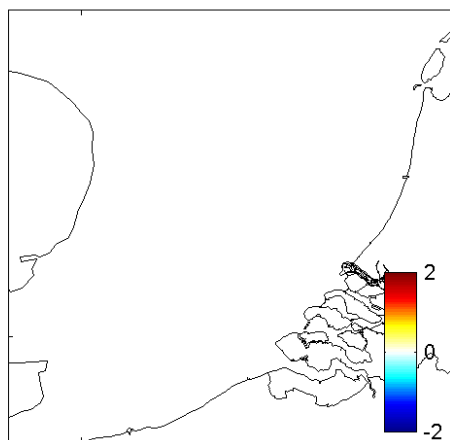
Model at bottom layer



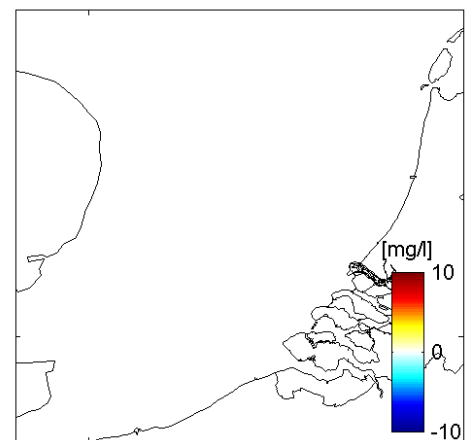
RMS difference



Relative difference [(MERIS-Model)/Model]



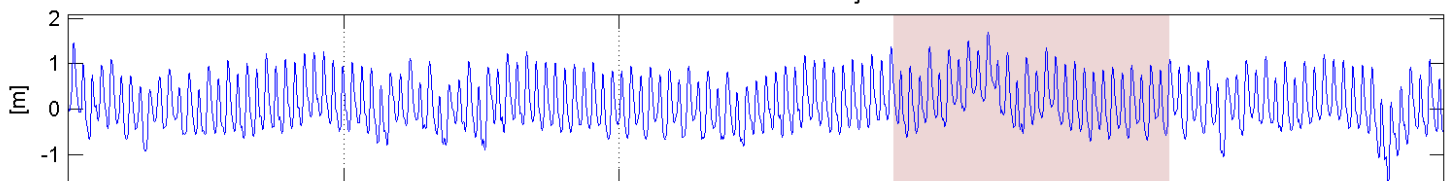
Mean difference [MERIS-Model]

 $\times 10^6$

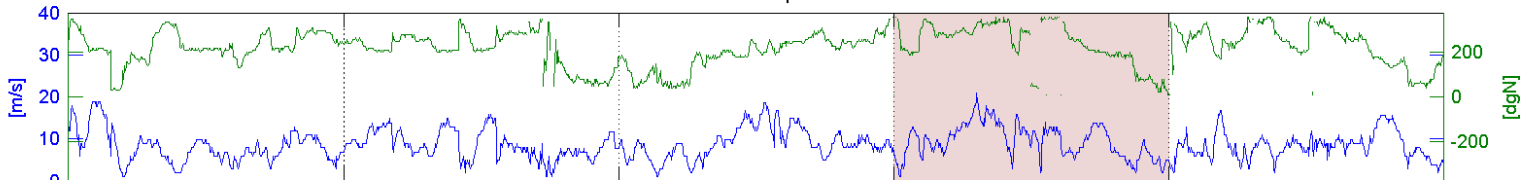
Sand mining volume for Maasvlakte 2



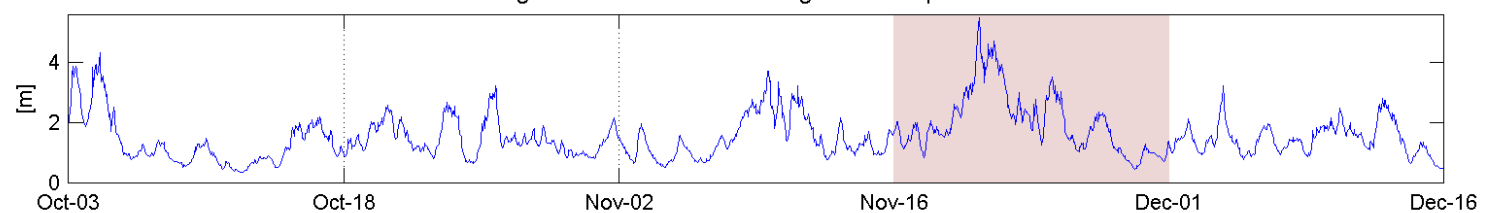
Water level at Noordwijk10



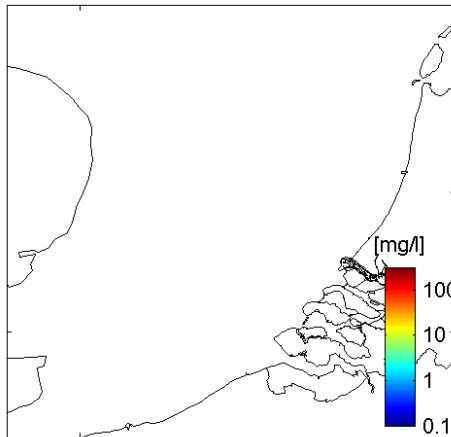
Wind at Euro platform



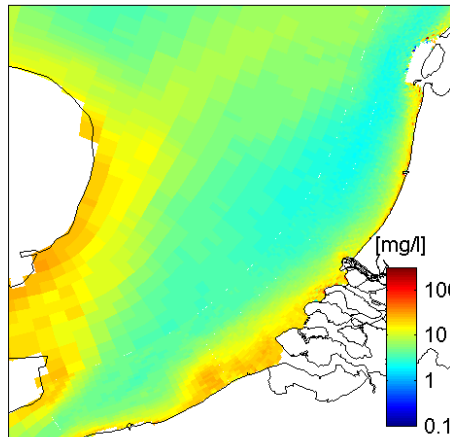
Significant surface wave height at Euro platform



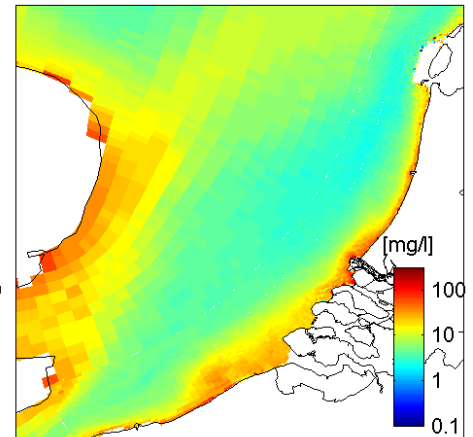
MERIS at surface layer



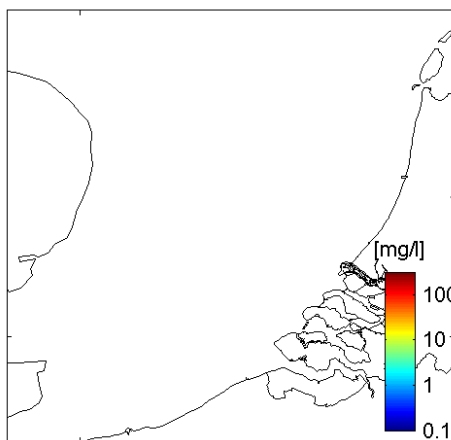
Model at surface layer



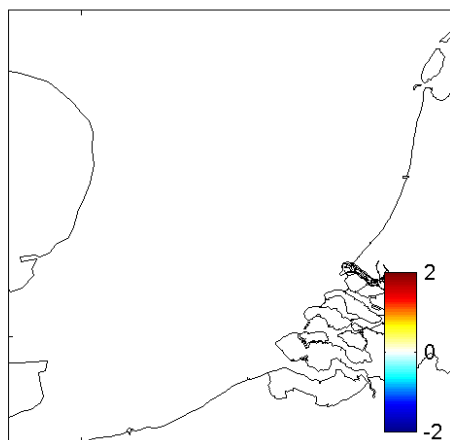
Model at bottom layer



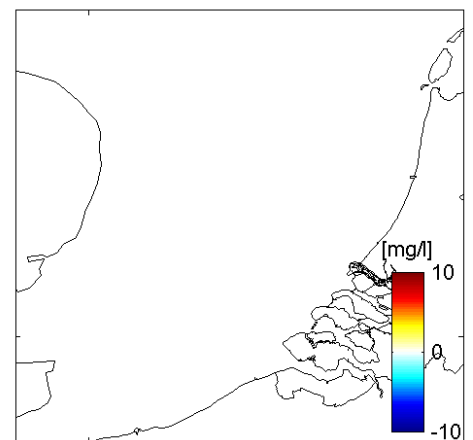
RMS difference



Relative difference [(MERIS-Model)/Model]



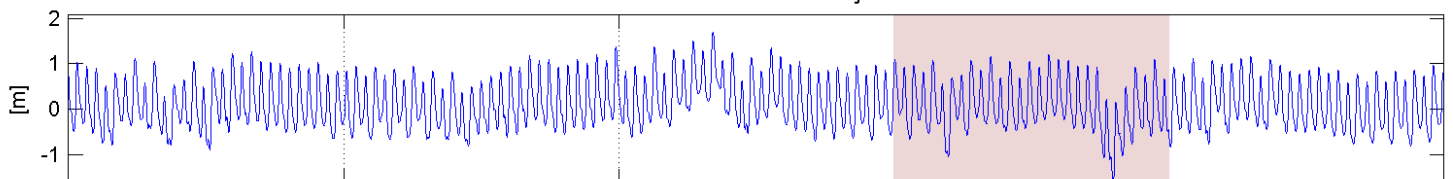
Mean difference [MERIS-Model]

 $\times 10^6$

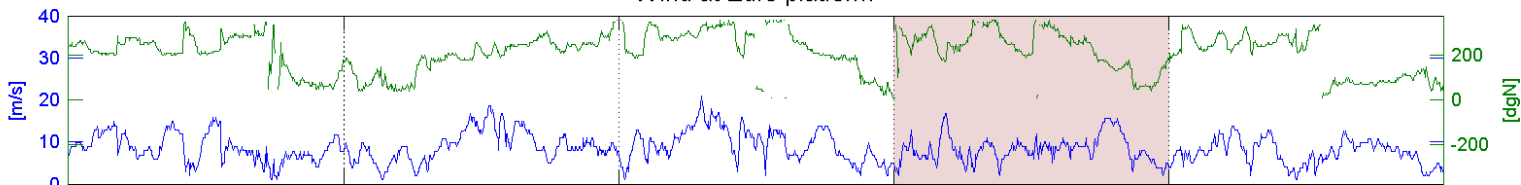
Sand mining volume for Maasvlakte 2



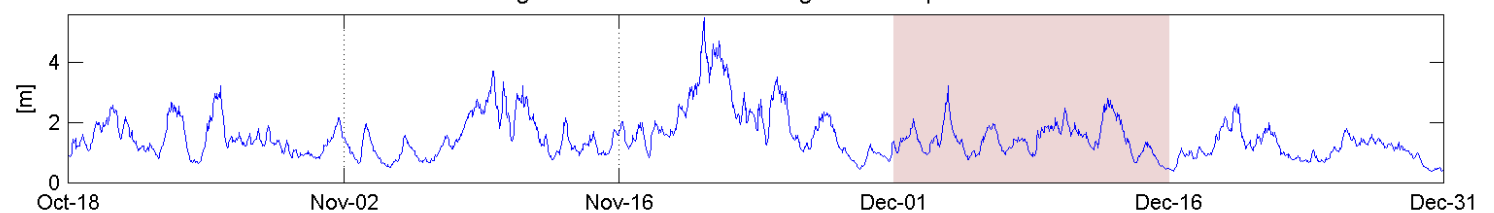
Water level at Noordwijk10



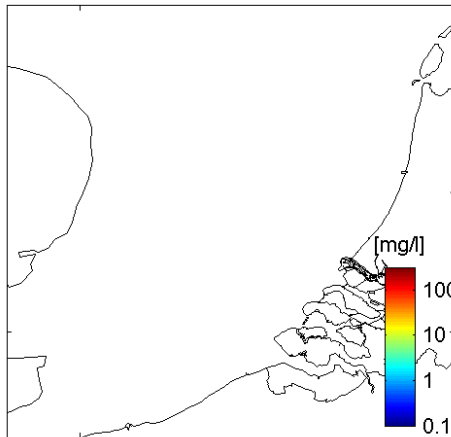
Wind at Euro platform



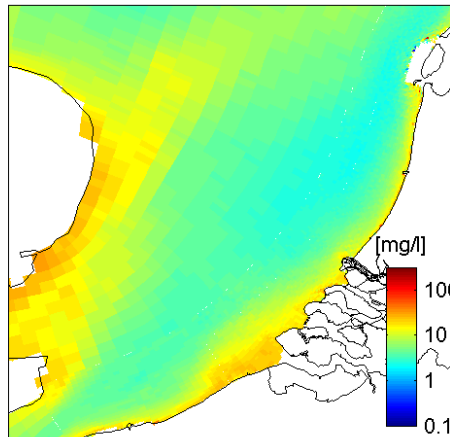
Significant surface wave height at Euro platform



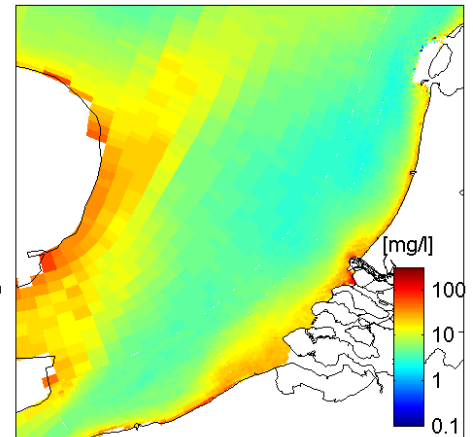
MERIS at surface layer



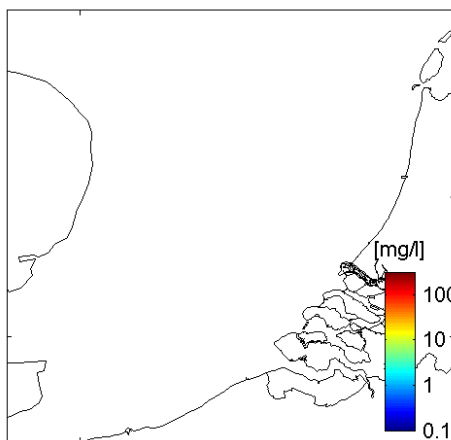
Model at surface layer



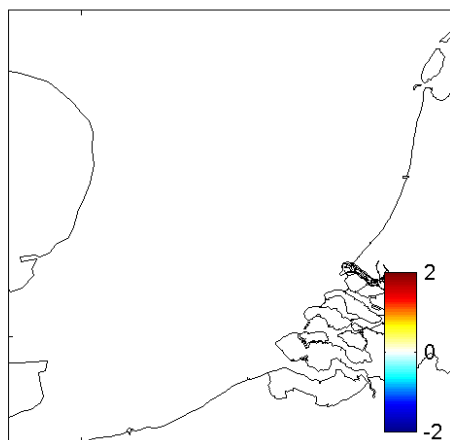
Model at bottom layer



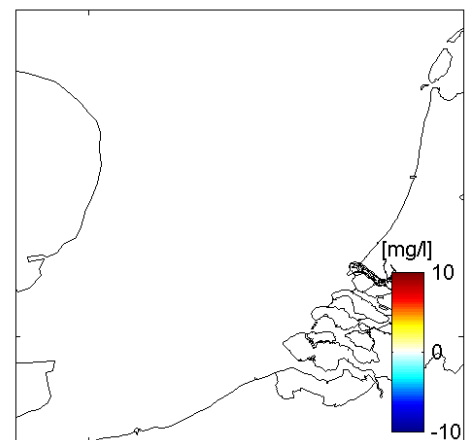
RMS difference



Relative difference [(MERIS-Model)/Model]



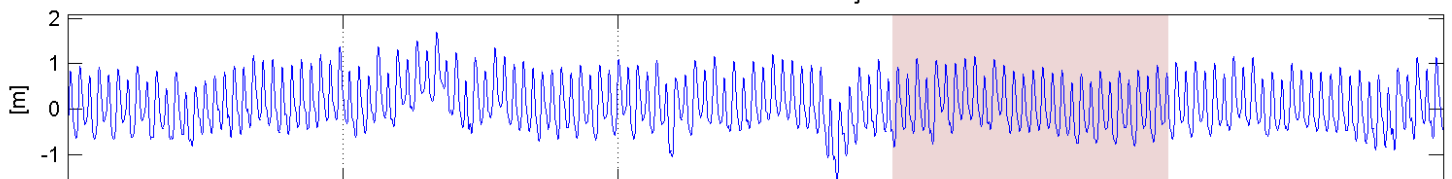
Mean difference [MERIS-Model]

 $\times 10^6$

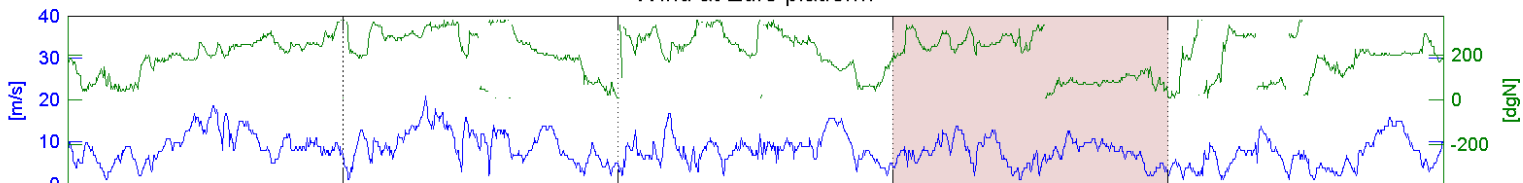
Sand mining volume for Maasvlakte 2



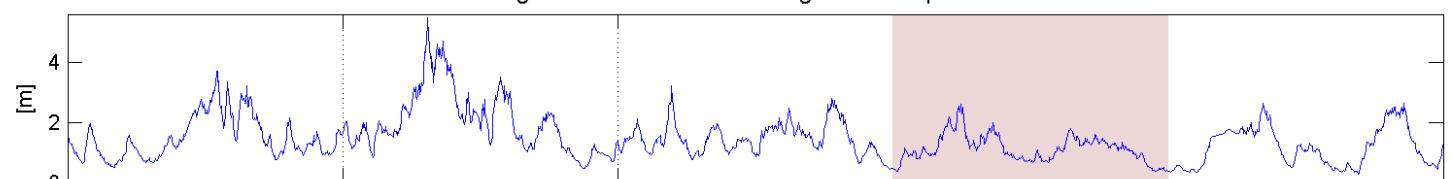
Water level at Noordwijk10



Wind at Euro platform

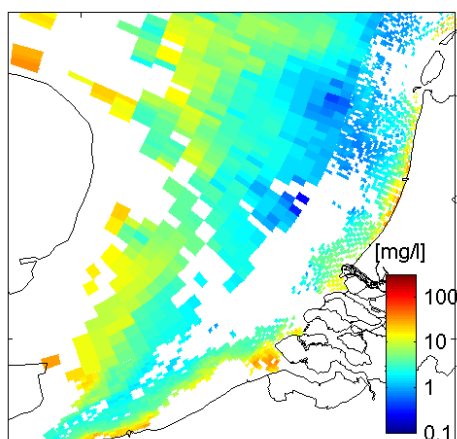


Significant surface wave height at Euro platform

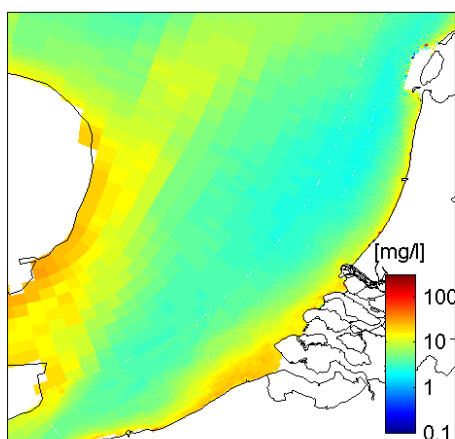


Nov-02 Nov-16 Dec-01 Dec-16 Dec-31 Jan-15

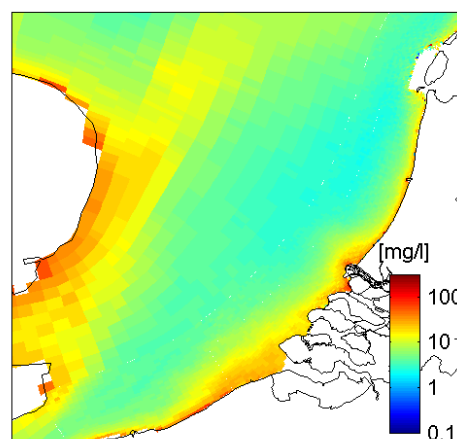
MERIS at surface layer



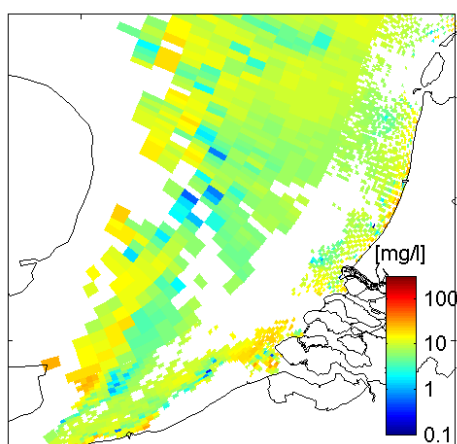
Model at surface layer



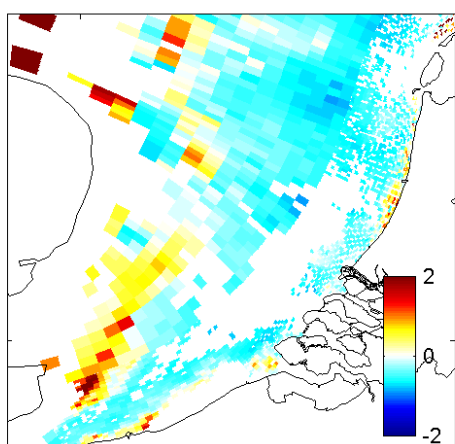
Model at bottom layer



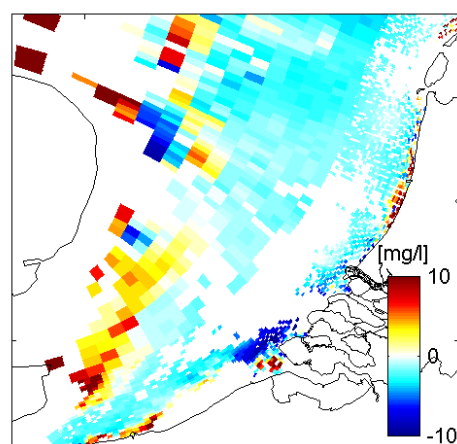
RMS difference



Relative difference [(MERIS-Model)/Model]



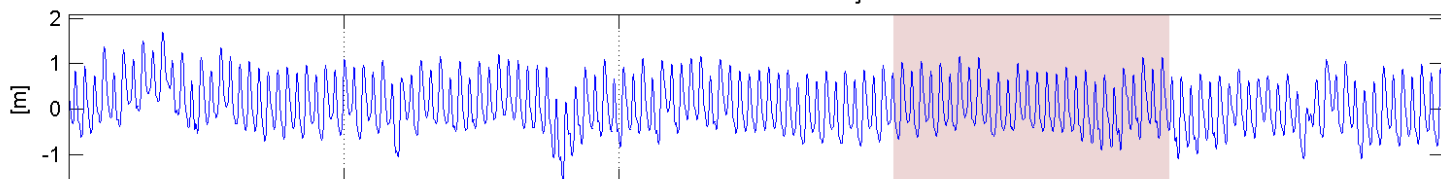
Mean difference [MERIS-Model]


 $\times 10^6$

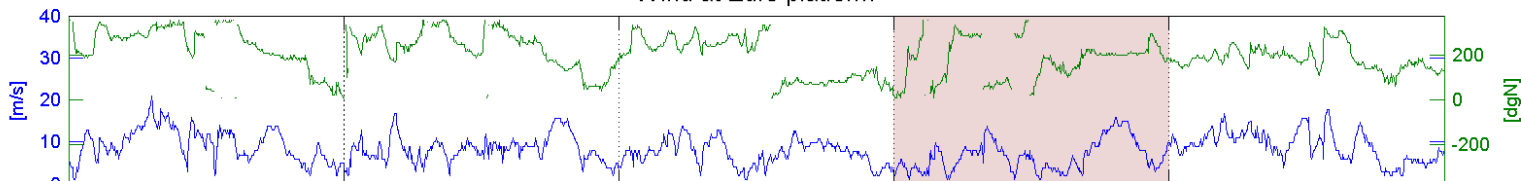
Sand mining volume for Maasvlakte 2



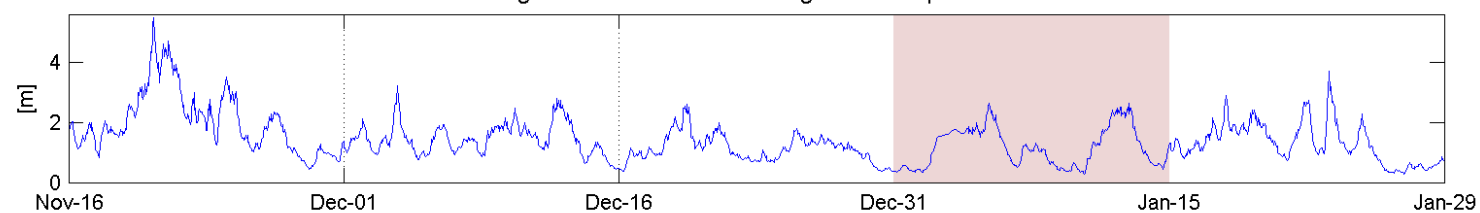
Water level at Noordwijk10



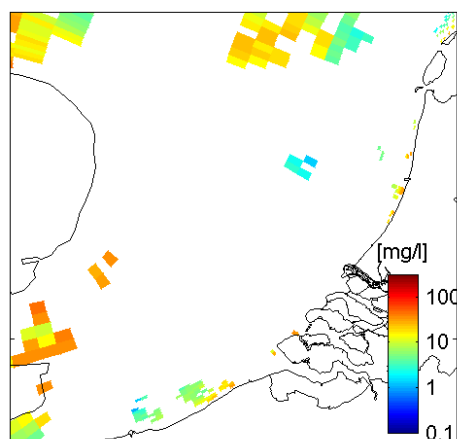
Wind at Euro platform



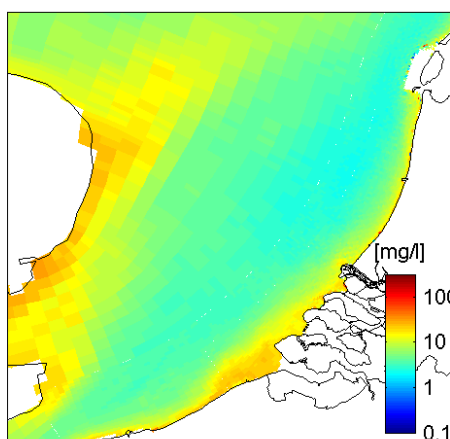
Significant surface wave height at Euro platform



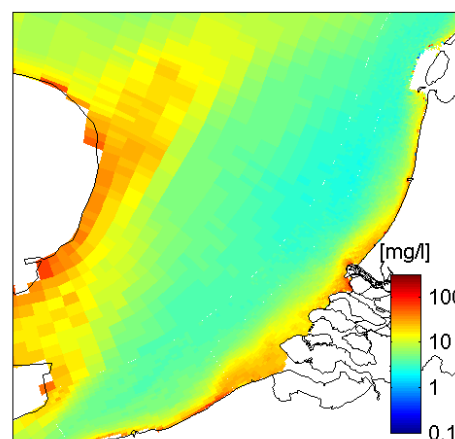
MERIS at surface layer



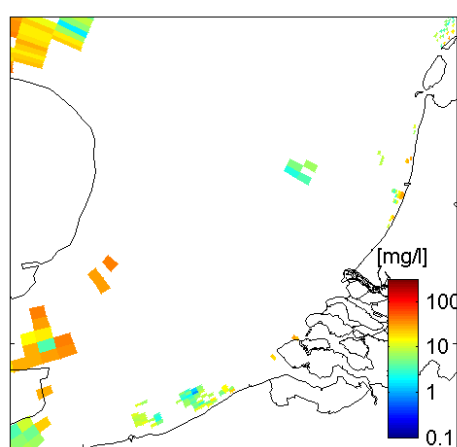
Model at surface layer



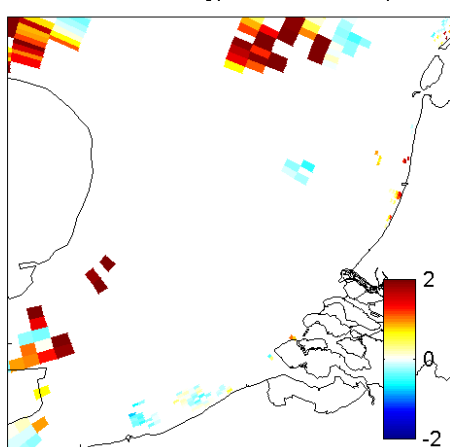
Model at bottom layer



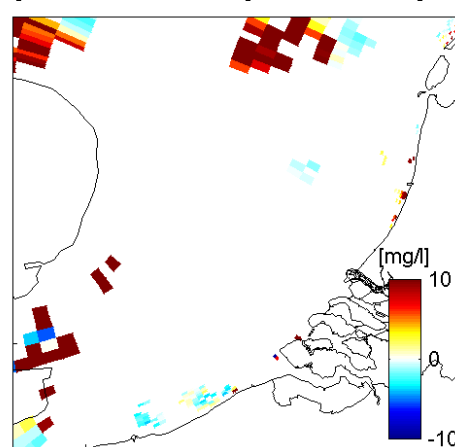
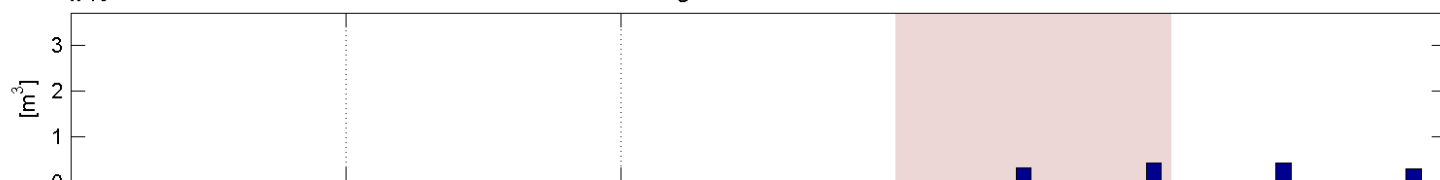
RMS difference



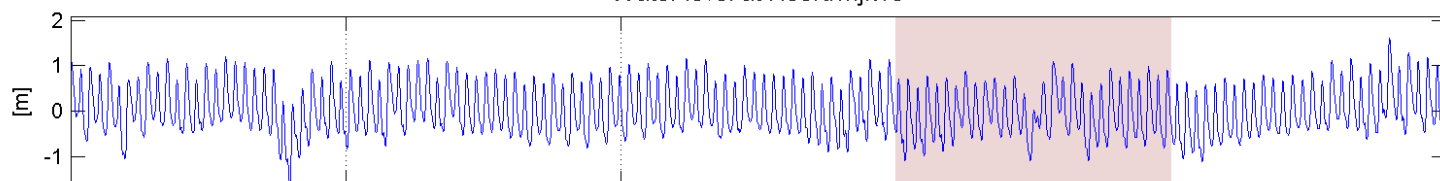
Relative difference [(MERIS-Model)/Model]



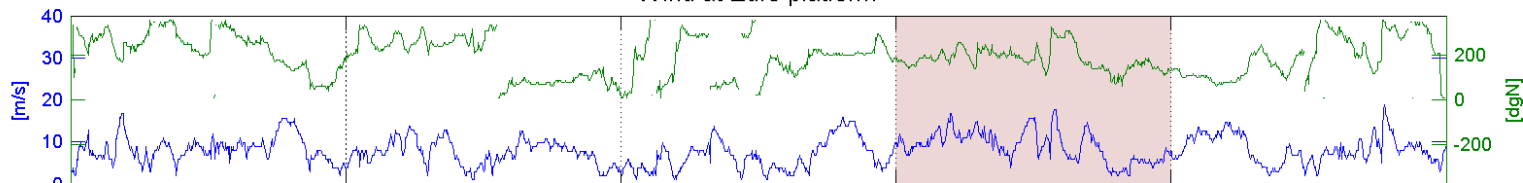
Mean difference [MERIS-Model]


x 10⁶ Sand mining volume for Maasvlakte 2

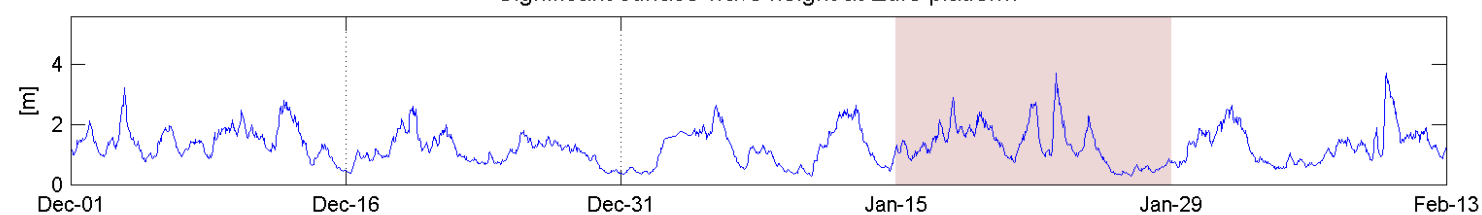
Water level at Noordwijk10



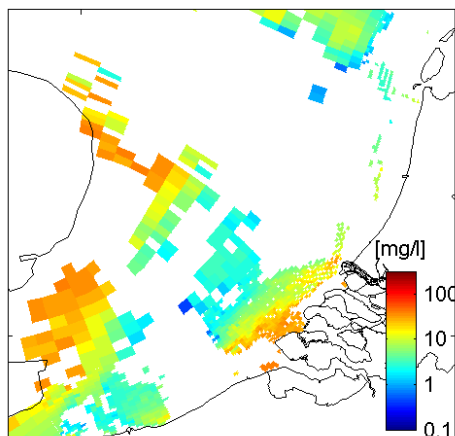
Wind at Euro platform



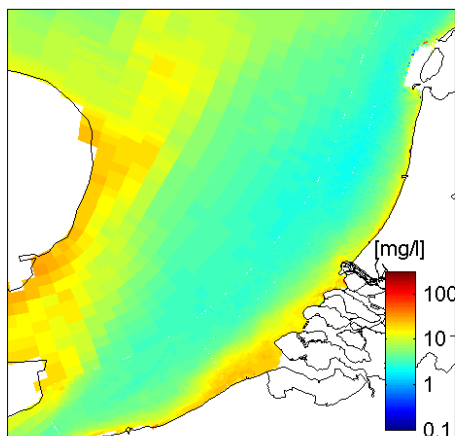
Significant surface wave height at Euro platform



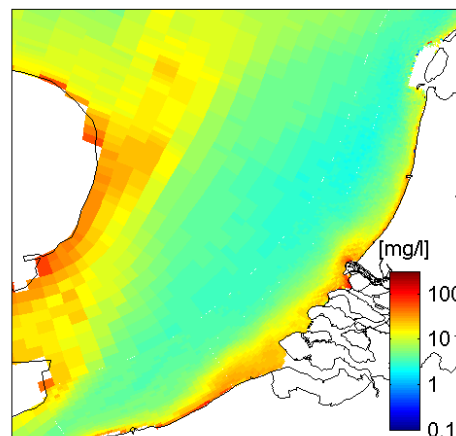
MERIS at surface layer



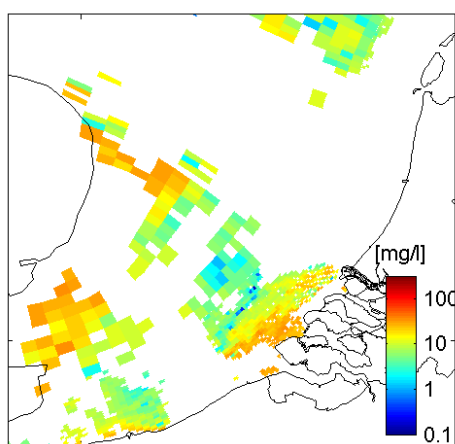
Model at surface layer



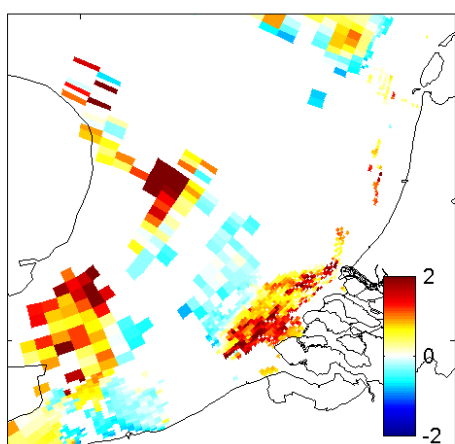
Model at bottom layer



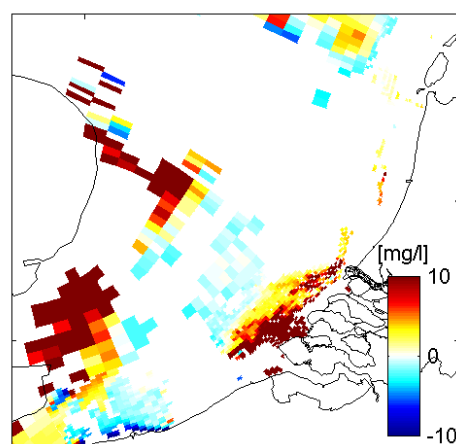
RMS difference



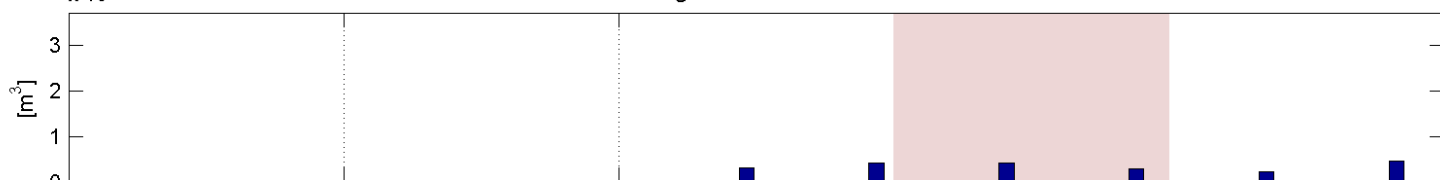
Relative difference [(MERIS-Model)/Model]



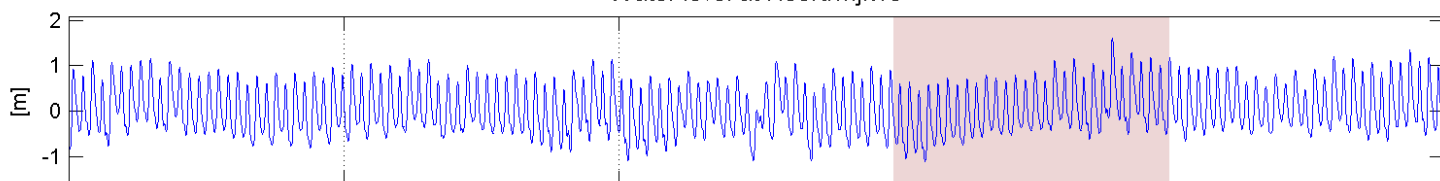
Mean difference [MERIS-Model]


x 10⁶

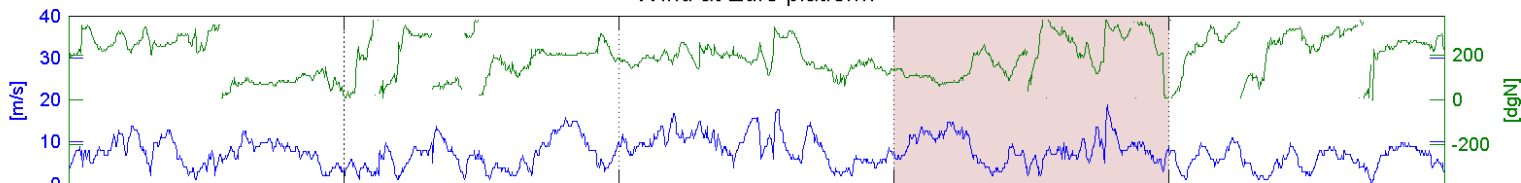
Sand mining volume for Maasvlakte 2



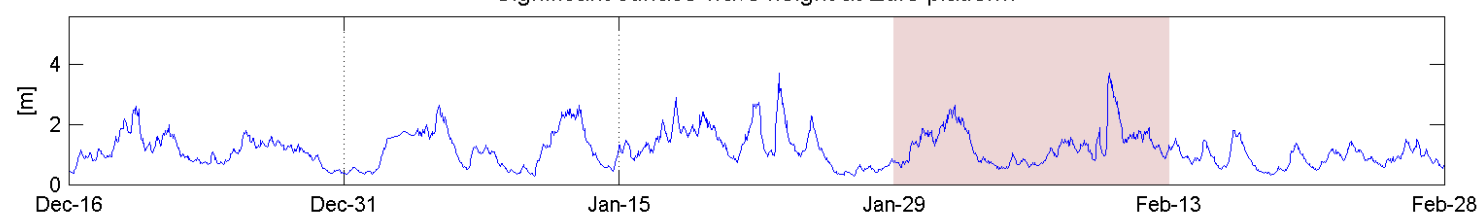
Water level at Noordwijk10



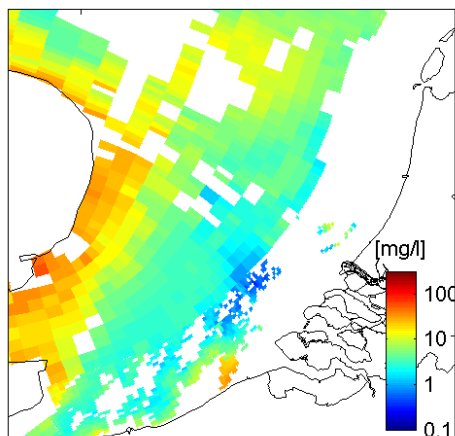
Wind at Euro platform



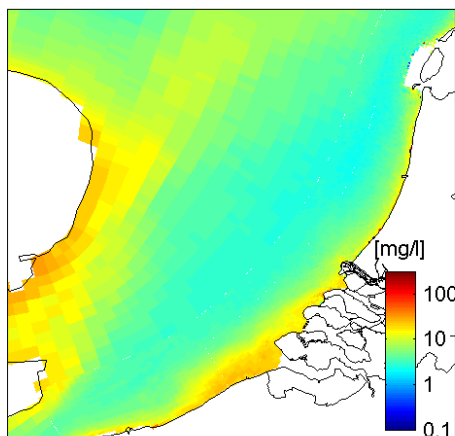
Significant surface wave height at Euro platform



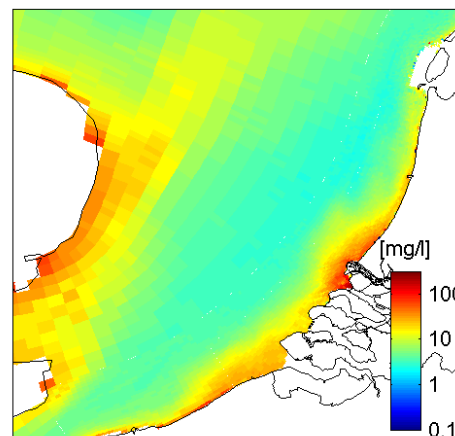
MERIS at surface layer



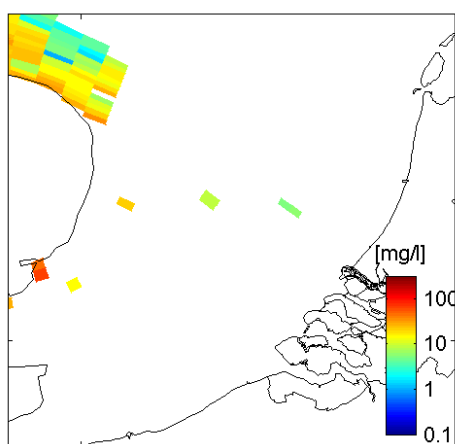
Model at surface layer



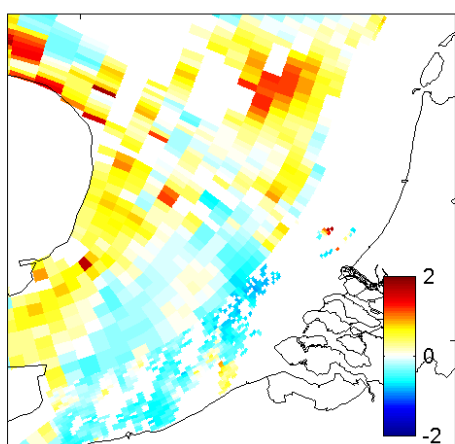
Model at bottom layer



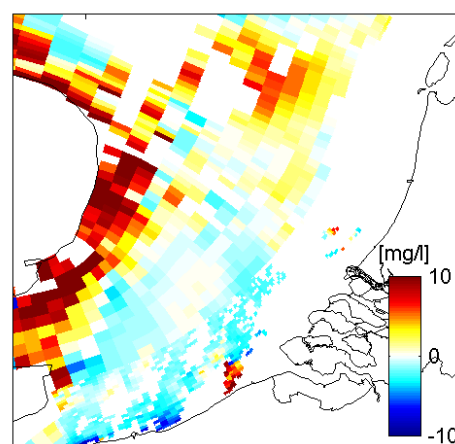
RMS difference



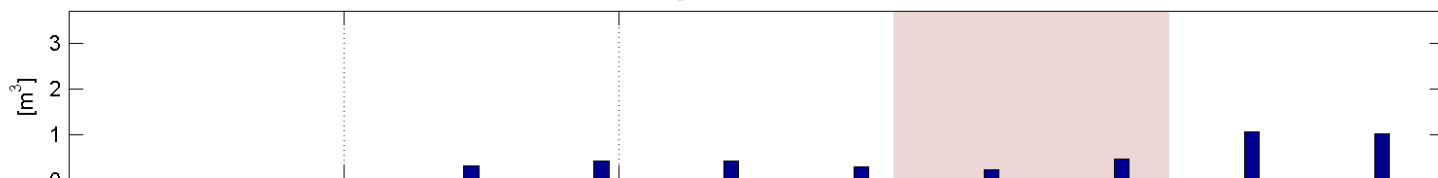
Relative difference [(MERIS-Model)/Model]



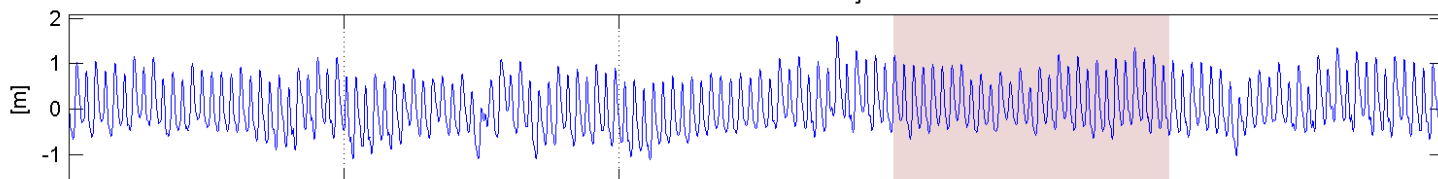
Mean difference [MERIS-Model]


x 10⁶

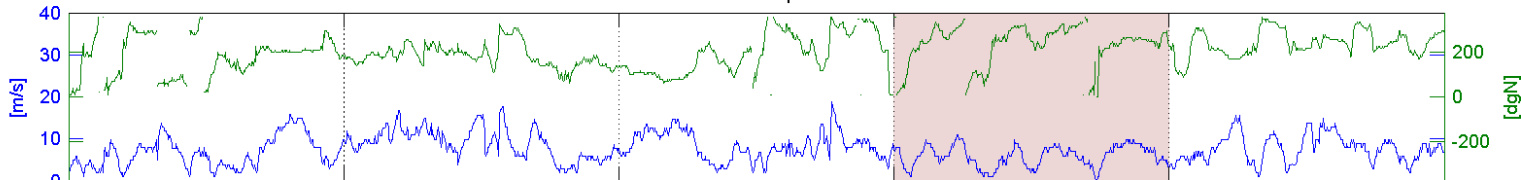
Sand mining volume for Maasvlakte 2



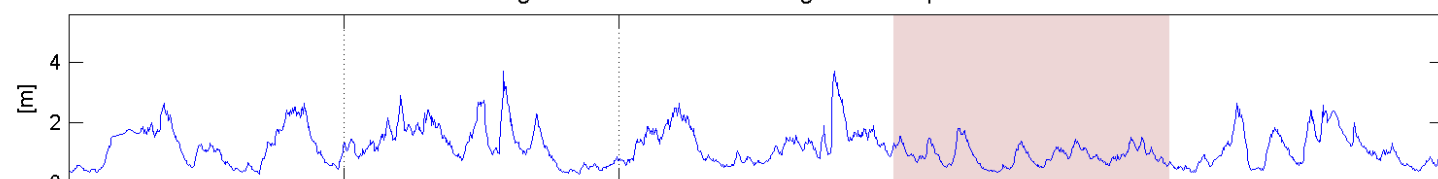
Water level at Noordwijk10



Wind at Euro platform

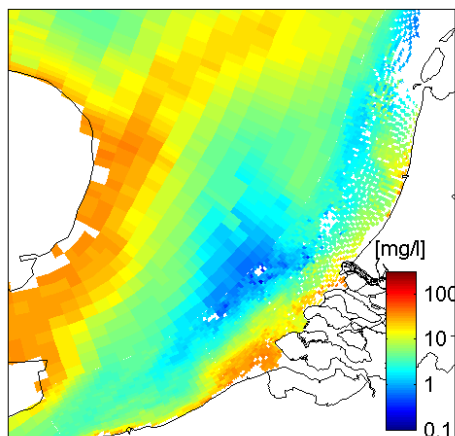


Significant surface wave height at Euro platform

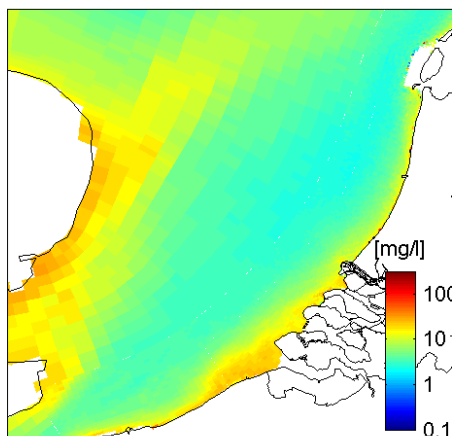


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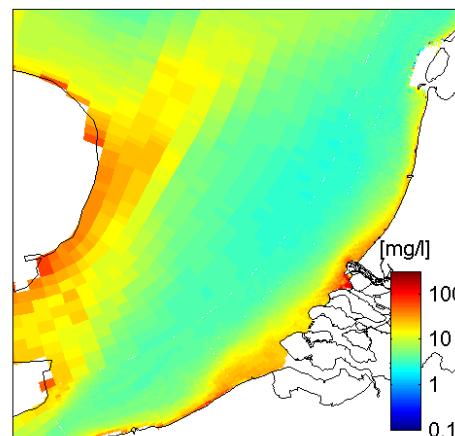
MERIS at surface layer



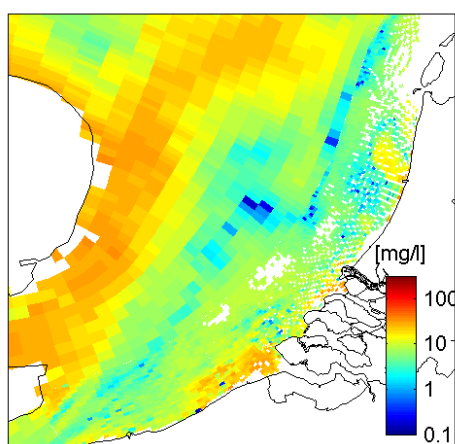
Model at surface layer



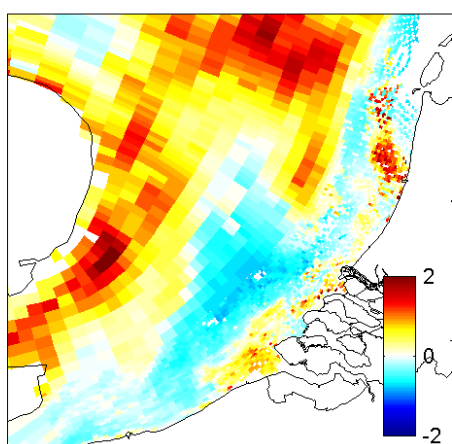
Model at bottom layer



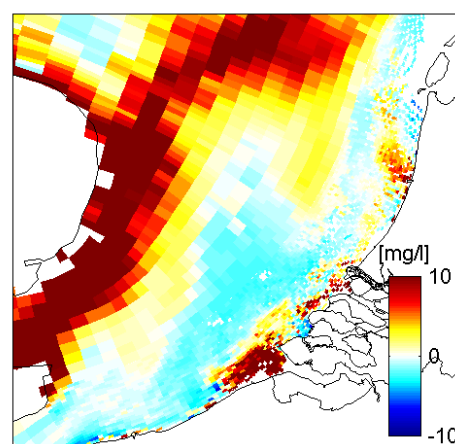
RMS difference



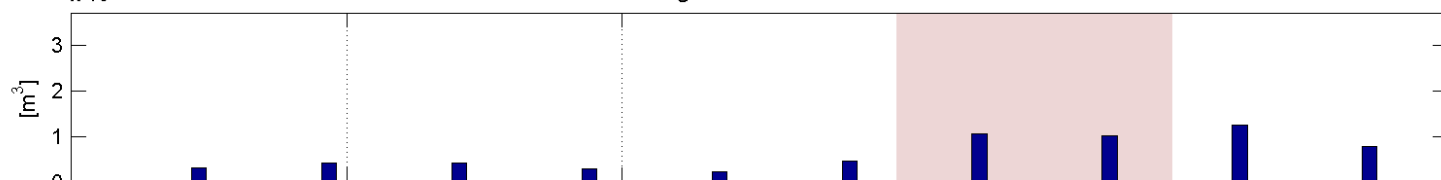
Relative difference [(MERIS-Model)/Model]



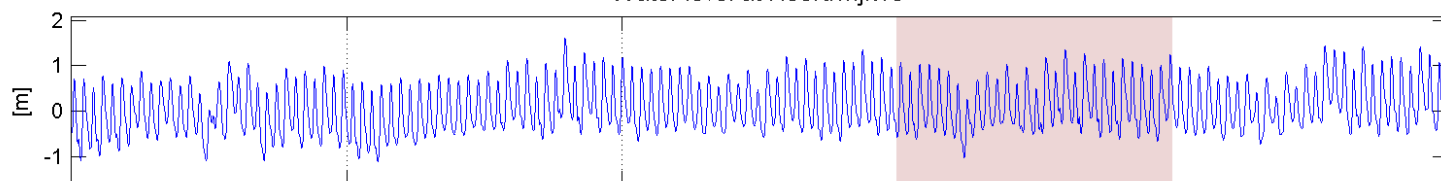
Mean difference [MERIS-Model]


 $\times 10^6$

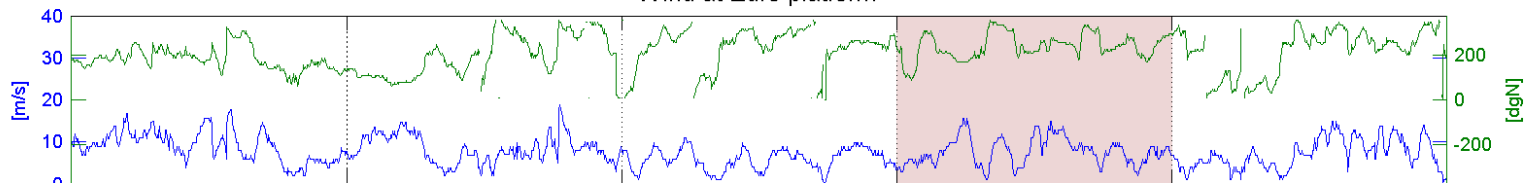
Sand mining volume for Maasvlakte 2



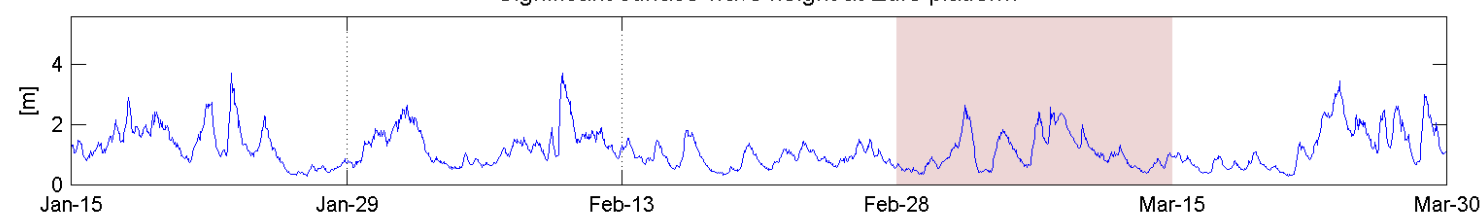
Water level at Noordwijk10



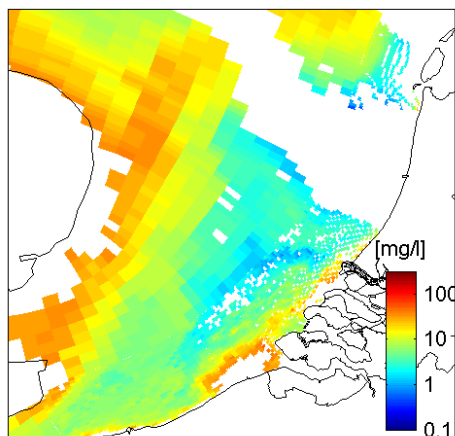
Wind at Euro platform



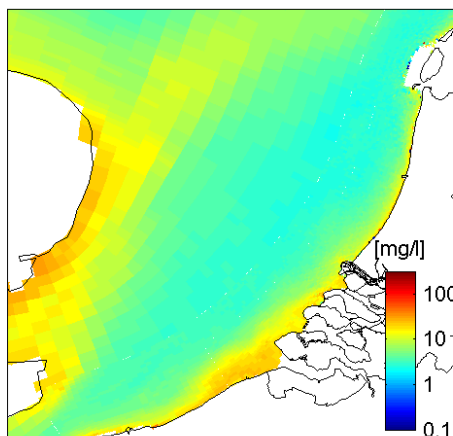
Significant surface wave height at Euro platform



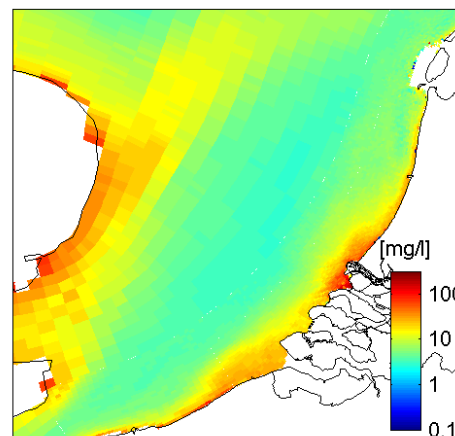
MERIS at surface layer



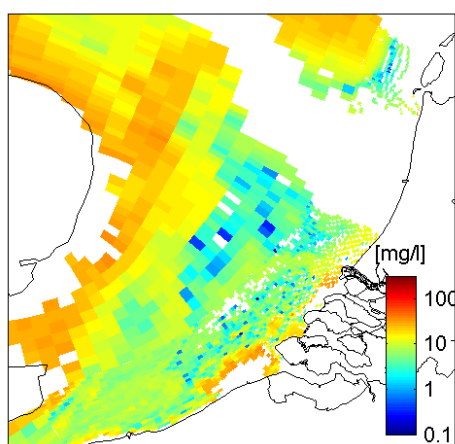
Model at surface layer



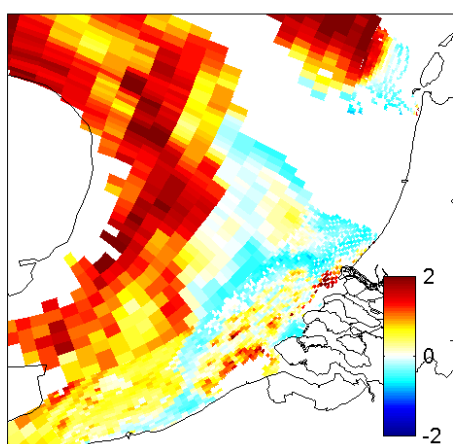
Model at bottom layer



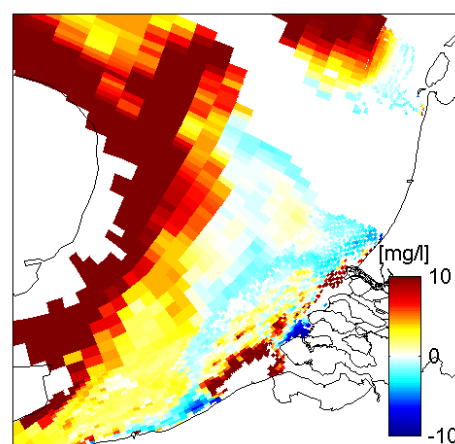
RMS difference



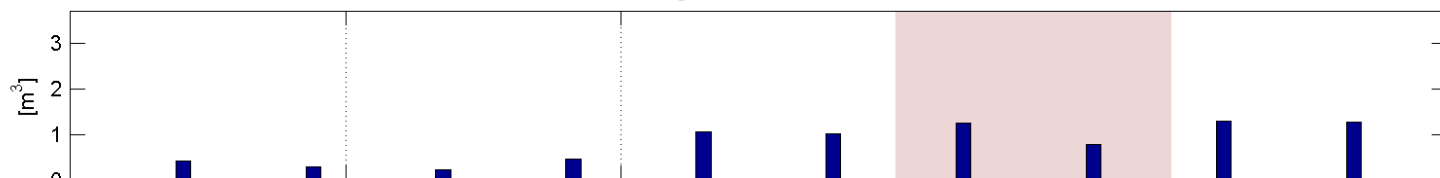
Relative difference [(MERIS-Model)/Model]



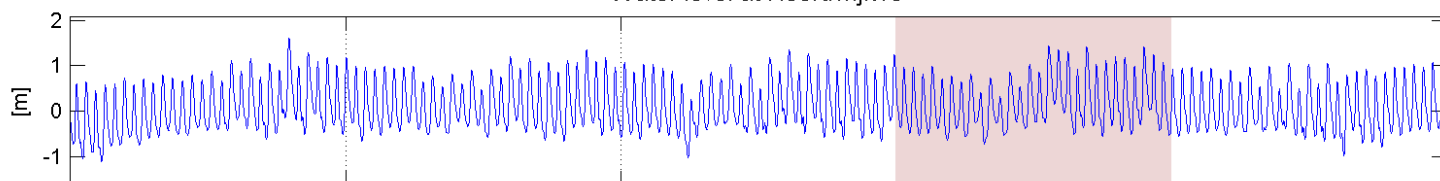
Mean difference [MERIS-Model]


x 10⁶

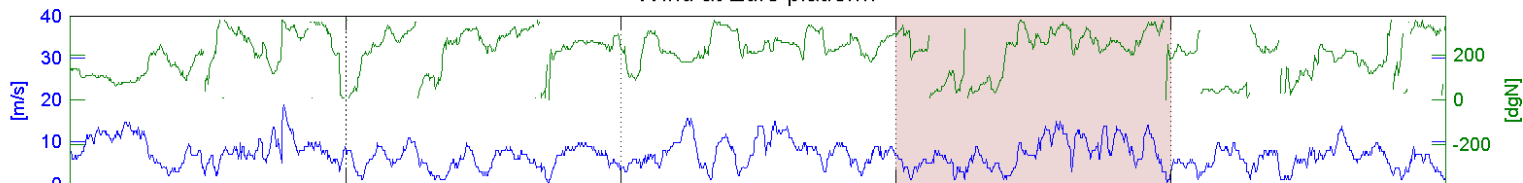
Sand mining volume for Maasvlakte 2



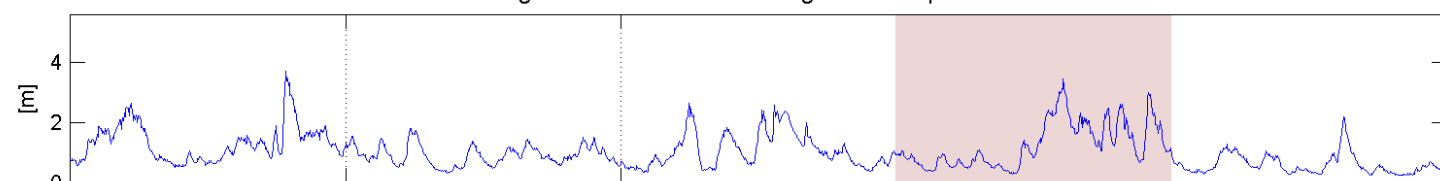
Water level at Noordwijk10



Wind at Euro platform

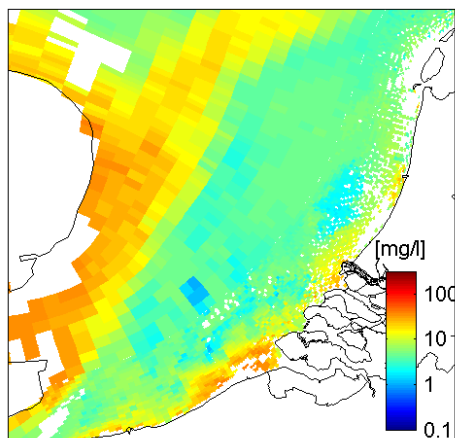


Significant surface wave height at Euro platform

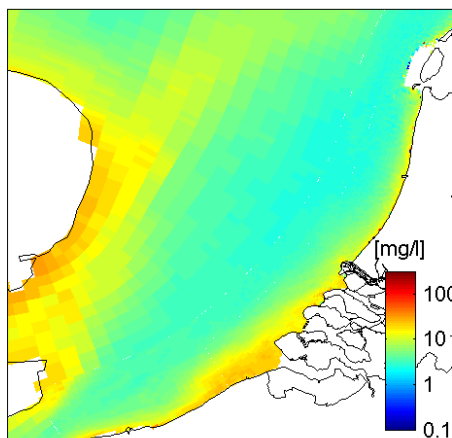


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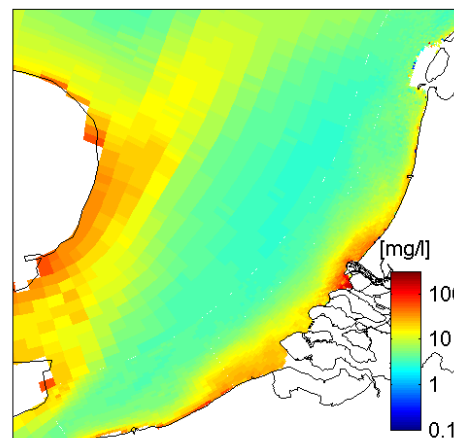
MERIS at surface layer



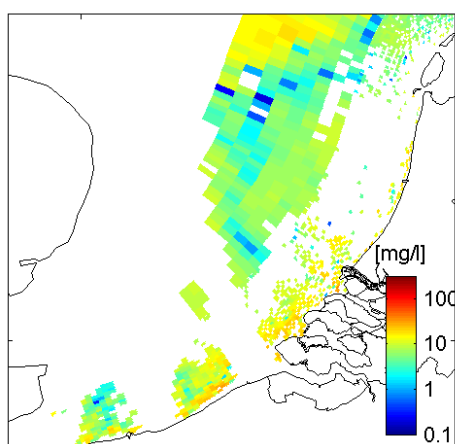
Model at surface layer



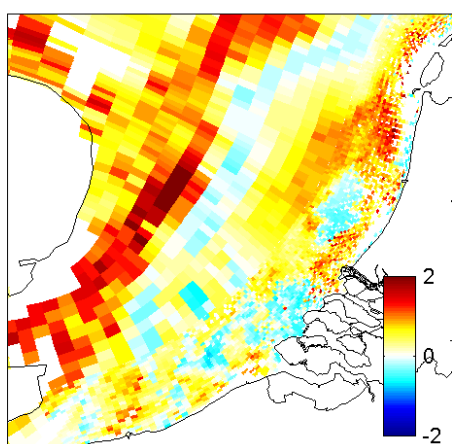
Model at bottom layer



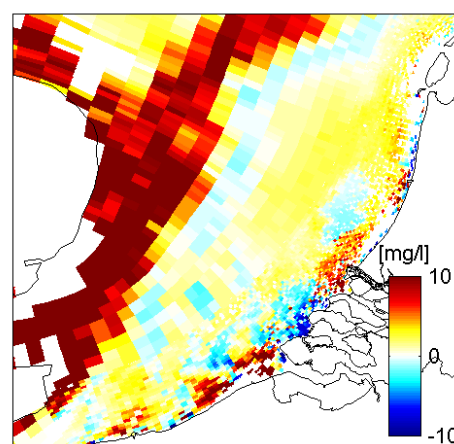
RMS difference



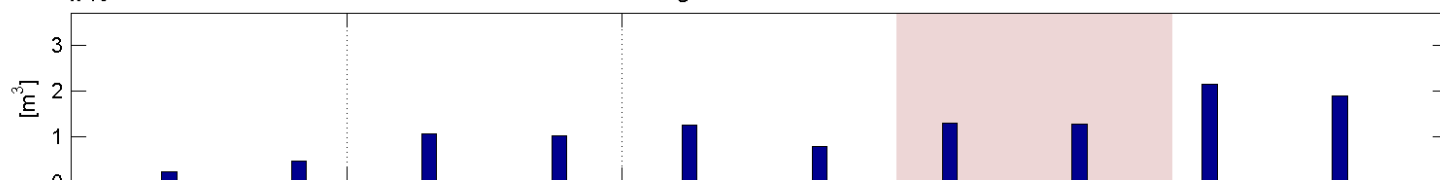
Relative difference [(MERIS-Model)/Model]



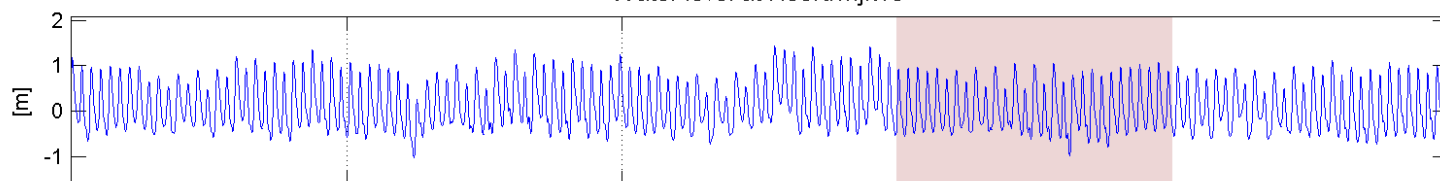
Mean difference [MERIS-Model]

 $\times 10^6$

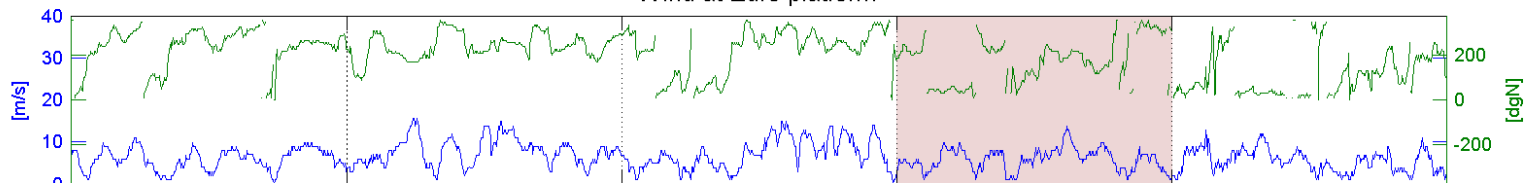
Sand mining volume for Maasvlakte 2



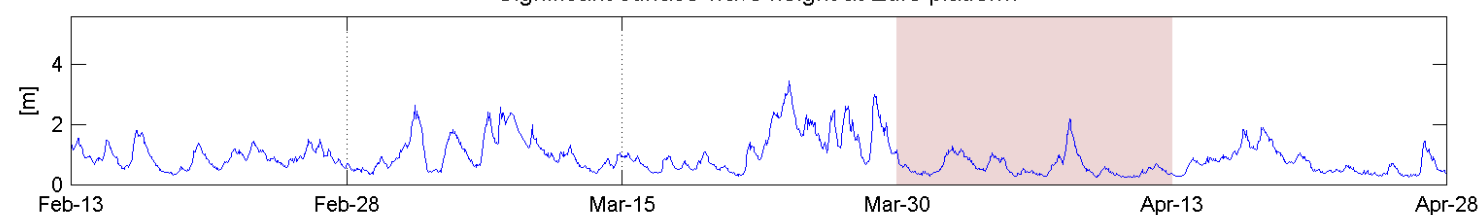
Water level at Noordwijk10



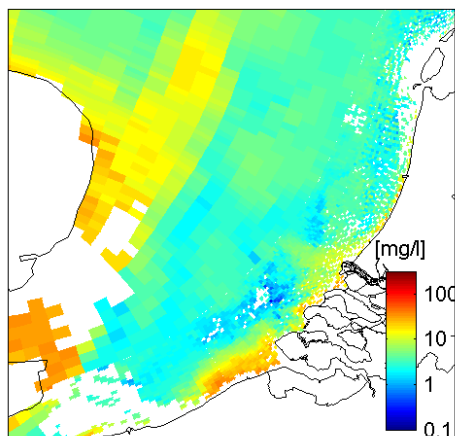
Wind at Euro platform



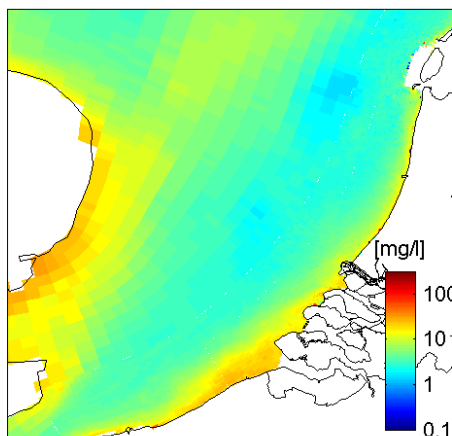
Significant surface wave height at Euro platform



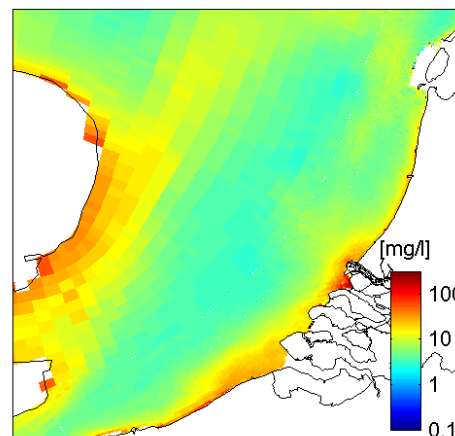
MERIS at surface layer



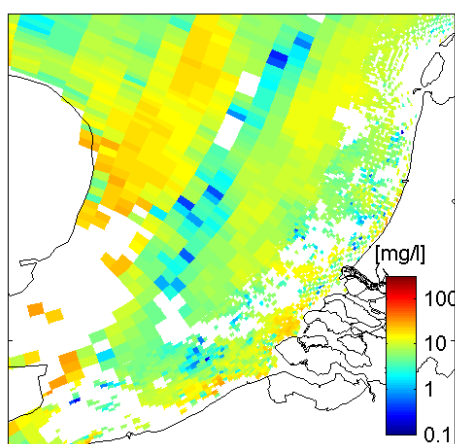
Model at surface layer



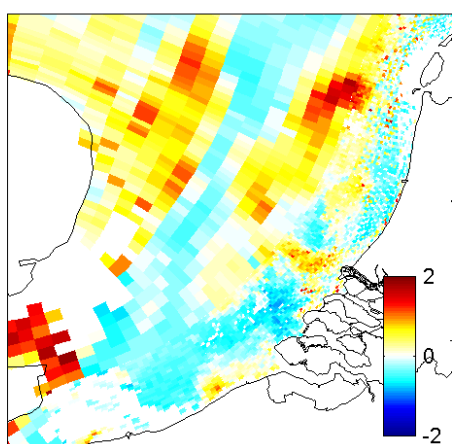
Model at bottom layer



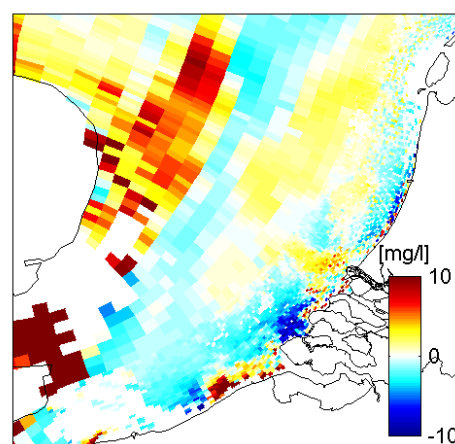
RMS difference



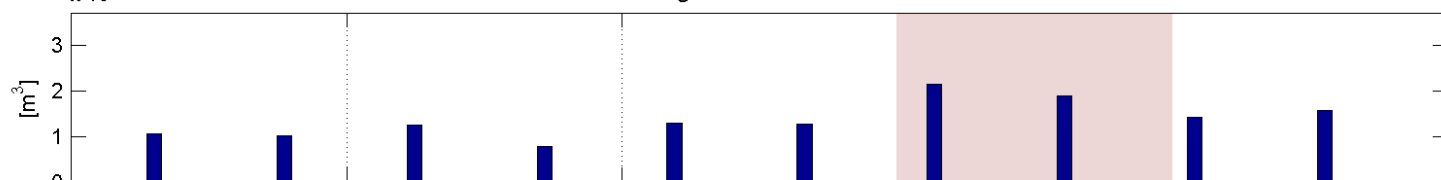
Relative difference [(MERIS-Model)/Model]



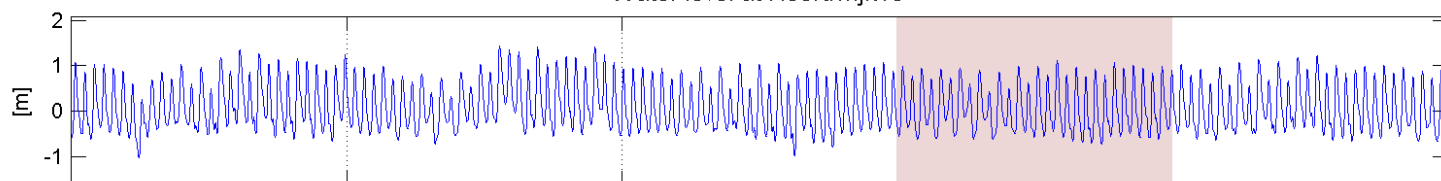
Mean difference [MERIS-Model]


 $\times 10^6$

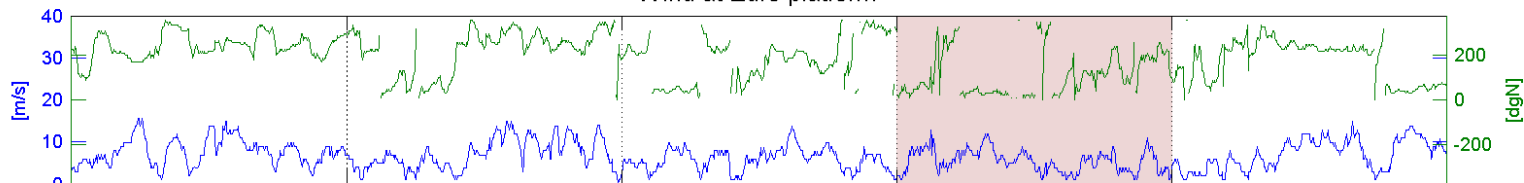
Sand mining volume for Maasvlakte 2



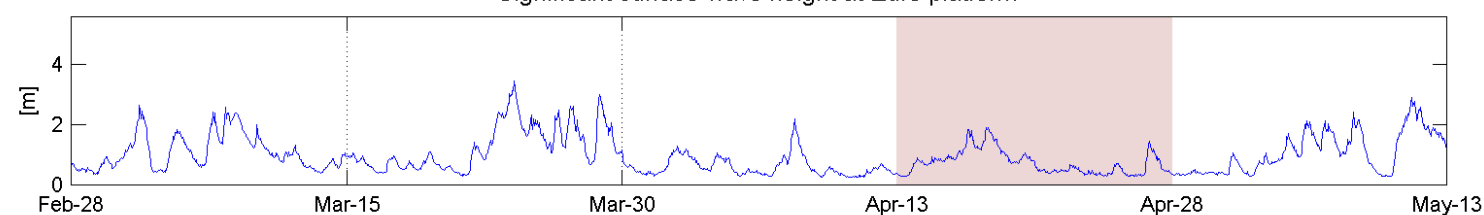
Water level at Noordwijk10



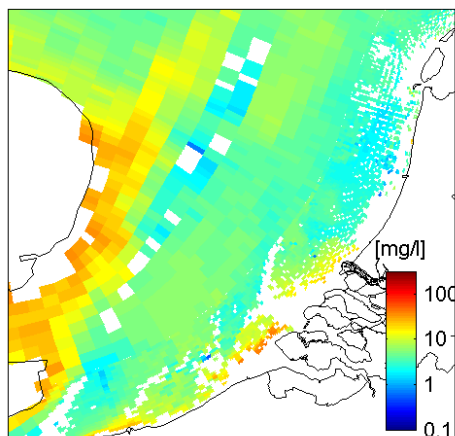
Wind at Euro platform



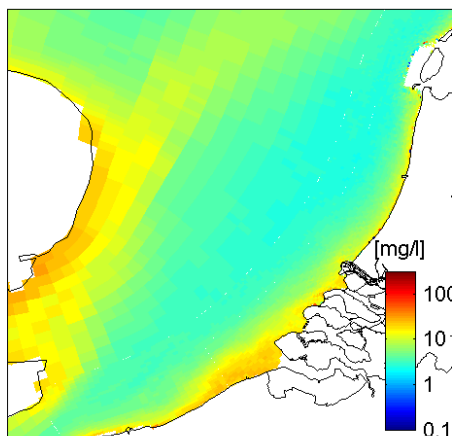
Significant surface wave height at Euro platform



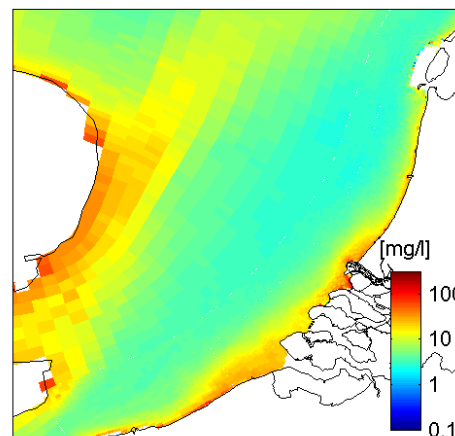
MERIS at surface layer



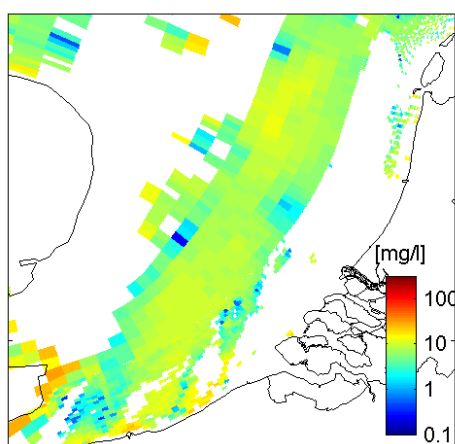
Model at surface layer



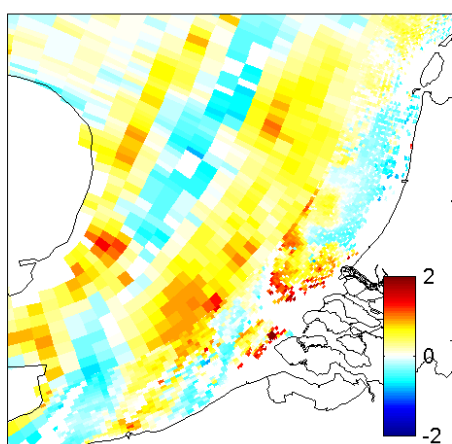
Model at bottom layer



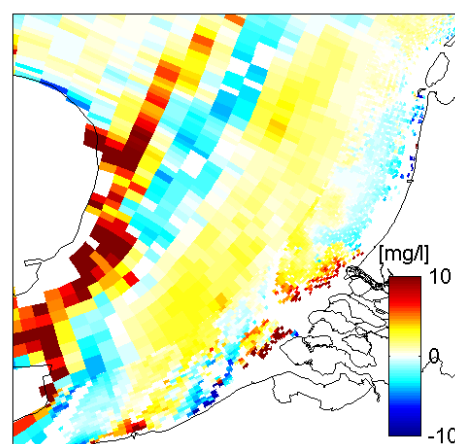
RMS difference



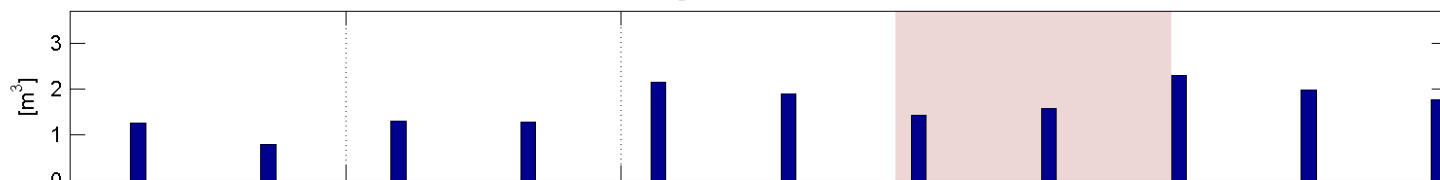
Relative difference [(MERIS-Model)/Model]



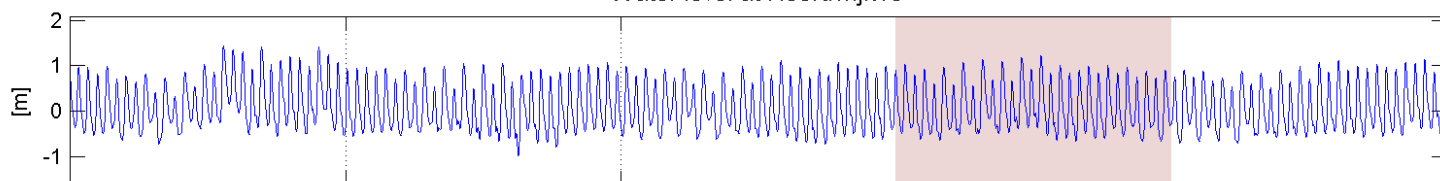
Mean difference [MERIS-Model]

 $\times 10^6$

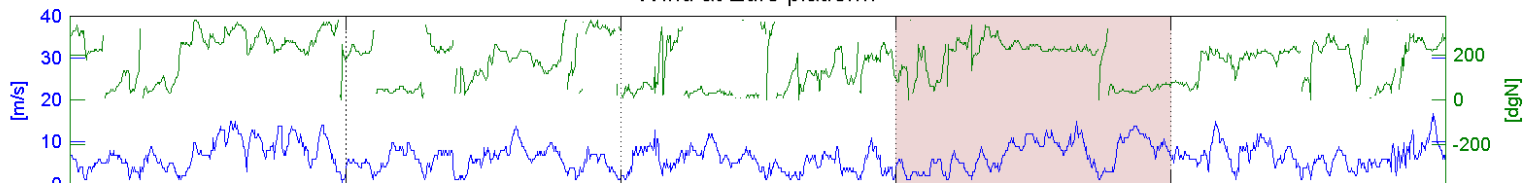
Sand mining volume for Maasvlakte 2



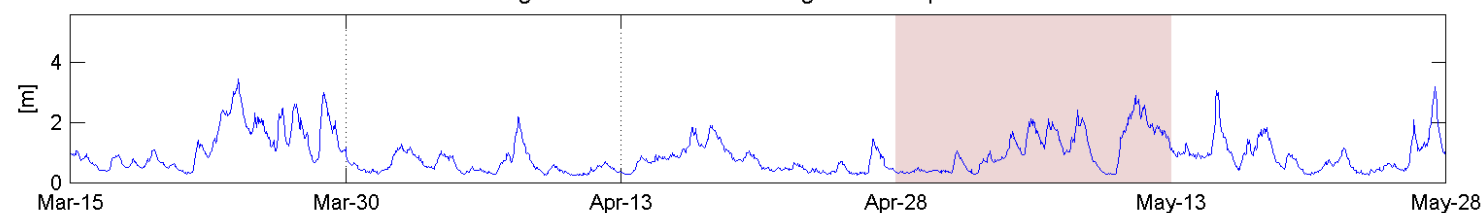
Water level at Noordwijk10



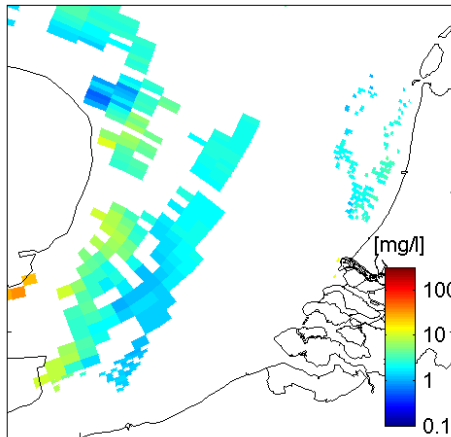
Wind at Euro platform



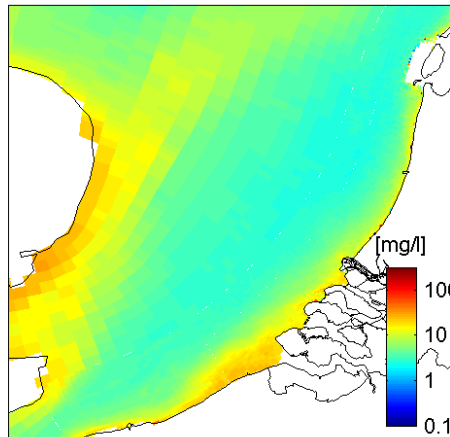
Significant surface wave height at Euro platform



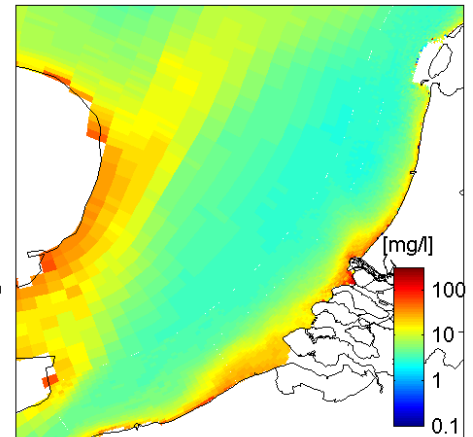
MERIS at surface layer



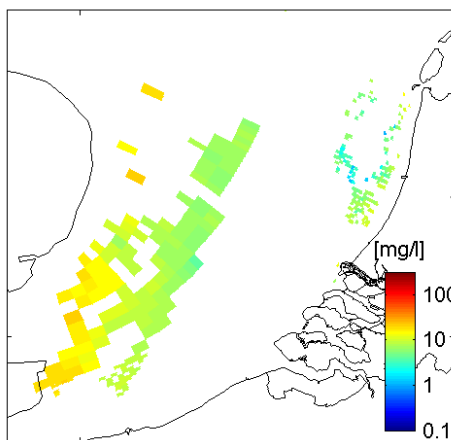
Model at surface layer



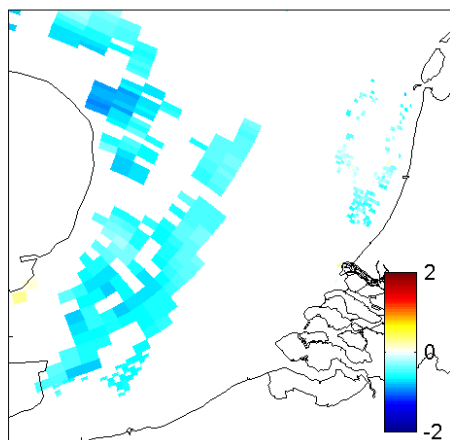
Model at bottom layer



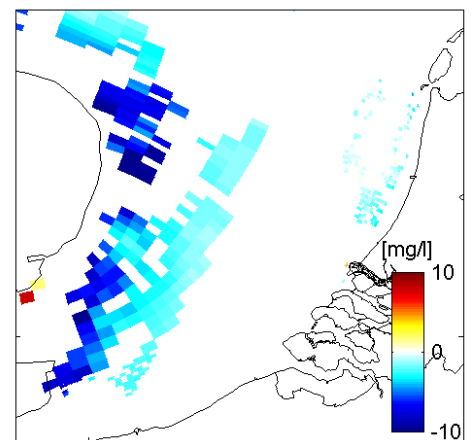
RMS difference



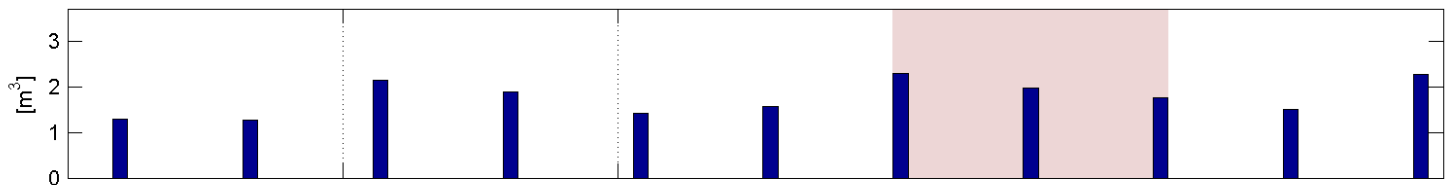
Relative difference [(MERIS-Model)/Model]



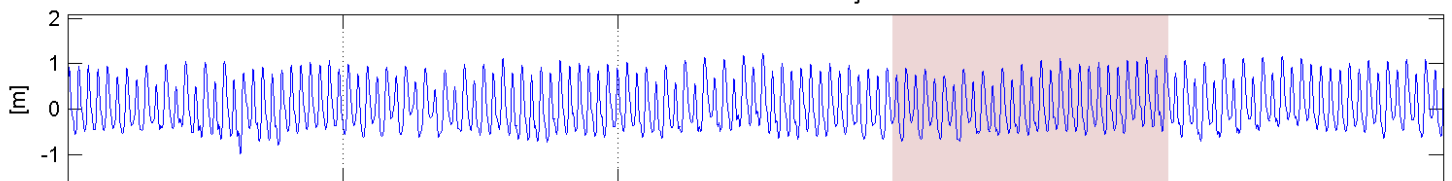
Mean difference [MERIS-Model]

x 10⁶

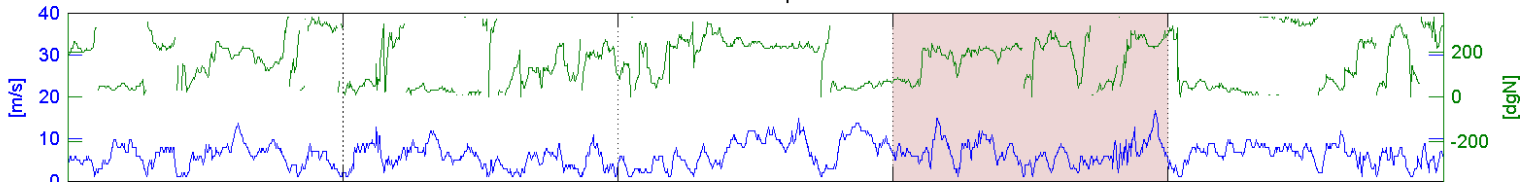
Sand mining volume for Maasvlakte 2



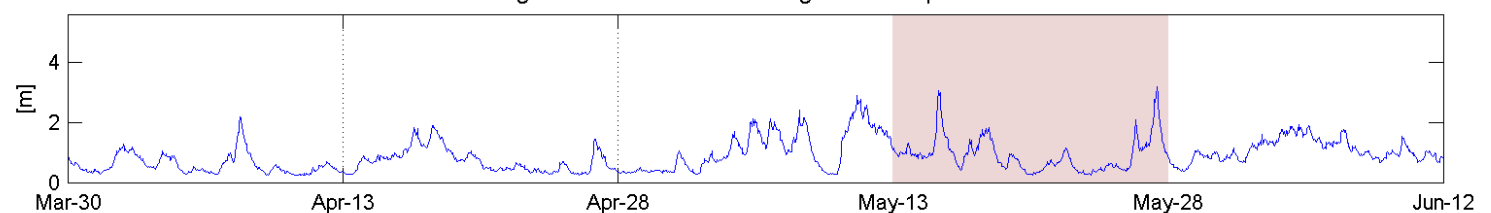
Water level at Noordwijk10



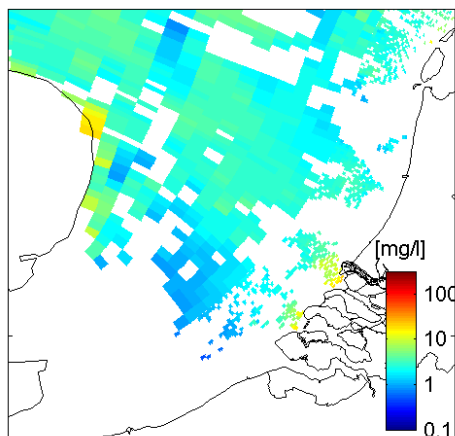
Wind at Euro platform



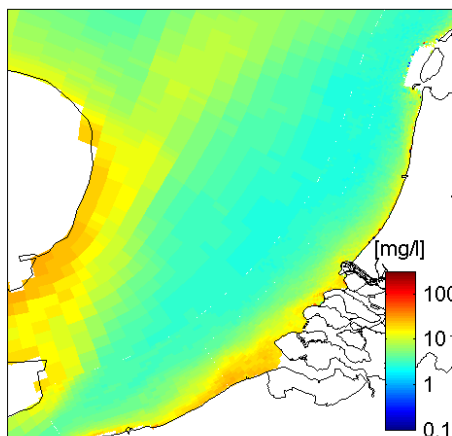
Significant surface wave height at Euro platform



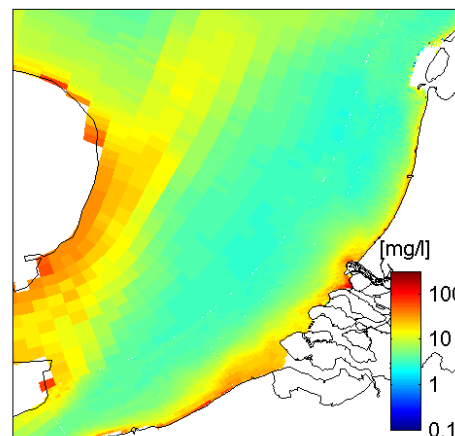
MERIS at surface layer



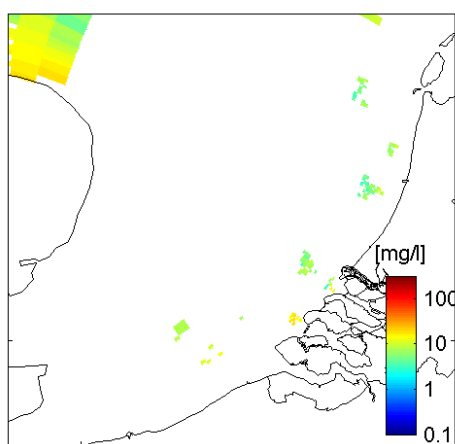
Model at surface layer



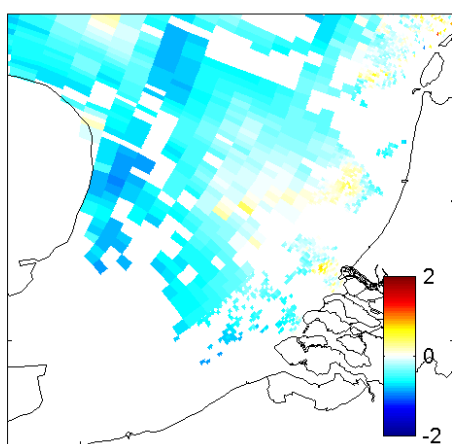
Model at bottom layer



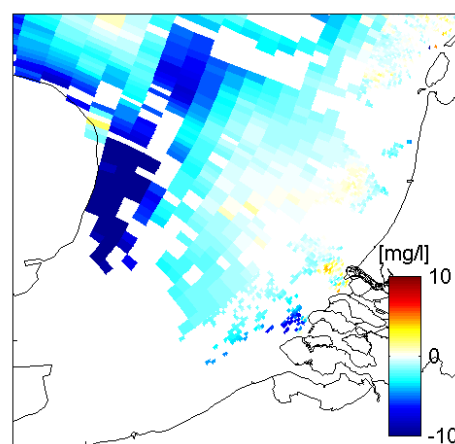
RMS difference



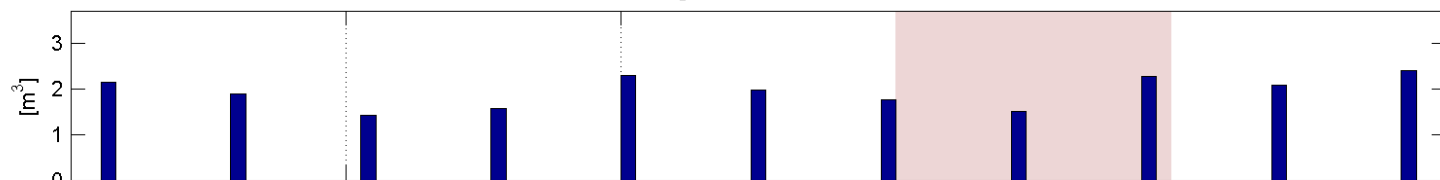
Relative difference [(MERIS-Model)/Model]



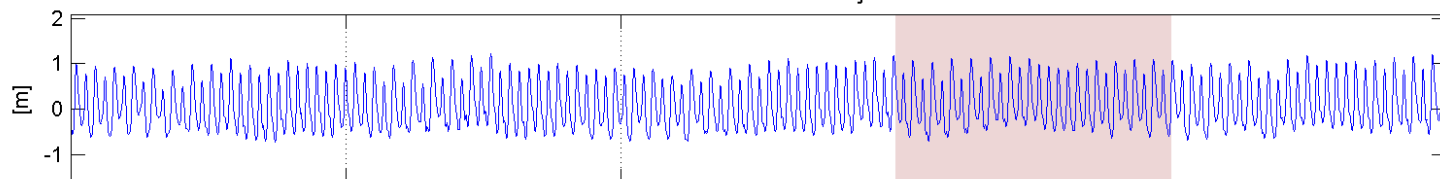
Mean difference [MERIS-Model]


x 10⁶

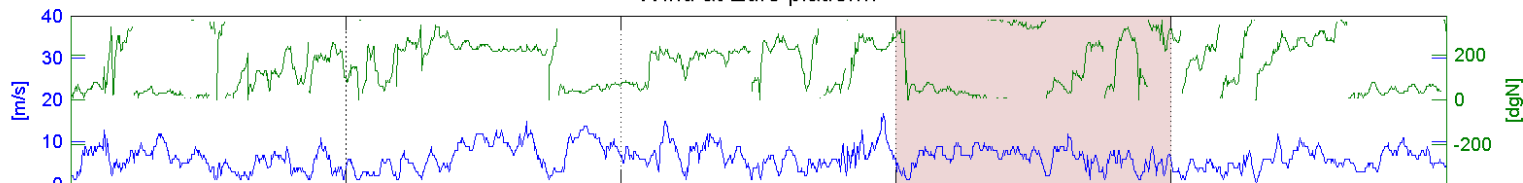
Sand mining volume for Maasvlakte 2



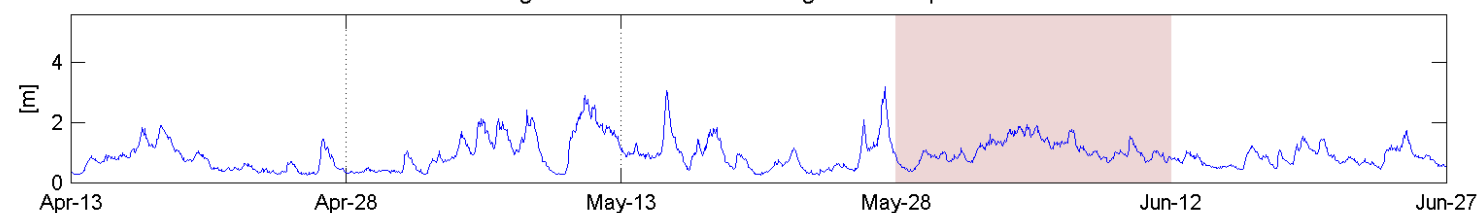
Water level at Noordwijk10



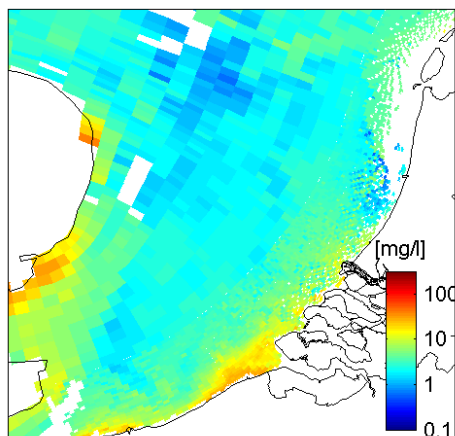
Wind at Euro platform



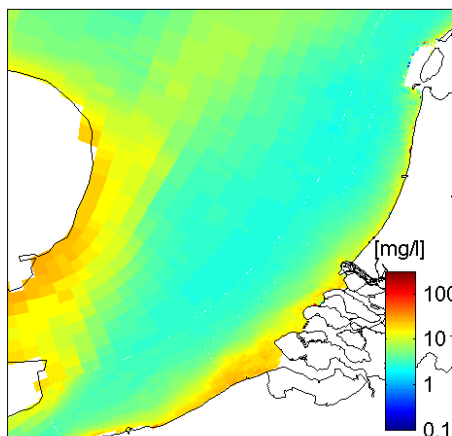
Significant surface wave height at Euro platform



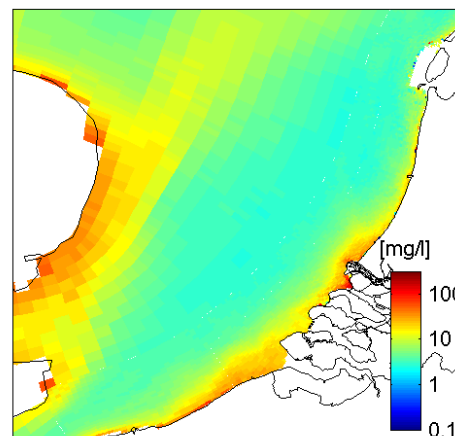
MERIS at surface layer



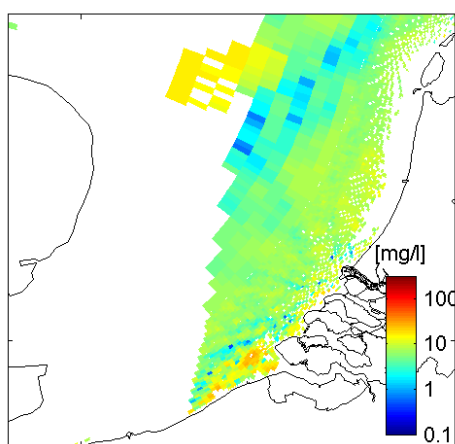
Model at surface layer



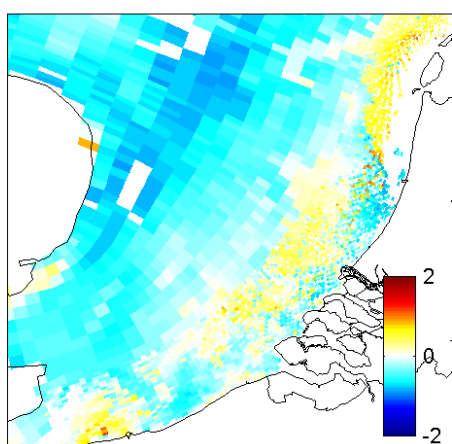
Model at bottom layer



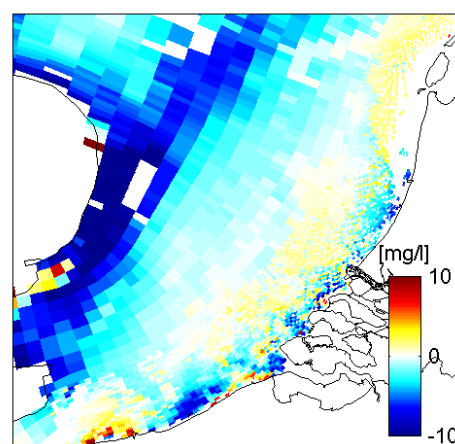
RMS difference



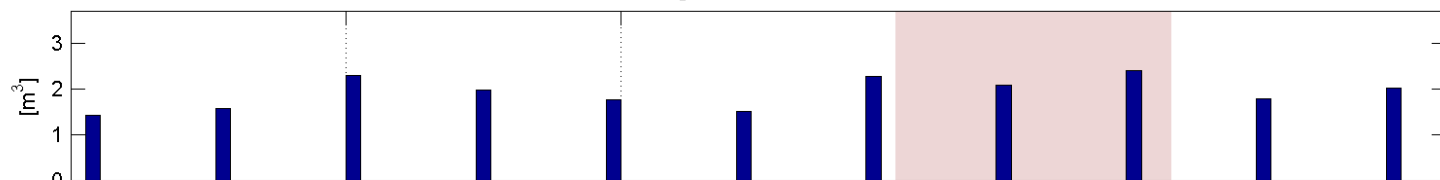
Relative difference [(MERIS-Model)/Model]



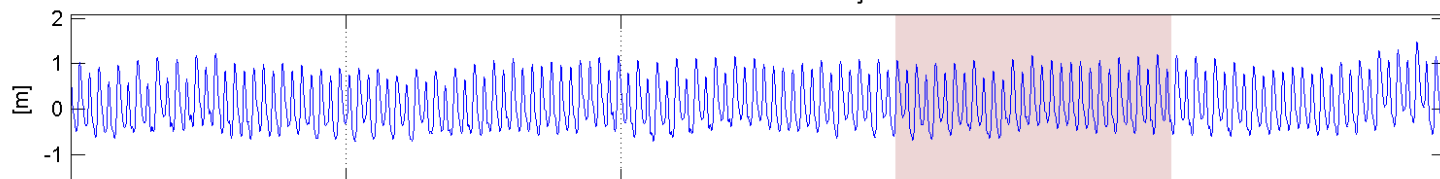
Mean difference [MERIS-Model]


x 10⁶

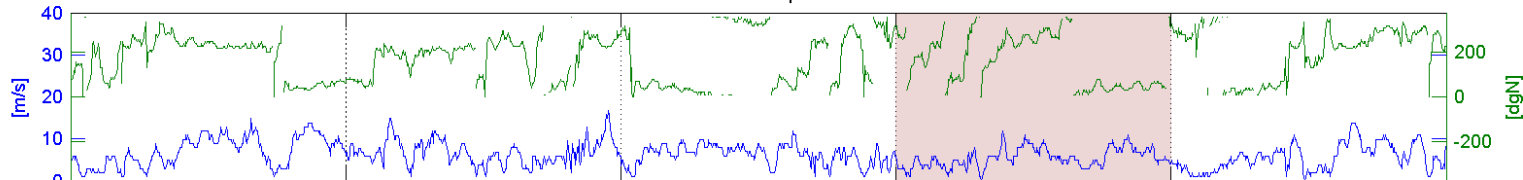
Sand mining volume for Maasvlakte 2



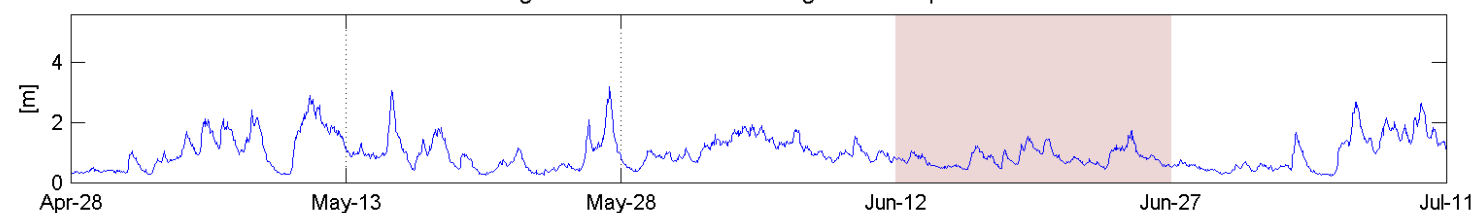
Water level at Noordwijk10



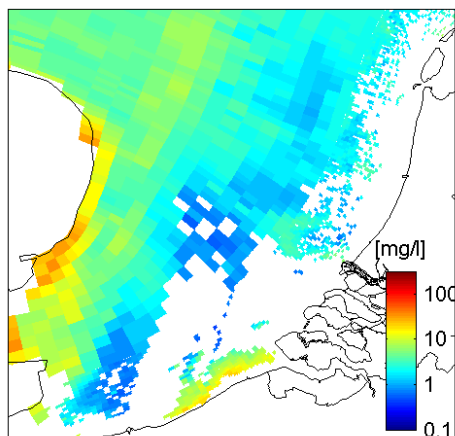
Wind at Euro platform



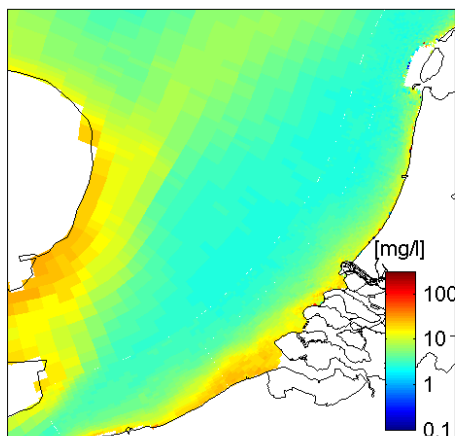
Significant surface wave height at Euro platform



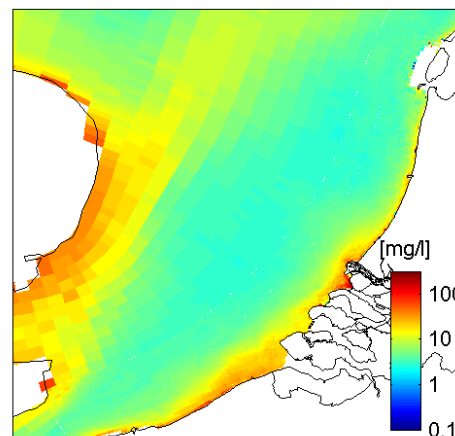
MERIS at surface layer



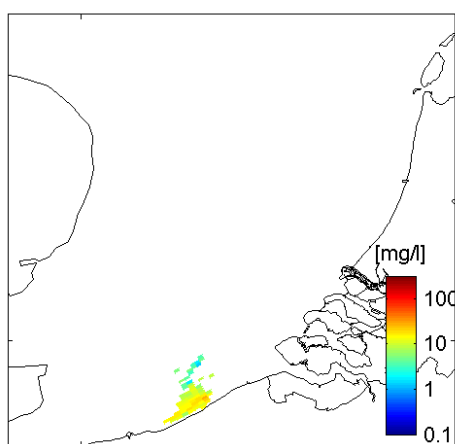
Model at surface layer



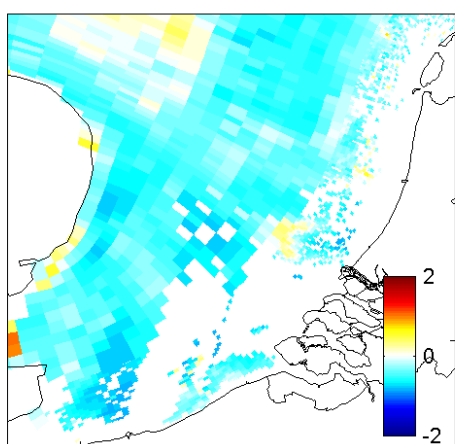
Model at bottom layer



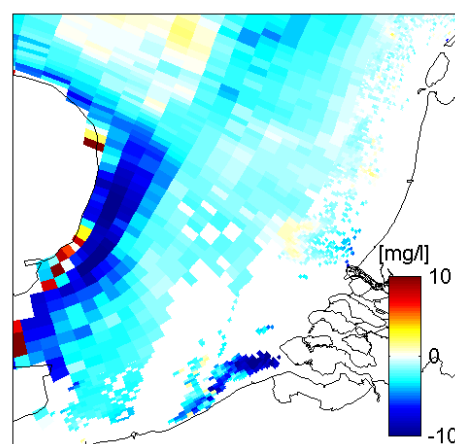
RMS difference



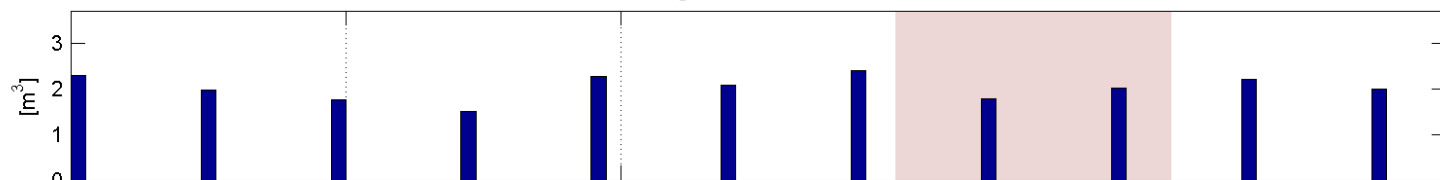
Relative difference [(MERIS-Model)/Model]



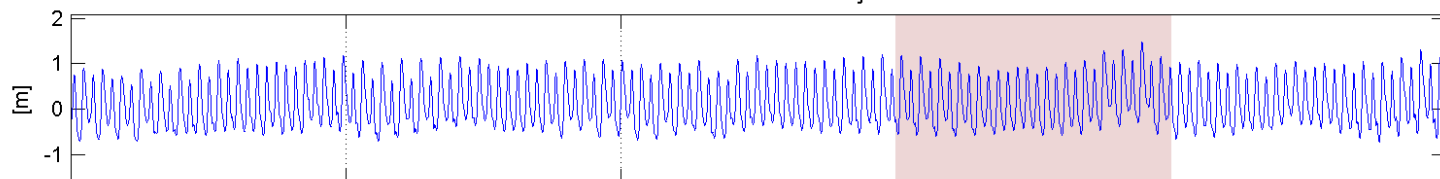
Mean difference [MERIS-Model]


x 10⁶

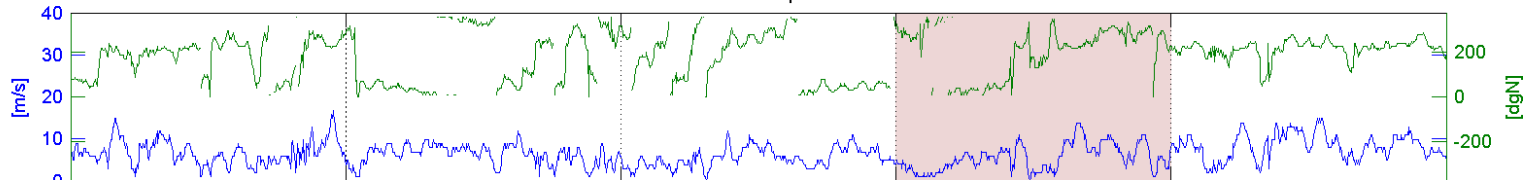
Sand mining volume for Maasvlakte 2



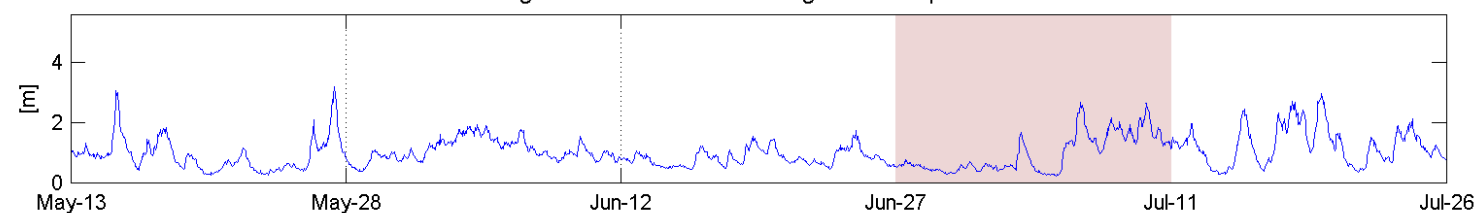
Water level at Noordwijk10



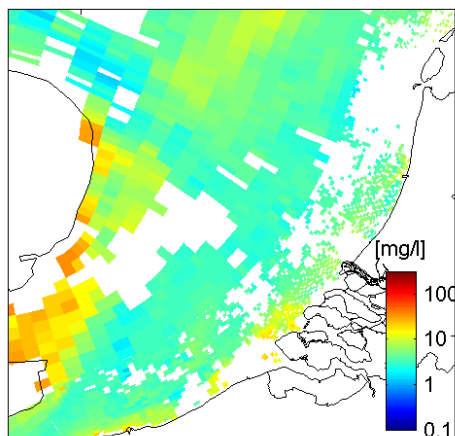
Wind at Euro platform



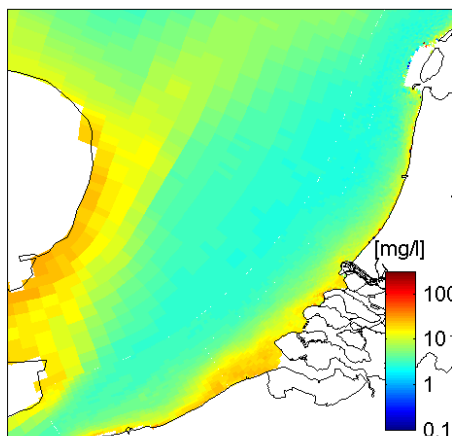
Significant surface wave height at Euro platform



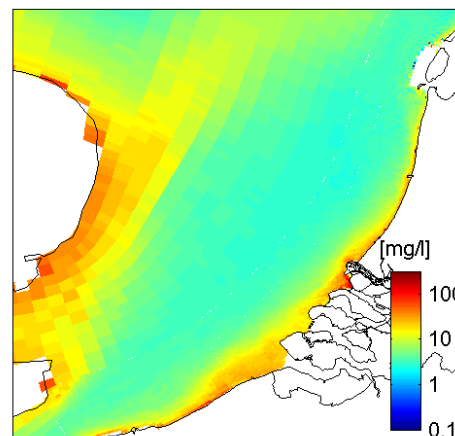
MERIS at surface layer



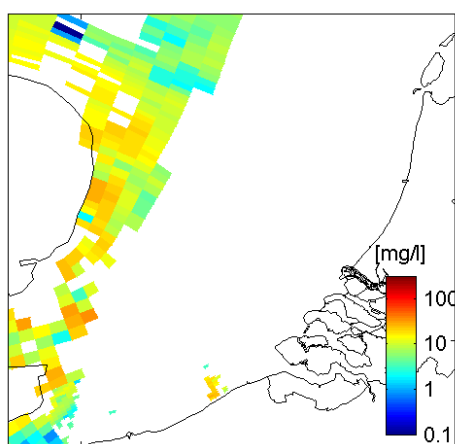
Model at surface layer



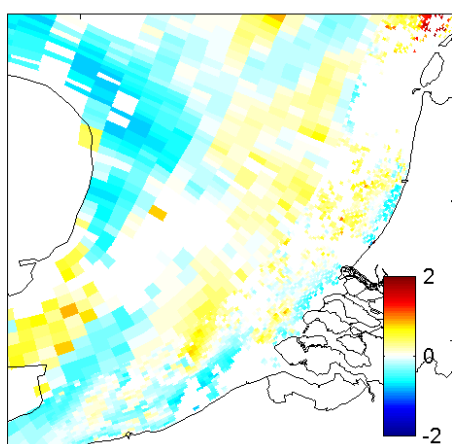
Model at bottom layer



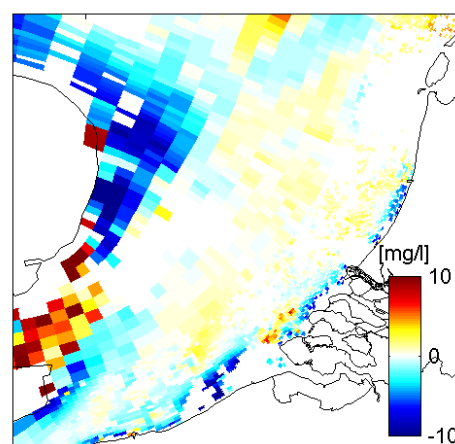
RMS difference



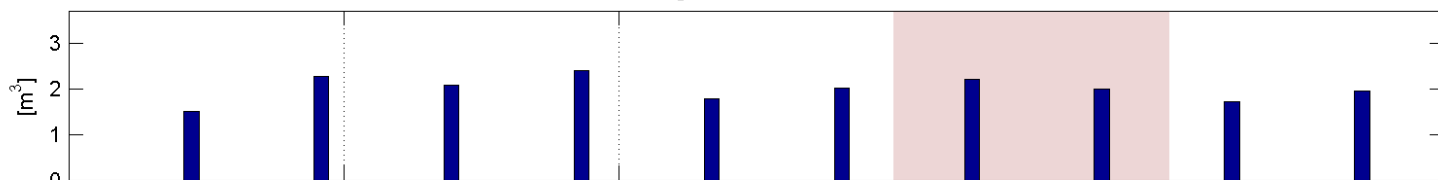
Relative difference [(MERIS-Model)/Model]



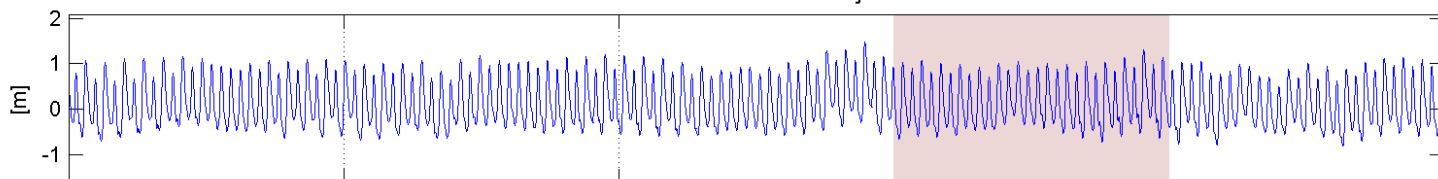
Mean difference [MERIS-Model]


x 10⁶

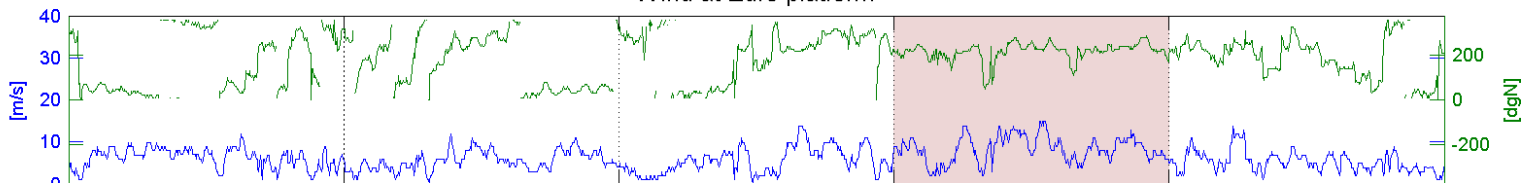
Sand mining volume for Maasvlakte 2



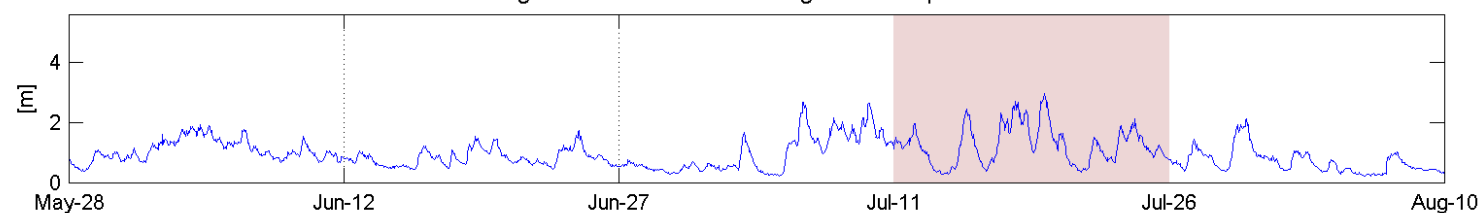
Water level at Noordwijk10



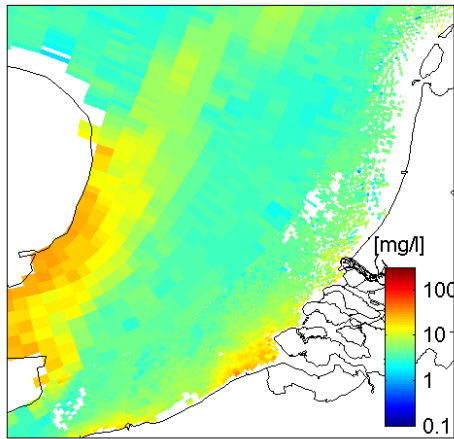
Wind at Euro platform



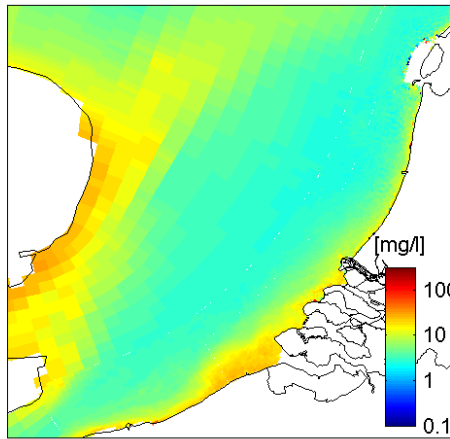
Significant surface wave height at Euro platform



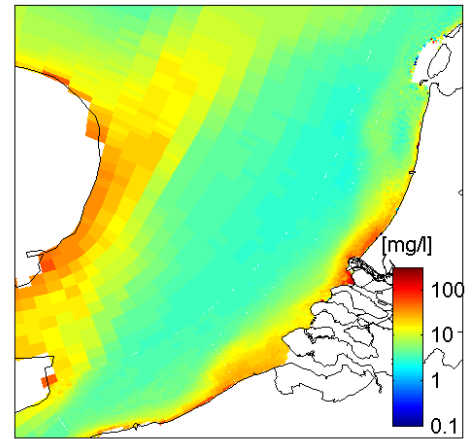
MERIS at surface layer



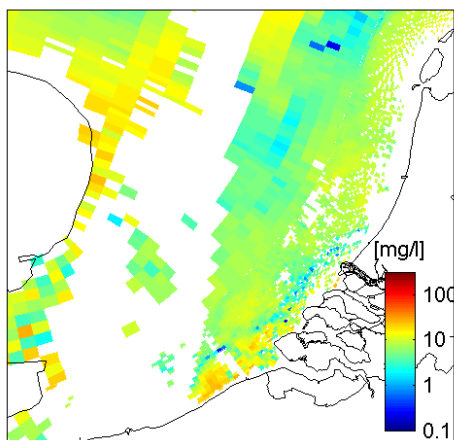
Model at surface layer



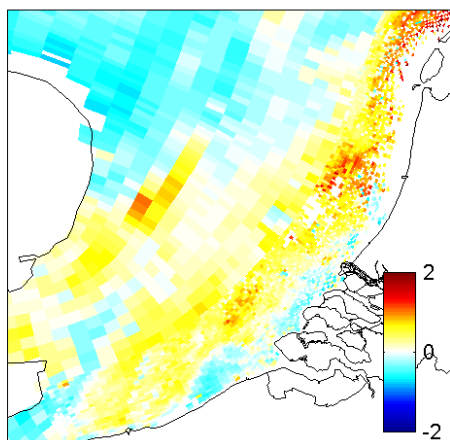
Model at bottom layer



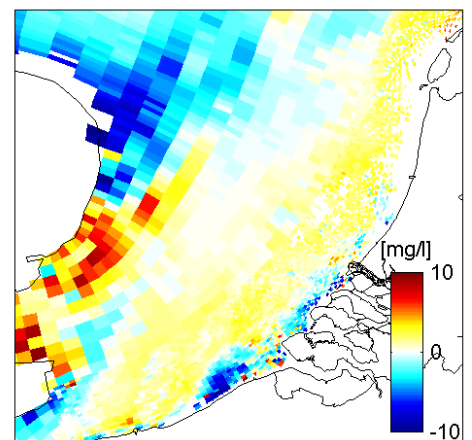
RMS difference



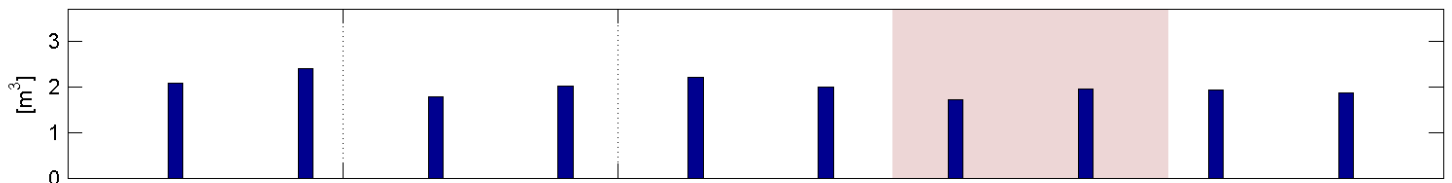
Relative difference [(MERIS-Model)/Model]



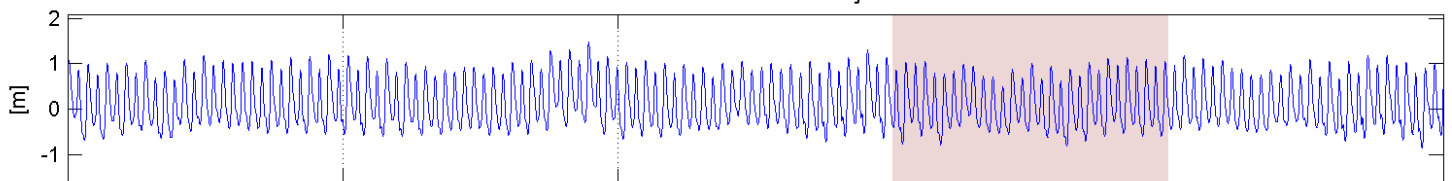
Mean difference [MERIS-Model]

 $\times 10^6$

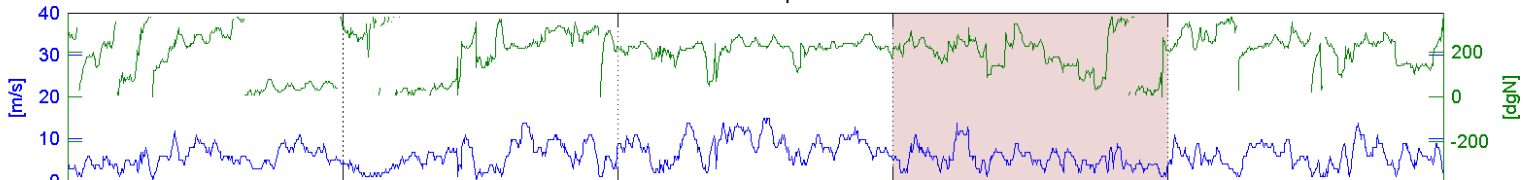
Sand mining volume for Maasvlakte 2



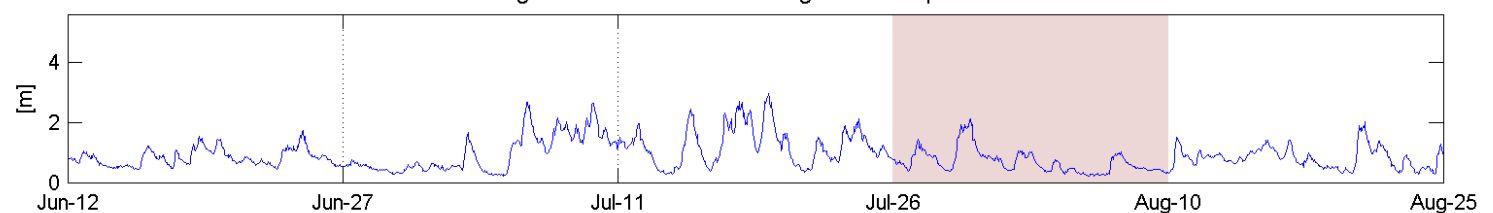
Water level at Noordwijk10



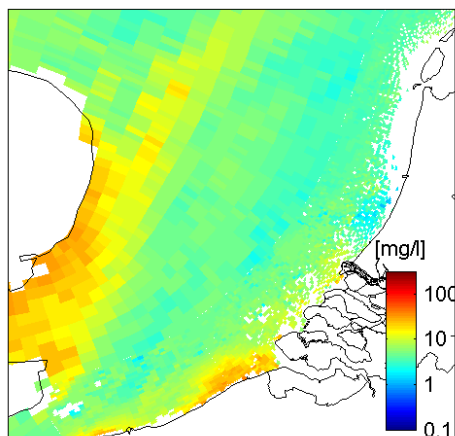
Wind at Euro platform



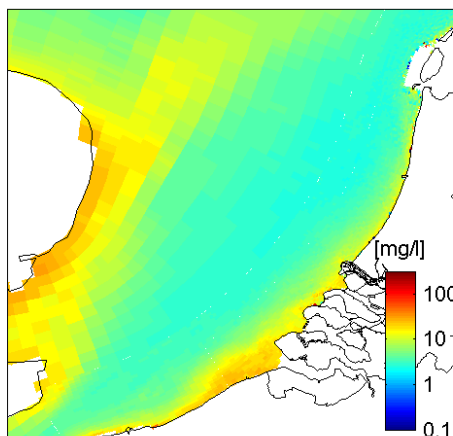
Significant surface wave height at Euro platform



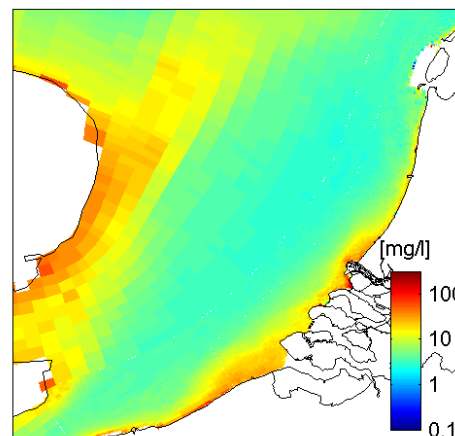
MERIS at surface layer



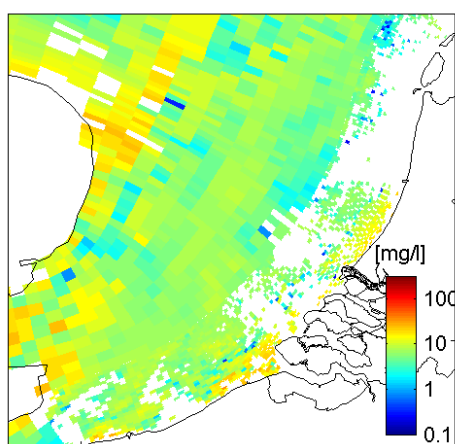
Model at surface layer



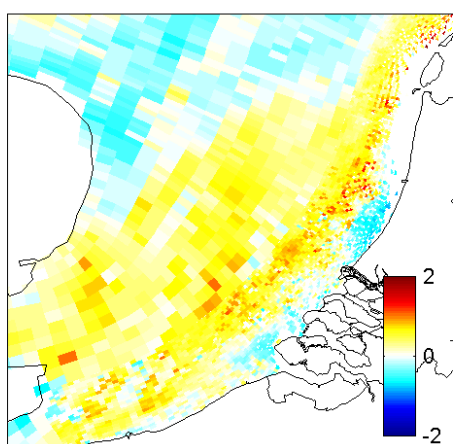
Model at bottom layer



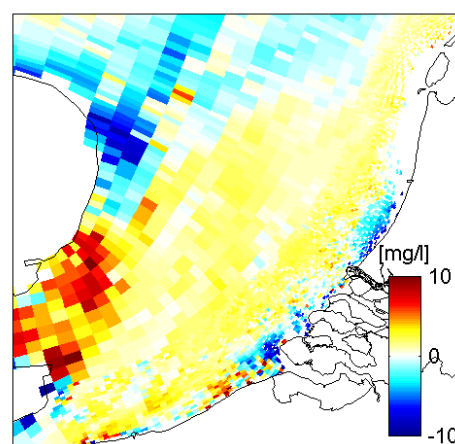
RMS difference



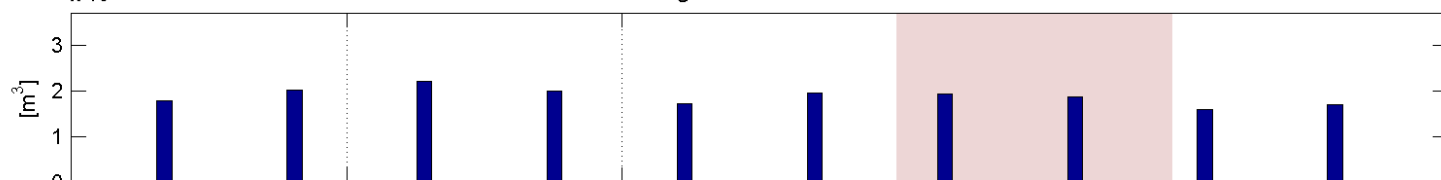
Relative difference [(MERIS-Model)/Model]



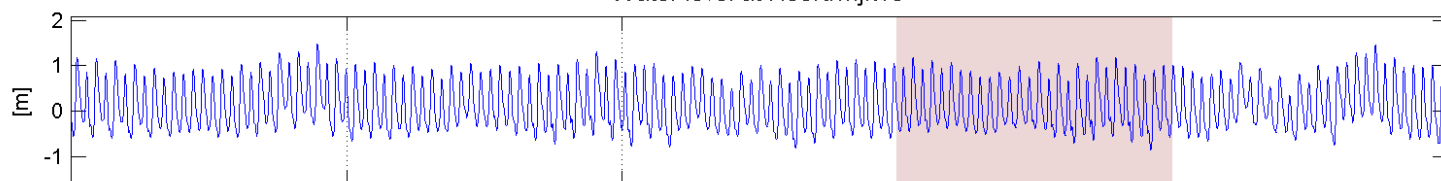
Mean difference [MERIS-Model]


x 10⁶

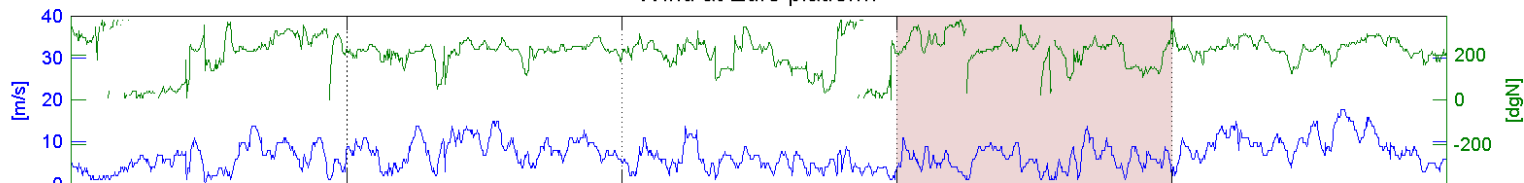
Sand mining volume for Maasvlakte 2



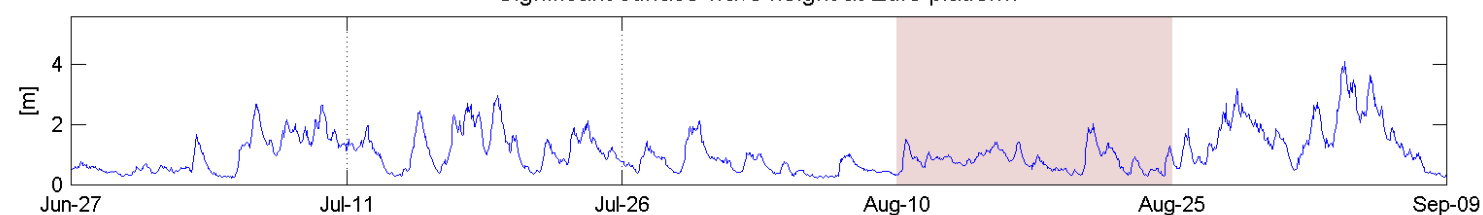
Water level at Noordwijk10



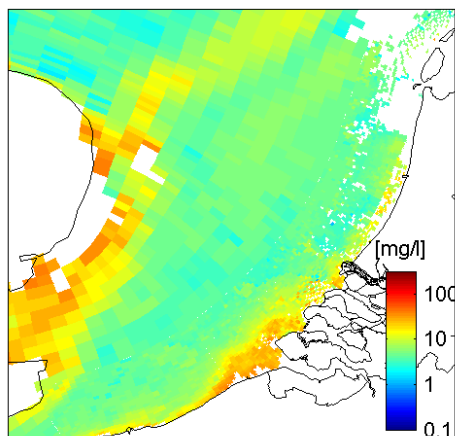
Wind at Euro platform



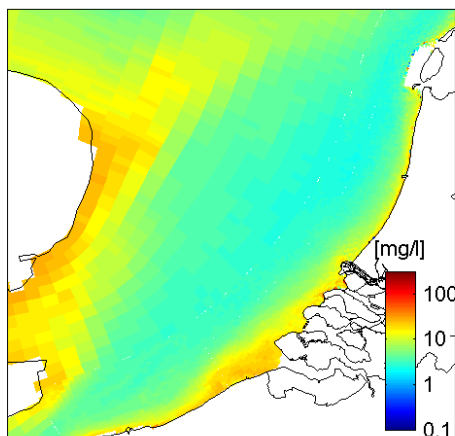
Significant surface wave height at Euro platform



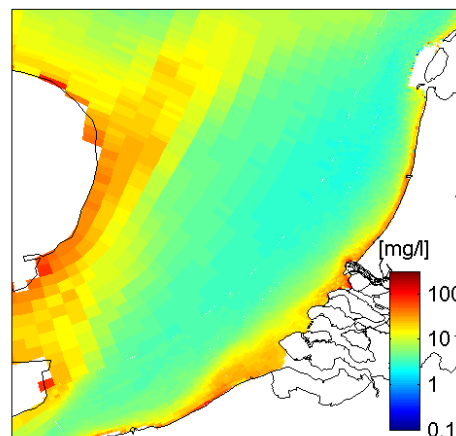
MERIS at surface layer



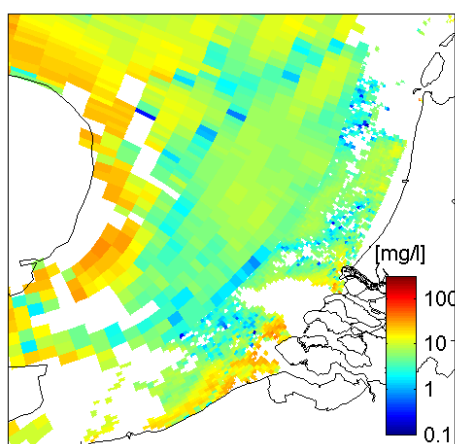
Model at surface layer



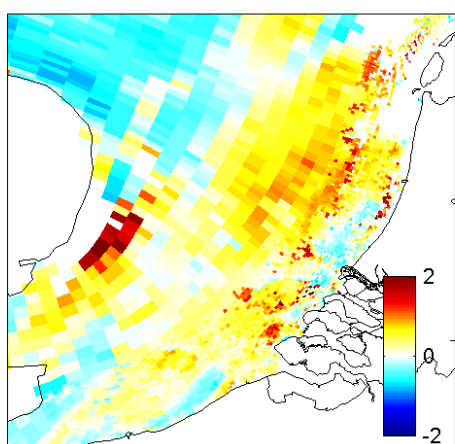
Model at bottom layer



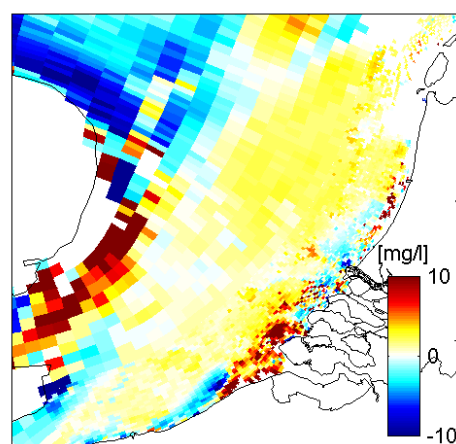
RMS difference



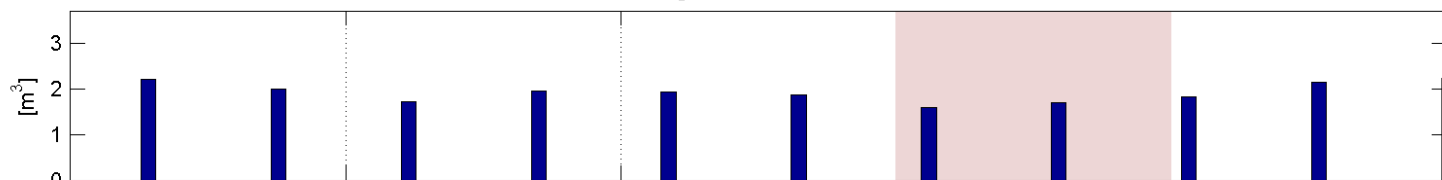
Relative difference [(MERIS-Model)/Model]



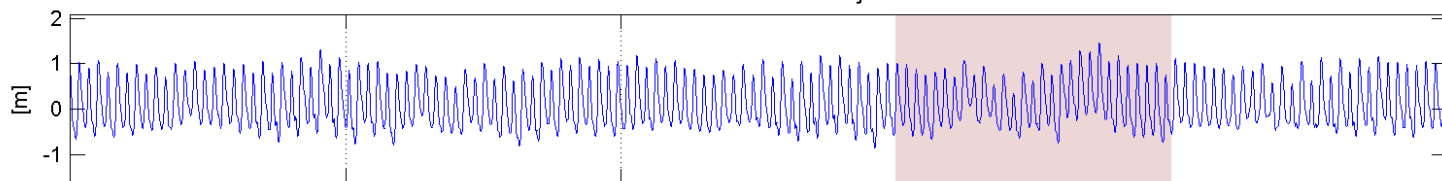
Mean difference [MERIS-Model]


x 10⁶

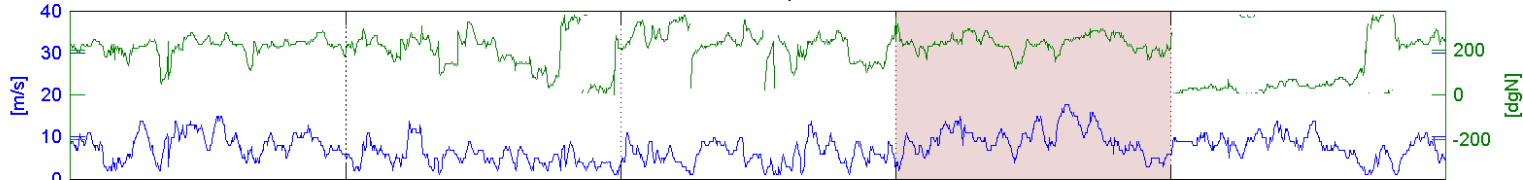
Sand mining volume for Maasvlakte 2



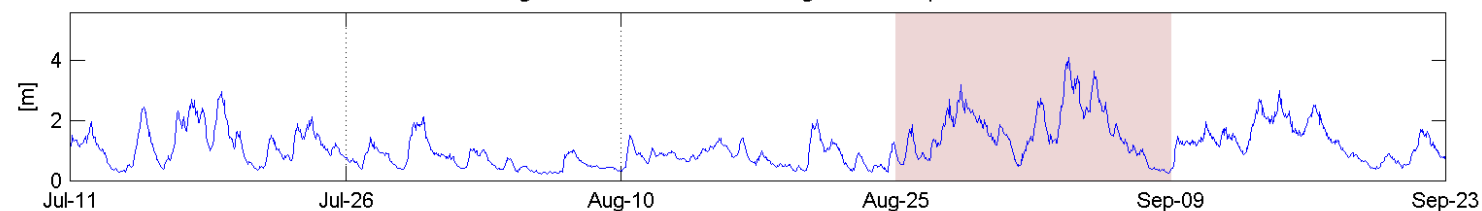
Water level at Noordwijk10



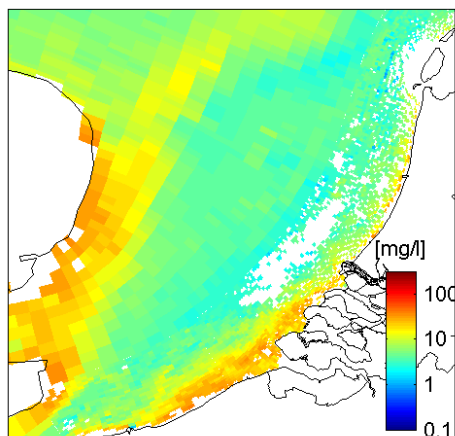
Wind at Euro platform



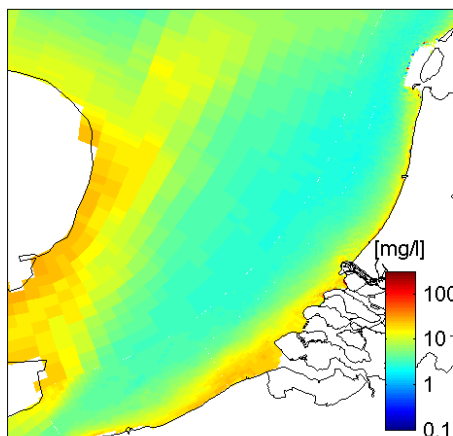
Significant surface wave height at Euro platform



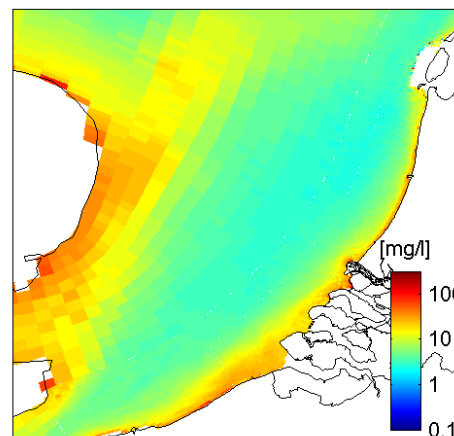
MERIS at surface layer



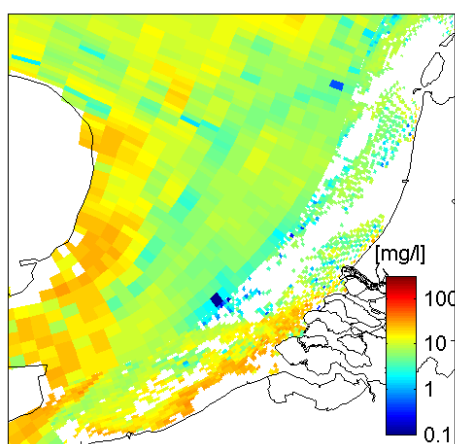
Model at surface layer



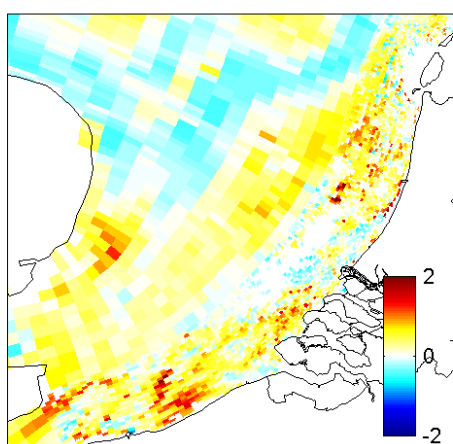
Model at bottom layer



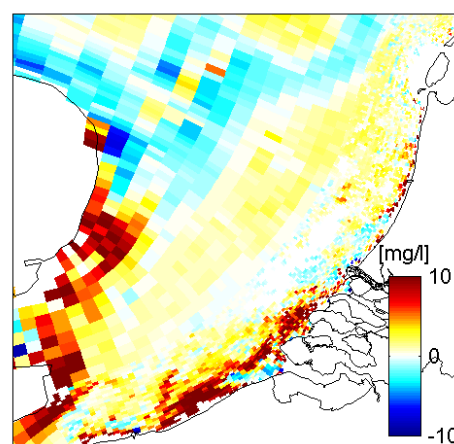
RMS difference



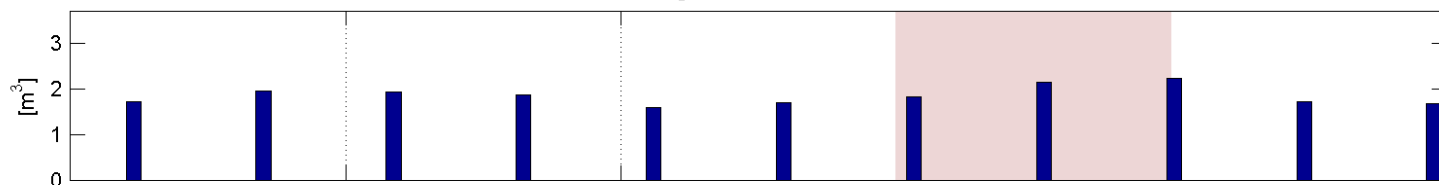
Relative difference [(MERIS-Model)/Model]



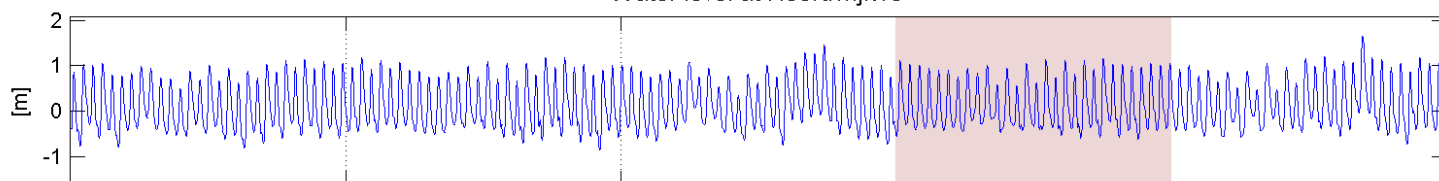
Mean difference [MERIS-Model]

x 10⁶

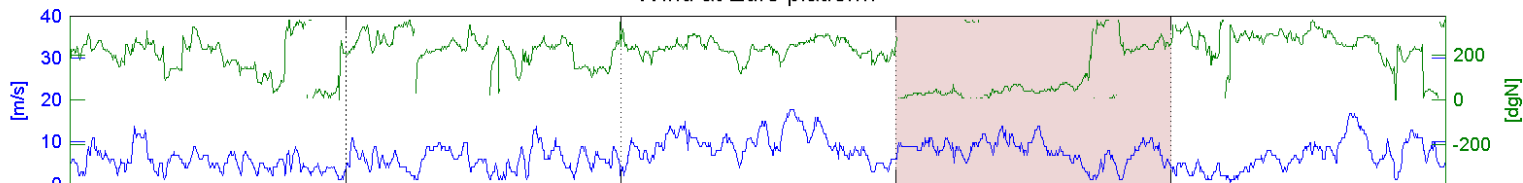
Sand mining volume for Maasvlakte 2



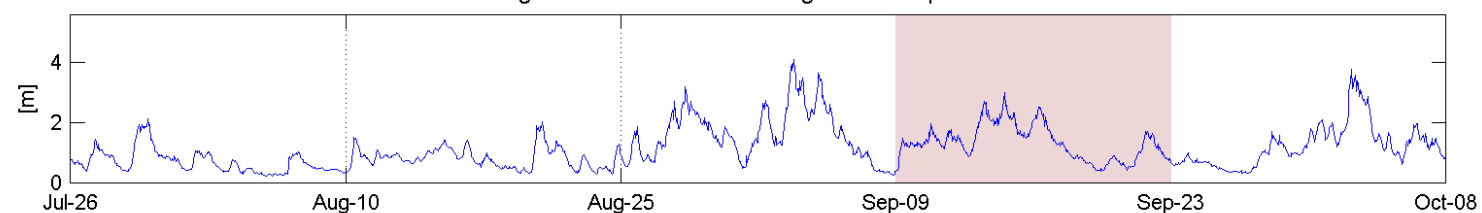
Water level at Noordwijk10



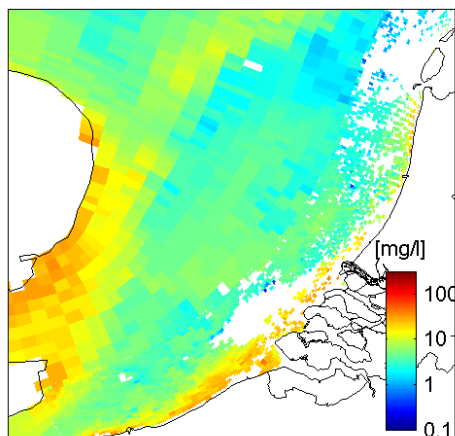
Wind at Euro platform



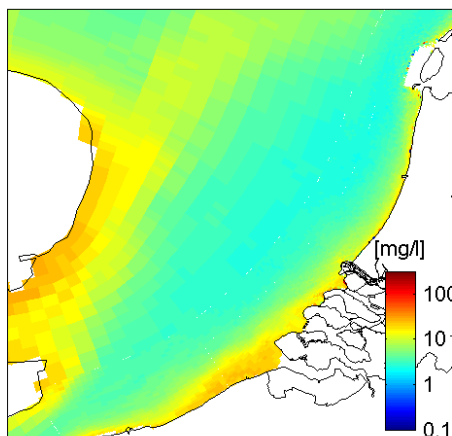
Significant surface wave height at Euro platform



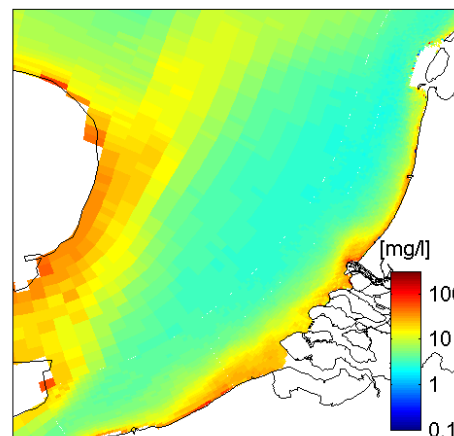
MERIS at surface layer



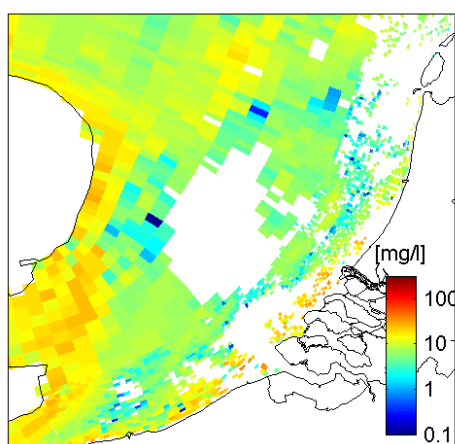
Model at surface layer



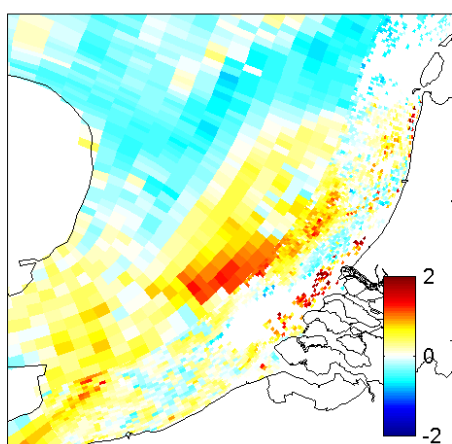
Model at bottom layer



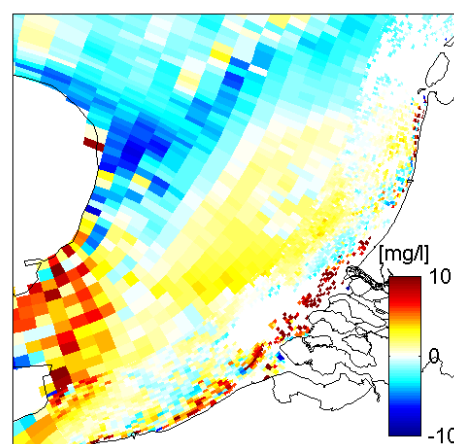
RMS difference



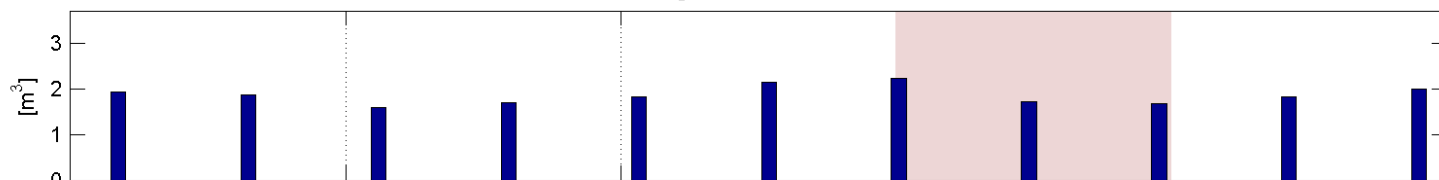
Relative difference [(MERIS-Model)/Model]



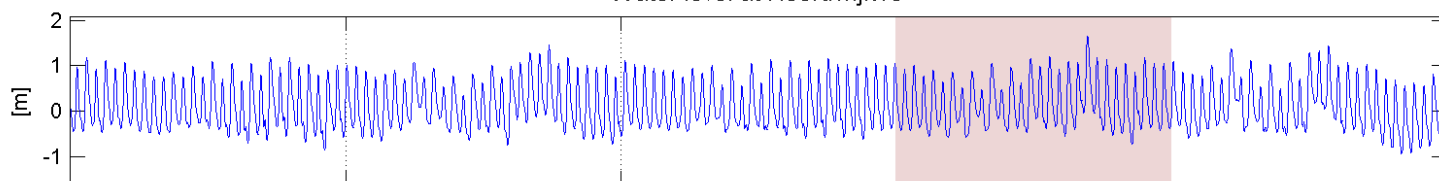
Mean difference [MERIS-Model]

 $\times 10^6$

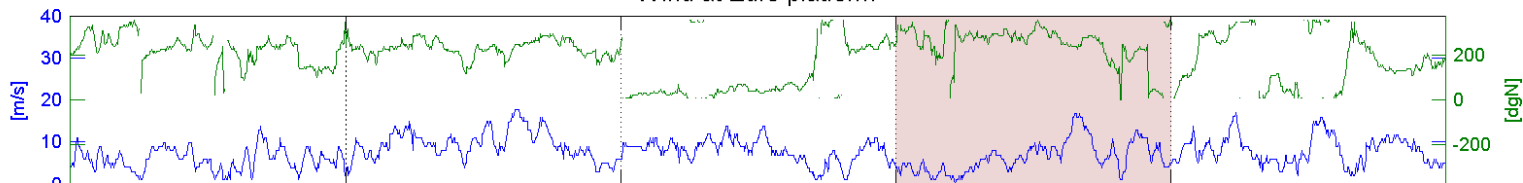
Sand mining volume for Maasvlakte 2



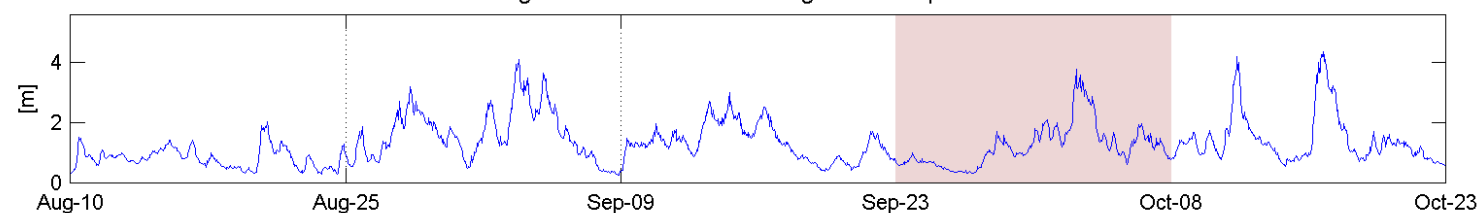
Water level at Noordwijk10



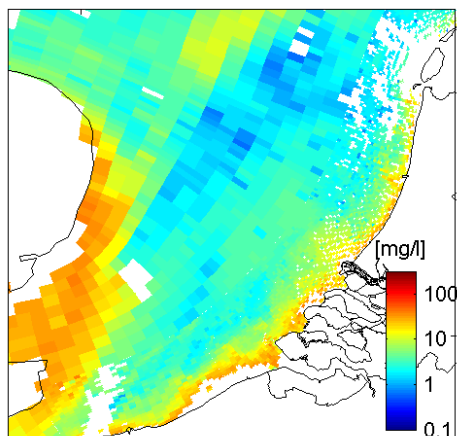
Wind at Euro platform



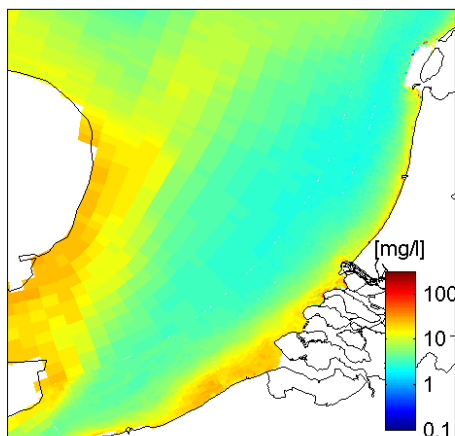
Significant surface wave height at Euro platform



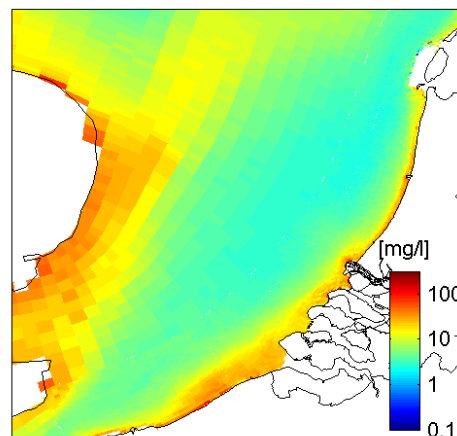
MERIS at surface layer



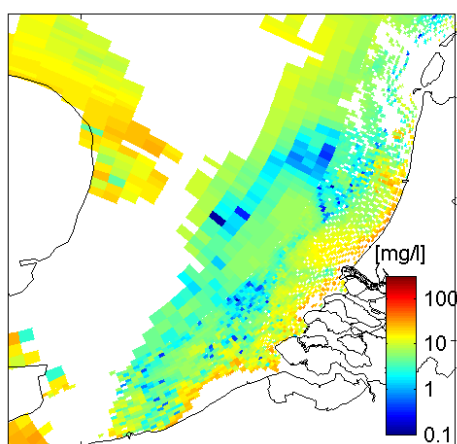
Model at surface layer



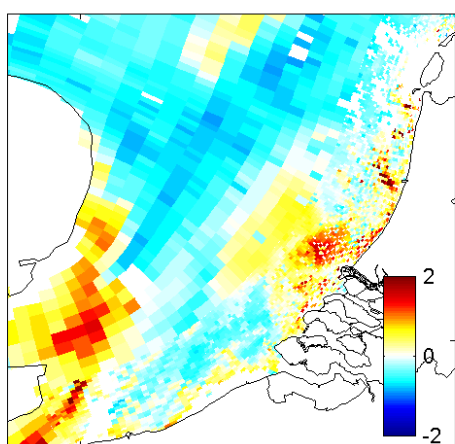
Model at bottom layer



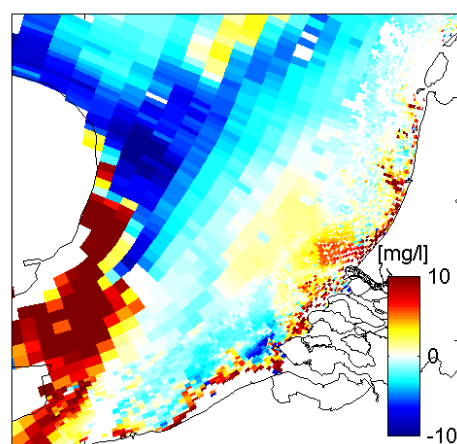
RMS difference



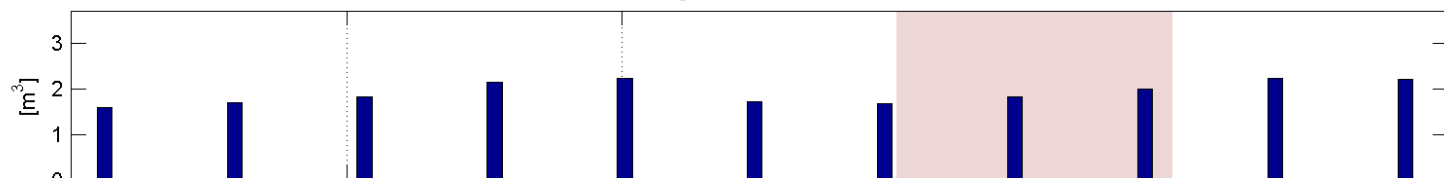
Relative difference [(MERIS-Model)/Model]



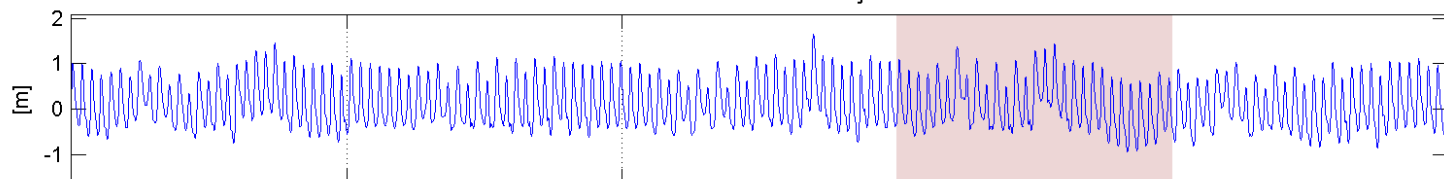
Mean difference [MERIS-Model]


x 10⁶

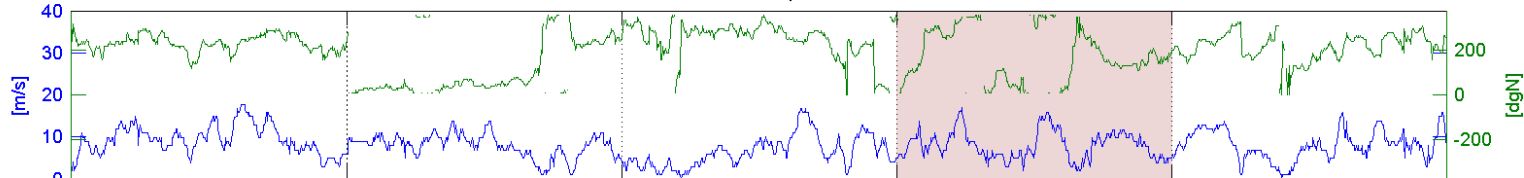
Sand mining volume for Maasvlakte 2



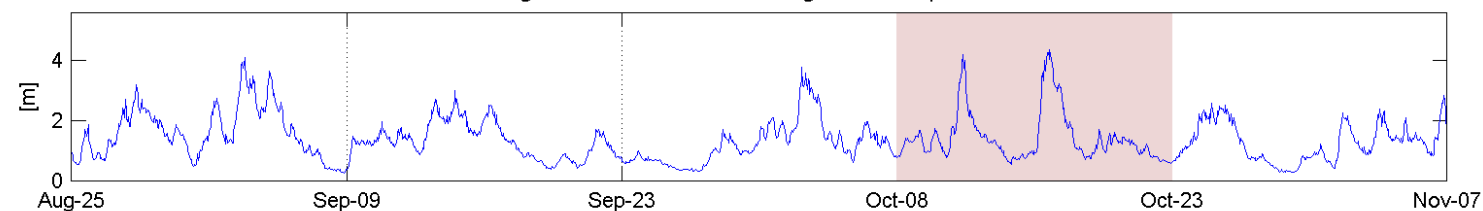
Water level at Noordwijk10



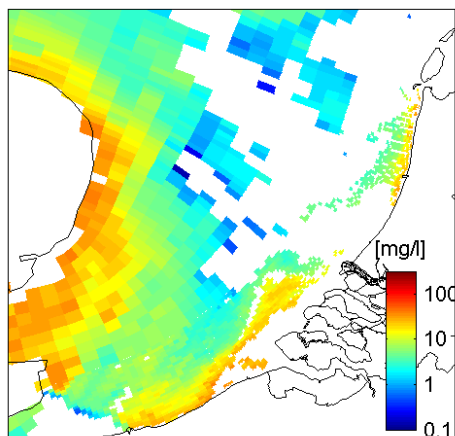
Wind at Euro platform



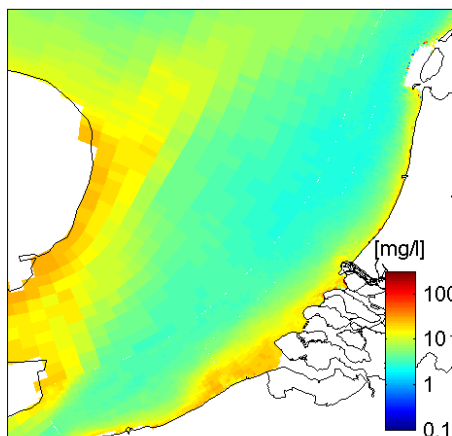
Significant surface wave height at Euro platform



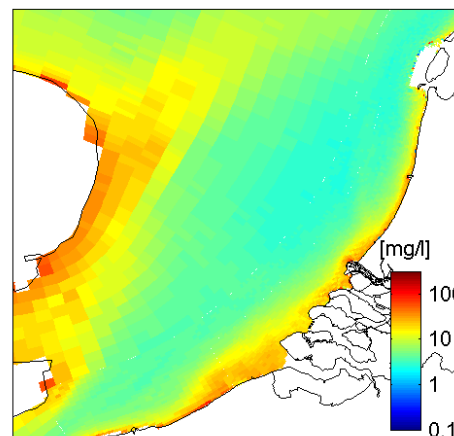
MERIS at surface layer



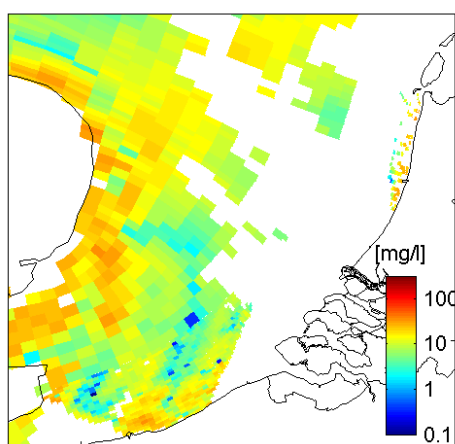
Model at surface layer



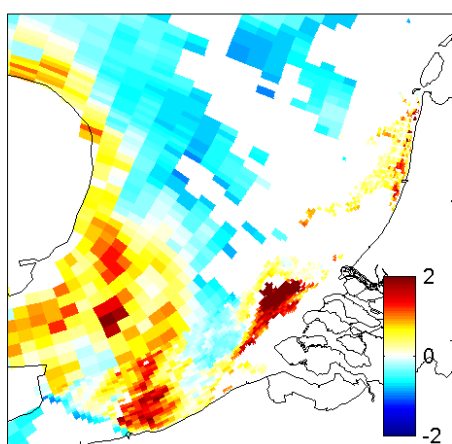
Model at bottom layer



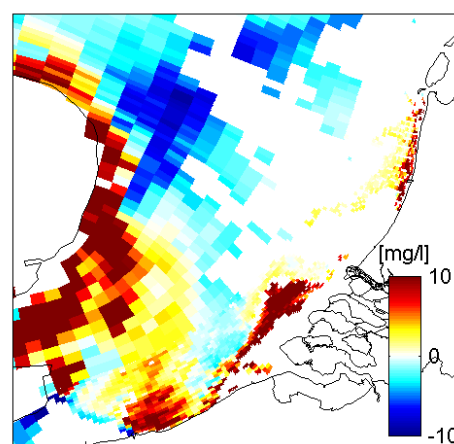
RMS difference



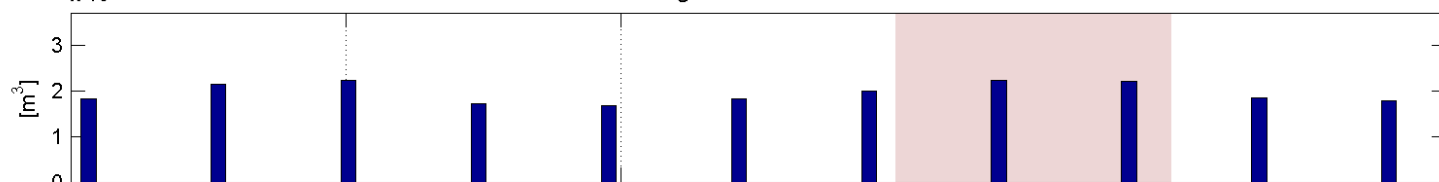
Relative difference [(MERIS-Model)/Model]



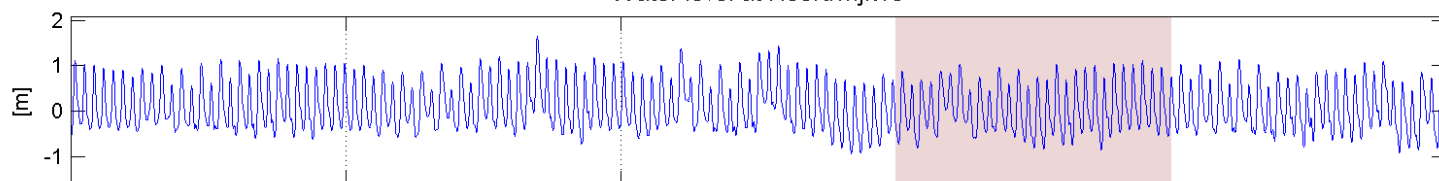
Mean difference [MERIS-Model]

 $\times 10^6$

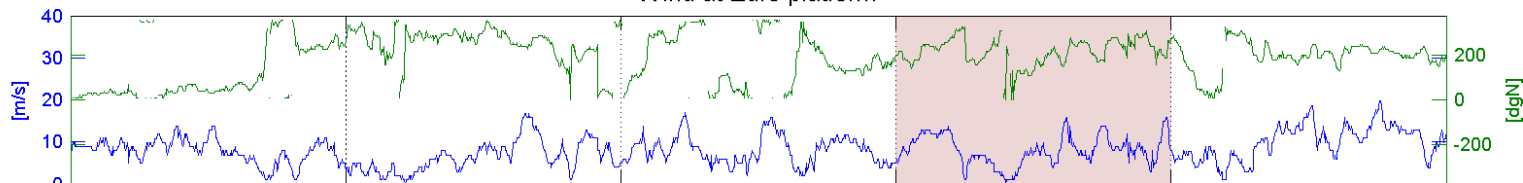
Sand mining volume for Maasvlakte 2



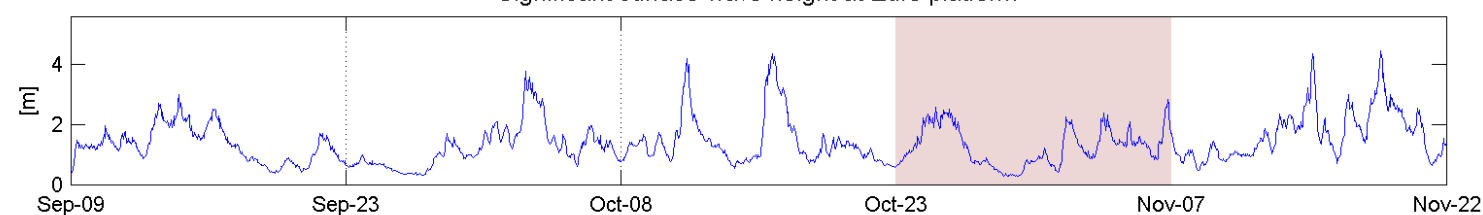
Water level at Noordwijk10



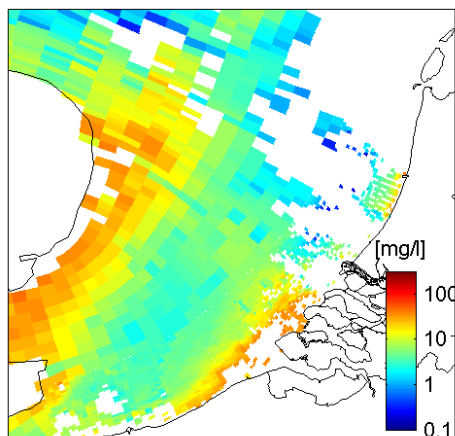
Wind at Euro platform



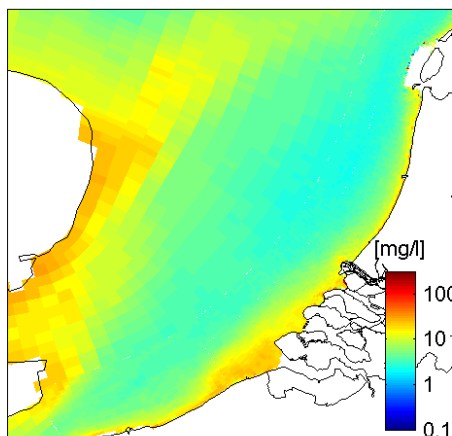
Significant surface wave height at Euro platform



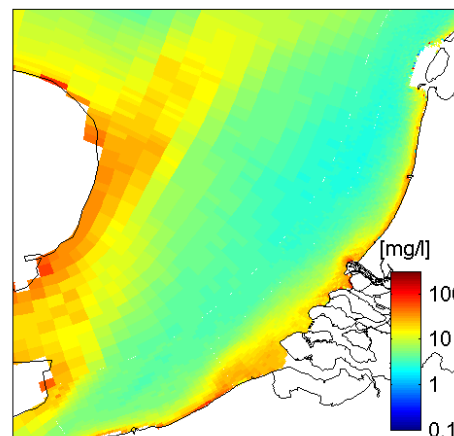
MERIS at surface layer



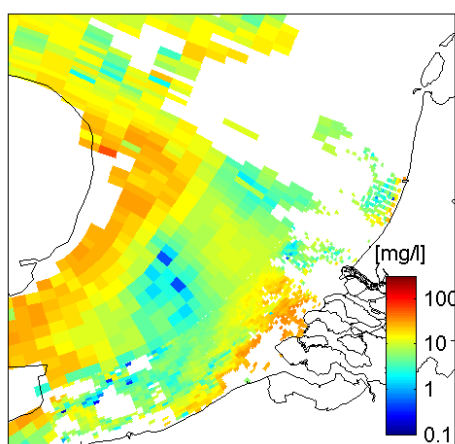
Model at surface layer



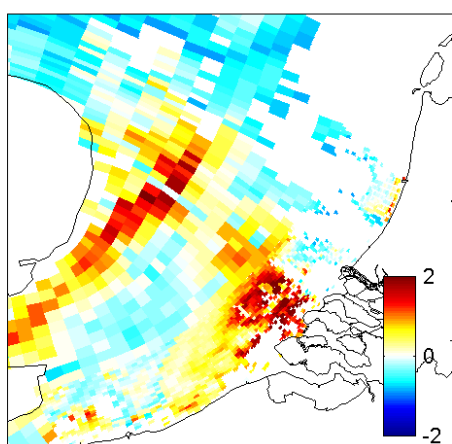
Model at bottom layer



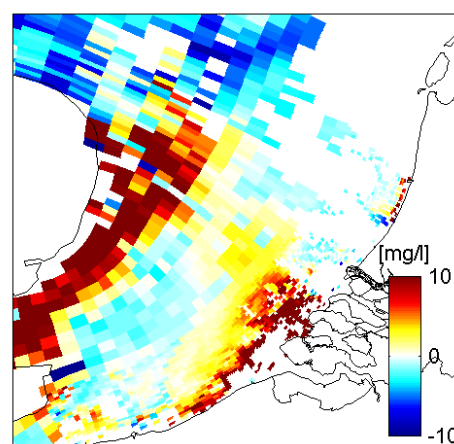
RMS difference



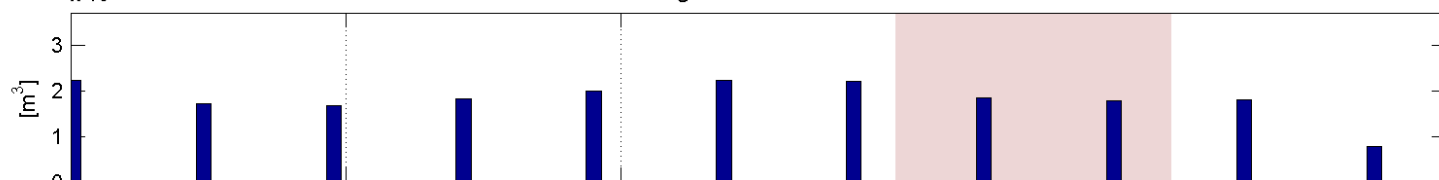
Relative difference [(MERIS-Model)/Model]



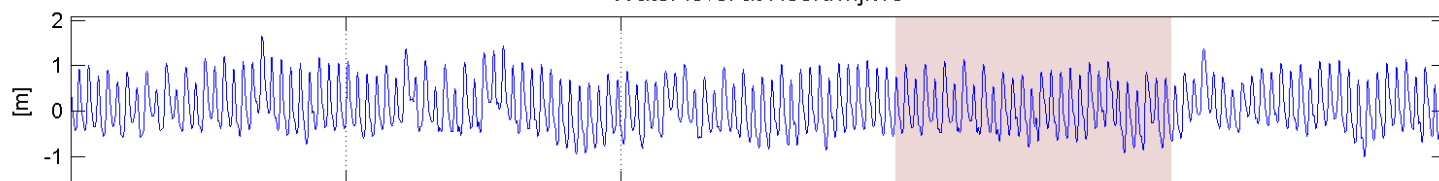
Mean difference [MERIS-Model]

x 10⁶

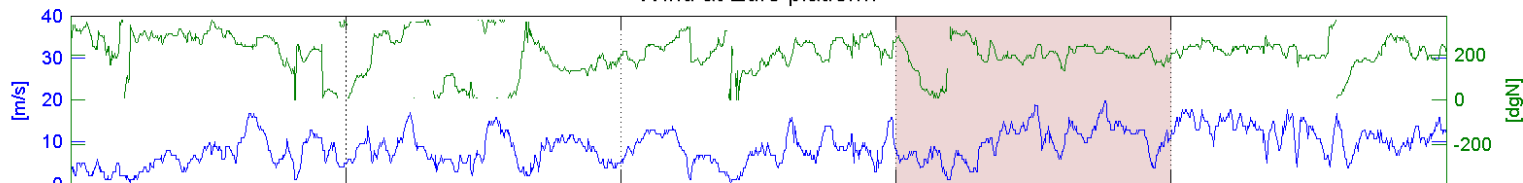
Sand mining volume for Maasvlakte 2



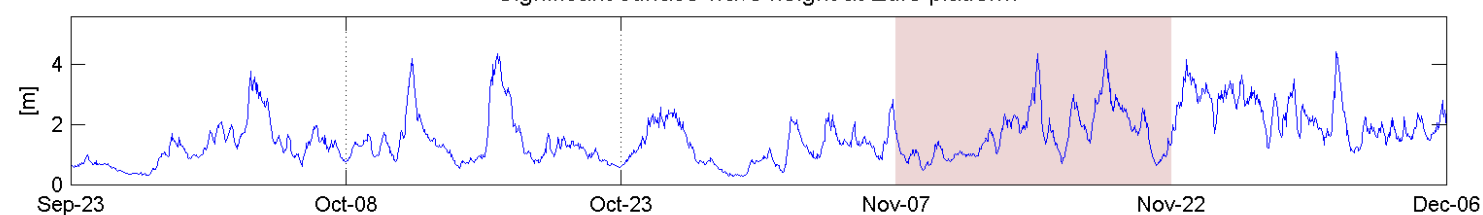
Water level at Noordwijk10



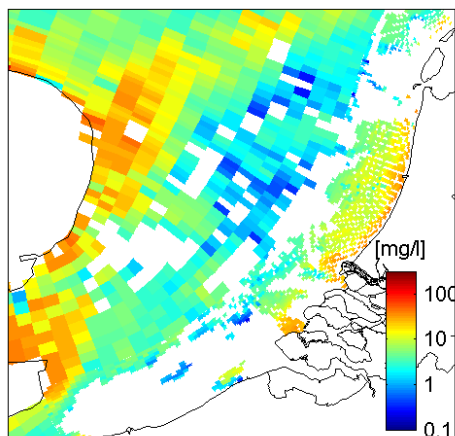
Wind at Euro platform



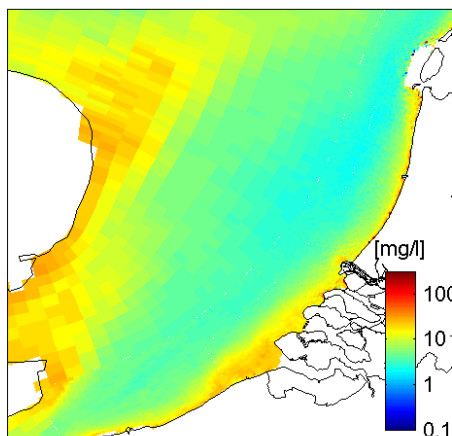
Significant surface wave height at Euro platform



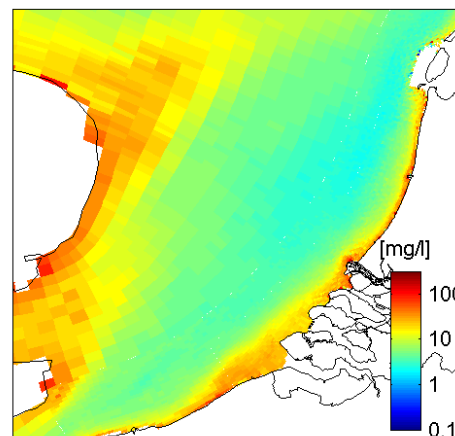
MERIS at surface layer



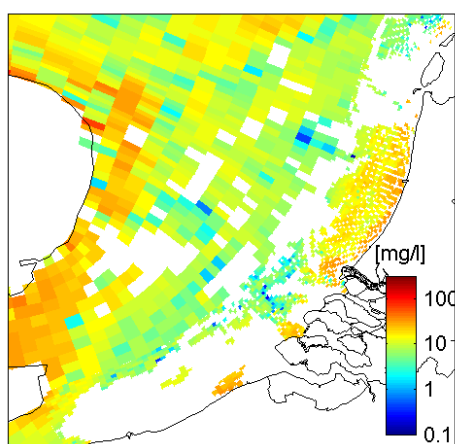
Model at surface layer



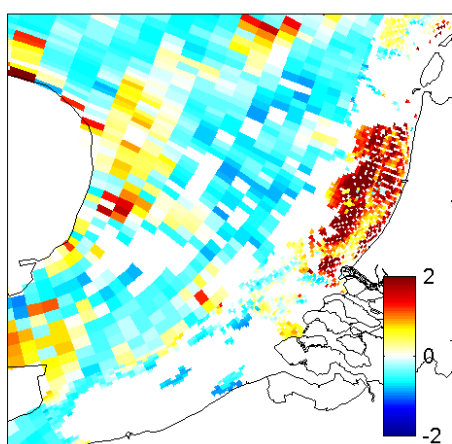
Model at bottom layer



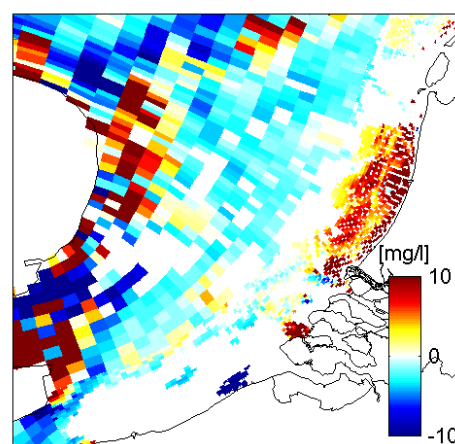
RMS difference



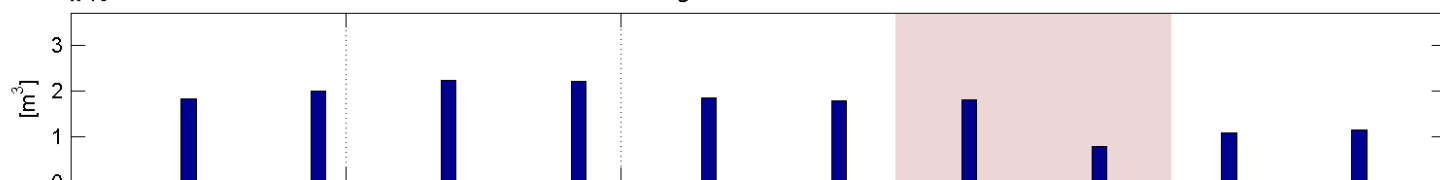
Relative difference [(MERIS-Model)/Model]



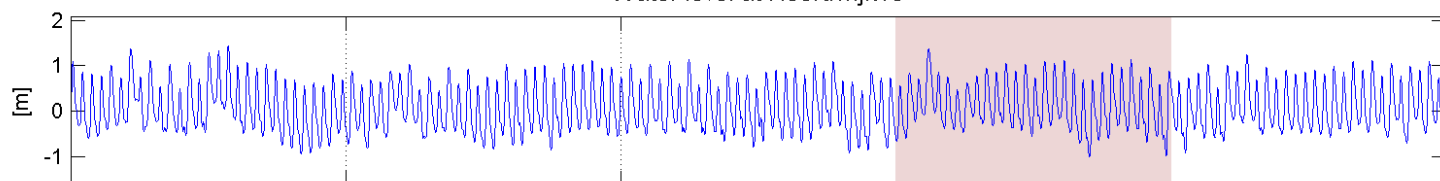
Mean difference [MERIS-Model]


x 10⁶

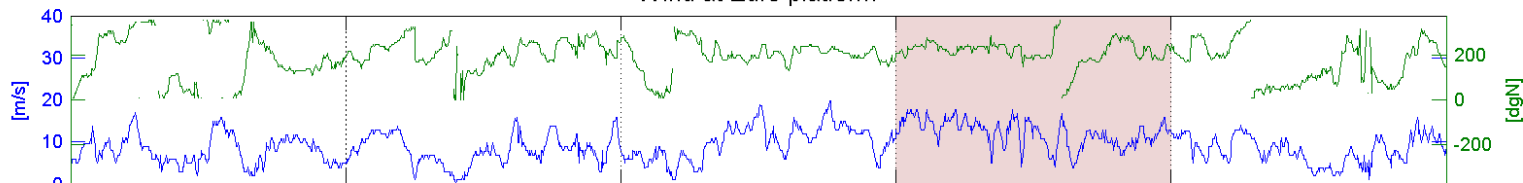
Sand mining volume for Maasvlakte 2



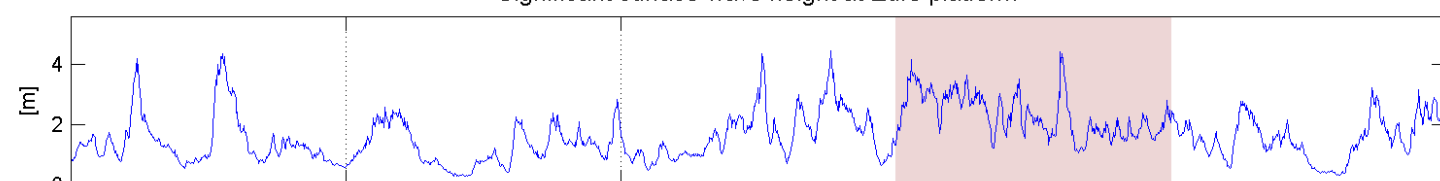
Water level at Noordwijk10



Wind at Euro platform

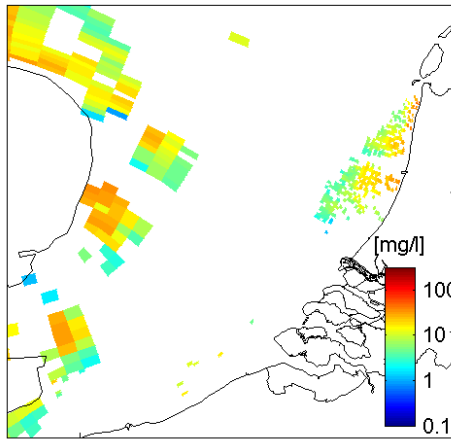


Significant surface wave height at Euro platform

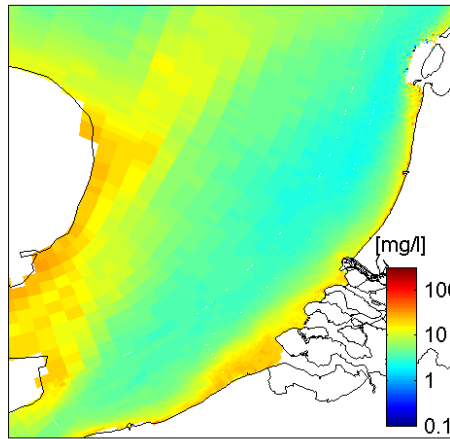


Oct-08 Oct-23 Nov-07 Nov-22 Dec-06 Dec-21

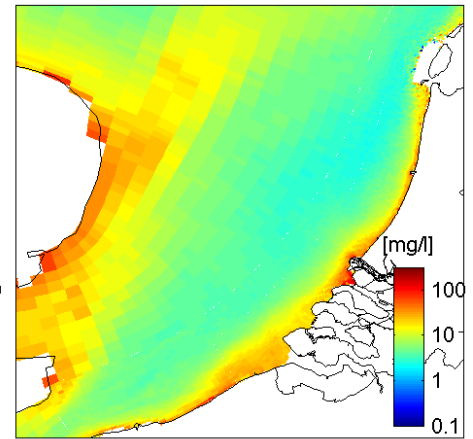
MERIS at surface layer



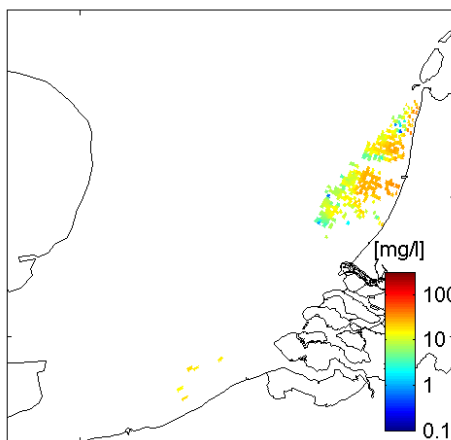
Model at surface layer



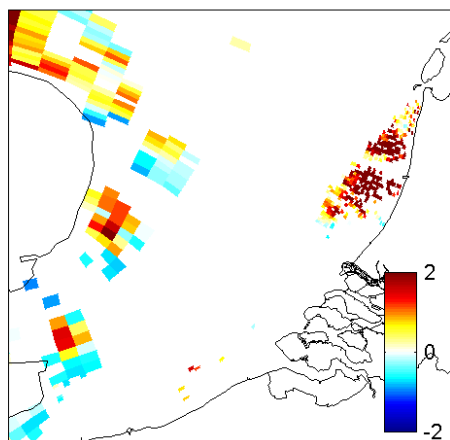
Model at bottom layer



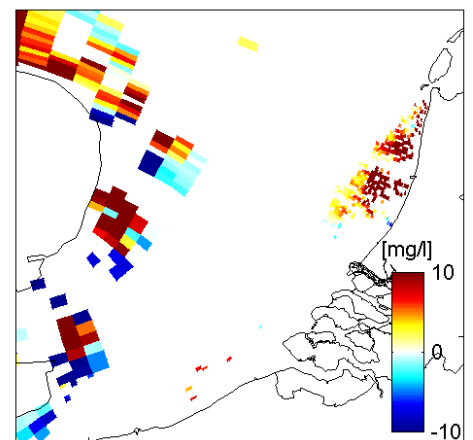
RMS difference



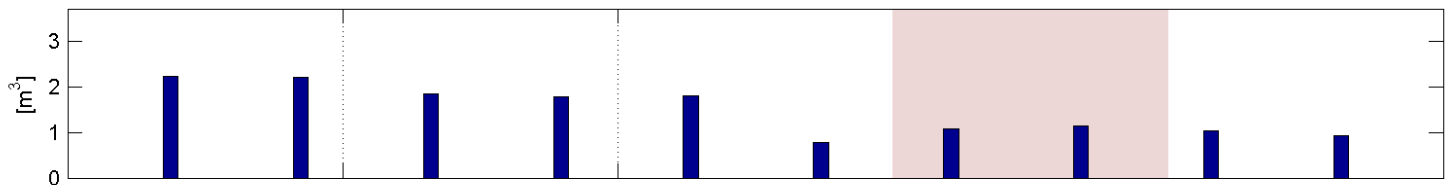
Relative difference [(MERIS-Model)/Model]



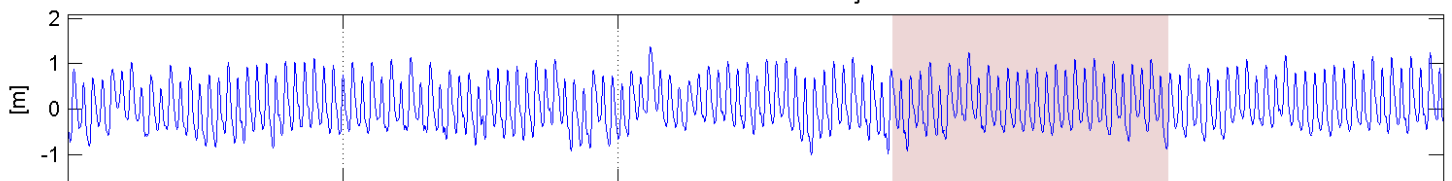
Mean difference [MERIS-Model]

 $\times 10^6$

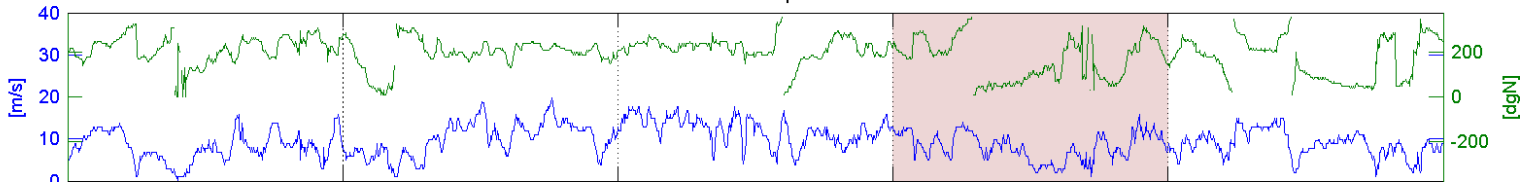
Sand mining volume for Maasvlakte 2



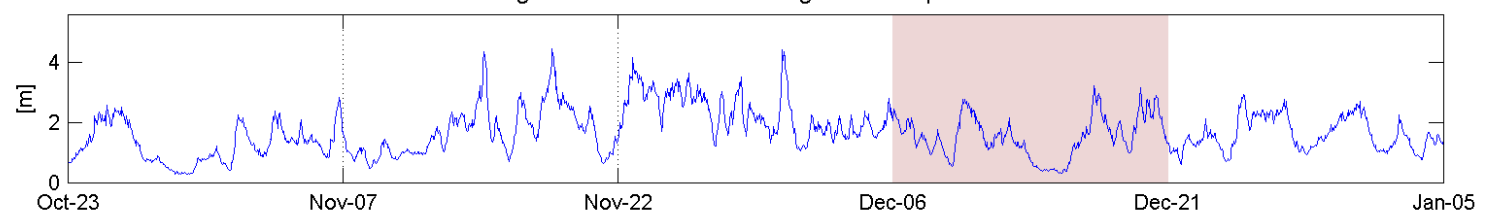
Water level at Noordwijk10



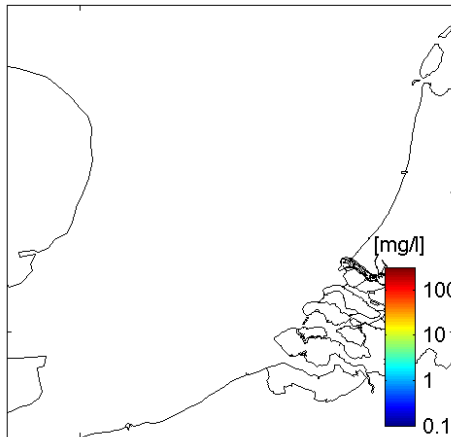
Wind at Euro platform



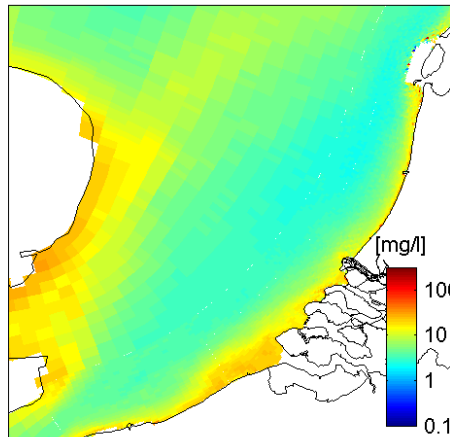
Significant surface wave height at Euro platform



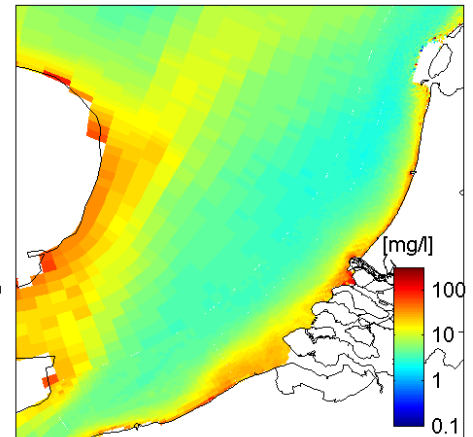
MERIS at surface layer



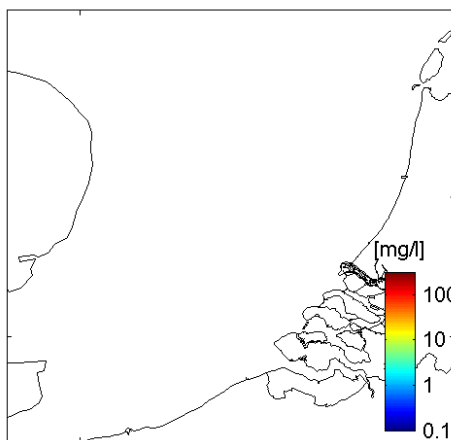
Model at surface layer



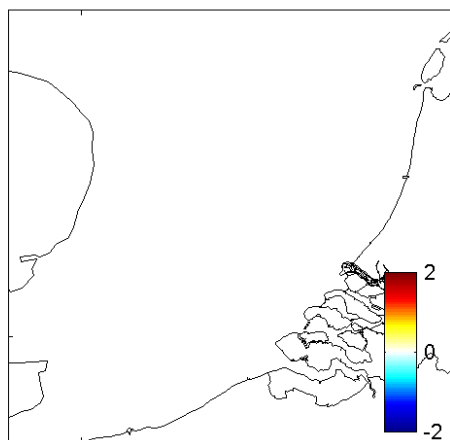
Model at bottom layer



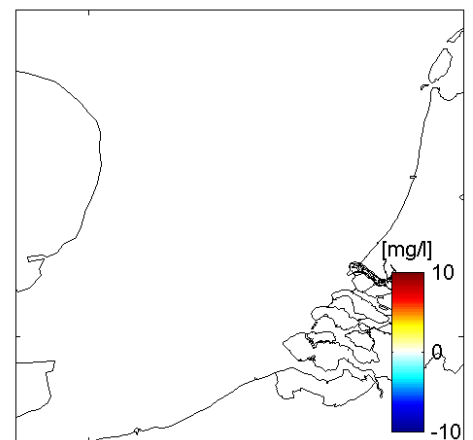
RMS difference



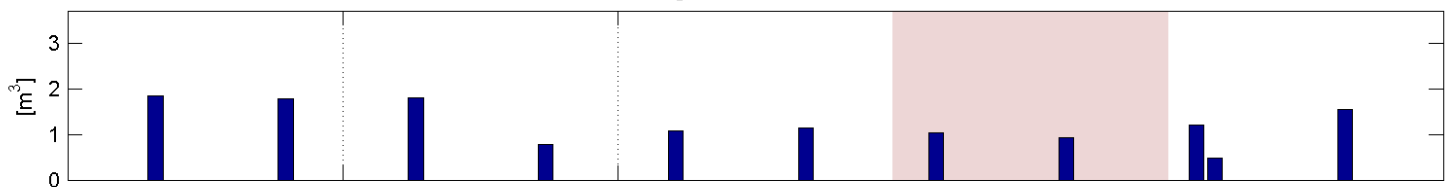
Relative difference [(MERIS-Model)/Model]



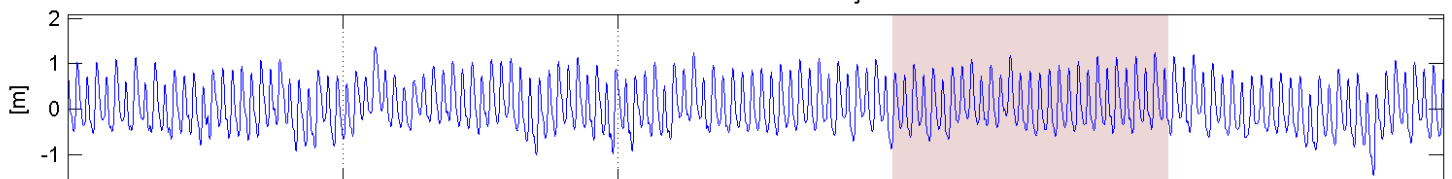
Mean difference [MERIS-Model]

 $\times 10^6$

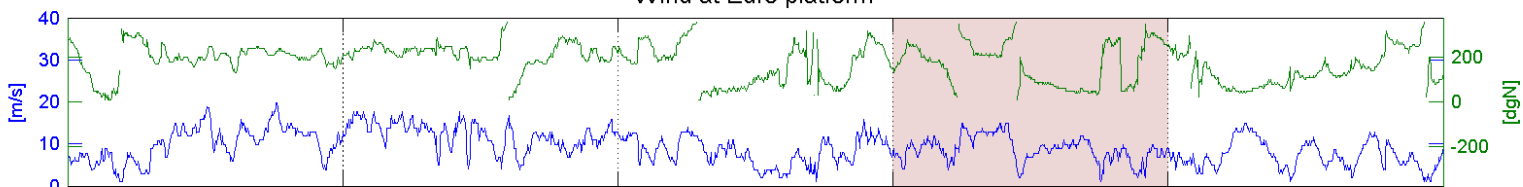
Sand mining volume for Maasvlakte 2



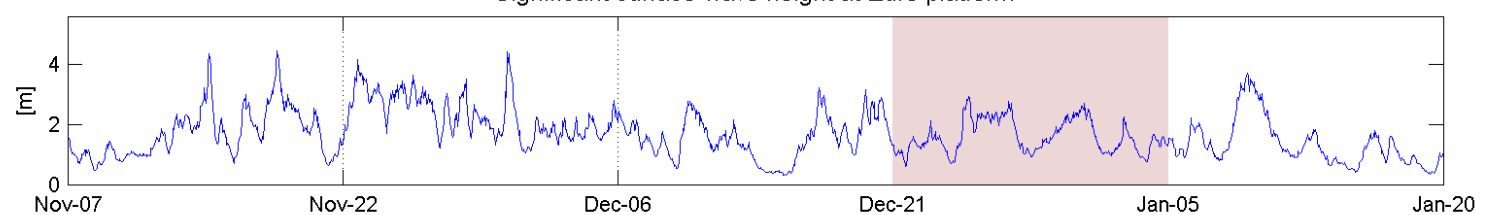
Water level at Noordwijk10



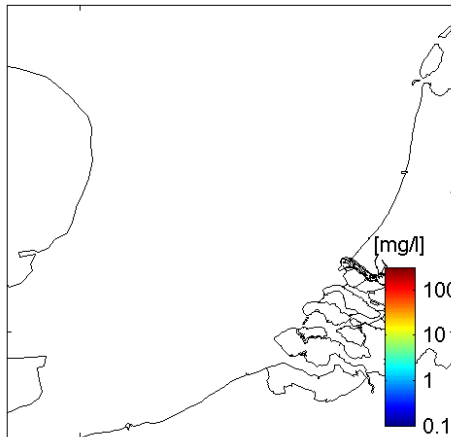
Wind at Euro platform



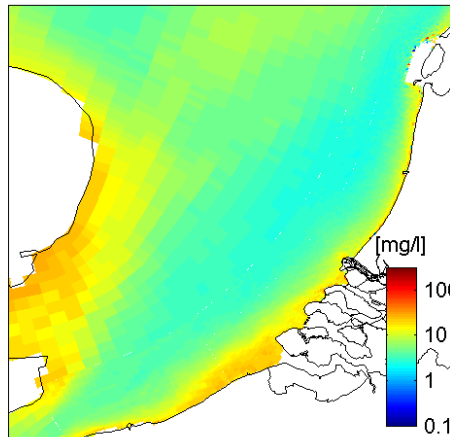
Significant surface wave height at Euro platform



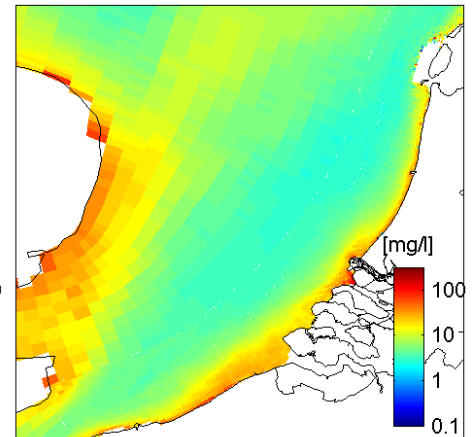
MERIS at surface layer



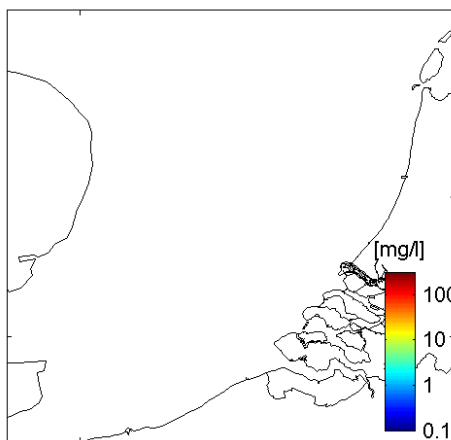
Model at surface layer



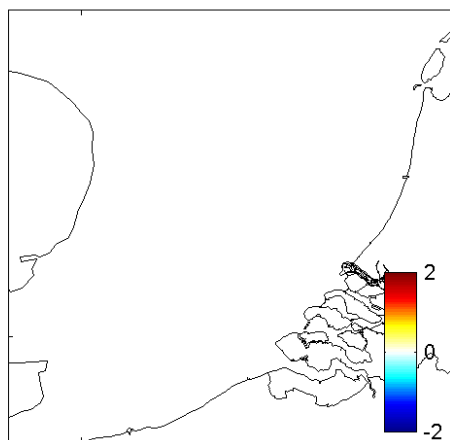
Model at bottom layer



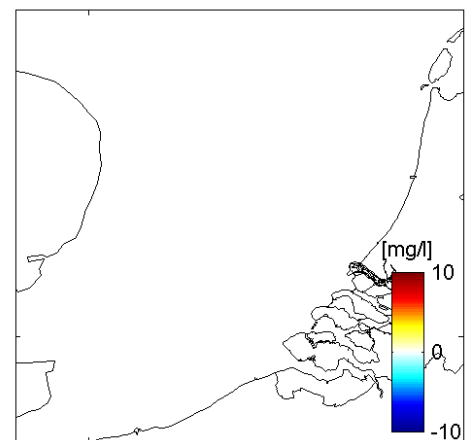
RMS difference



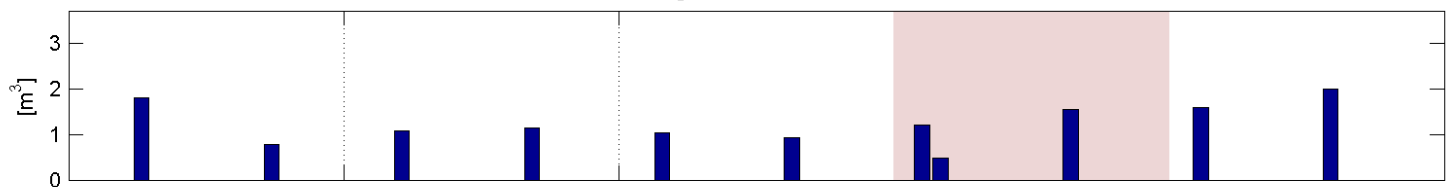
Relative difference [(MERIS-Model)/Model]



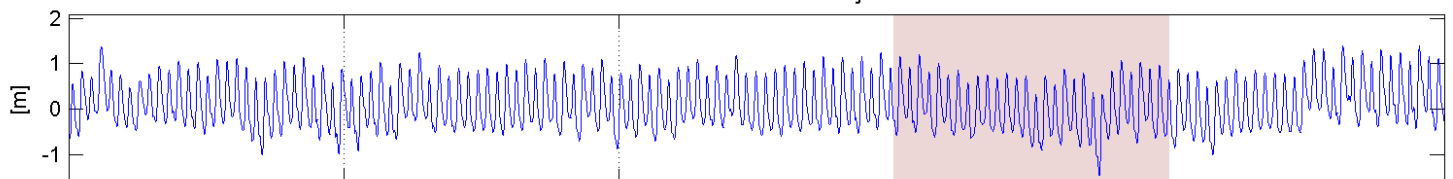
Mean difference [MERIS-Model]

 $\times 10^6$

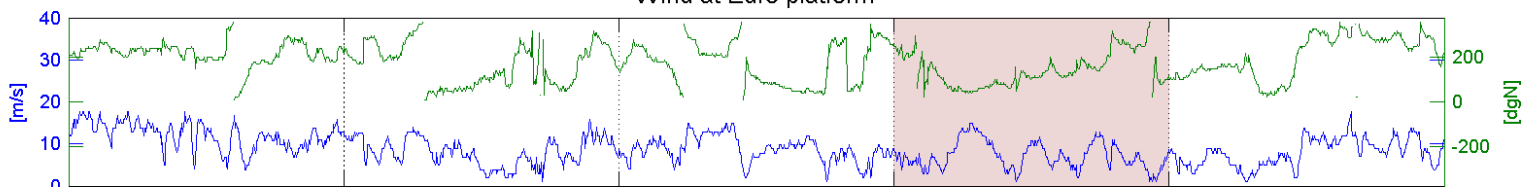
Sand mining volume for Maasvlakte 2



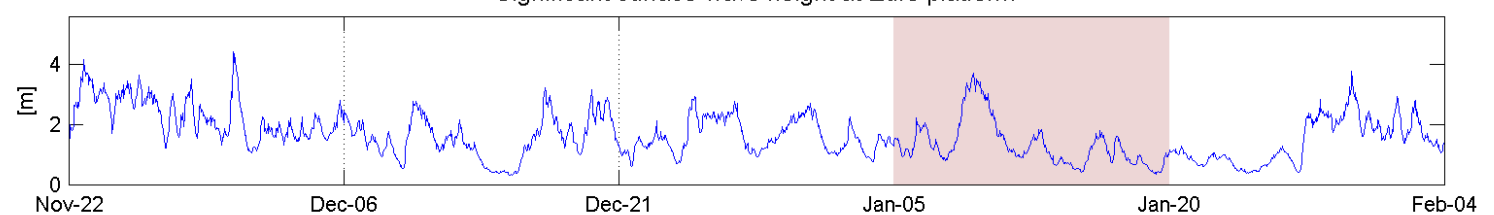
Water level at Noordwijk10



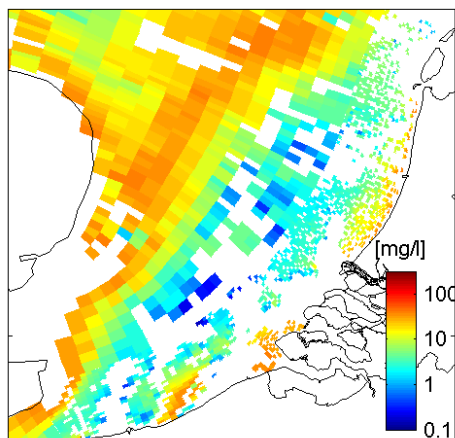
Wind at Euro platform



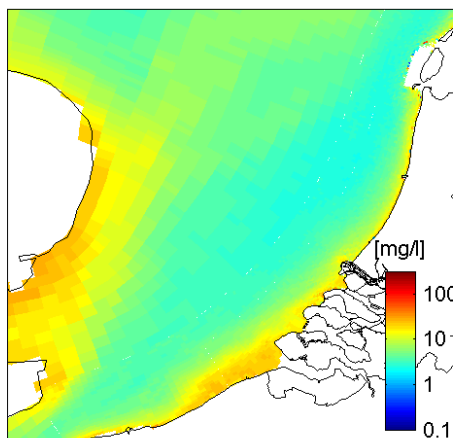
Significant surface wave height at Euro platform



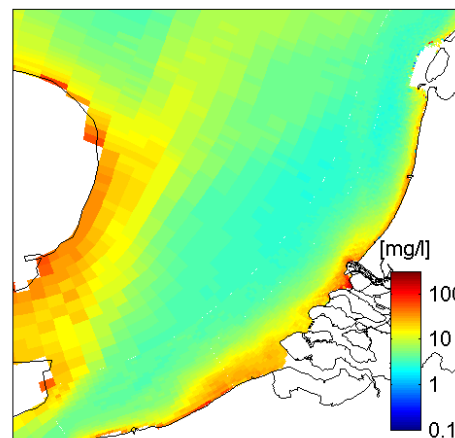
MERIS at surface layer



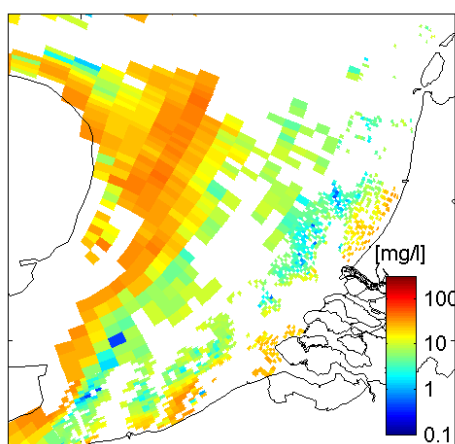
Model at surface layer



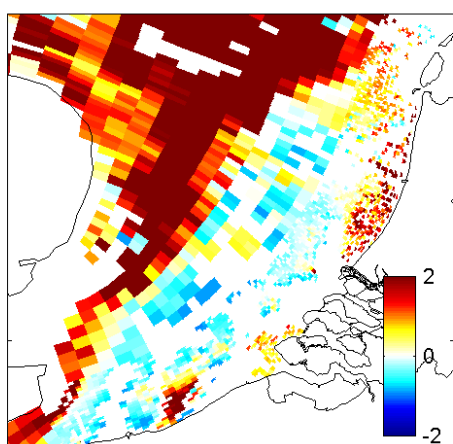
Model at bottom layer



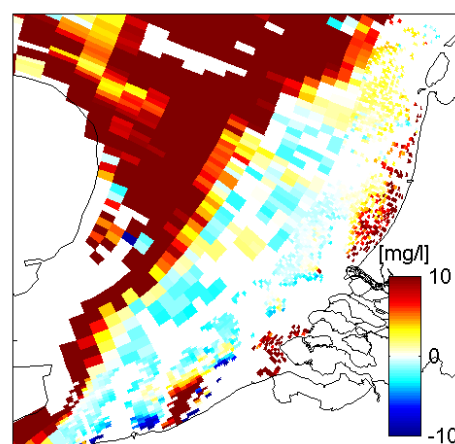
RMS difference



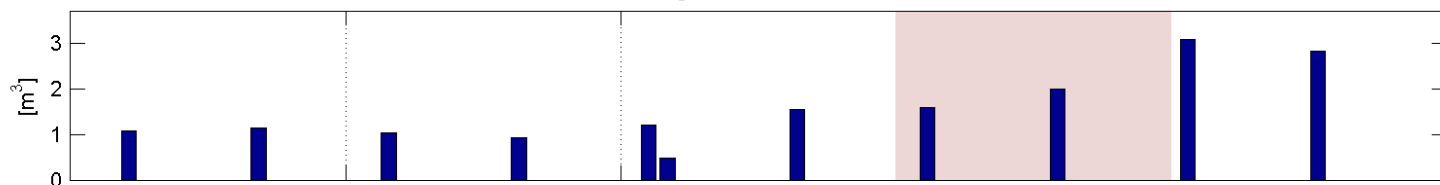
Relative difference [(MERIS-Model)/Model]



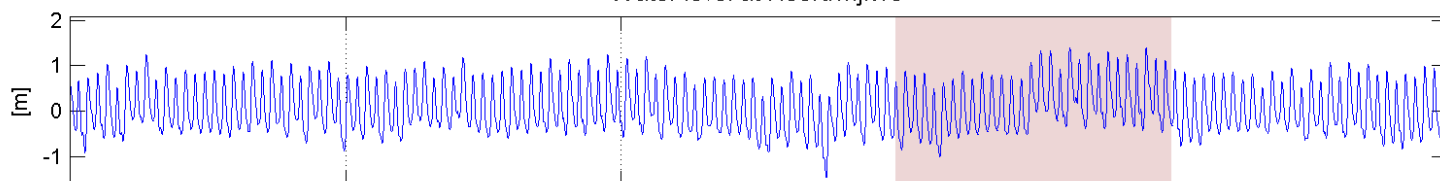
Mean difference [MERIS-Model]

 $\times 10^6$

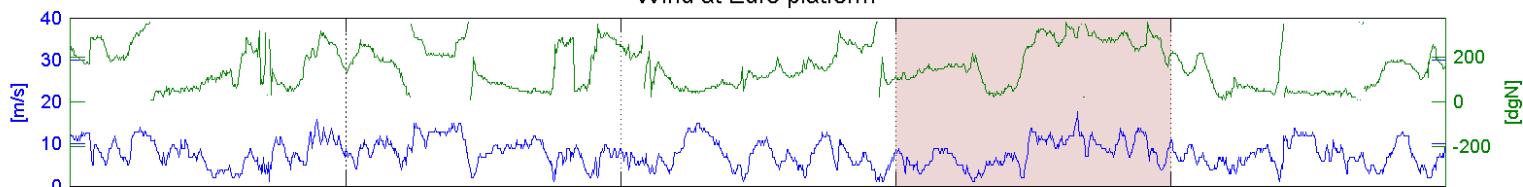
Sand mining volume for Maasvlakte 2



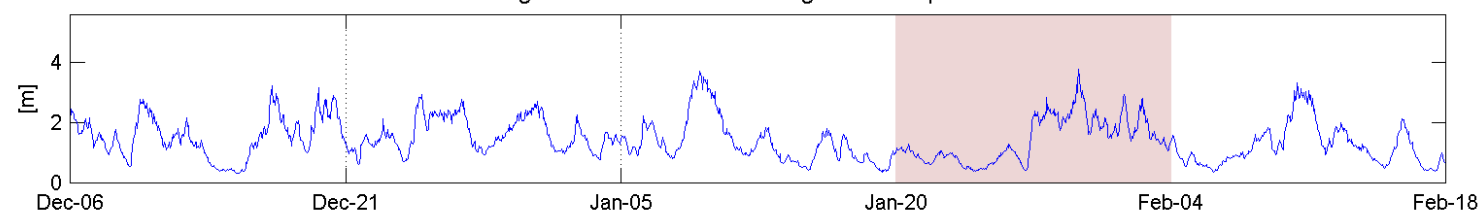
Water level at Noordwijk10



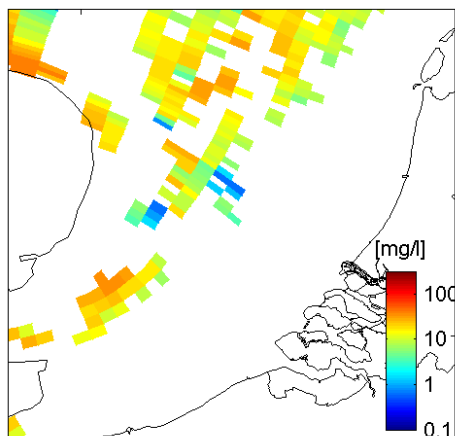
Wind at Euro platform



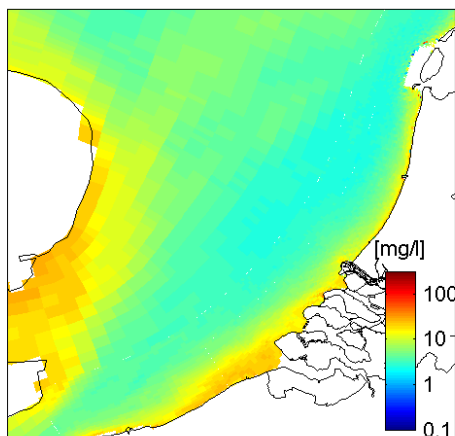
Significant surface wave height at Euro platform



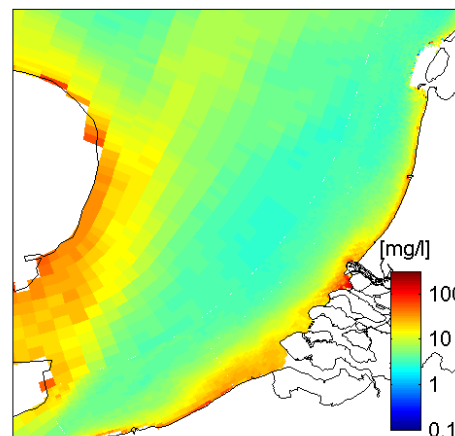
MERIS at surface layer



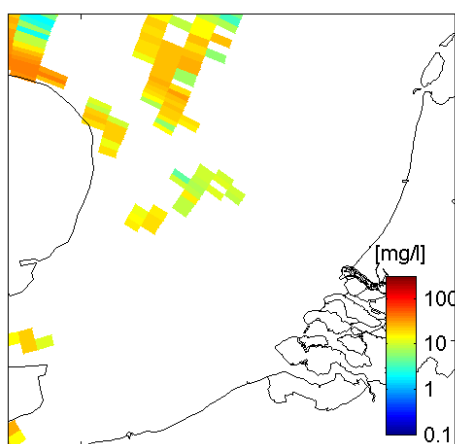
Model at surface layer



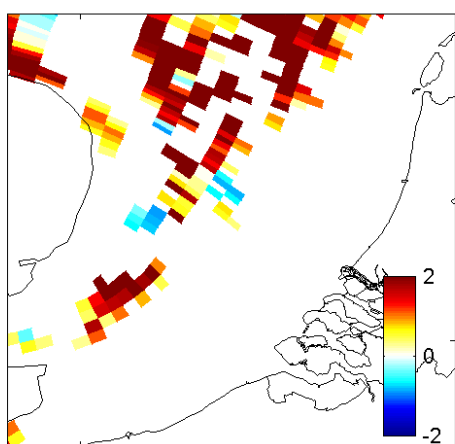
Model at bottom layer



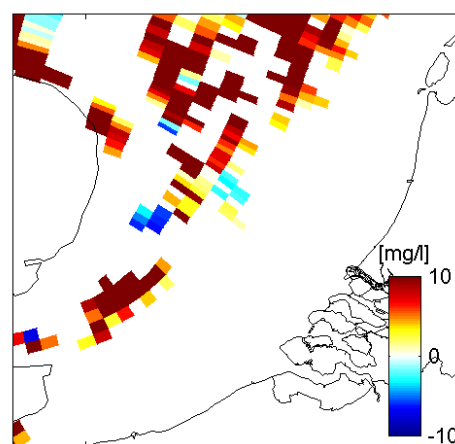
RMS difference



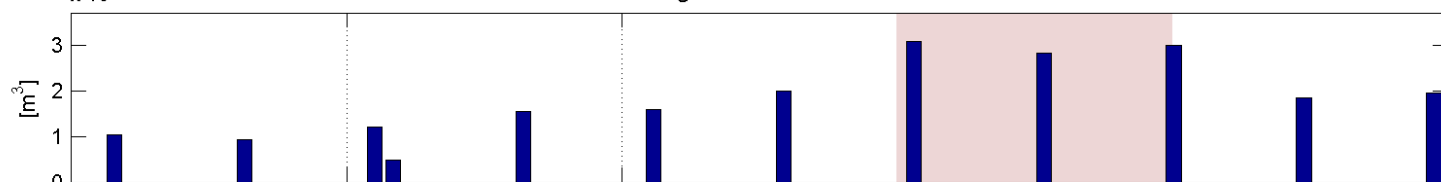
Relative difference [(MERIS-Model)/Model]



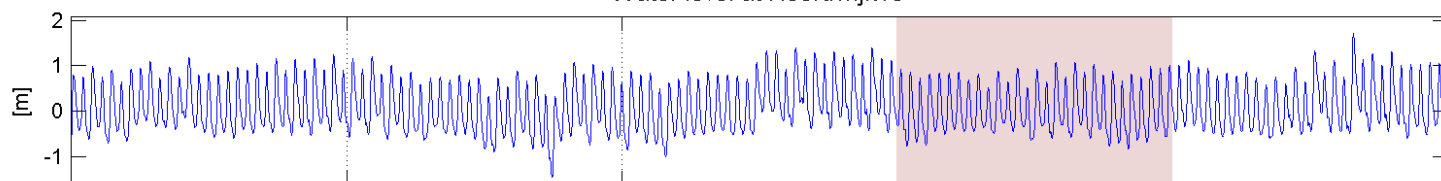
Mean difference [MERIS-Model]


x 10⁶

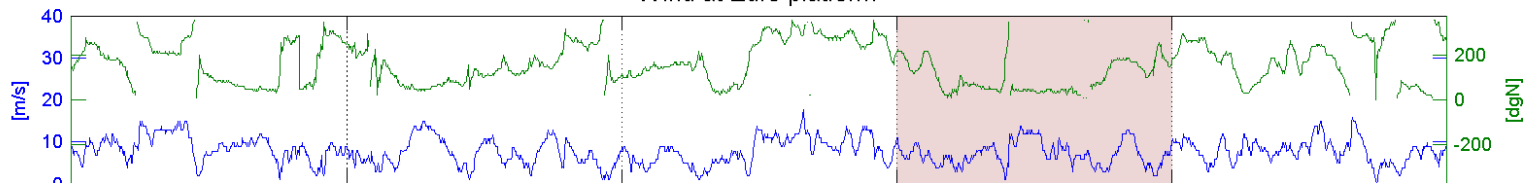
Sand mining volume for Maasvlakte 2



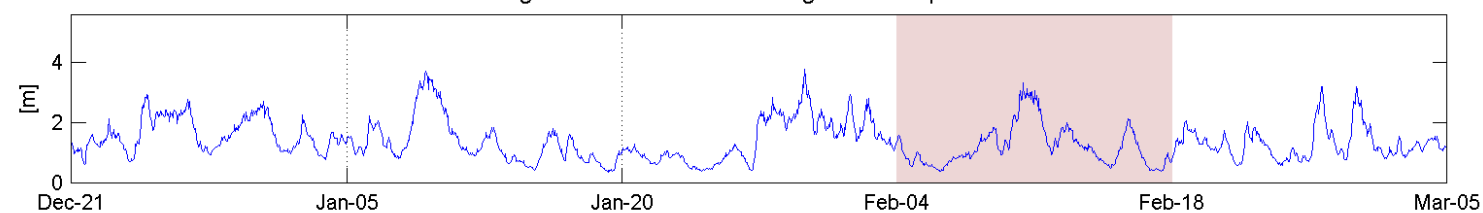
Water level at Noordwijk10



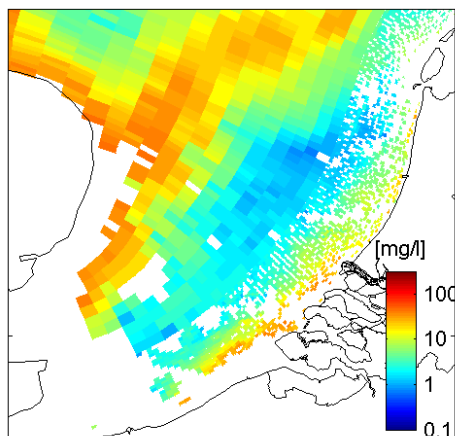
Wind at Euro platform



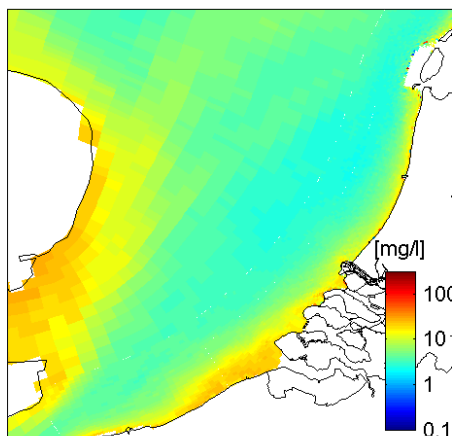
Significant surface wave height at Euro platform



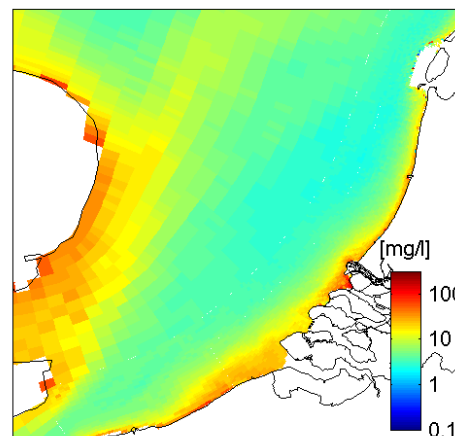
MERIS at surface layer



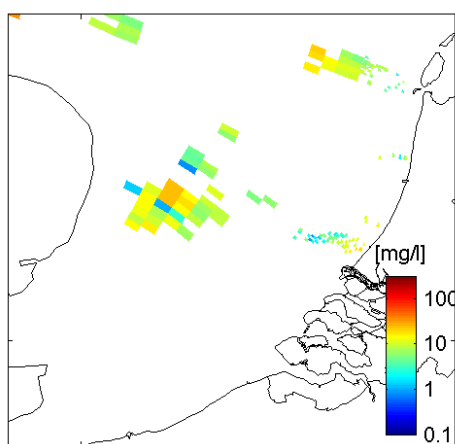
Model at surface layer



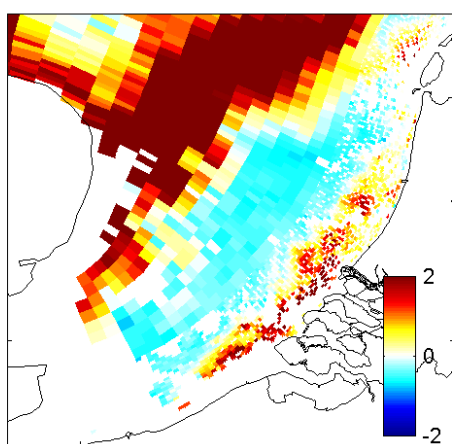
Model at bottom layer



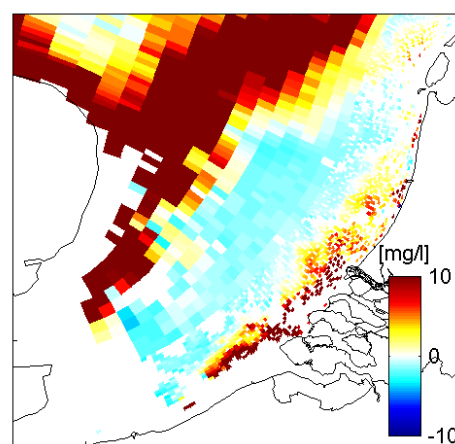
RMS difference



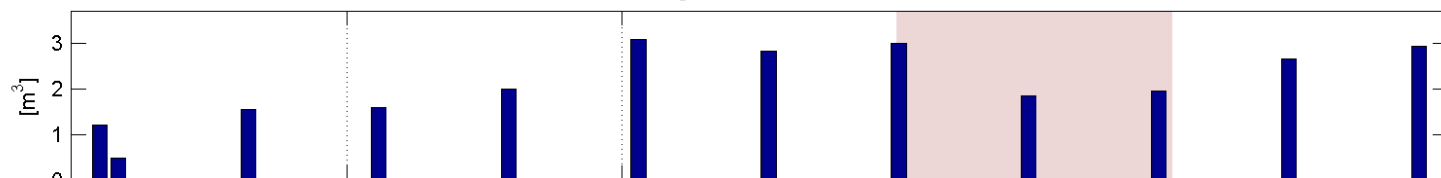
Relative difference [(MERIS-Model)/Model]



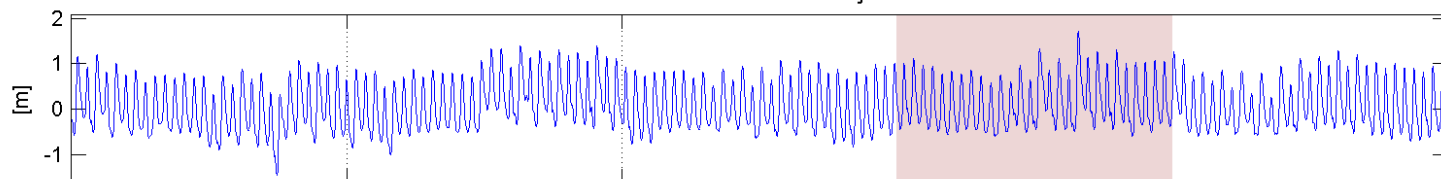
Mean difference [MERIS-Model]


x 10⁶

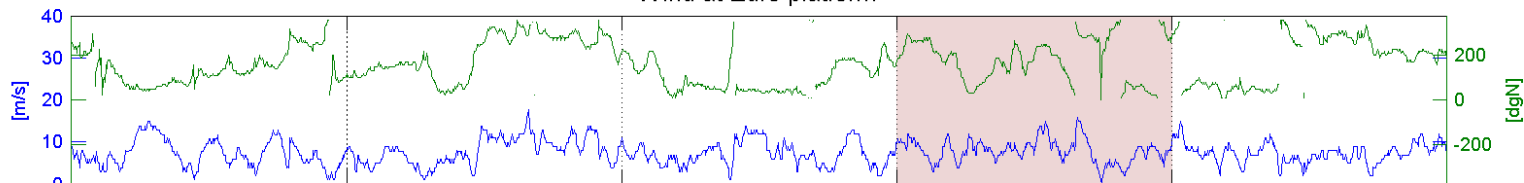
Sand mining volume for Maasvlakte 2



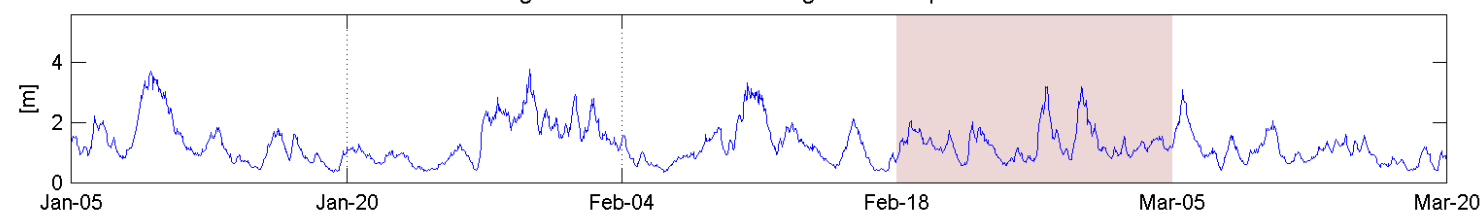
Water level at Noordwijk10



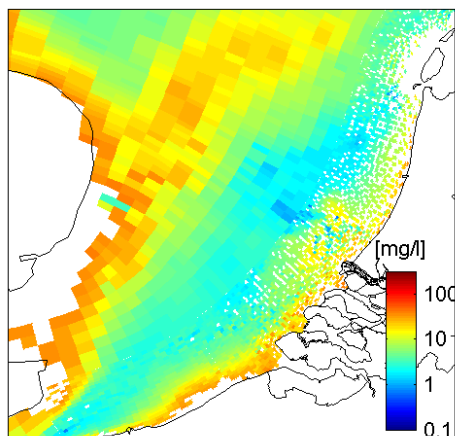
Wind at Euro platform



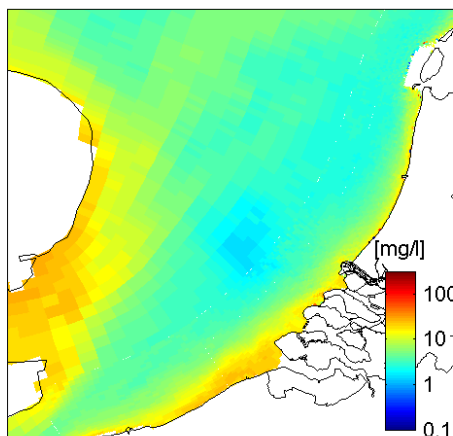
Significant surface wave height at Euro platform



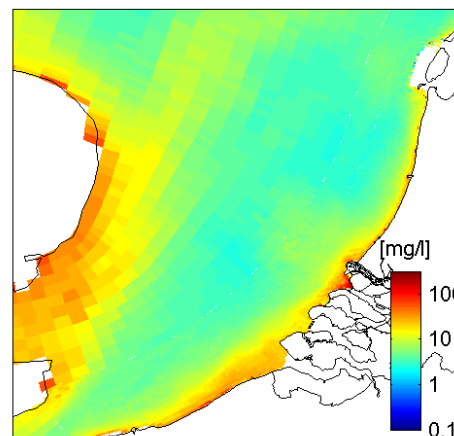
MERIS at surface layer



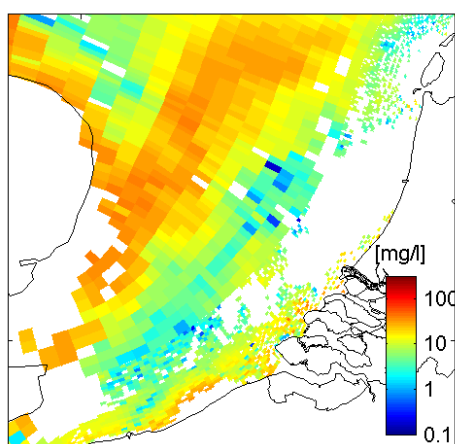
Model at surface layer



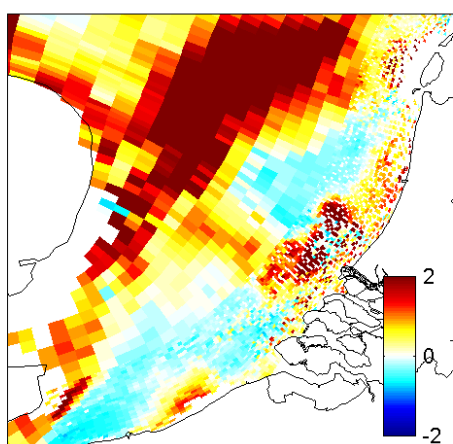
Model at bottom layer



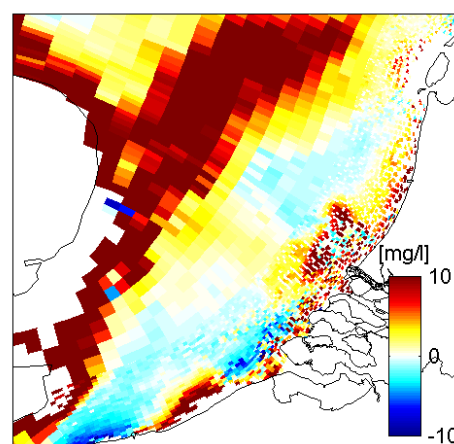
RMS difference



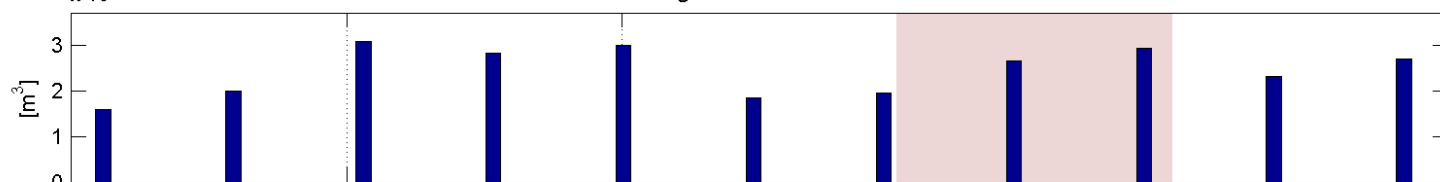
Relative difference [(MERIS-Model)/Model]



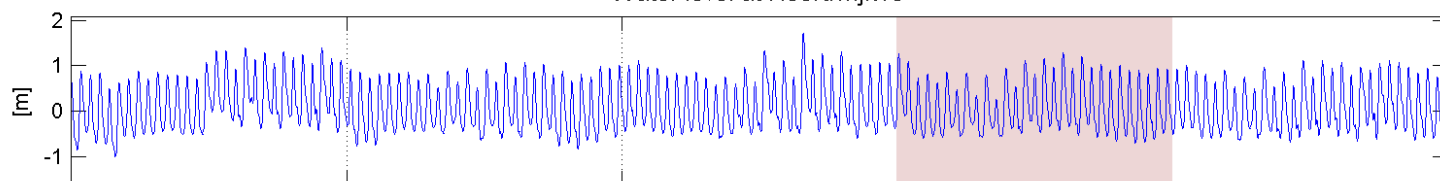
Mean difference [MERIS-Model]

x 10⁶

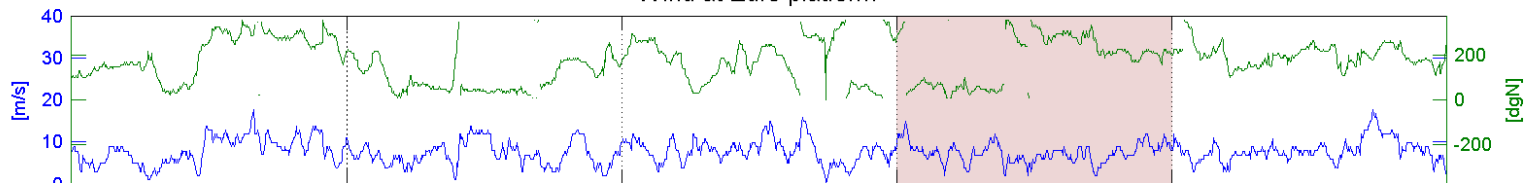
Sand mining volume for Maasvlakte 2



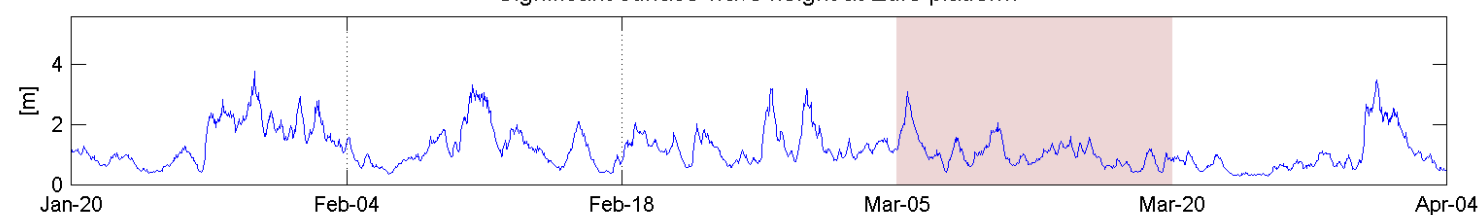
Water level at Noordwijk10



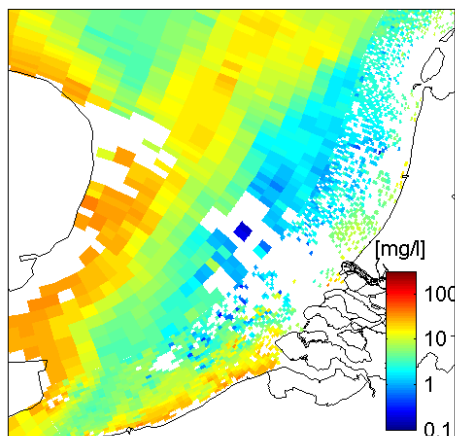
Wind at Euro platform



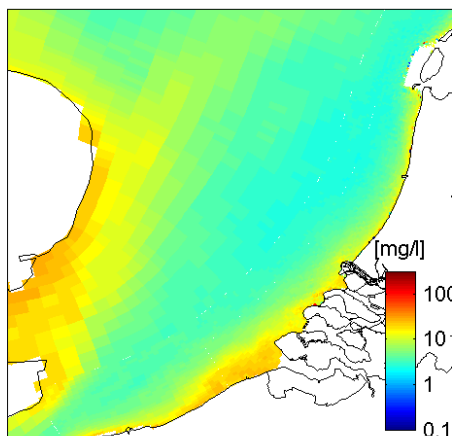
Significant surface wave height at Euro platform



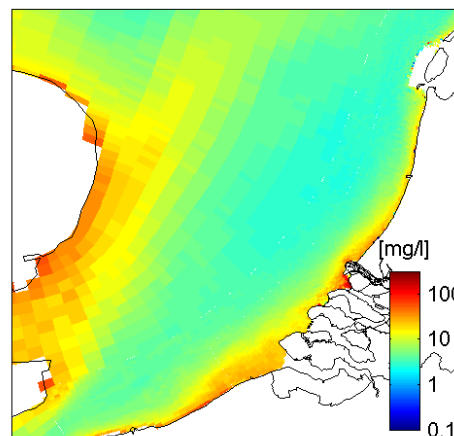
MERIS at surface layer



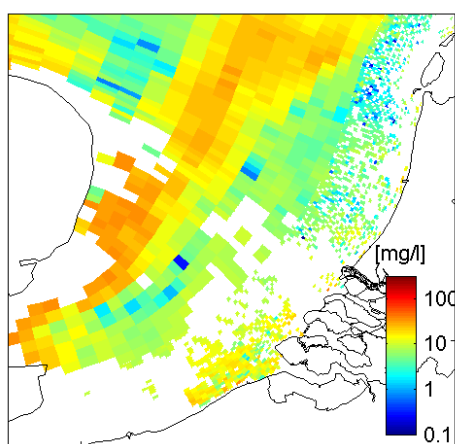
Model at surface layer



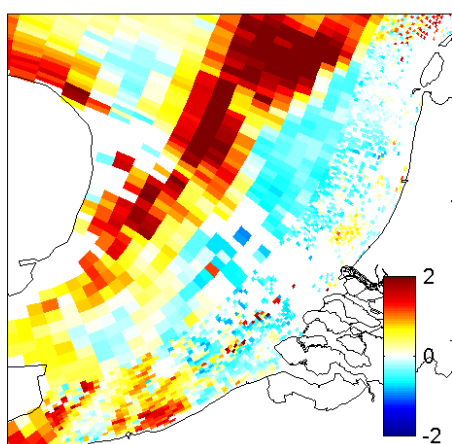
Model at bottom layer



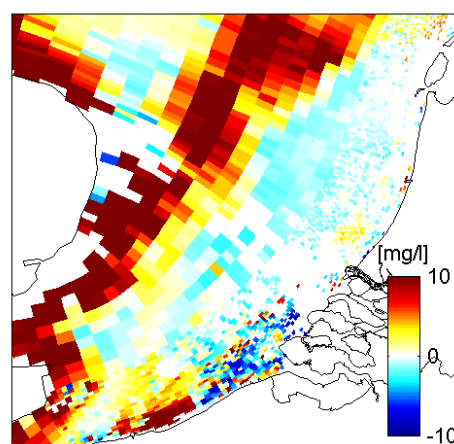
RMS difference



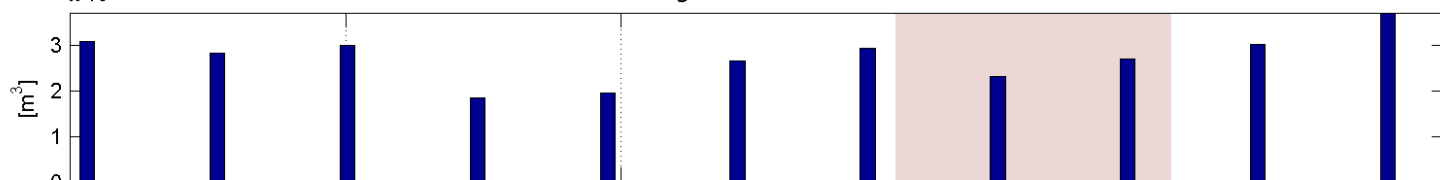
Relative difference [(MERIS-Model)/Model]



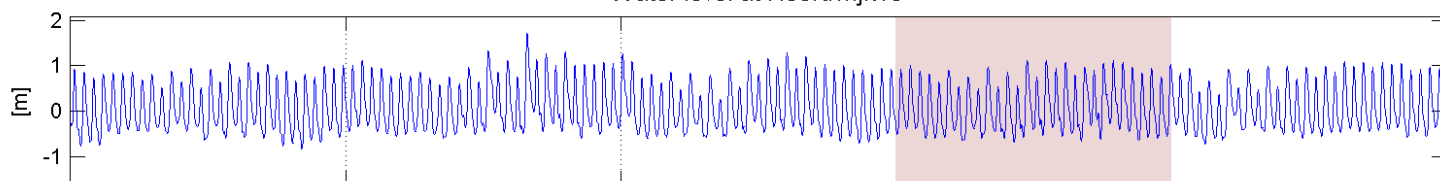
Mean difference [MERIS-Model]

 $\times 10^6$

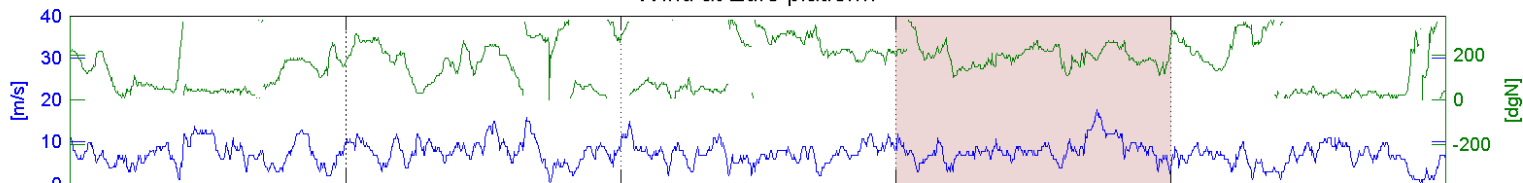
Sand mining volume for Maasvlakte 2



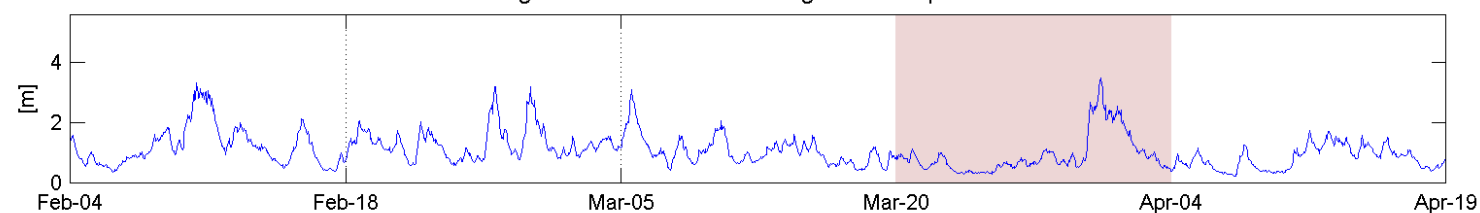
Water level at Noordwijk10



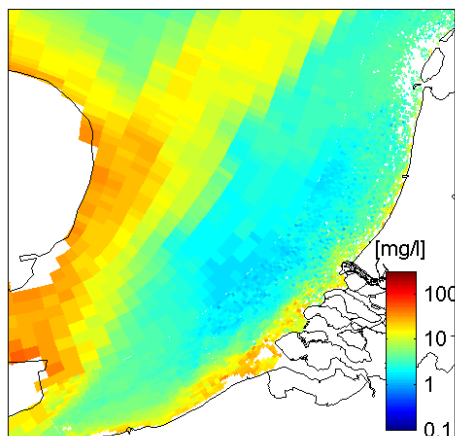
Wind at Euro platform



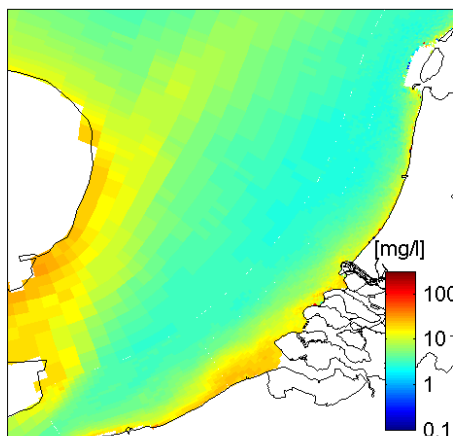
Significant surface wave height at Euro platform



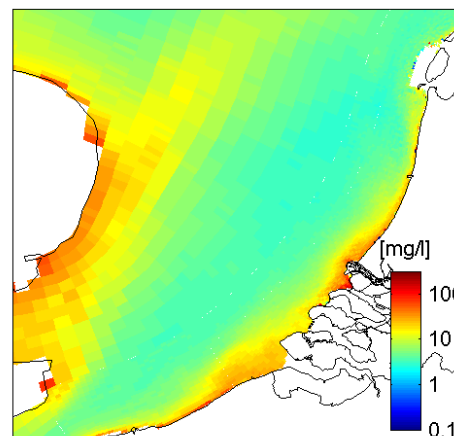
MERIS at surface layer



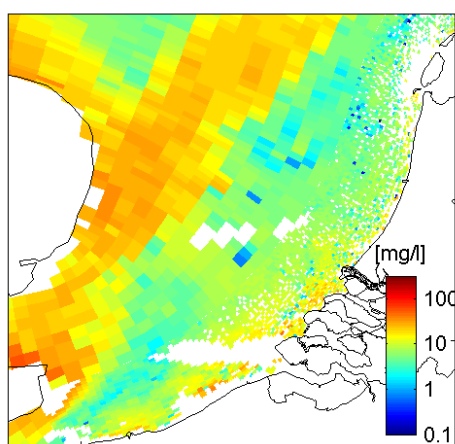
Model at surface layer



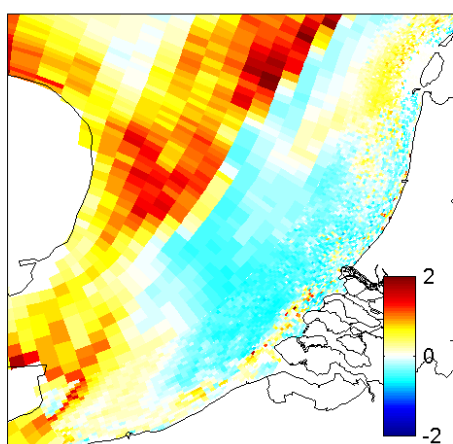
Model at bottom layer



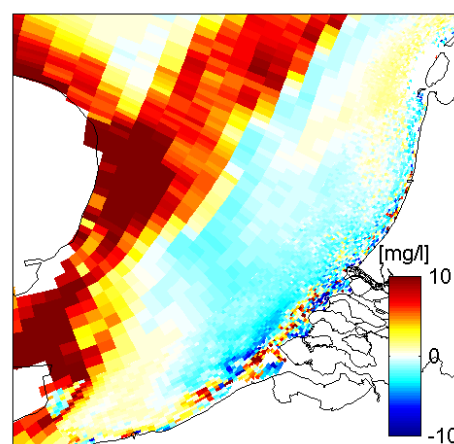
RMS difference



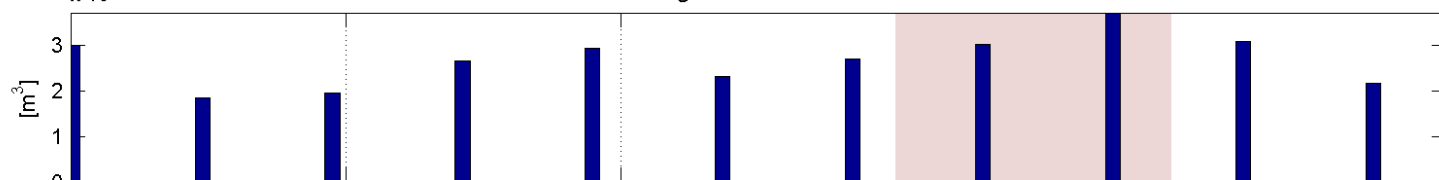
Relative difference [(MERIS-Model)/Model]



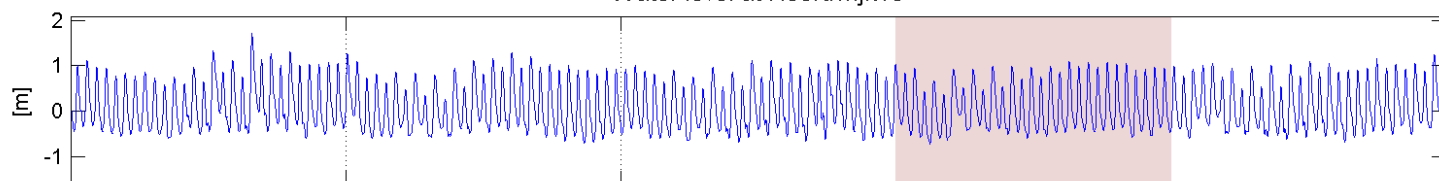
Mean difference [MERIS-Model]


x 10⁶

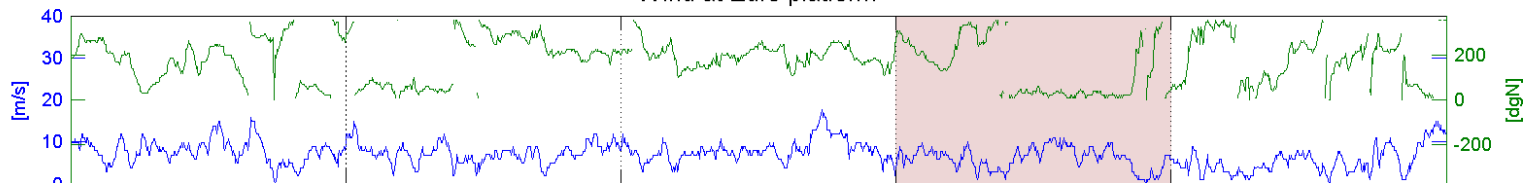
Sand mining volume for Maasvlakte 2



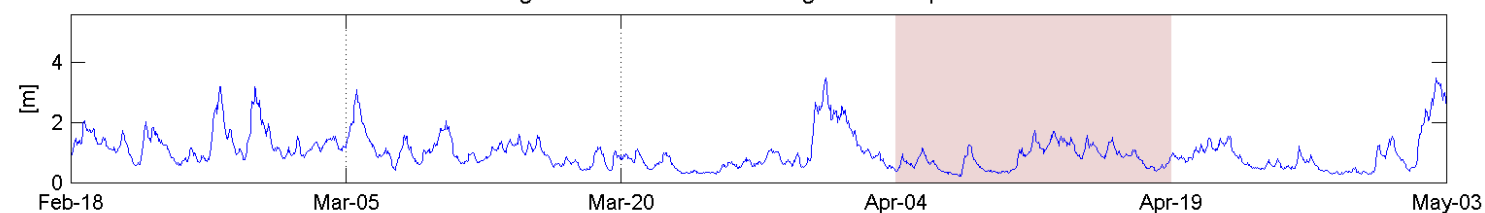
Water level at Noordwijk10



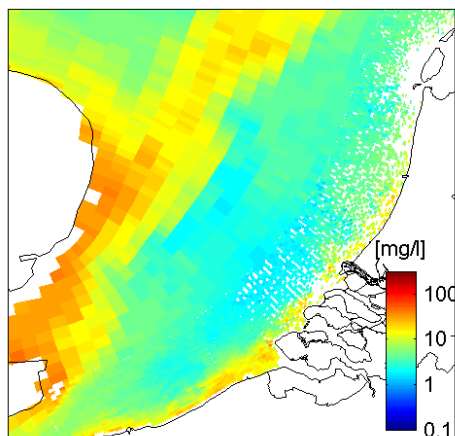
Wind at Euro platform



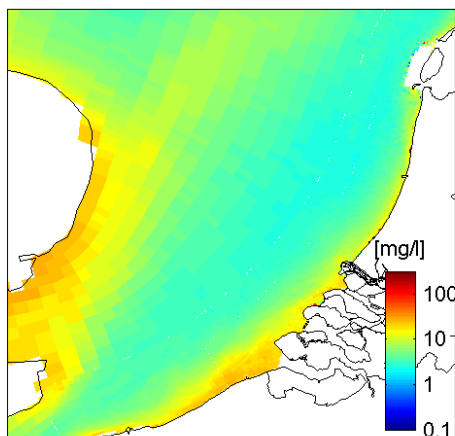
Significant surface wave height at Euro platform



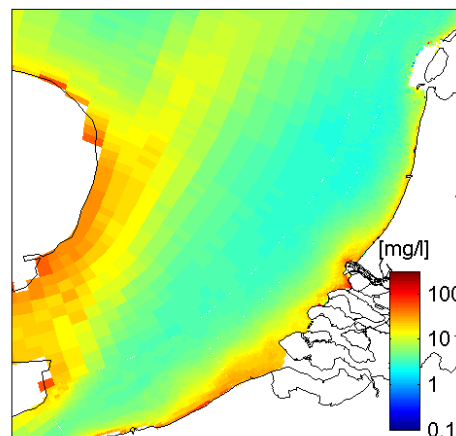
MERIS at surface layer



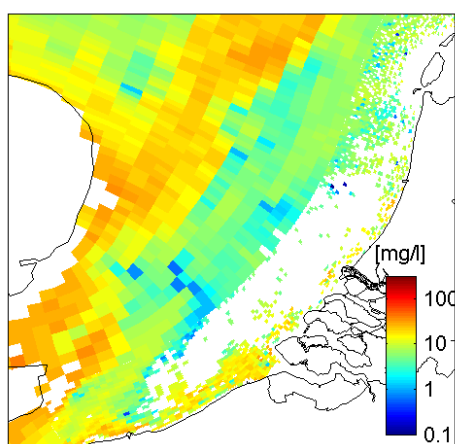
Model at surface layer



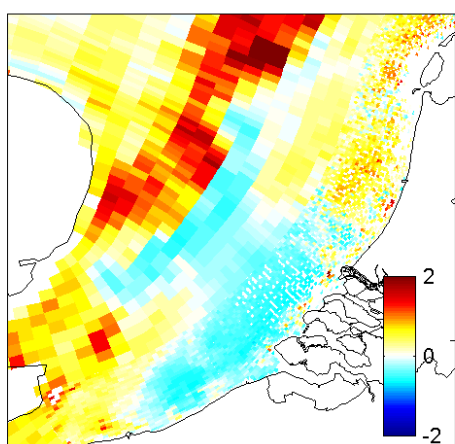
Model at bottom layer



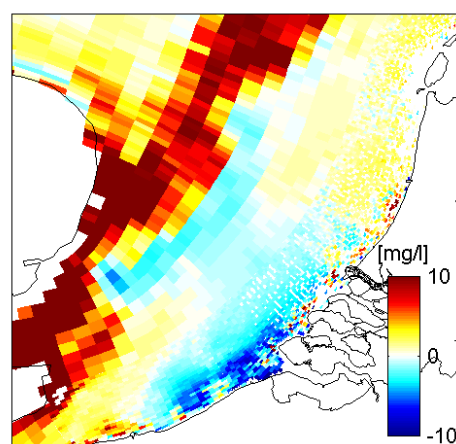
RMS difference



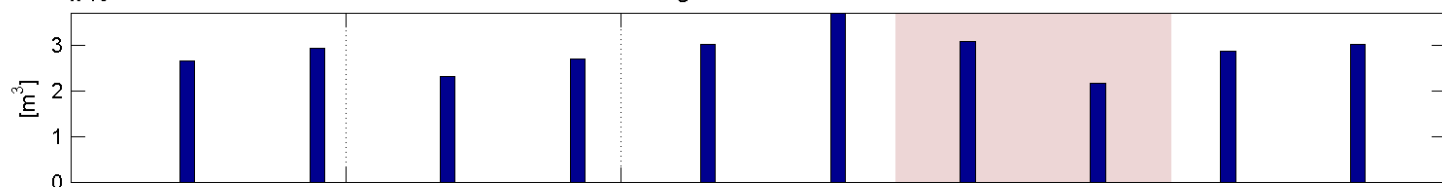
Relative difference [(MERIS-Model)/Model]



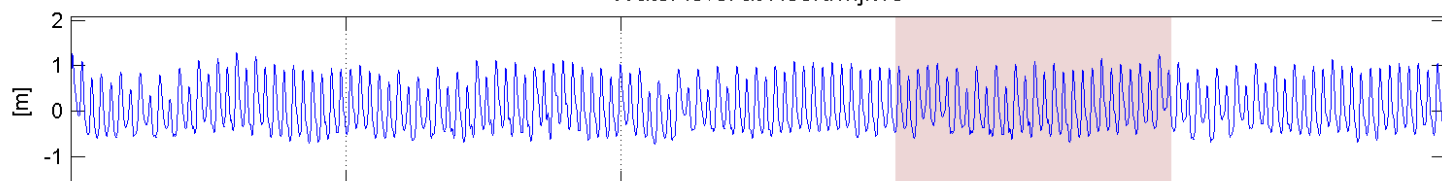
Mean difference [MERIS-Model]

x 10⁶

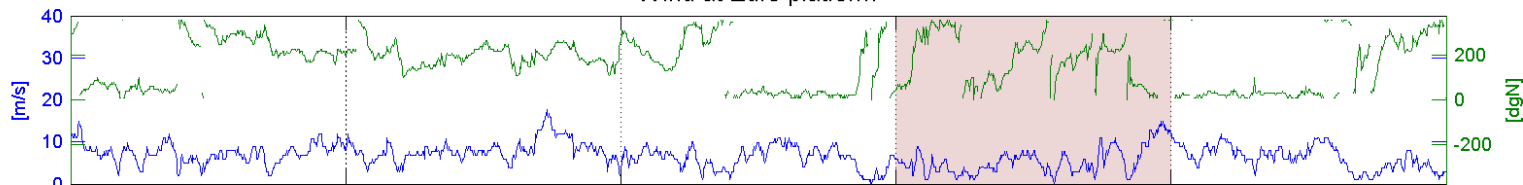
Sand mining volume for Maasvlakte 2



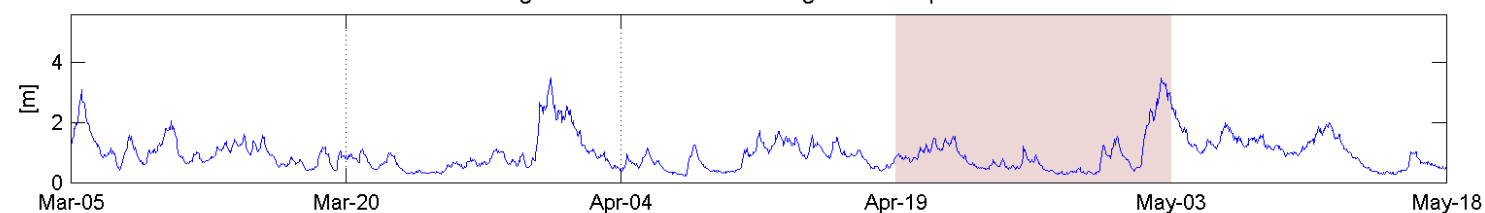
Water level at Noordwijk10



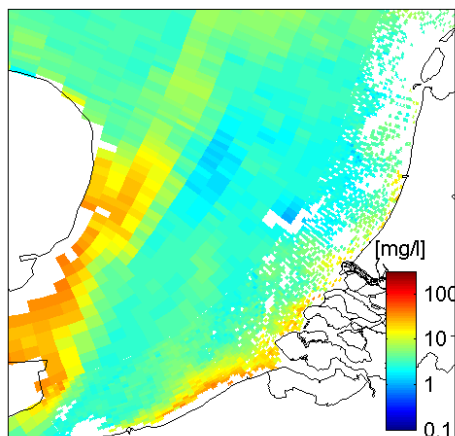
Wind at Euro platform



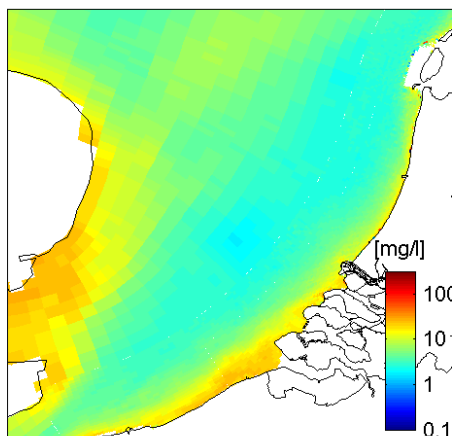
Significant surface wave height at Euro platform



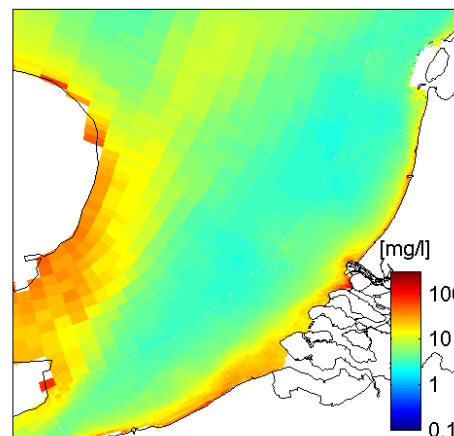
MERIS at surface layer



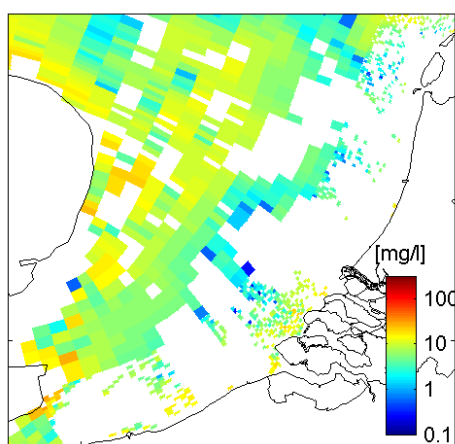
Model at surface layer



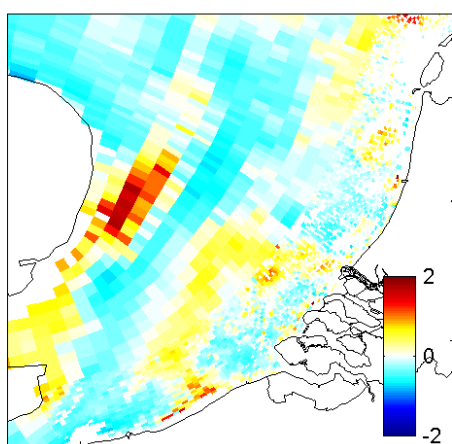
Model at bottom layer



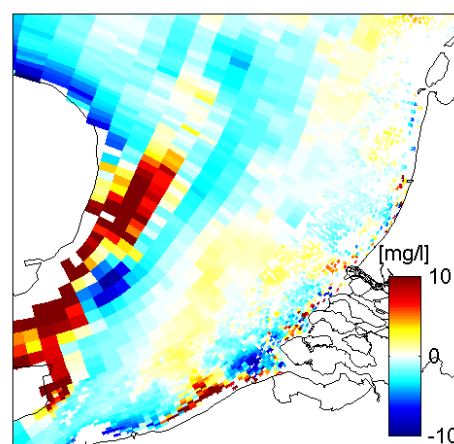
RMS difference



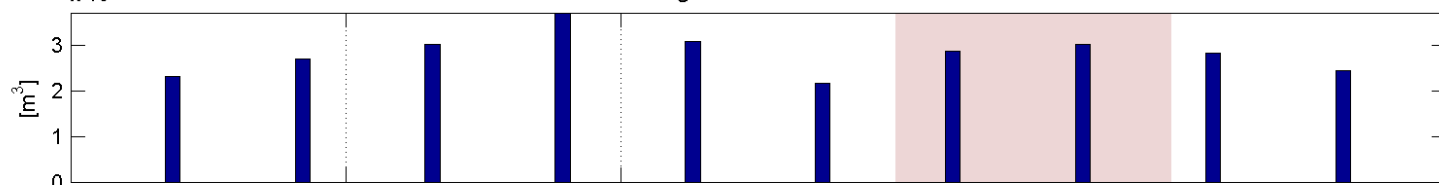
Relative difference [(MERIS-Model)/Model]



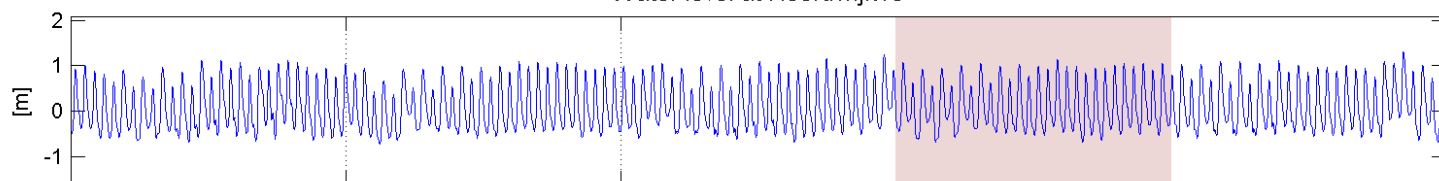
Mean difference [MERIS-Model]

 $\times 10^6$

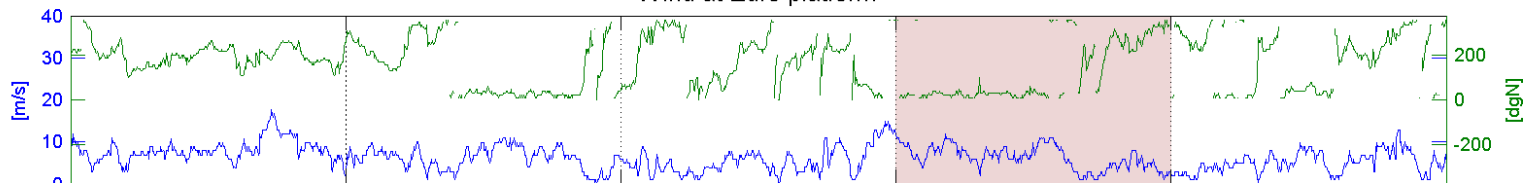
Sand mining volume for Maasvlakte 2



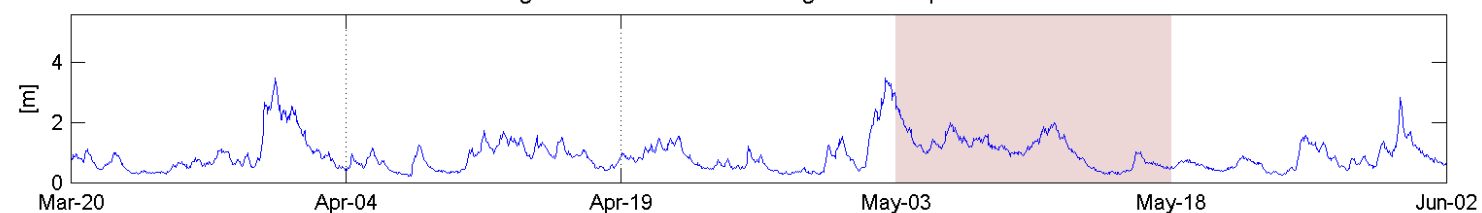
Water level at Noordwijk10



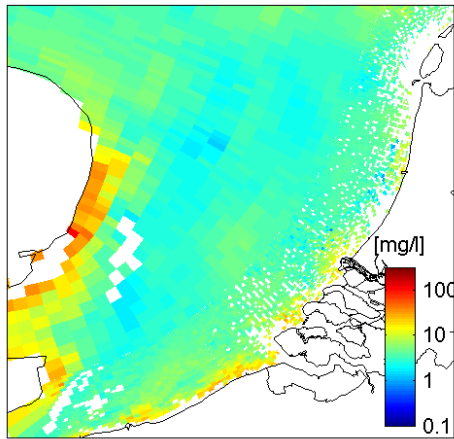
Wind at Euro platform



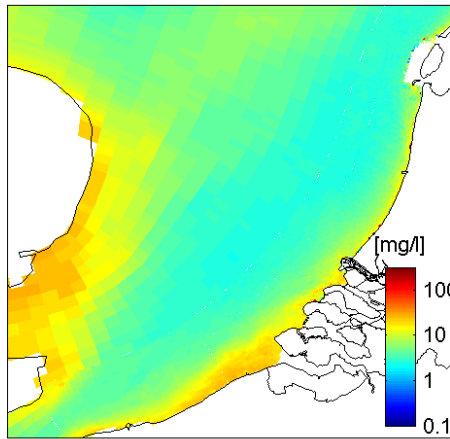
Significant surface wave height at Euro platform



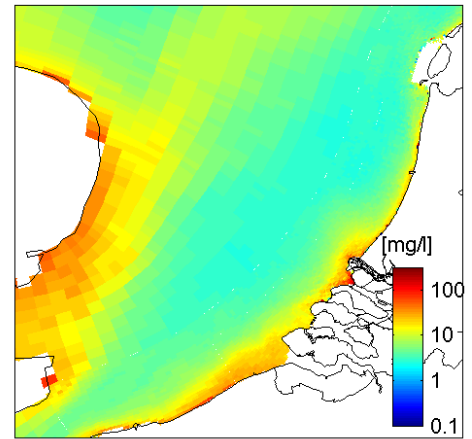
MERIS at surface layer



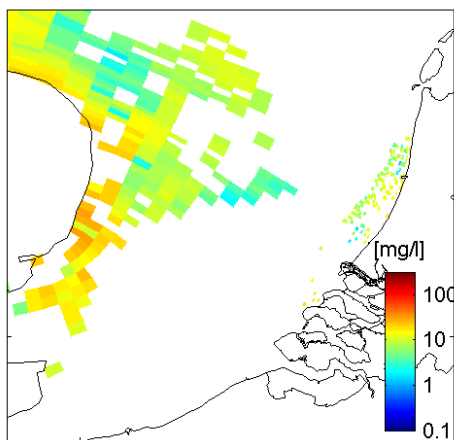
Model at surface layer



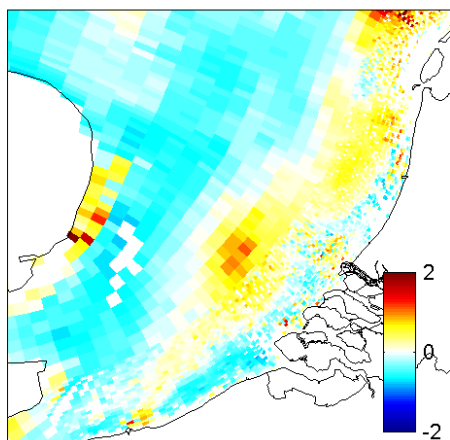
Model at bottom layer



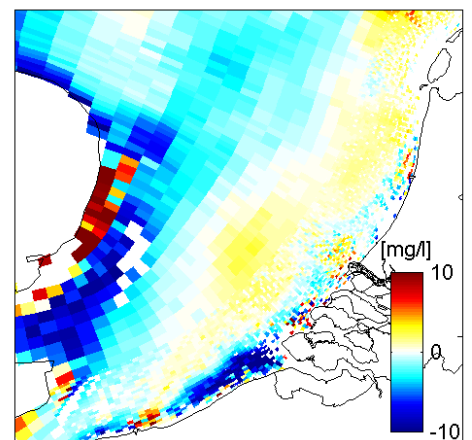
RMS difference



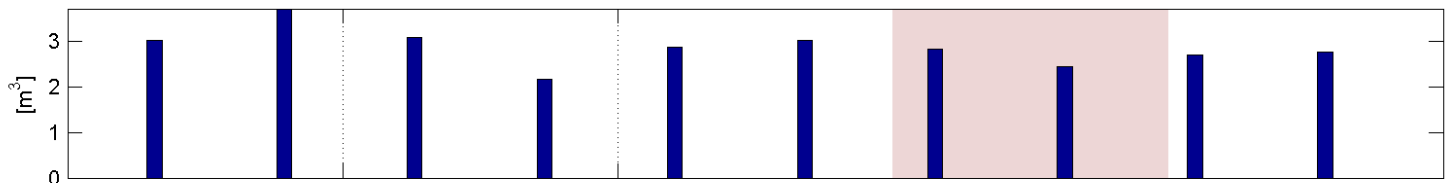
Relative difference [(MERIS-Model)/Model]



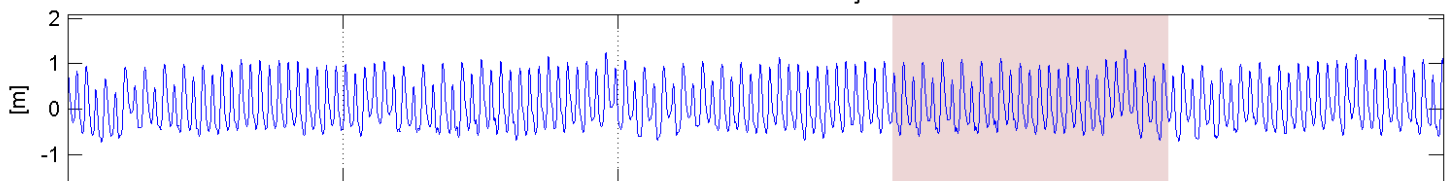
Mean difference [MERIS-Model]

 $\times 10^6$

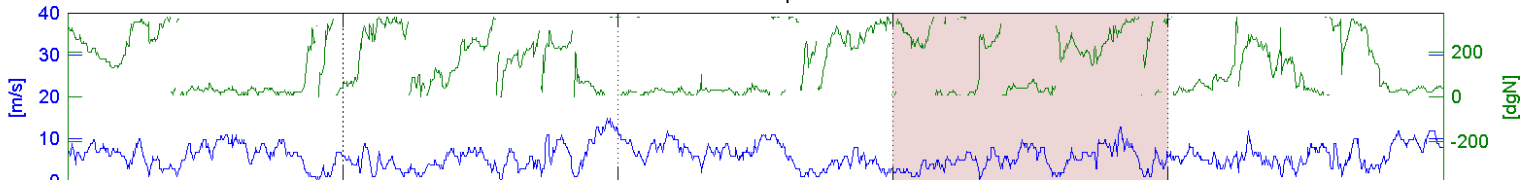
Sand mining volume for Maasvlakte 2



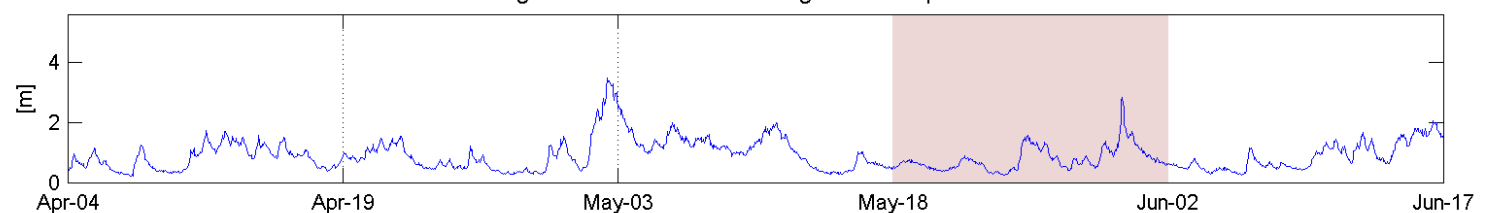
Water level at Noordwijk10



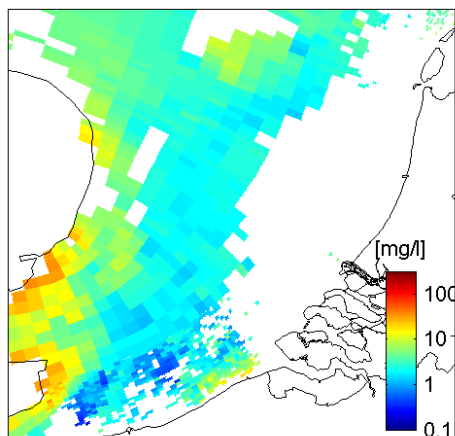
Wind at Euro platform



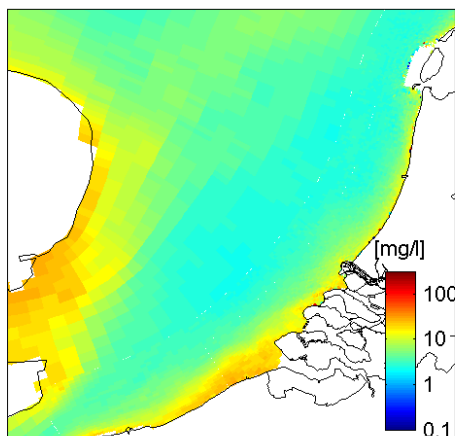
Significant surface wave height at Euro platform



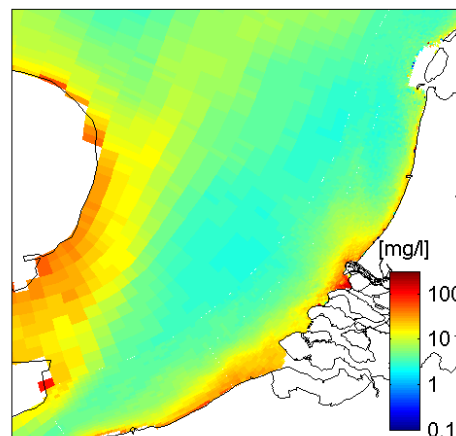
MERIS at surface layer



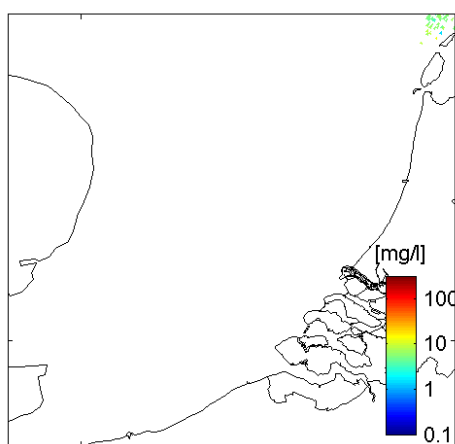
Model at surface layer



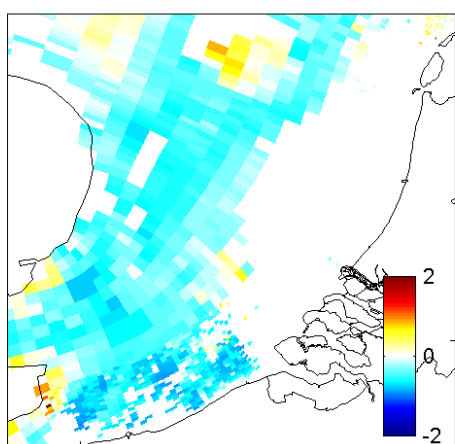
Model at bottom layer



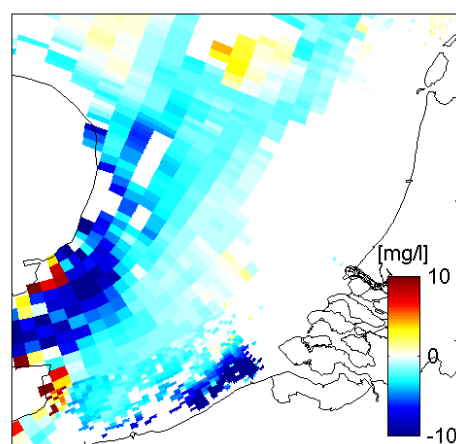
RMS difference



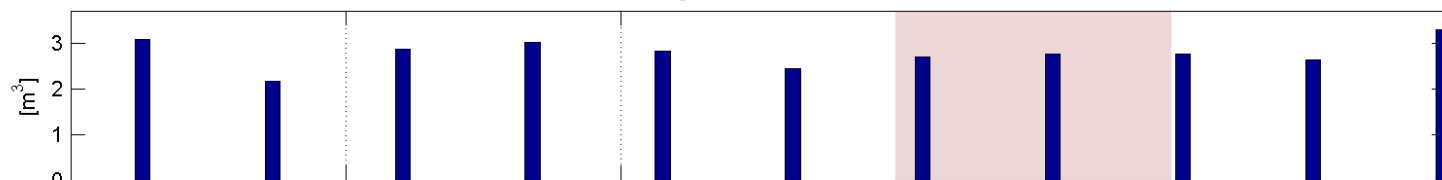
Relative difference [(MERIS-Model)/Model]



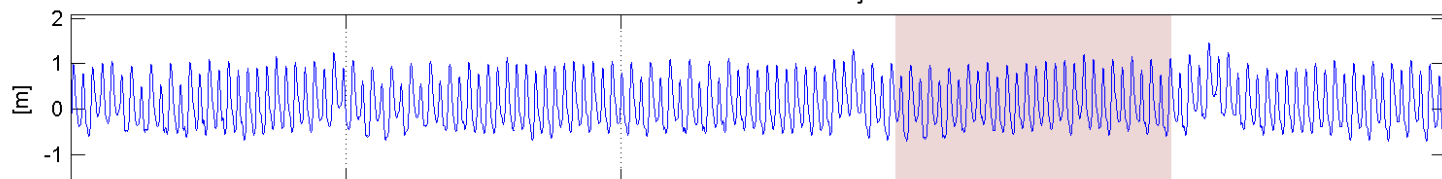
Mean difference [MERIS-Model]


x 10⁶

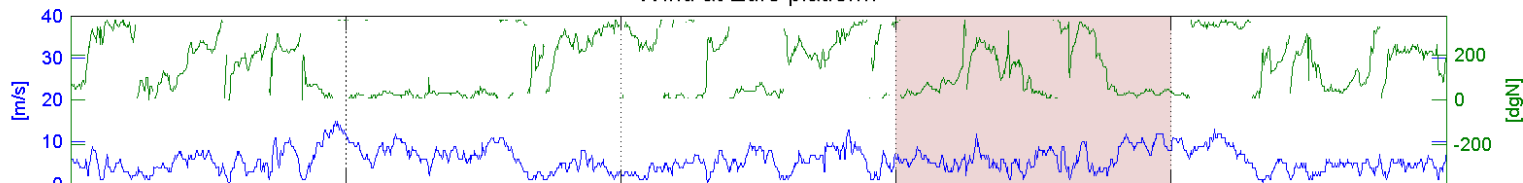
Sand mining volume for Maasvlakte 2



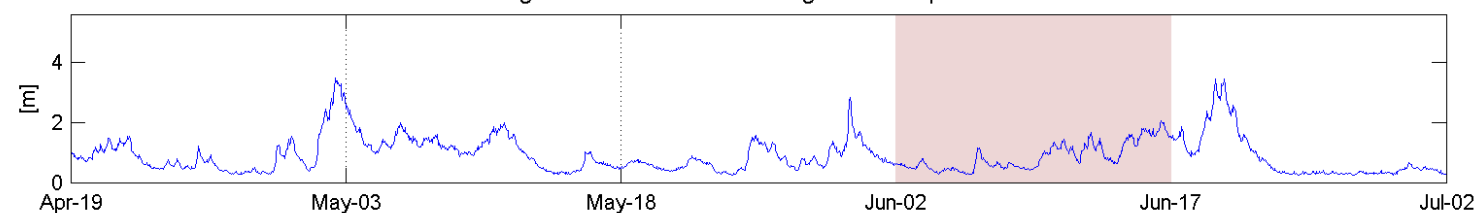
Water level at Noordwijk10



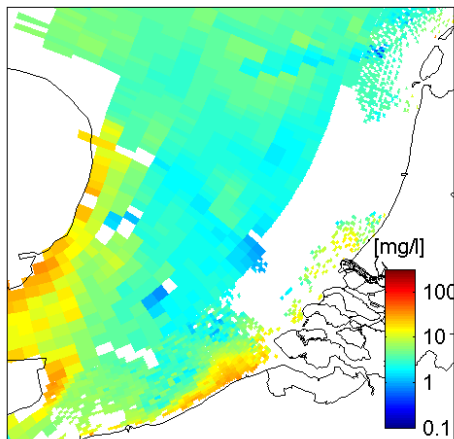
Wind at Euro platform



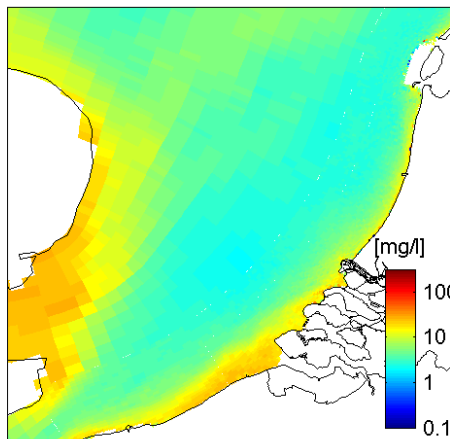
Significant surface wave height at Euro platform



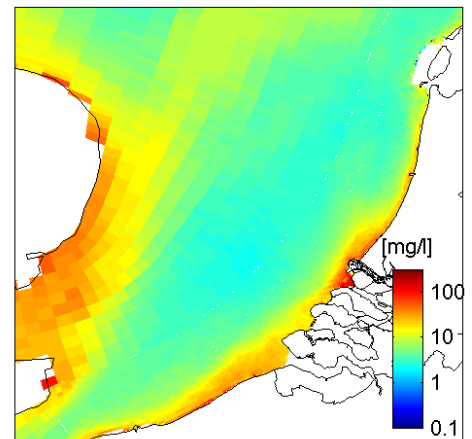
MERIS at surface layer



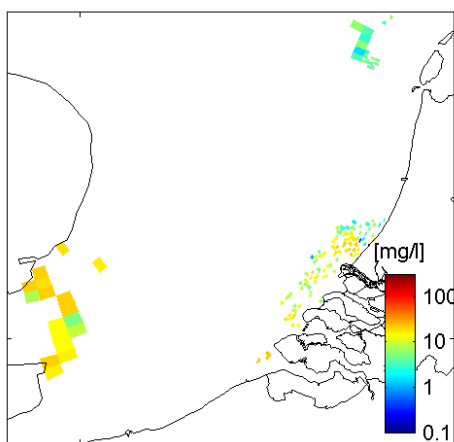
Model at surface layer



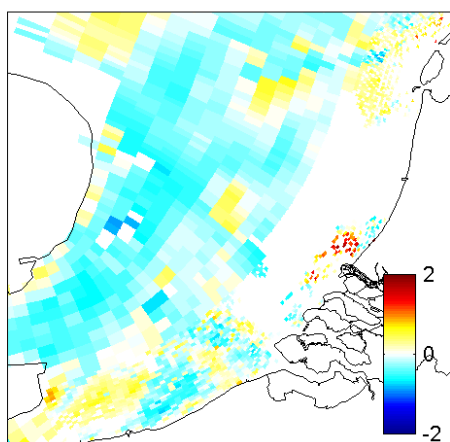
Model at bottom layer



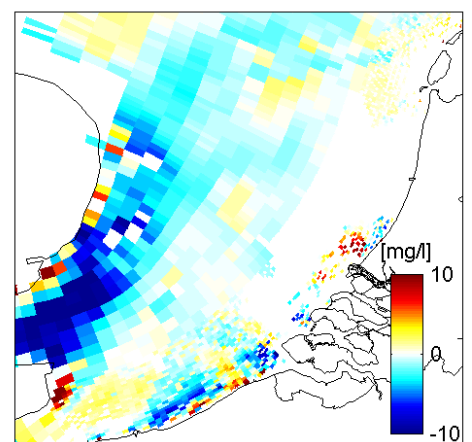
RMS difference



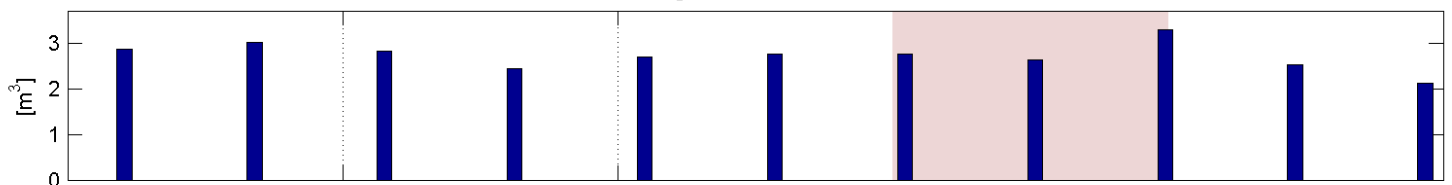
Relative difference [(MERIS-Model)/Model]



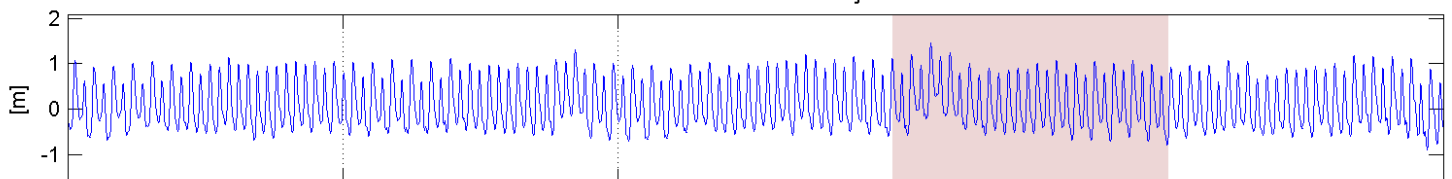
Mean difference [MERIS-Model]

x 10⁶

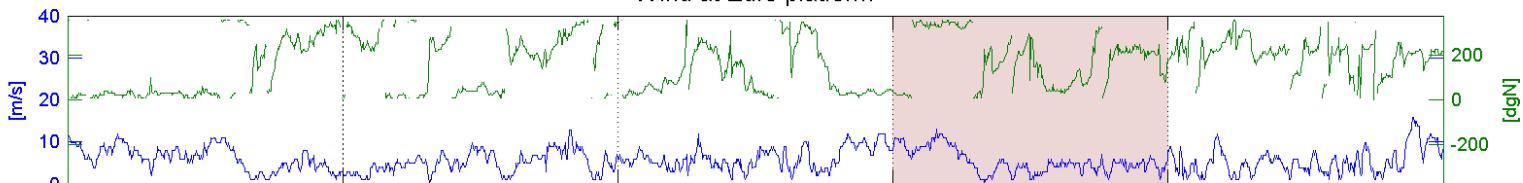
Sand mining volume for Maasvlakte 2



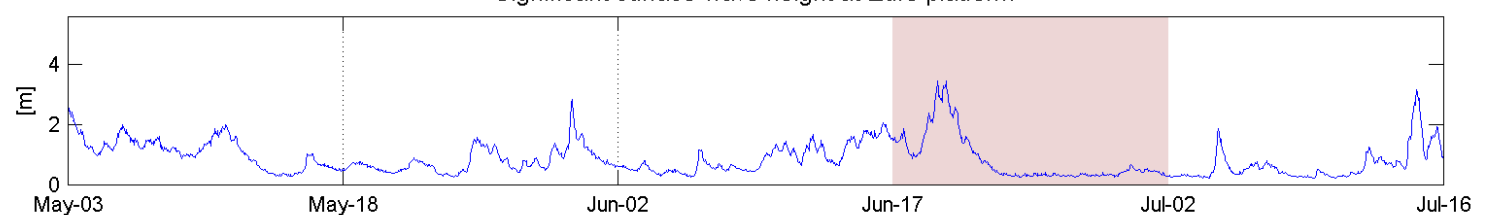
Water level at Noordwijk10



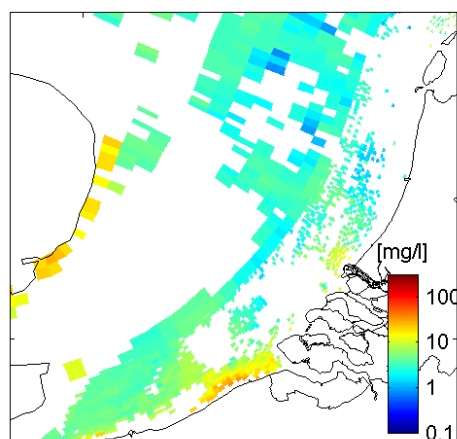
Wind at Euro platform



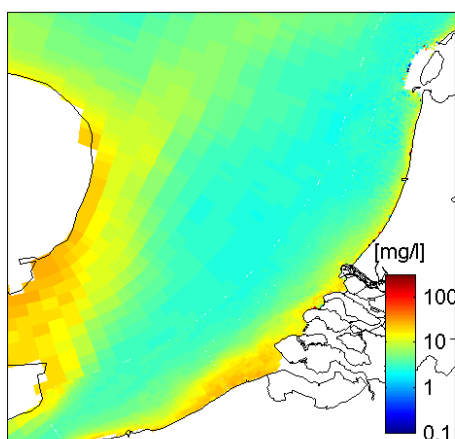
Significant surface wave height at Euro platform



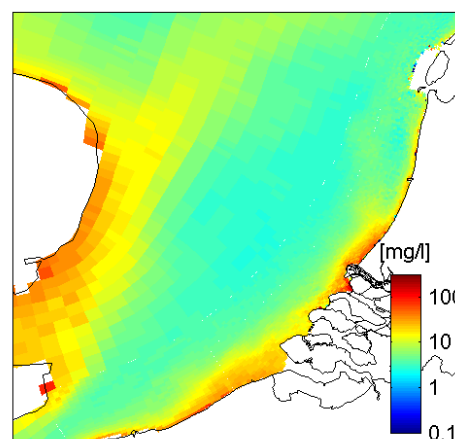
MERIS at surface layer



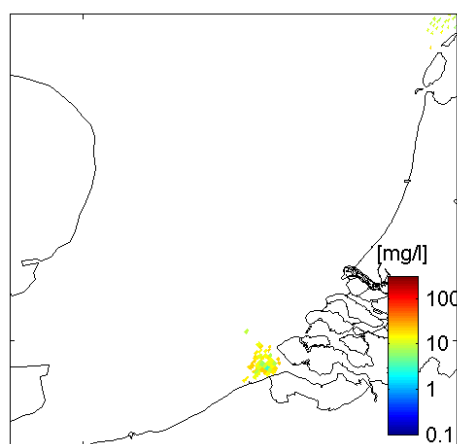
Model at surface layer



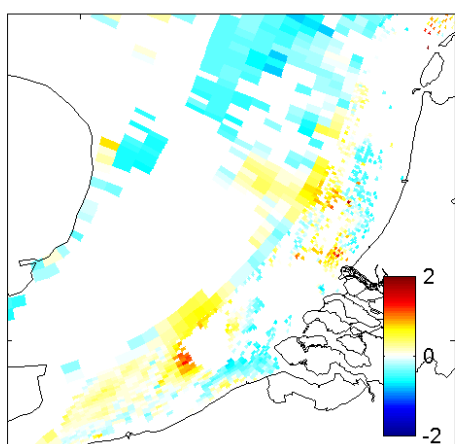
Model at bottom layer



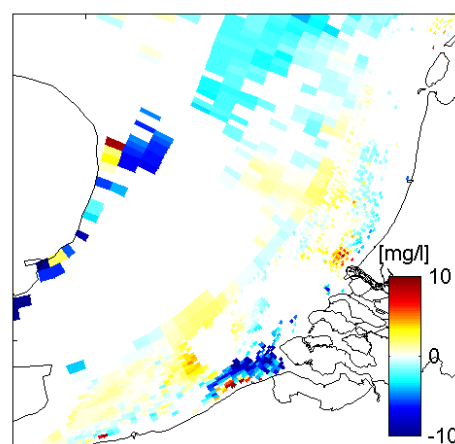
RMS difference



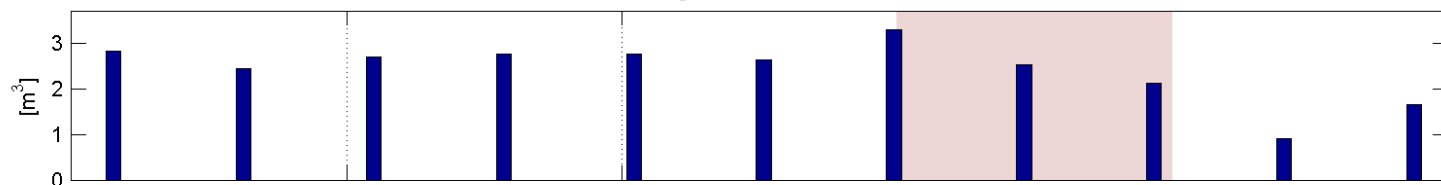
Relative difference [(MERIS-Model)/Model]



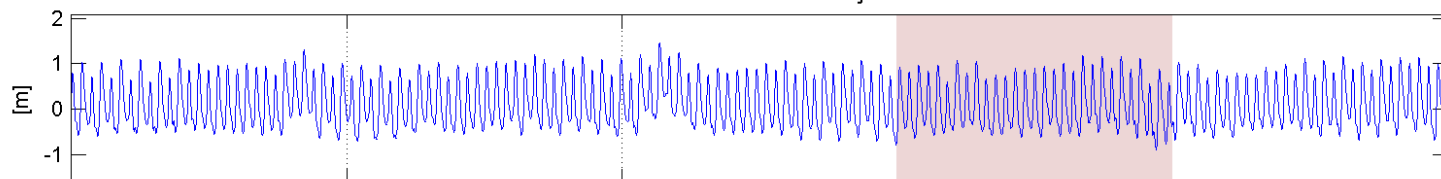
Mean difference [MERIS-Model]


x 10⁶

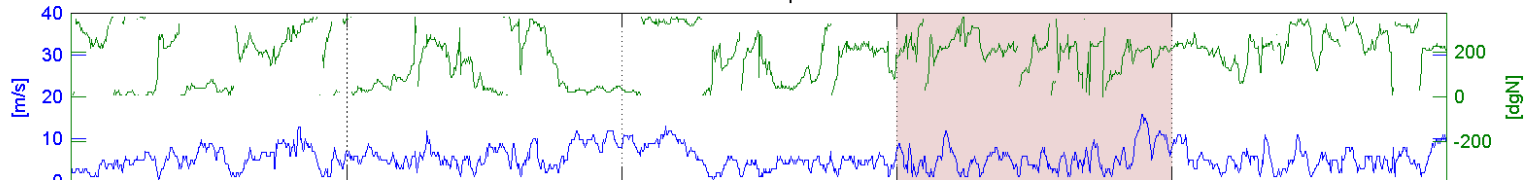
Sand mining volume for Maasvlakte 2



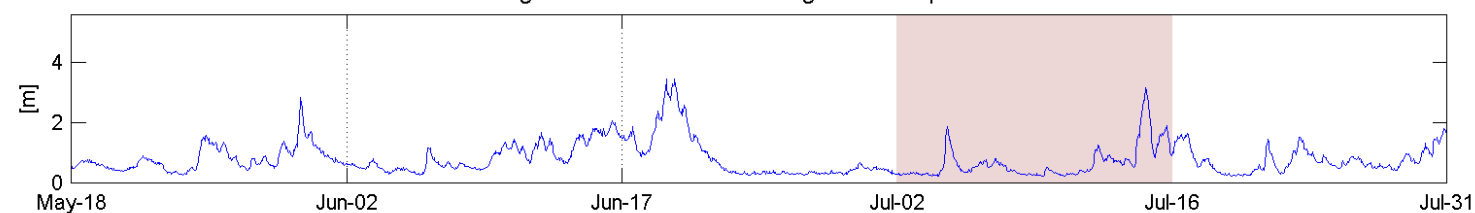
Water level at Noordwijk10



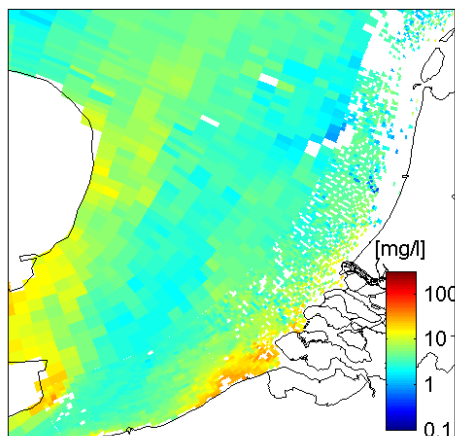
Wind at Euro platform



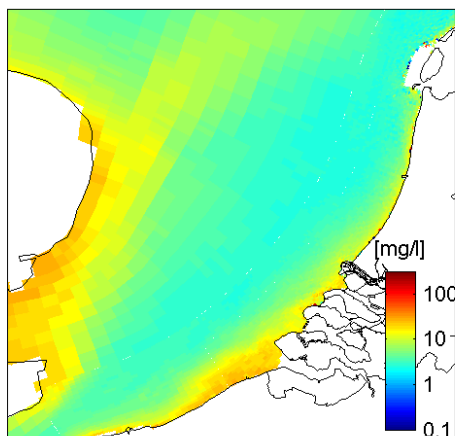
Significant surface wave height at Euro platform



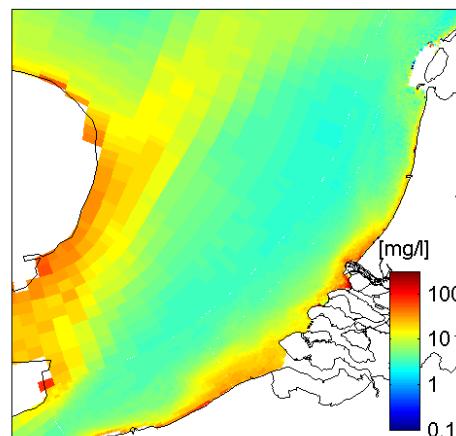
MERIS at surface layer



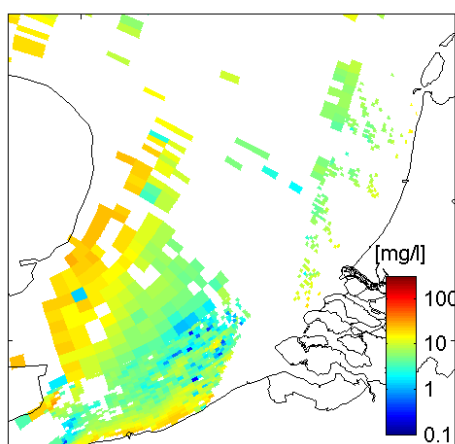
Model at surface layer



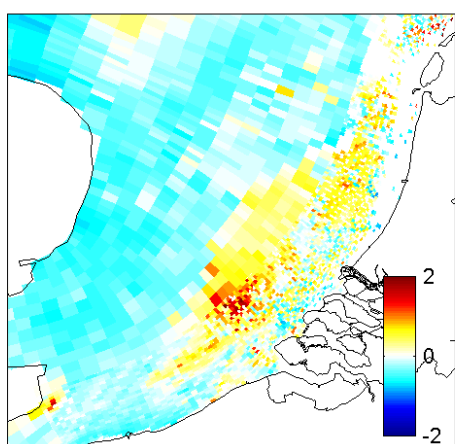
Model at bottom layer



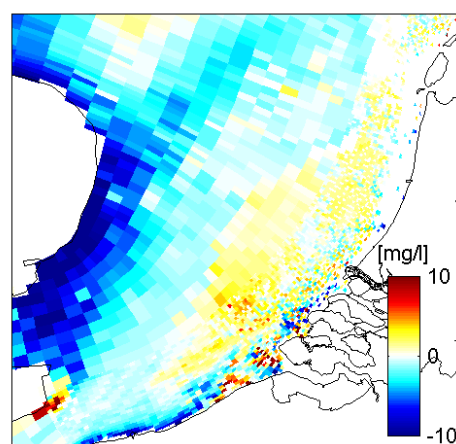
RMS difference



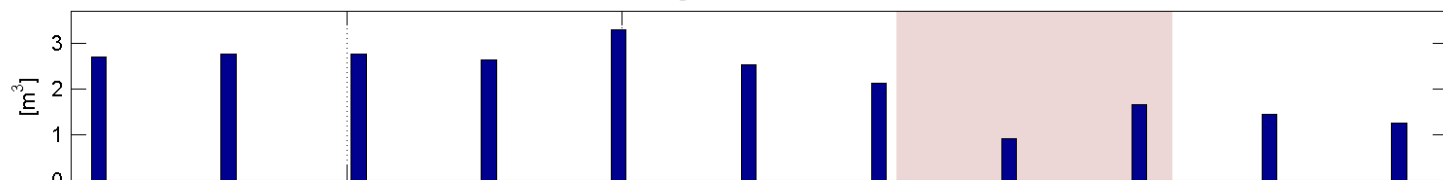
Relative difference [(MERIS-Model)/Model]



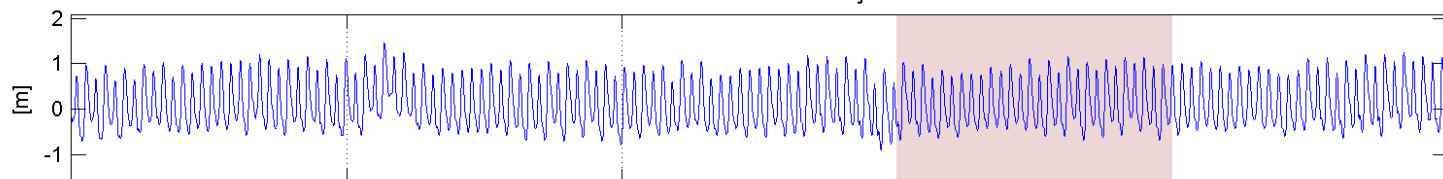
Mean difference [MERIS-Model]


x 10⁶

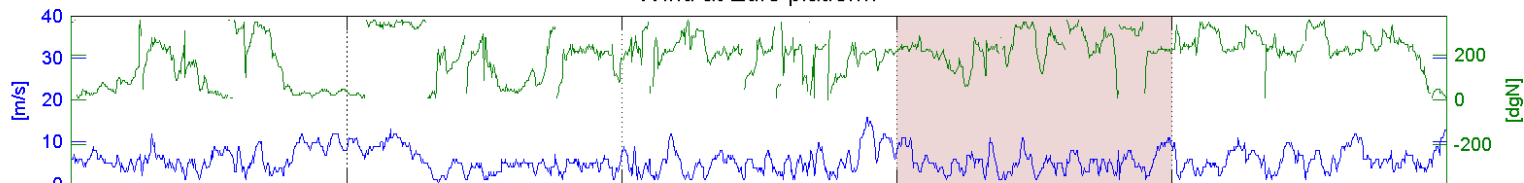
Sand mining volume for Maasvlakte 2



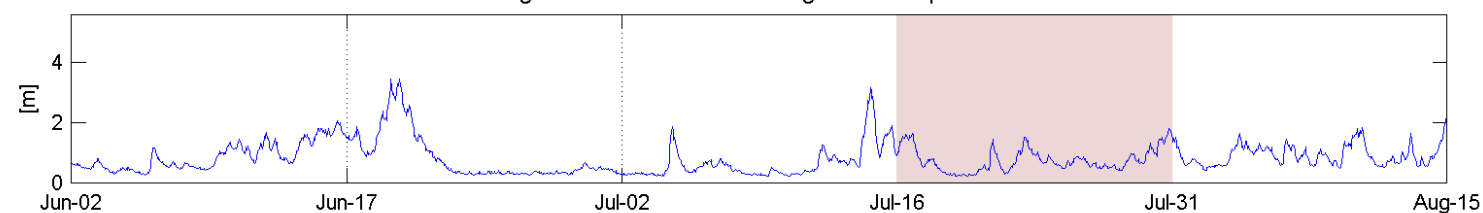
Water level at Noordwijk10



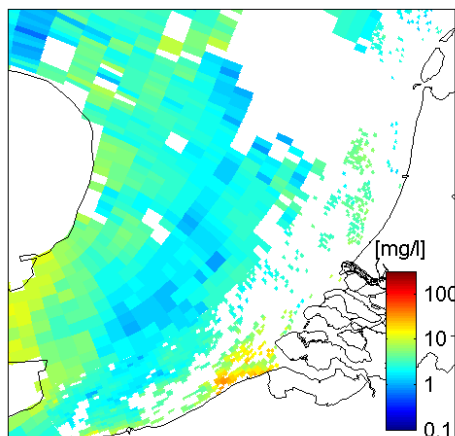
Wind at Euro platform



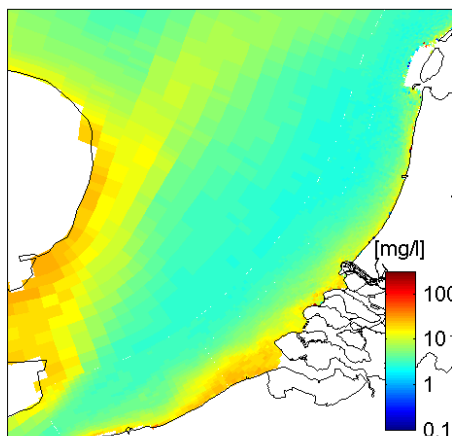
Significant surface wave height at Euro platform



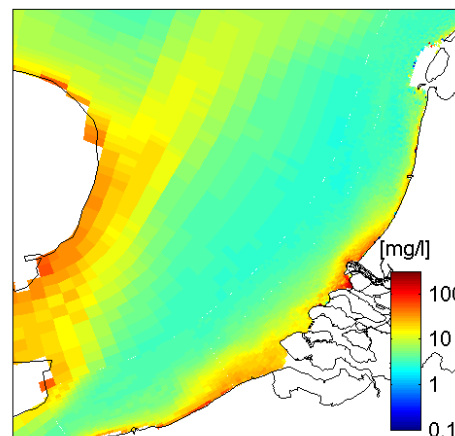
MERIS at surface layer



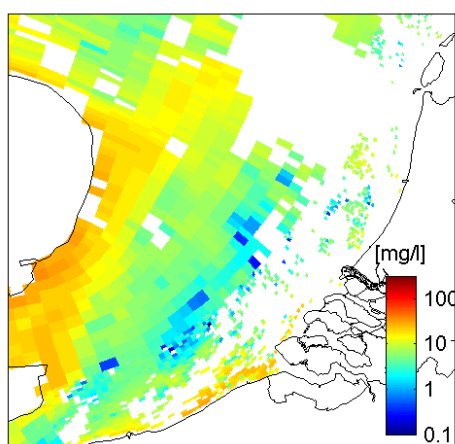
Model at surface layer



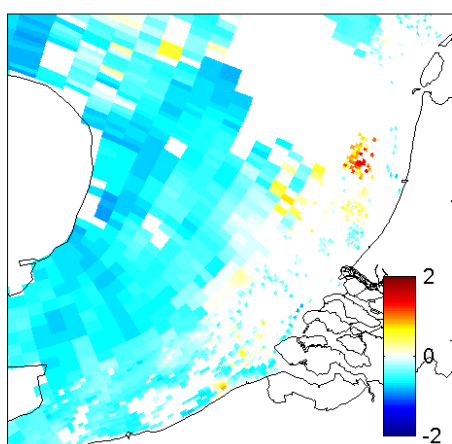
Model at bottom layer



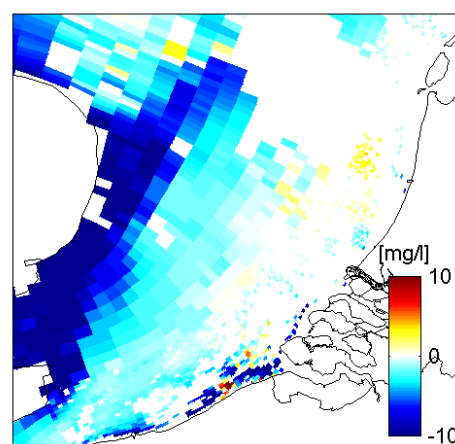
RMS difference



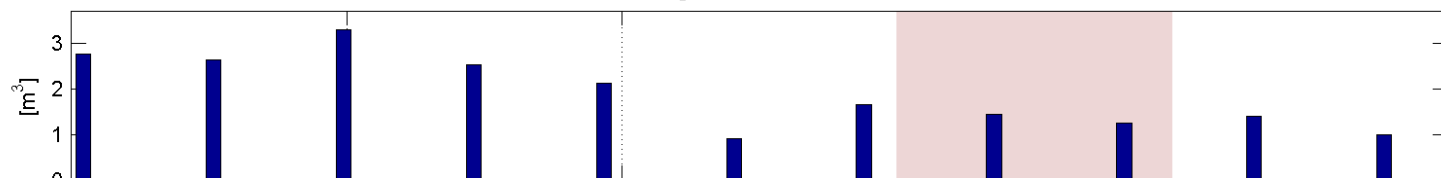
Relative difference [(MERIS-Model)/Model]



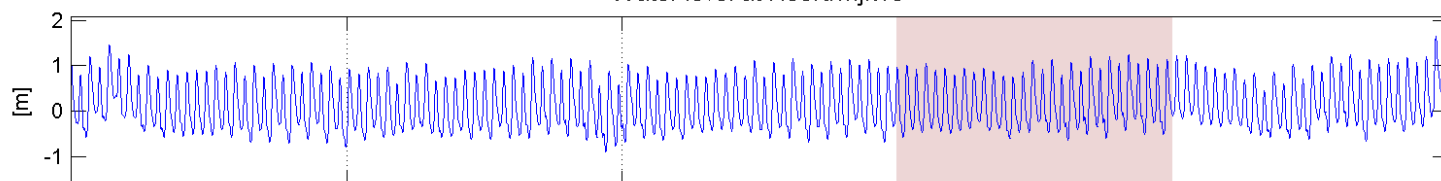
Mean difference [MERIS-Model]

 $\times 10^6$

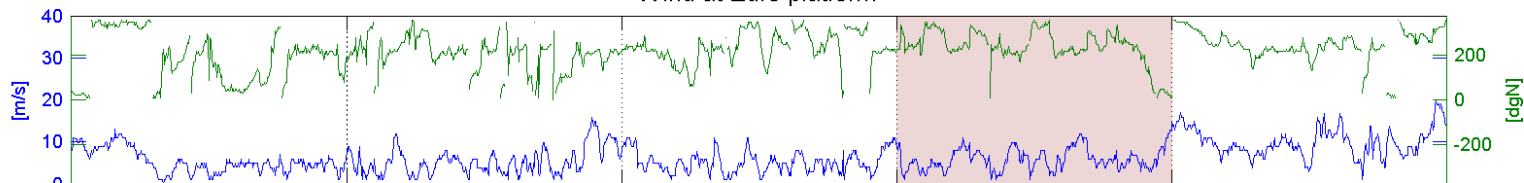
Sand mining volume for Maasvlakte 2



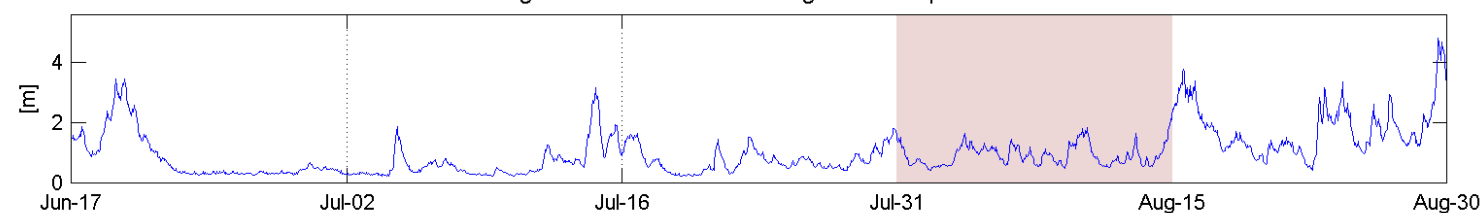
Water level at Noordwijk10



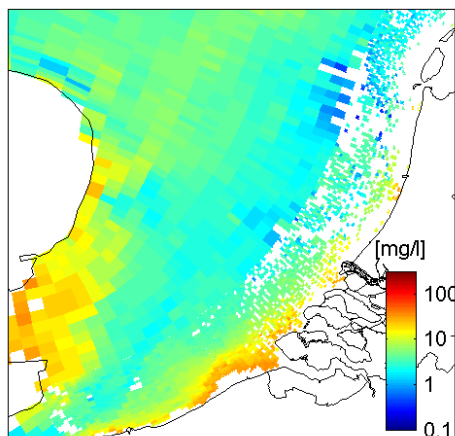
Wind at Euro platform



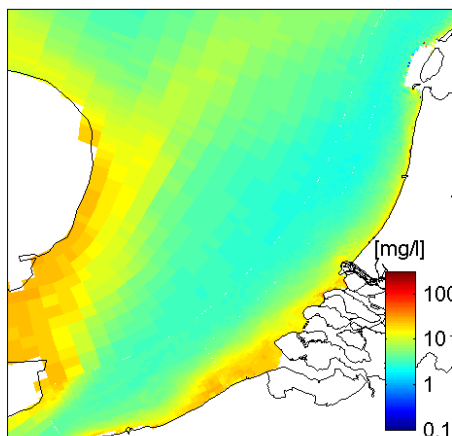
Significant surface wave height at Euro platform



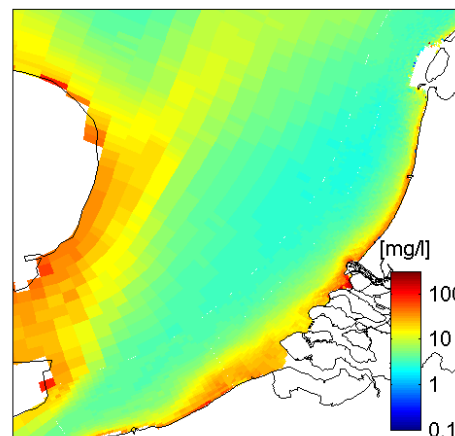
MERIS at surface layer



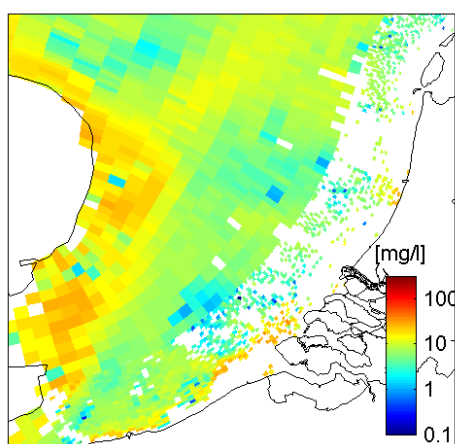
Model at surface layer



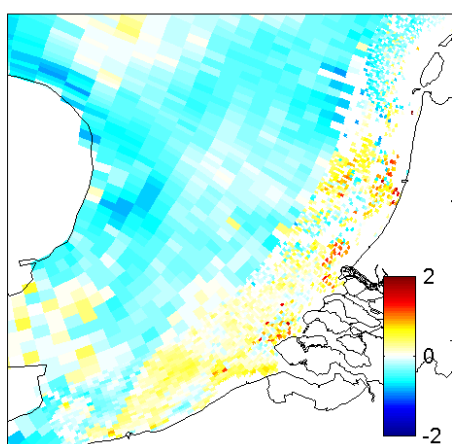
Model at bottom layer



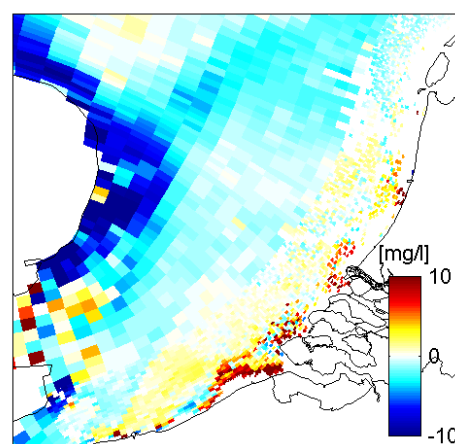
RMS difference



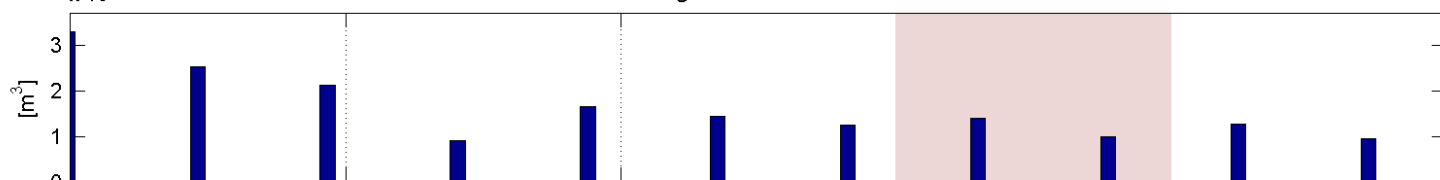
Relative difference [(MERIS-Model)/Model]



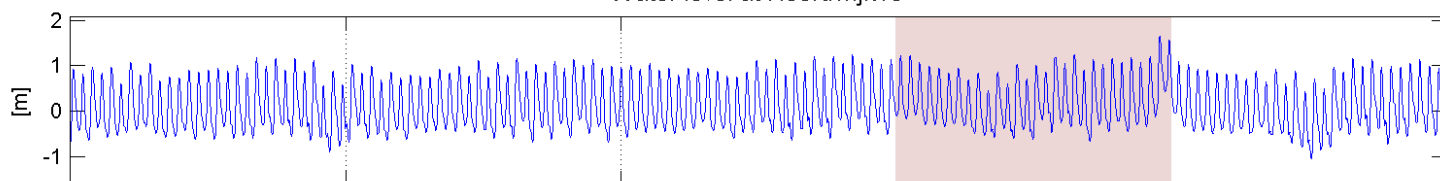
Mean difference [MERIS-Model]


x 10⁶

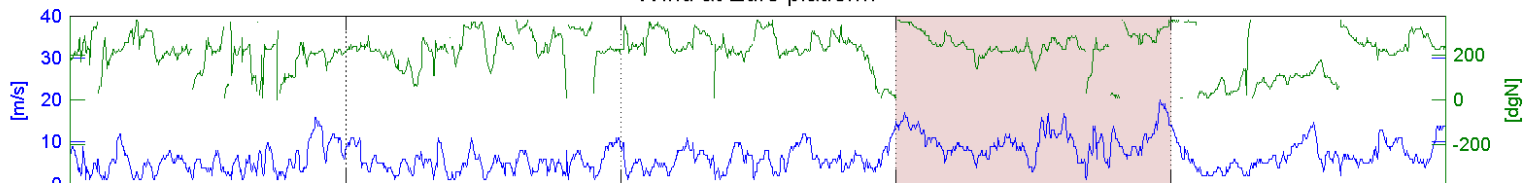
Sand mining volume for Maasvlakte 2



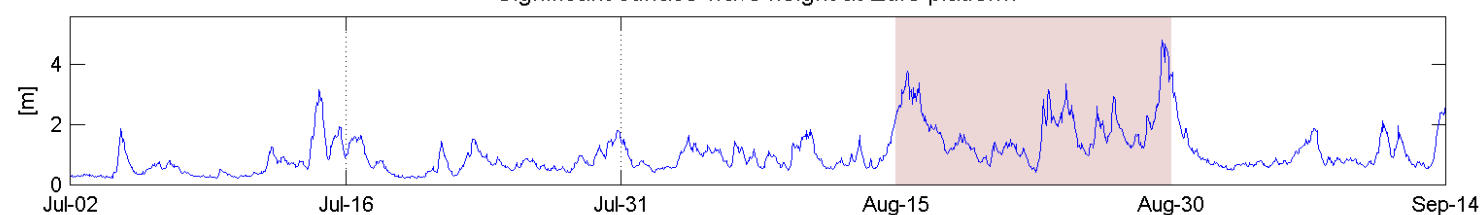
Water level at Noordwijk10



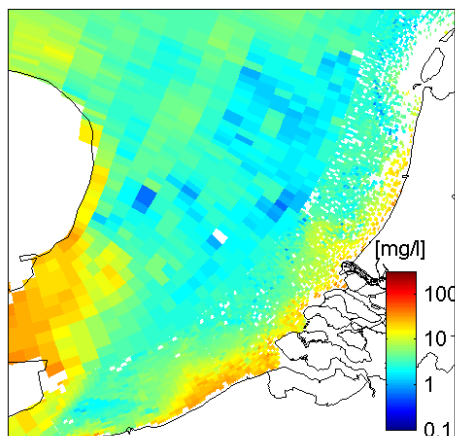
Wind at Euro platform



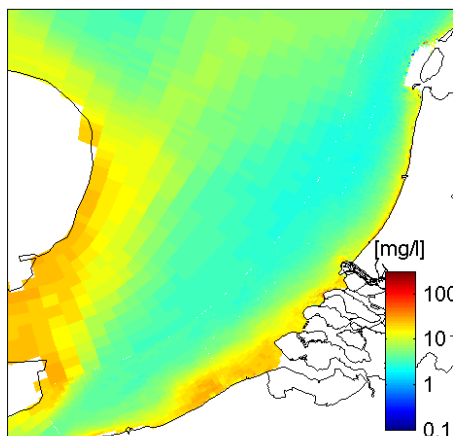
Significant surface wave height at Euro platform



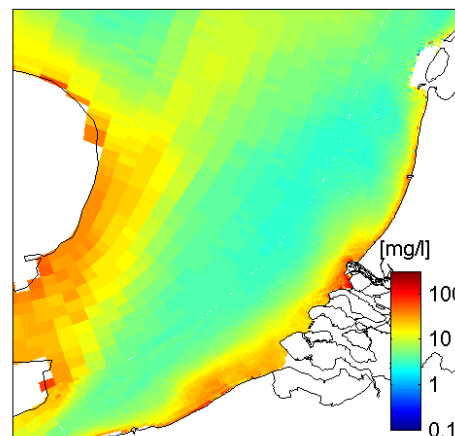
MERIS at surface layer



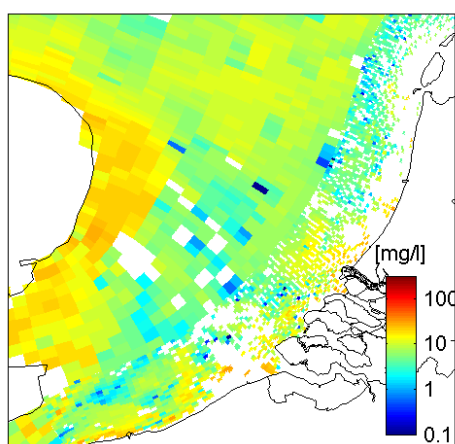
Model at surface layer



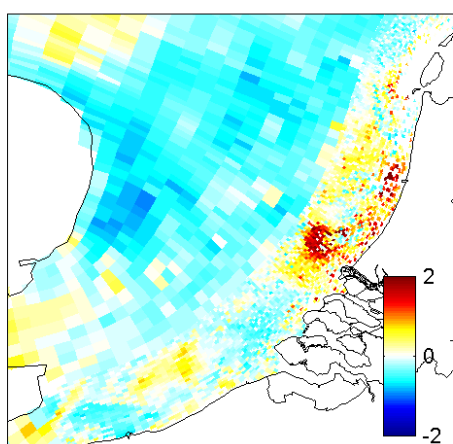
Model at bottom layer



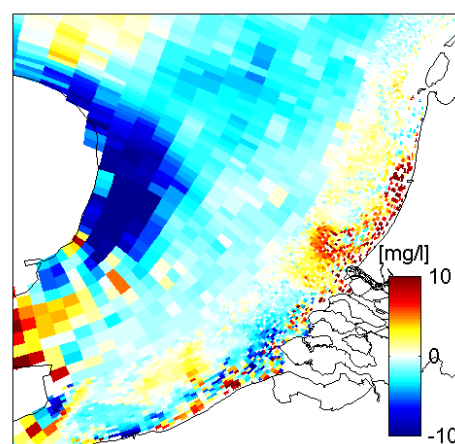
RMS difference



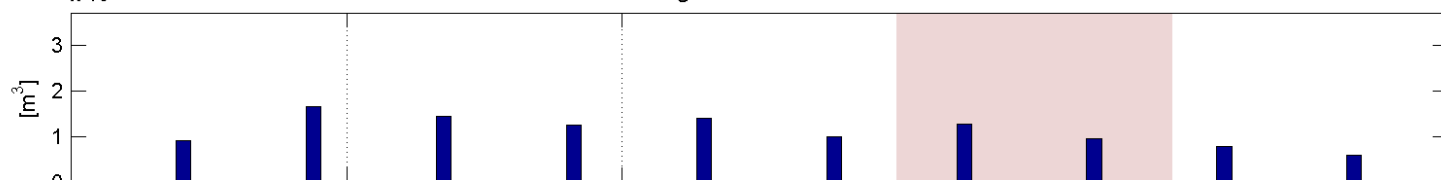
Relative difference [(MERIS-Model)/Model]



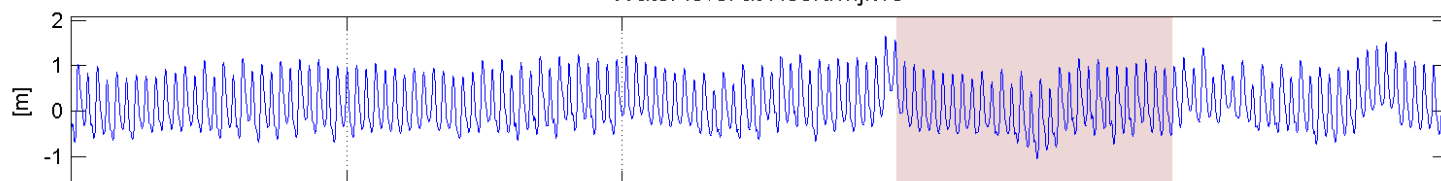
Mean difference [MERIS-Model]


 $\times 10^6$

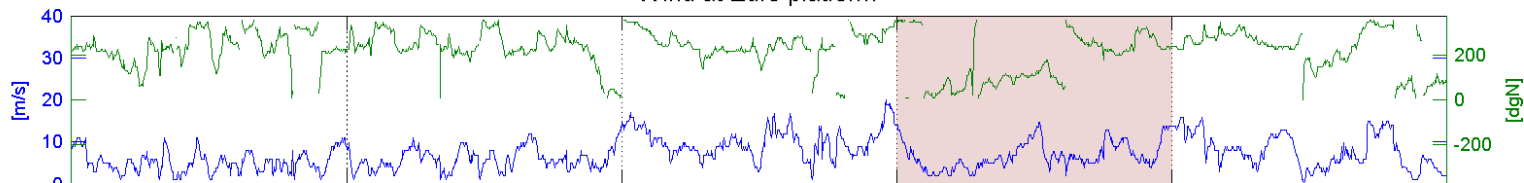
Sand mining volume for Maasvlakte 2



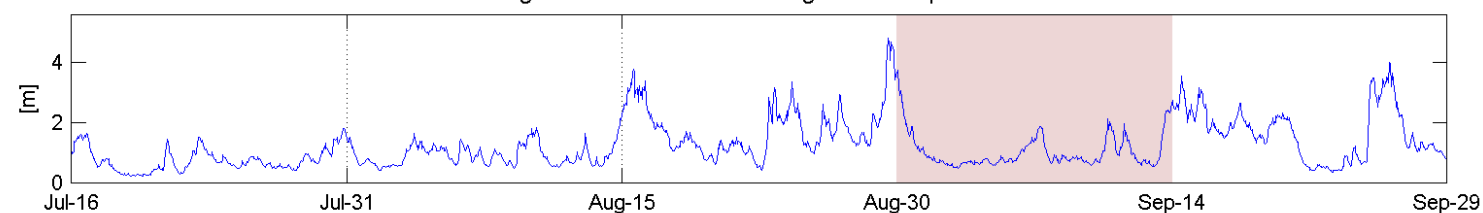
Water level at Noordwijk10



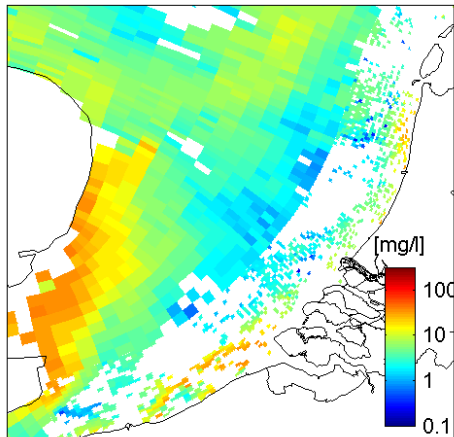
Wind at Euro platform



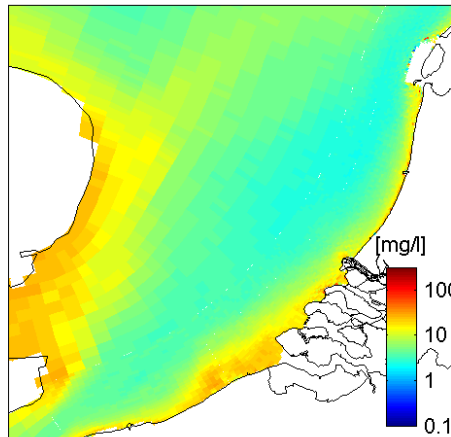
Significant surface wave height at Euro platform



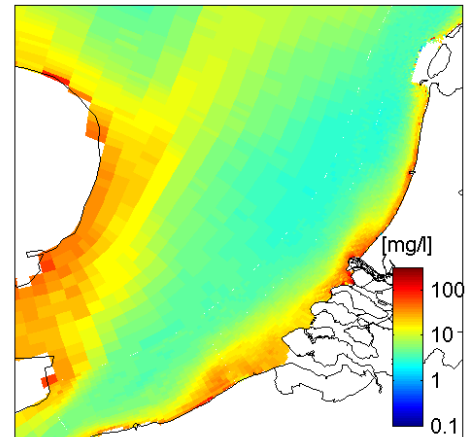
MERIS at surface layer



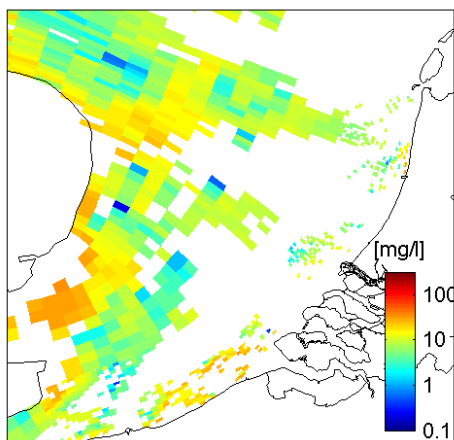
Model at surface layer



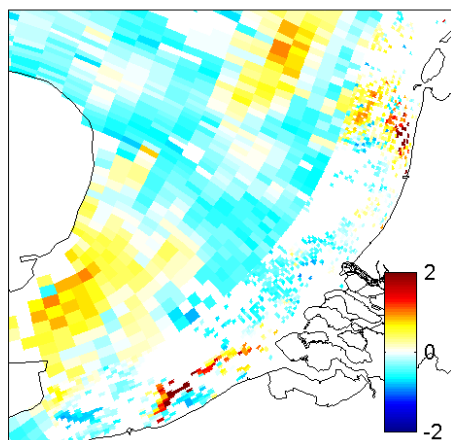
Model at bottom layer



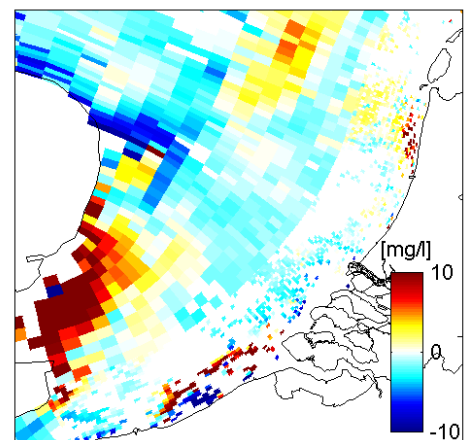
RMS difference



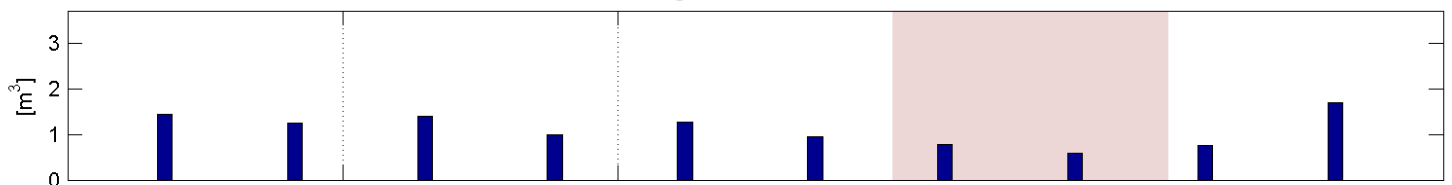
Relative difference [(MERIS-Model)/Model]



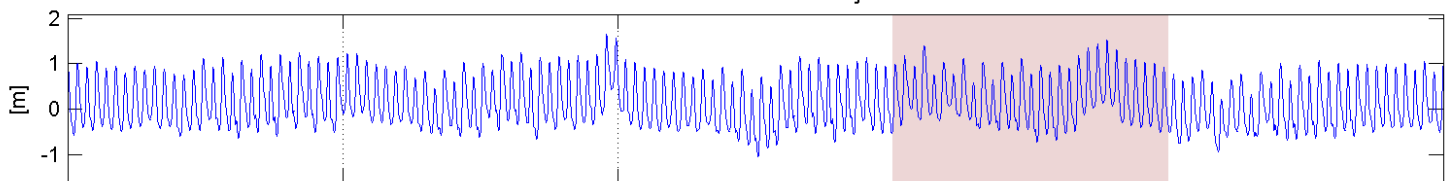
Mean difference [MERIS-Model]

x 10⁶

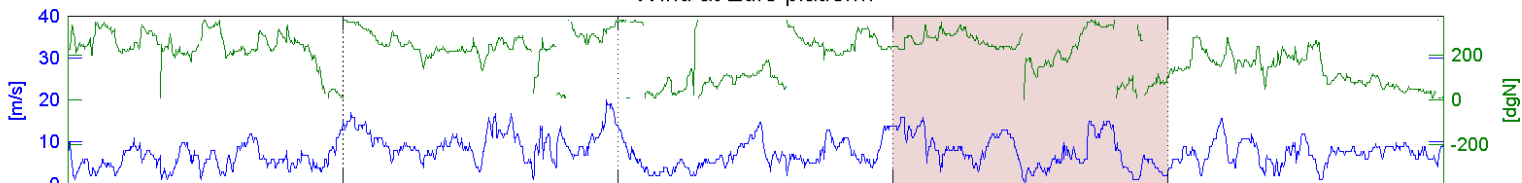
Sand mining volume for Maasvlakte 2



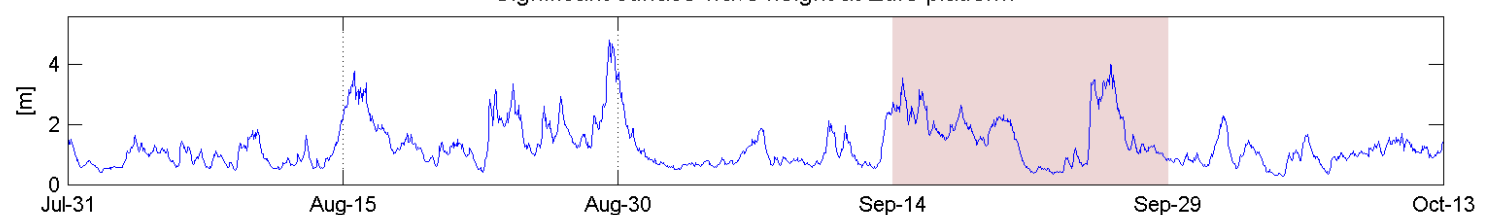
Water level at Noordwijk10



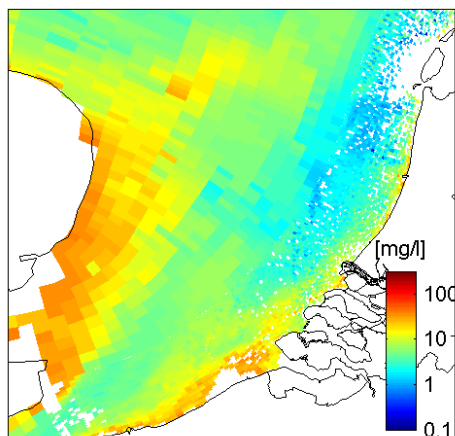
Wind at Euro platform



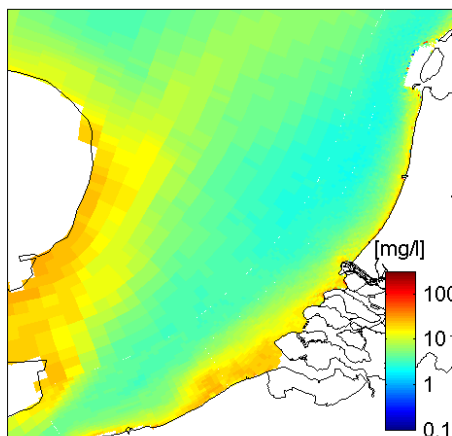
Significant surface wave height at Euro platform



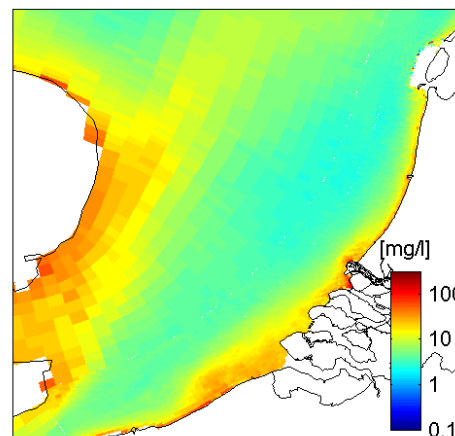
MERIS at surface layer



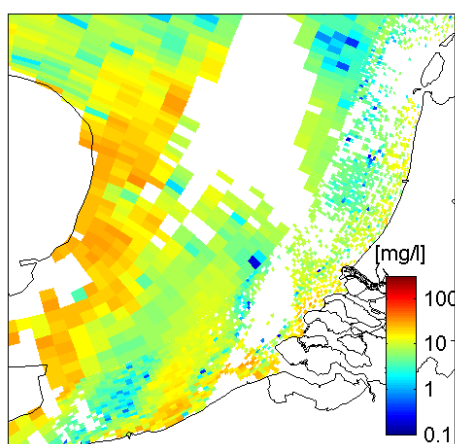
Model at surface layer



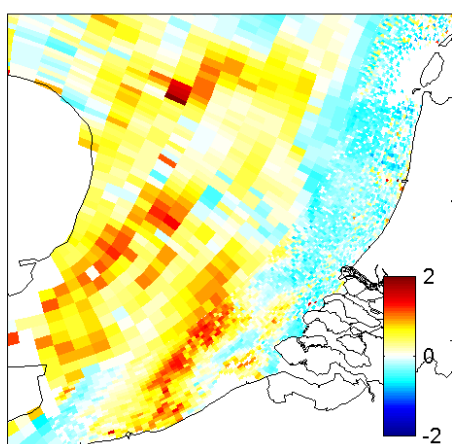
Model at bottom layer



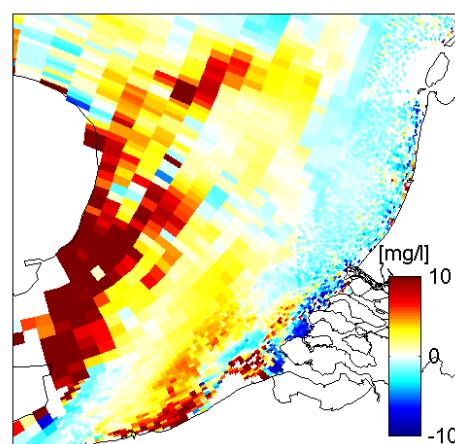
RMS difference



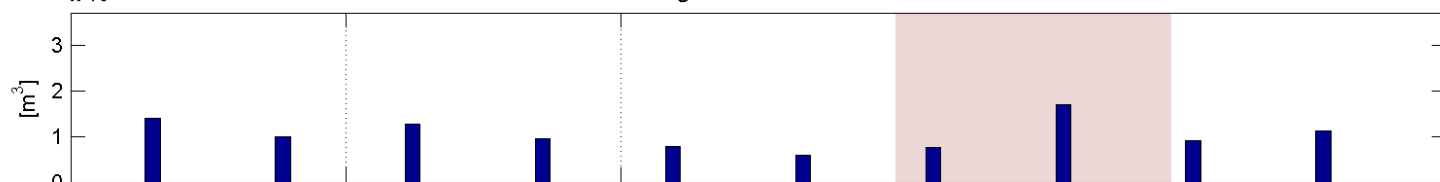
Relative difference [(MERIS-Model)/Model]



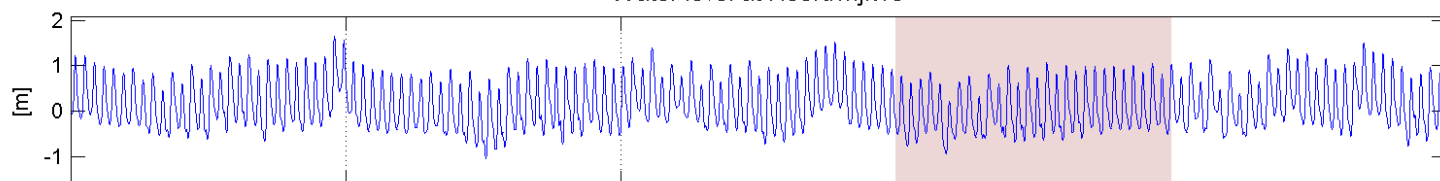
Mean difference [MERIS-Model]


x 10⁶

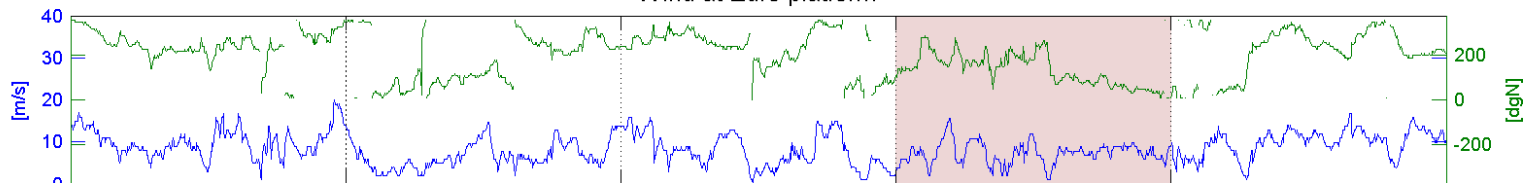
Sand mining volume for Maasvlakte 2



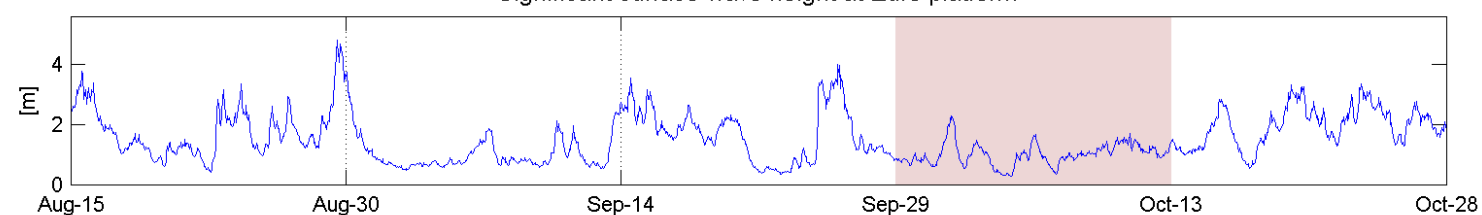
Water level at Noordwijk10



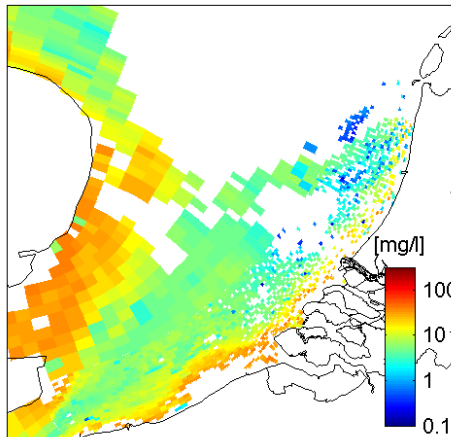
Wind at Euro platform



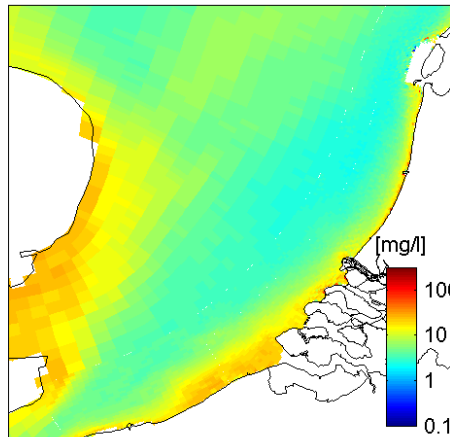
Significant surface wave height at Euro platform



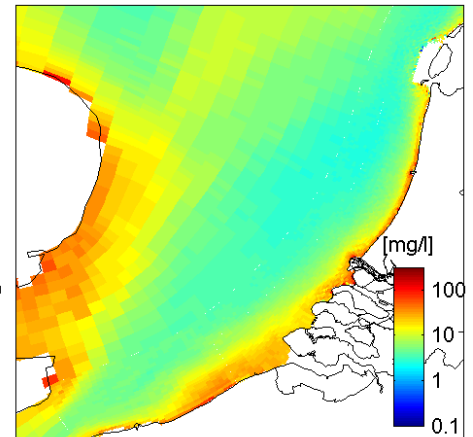
MERIS at surface layer



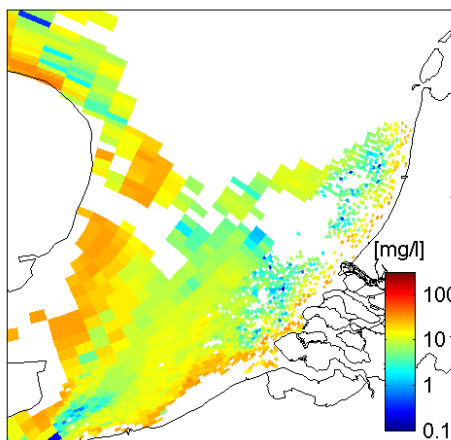
Model at surface layer



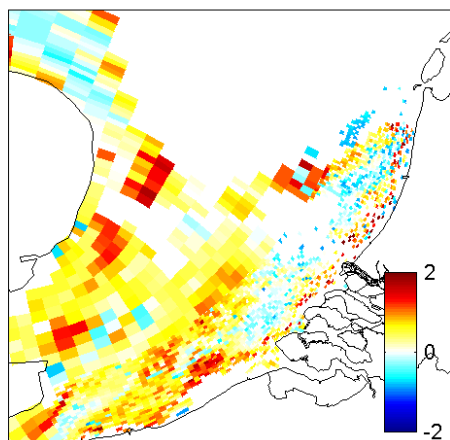
Model at bottom layer



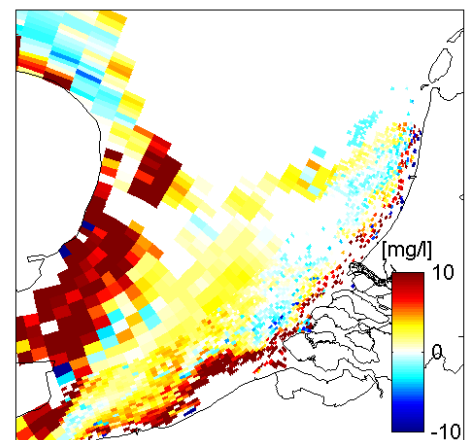
RMS difference



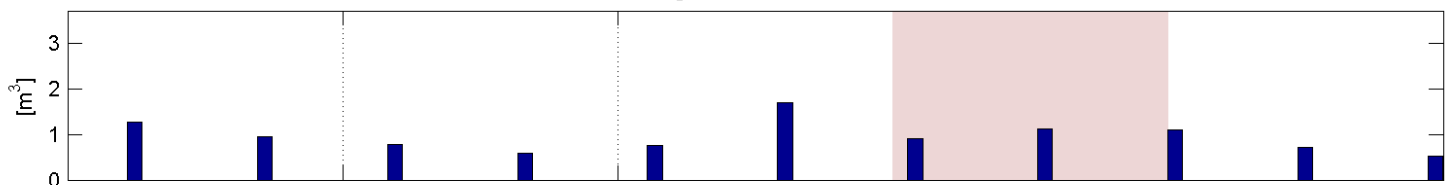
Relative difference [(MERIS-Model)/Model]



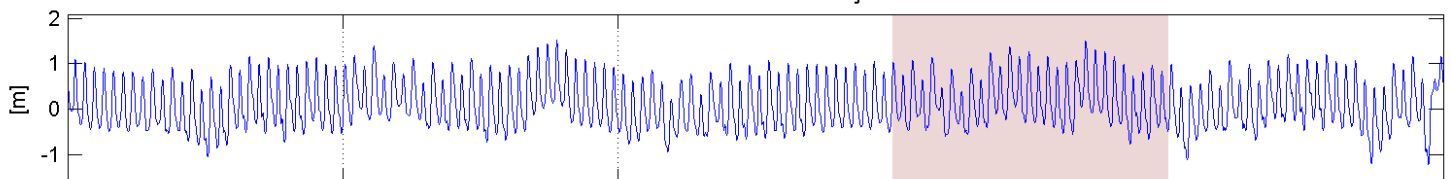
Mean difference [MERIS-Model]

x 10⁶

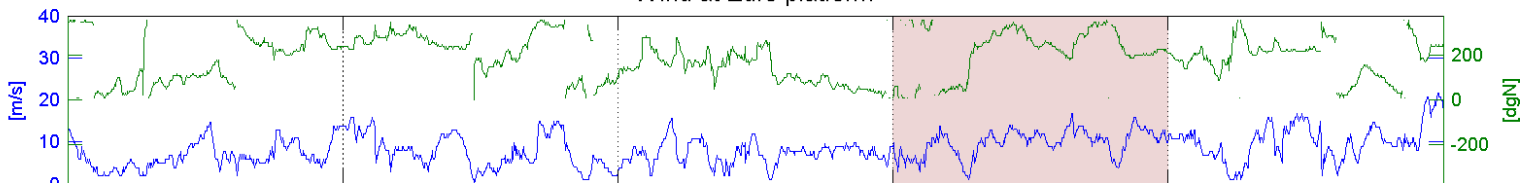
Sand mining volume for Maasvlakte 2



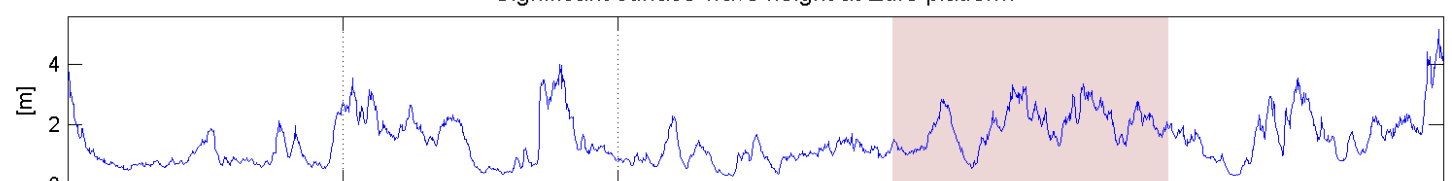
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Aug-30

Sep-14

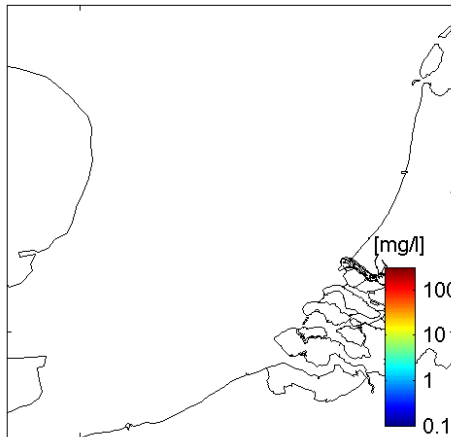
Sep-29

Oct-13

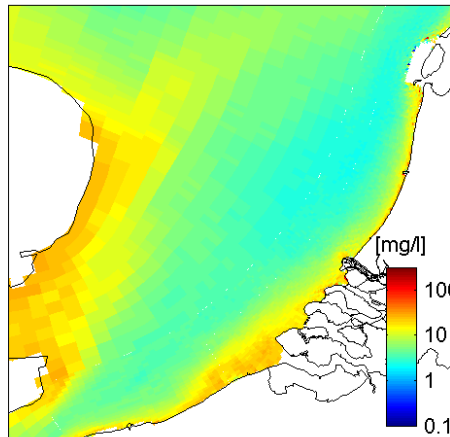
Oct-28

Nov-12

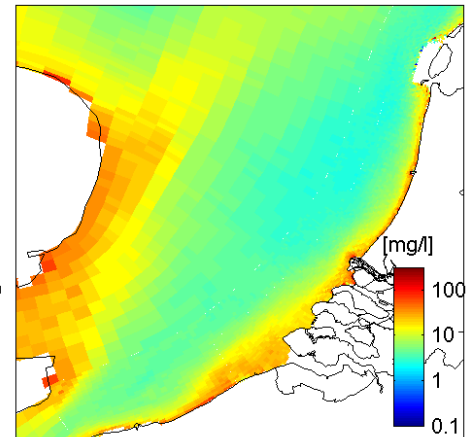
MERIS at surface layer



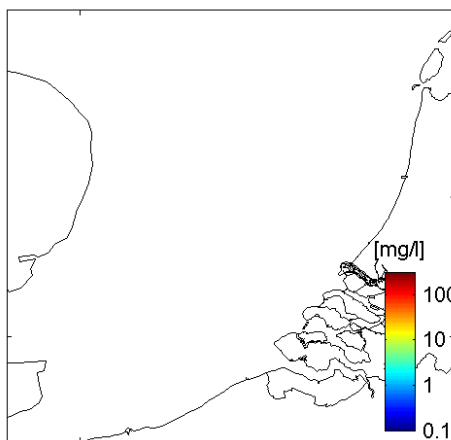
Model at surface layer



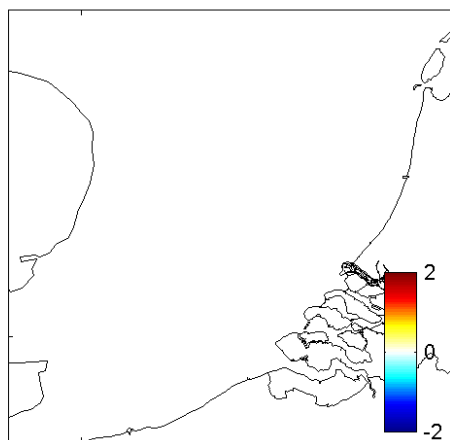
Model at bottom layer



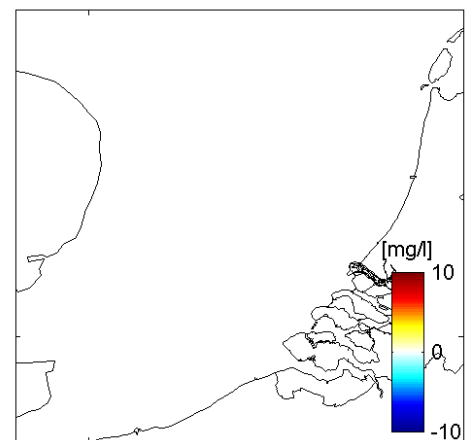
RMS difference



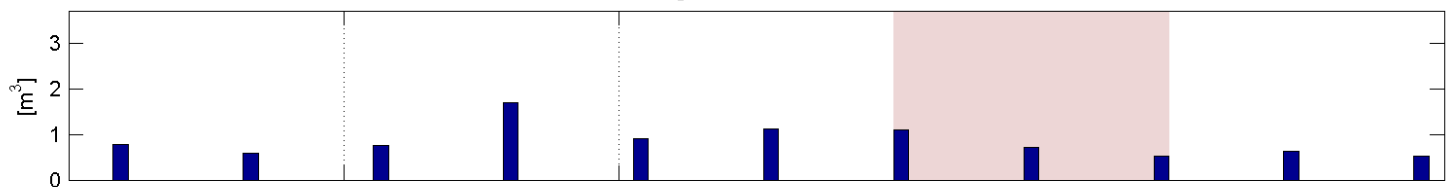
Relative difference [(MERIS-Model)/Model]



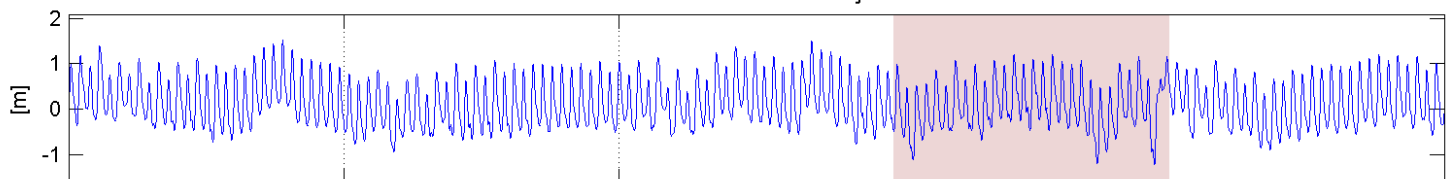
Mean difference [MERIS-Model]

 $\times 10^6$

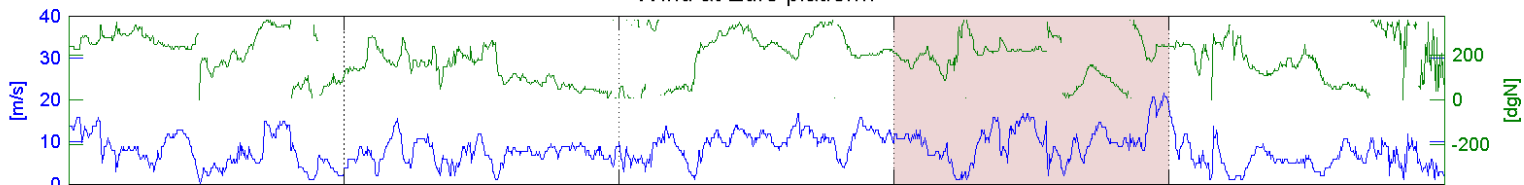
Sand mining volume for Maasvlakte 2



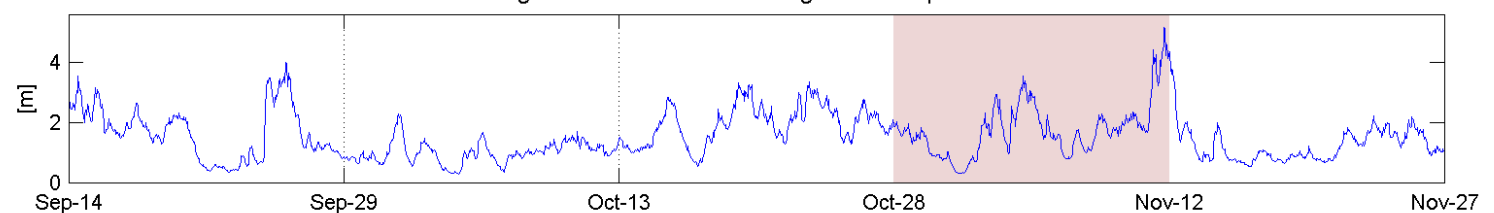
Water level at Noordwijk10



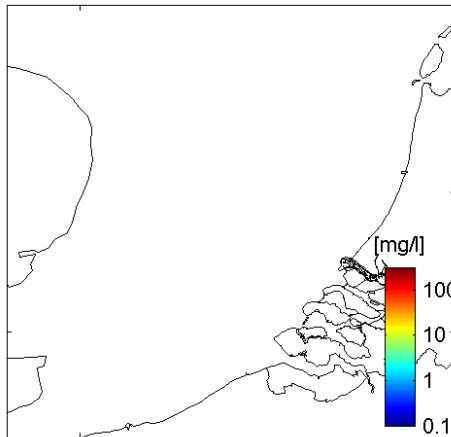
Wind at Euro platform



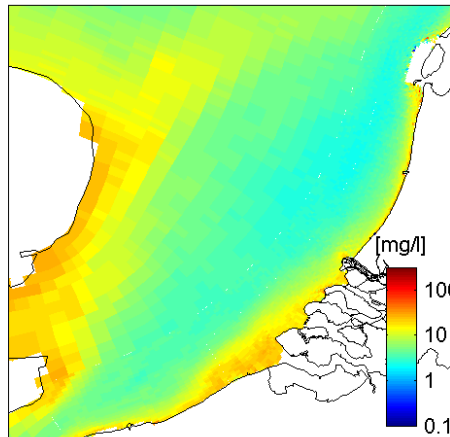
Significant surface wave height at Euro platform



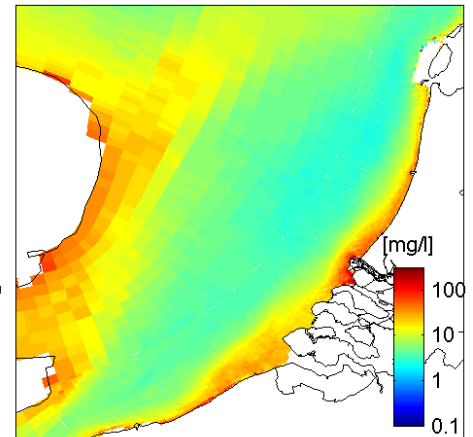
MERIS at surface layer



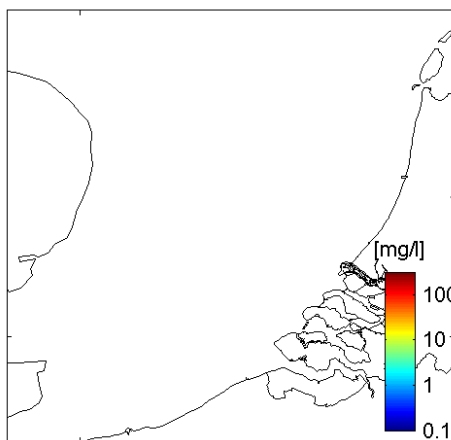
Model at surface layer



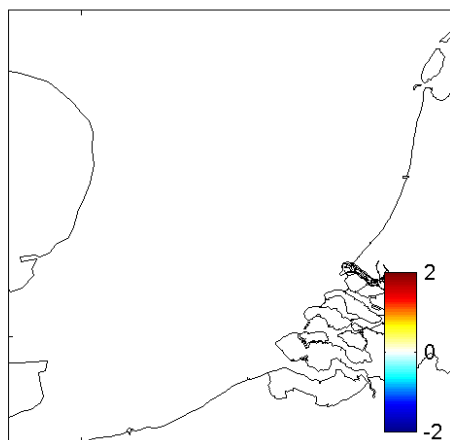
Model at bottom layer



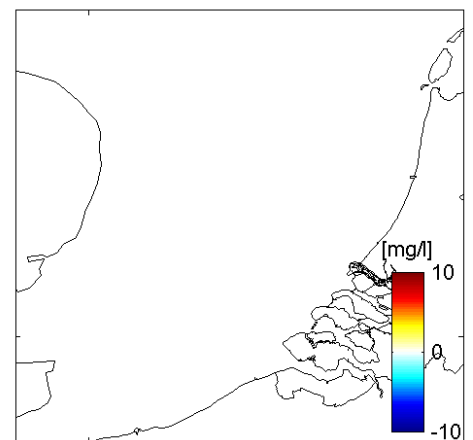
RMS difference



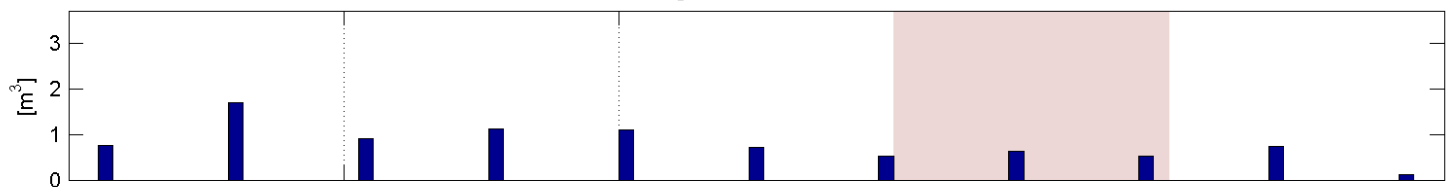
Relative difference [(MERIS-Model)/Model]



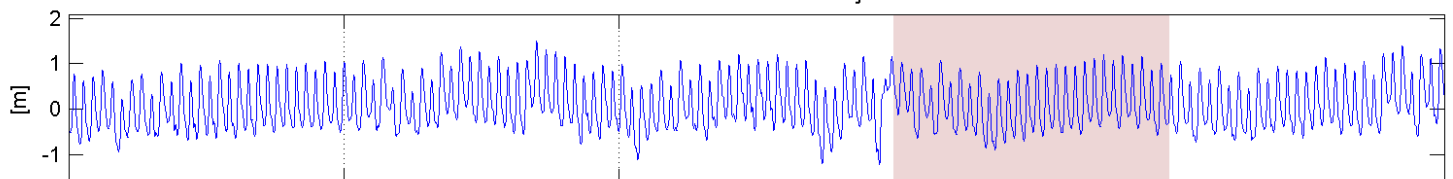
Mean difference [MERIS-Model]

 $\times 10^6$

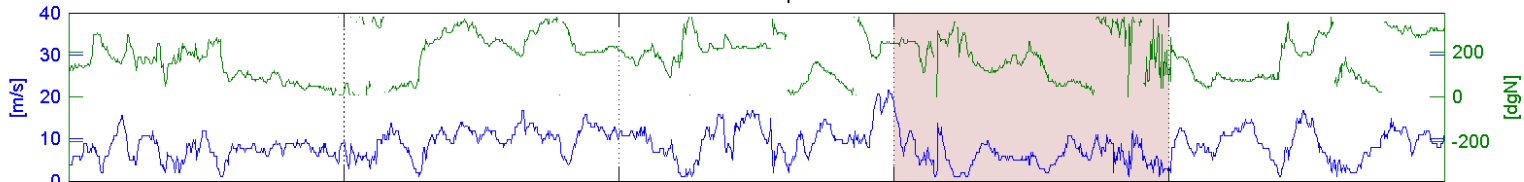
Sand mining volume for Maasvlakte 2



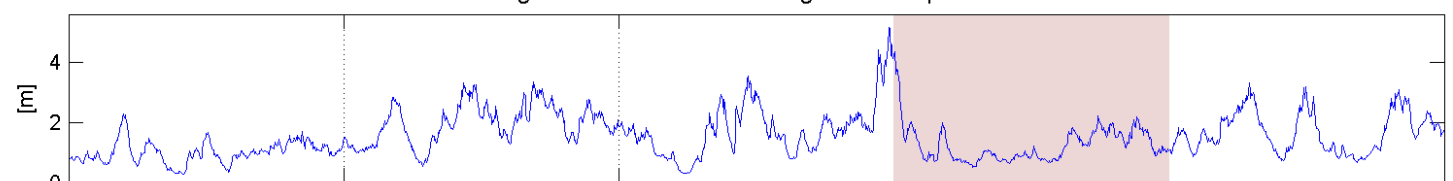
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Sep-29

Oct-13

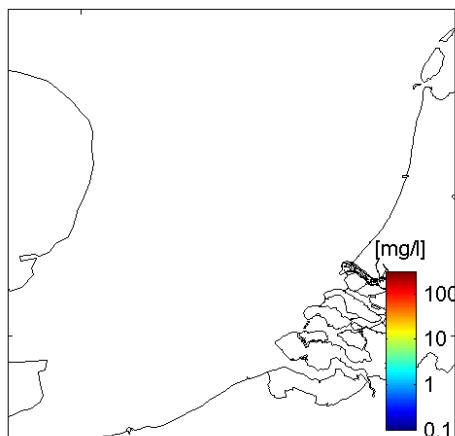
Oct-28

Nov-12

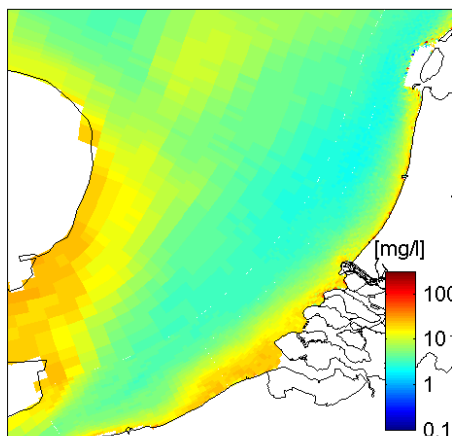
Nov-27

Dec-12

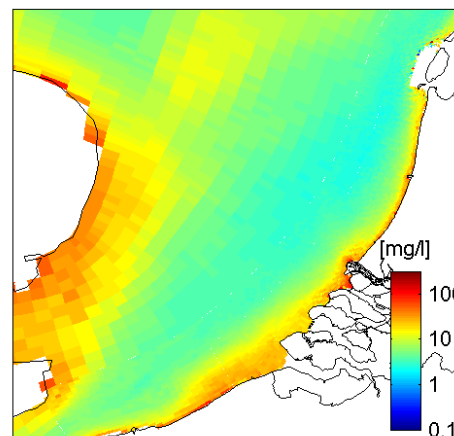
MERIS at surface layer



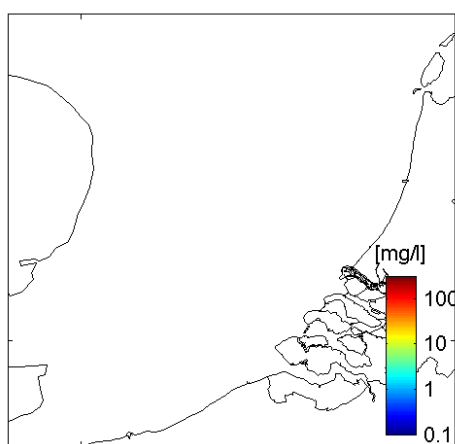
Model at surface layer



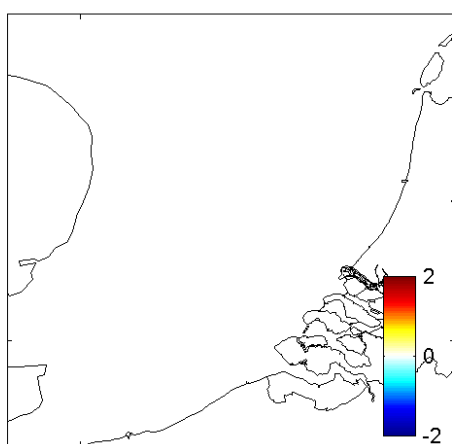
Model at bottom layer



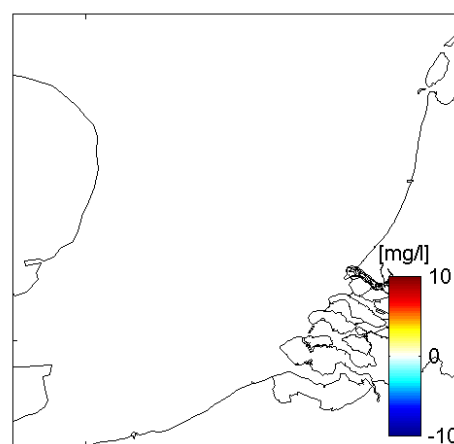
RMS difference



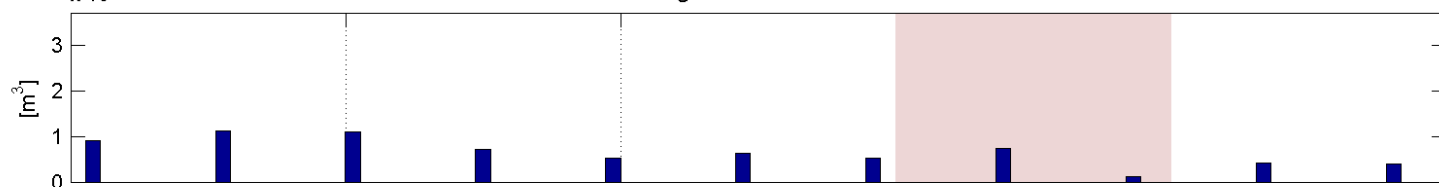
Relative difference [(MERIS-Model)/Model]



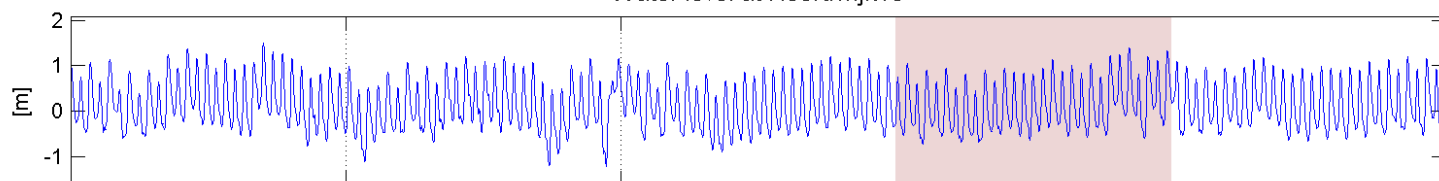
Mean difference [MERIS-Model]


x 10⁶

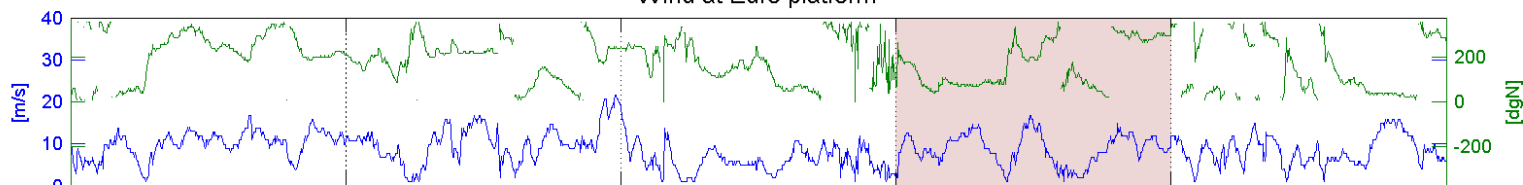
Sand mining volume for Maasvlakte 2



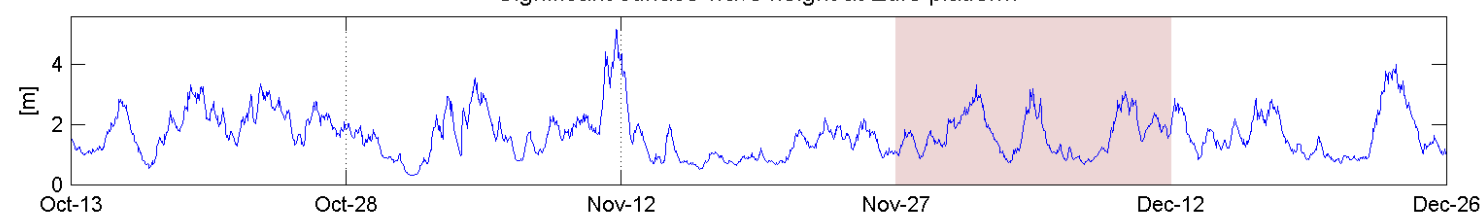
Water level at Noordwijk10



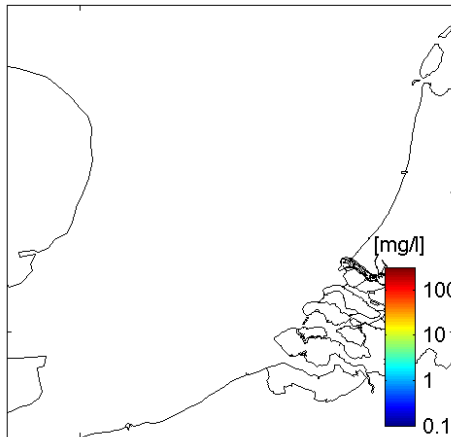
Wind at Euro platform



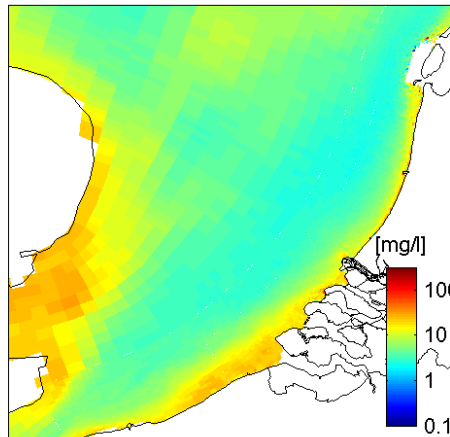
Significant surface wave height at Euro platform



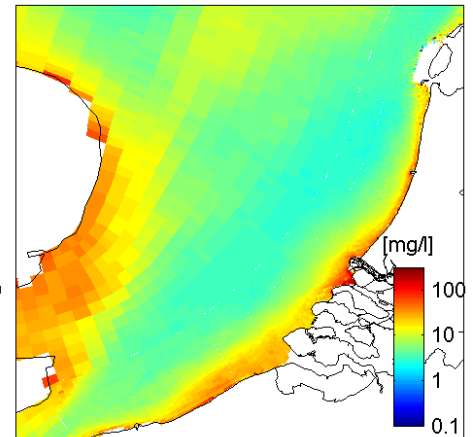
MERIS at surface layer



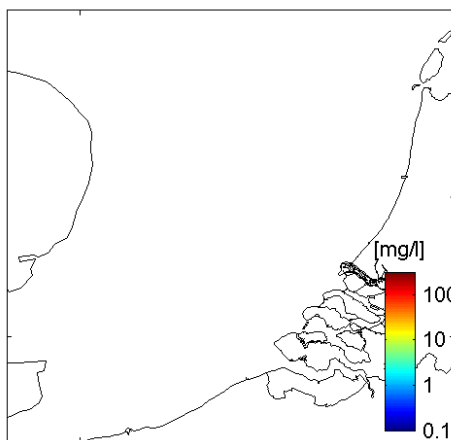
Model at surface layer



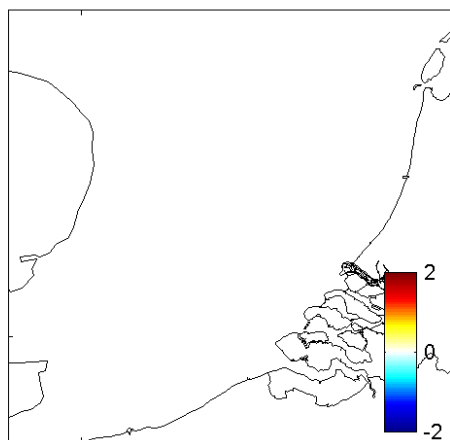
Model at bottom layer



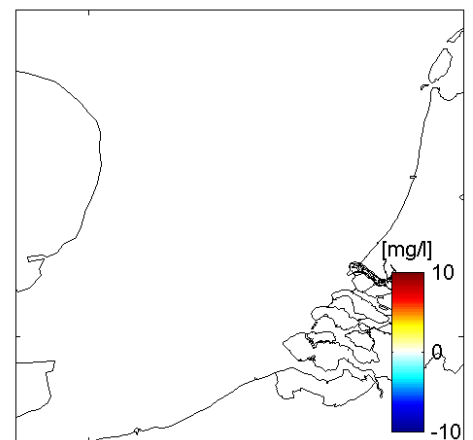
RMS difference



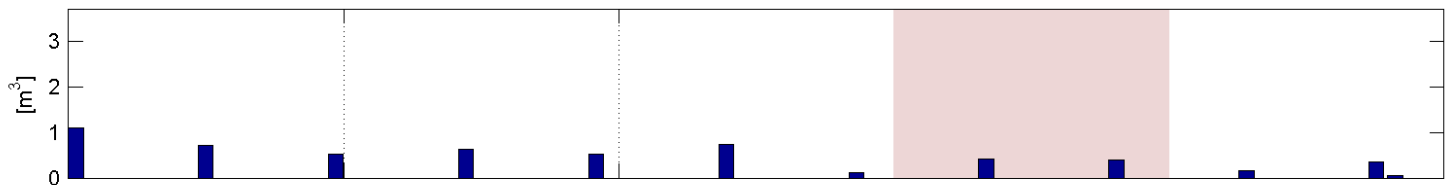
Relative difference [(MERIS-Model)/Model]



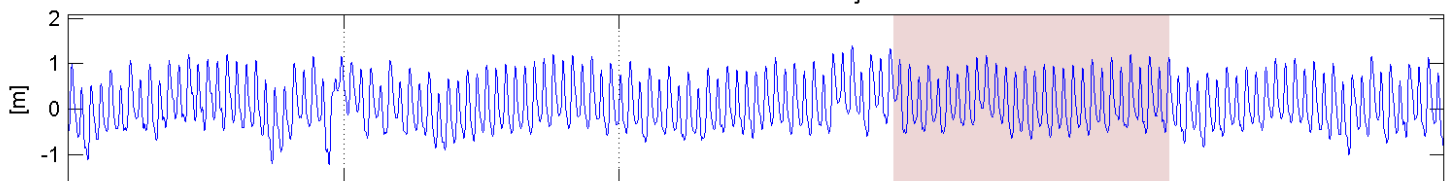
Mean difference [MERIS-Model]

 $\times 10^6$

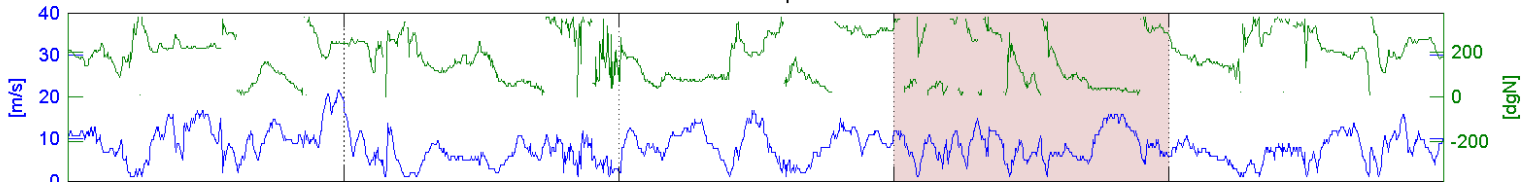
Sand mining volume for Maasvlakte 2



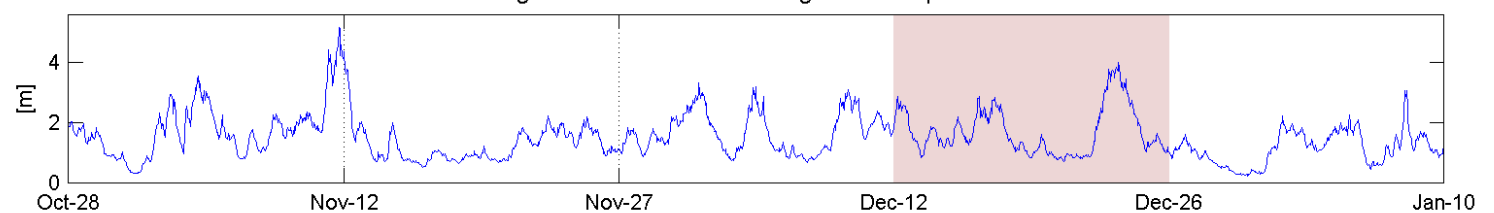
Water level at Noordwijk10



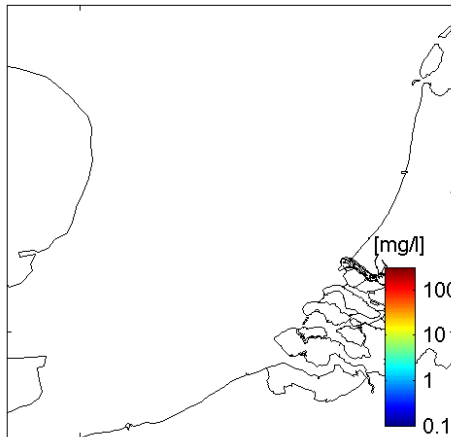
Wind at Euro platform



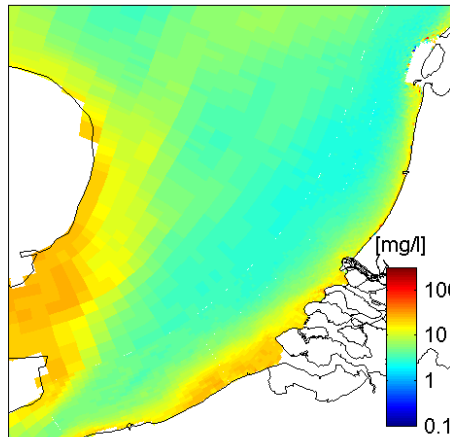
Significant surface wave height at Euro platform



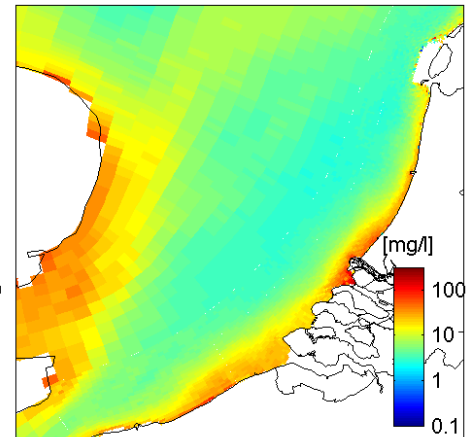
MERIS at surface layer



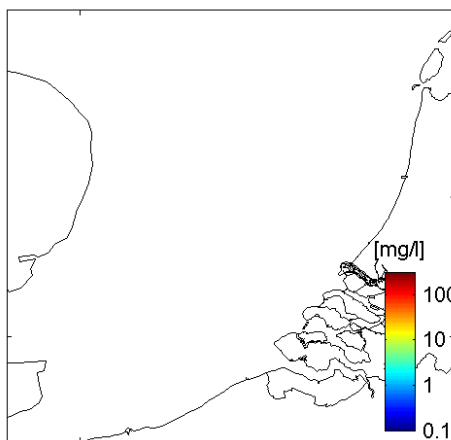
Model at surface layer



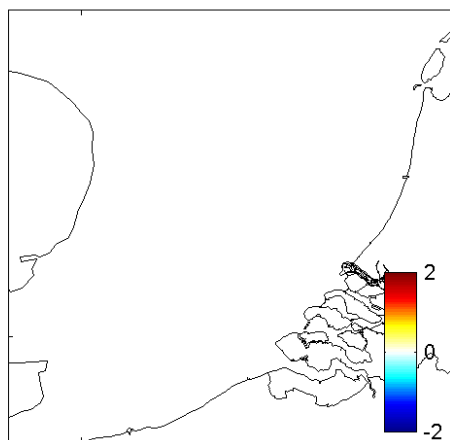
Model at bottom layer



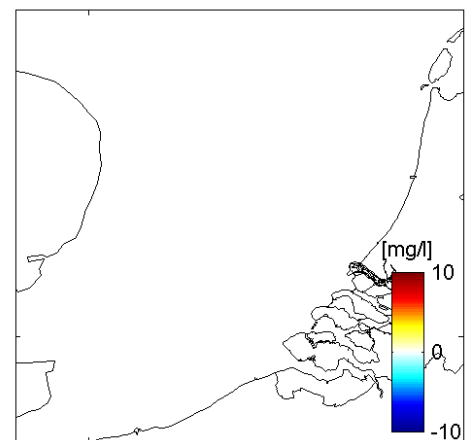
RMS difference



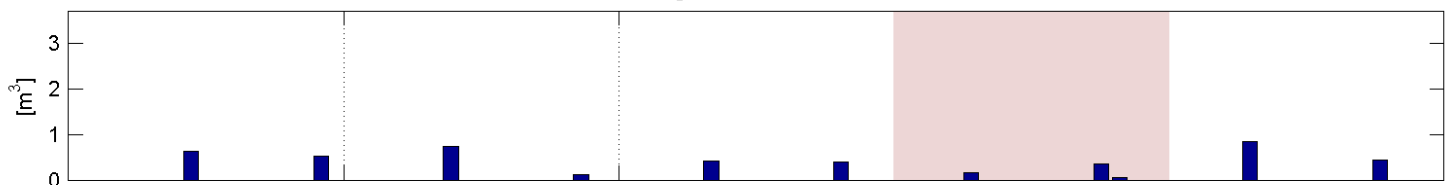
Relative difference [(MERIS-Model)/Model]



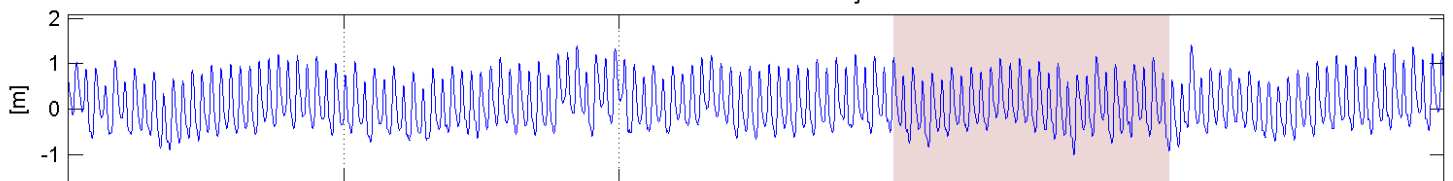
Mean difference [MERIS-Model]

 $\times 10^6$

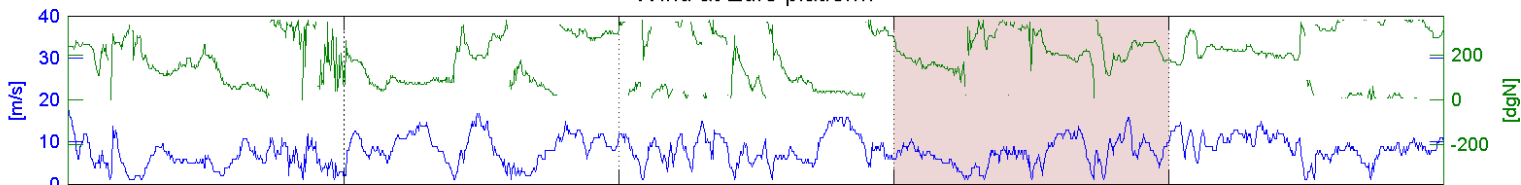
Sand mining volume for Maasvlakte 2



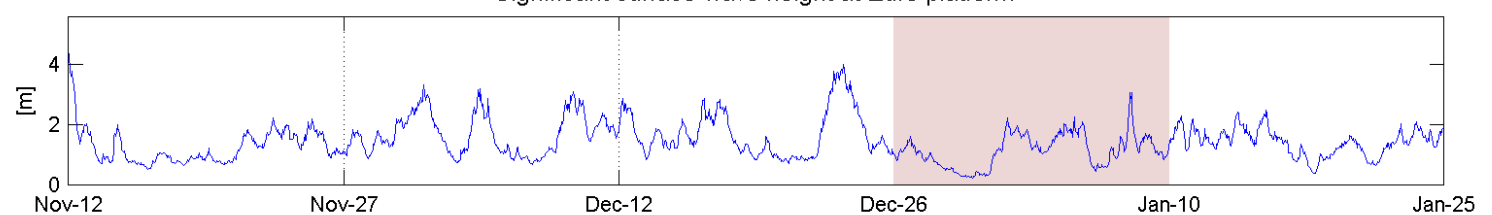
Water level at Noordwijk10



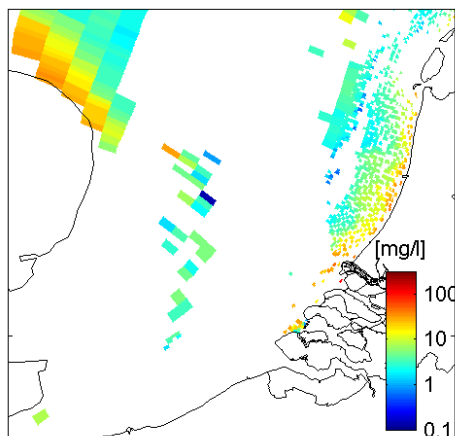
Wind at Euro platform



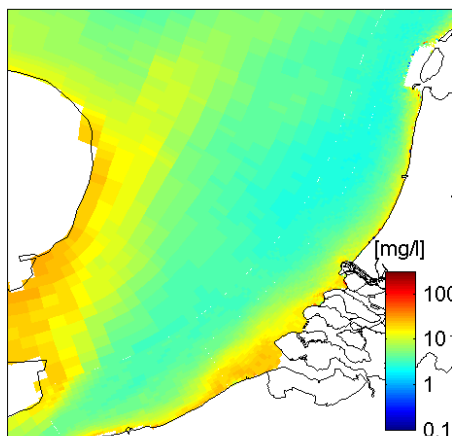
Significant surface wave height at Euro platform



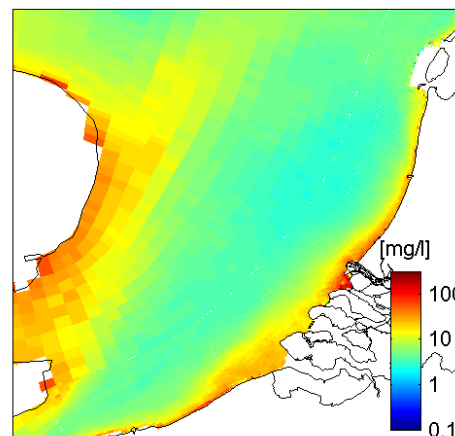
MERIS at surface layer



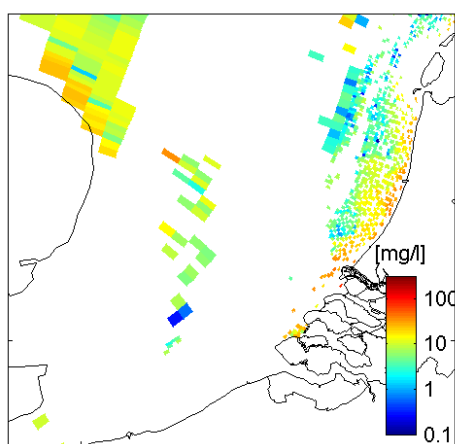
Model at surface layer



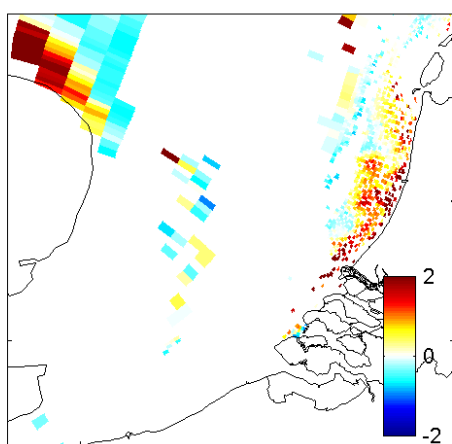
Model at bottom layer



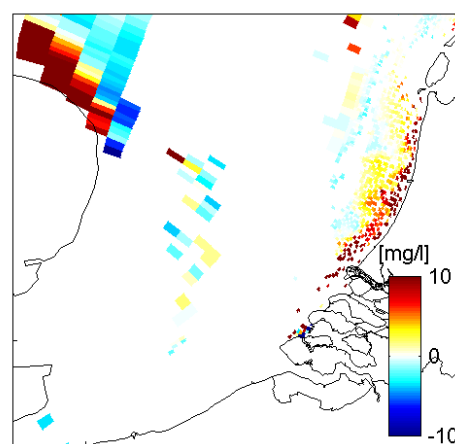
RMS difference



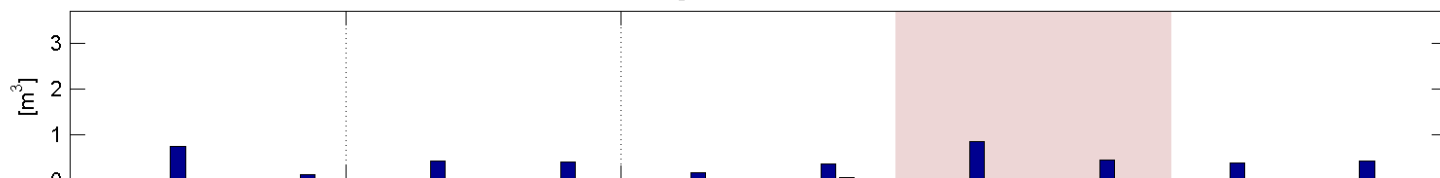
Relative difference [(MERIS-Model)/Model]



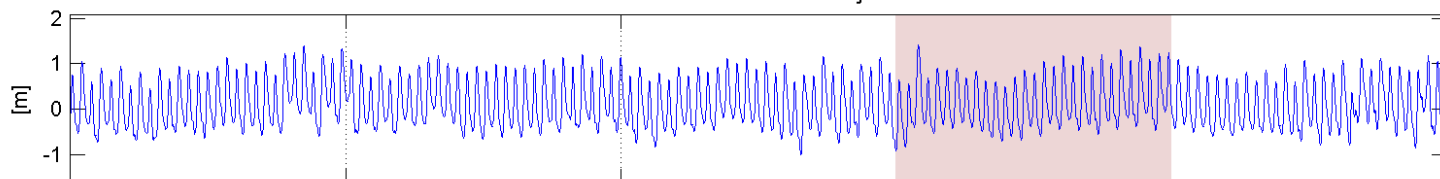
Mean difference [MERIS-Model]


 $\times 10^6$

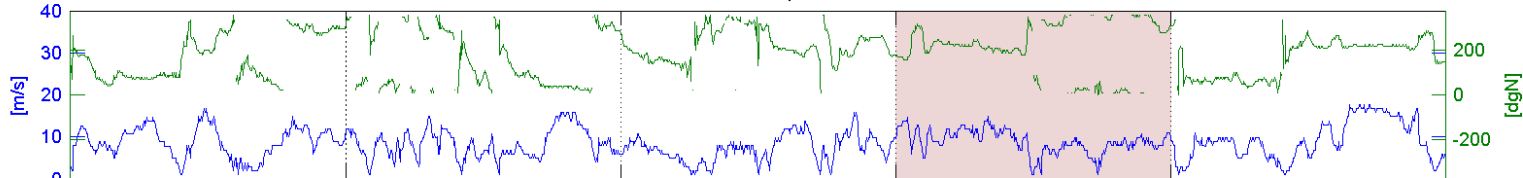
Sand mining volume for Maasvlakte 2



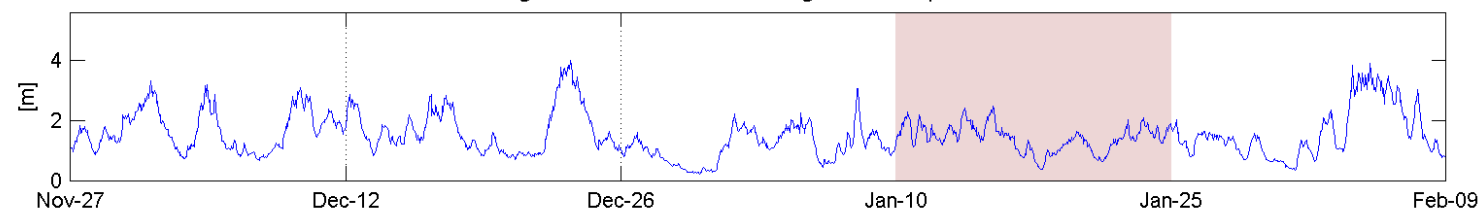
Water level at Noordwijk10



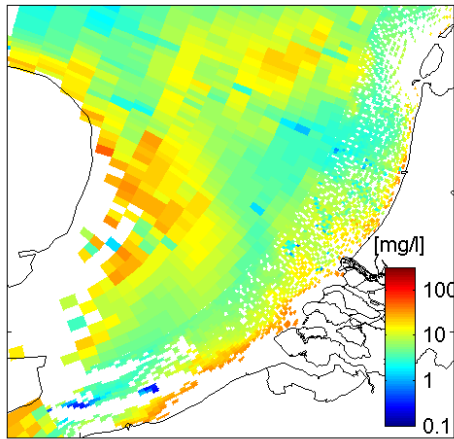
Wind at Euro platform



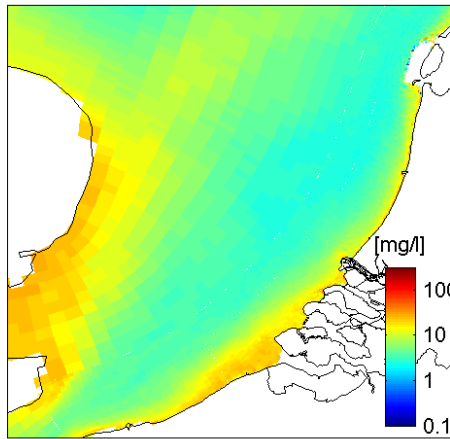
Significant surface wave height at Euro platform



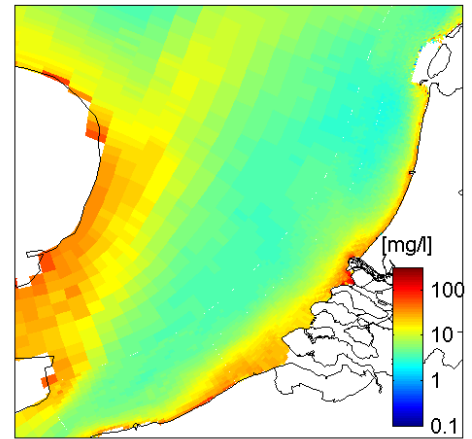
MERIS at surface layer



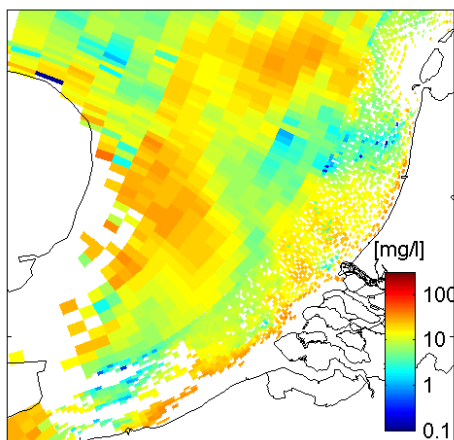
Model at surface layer



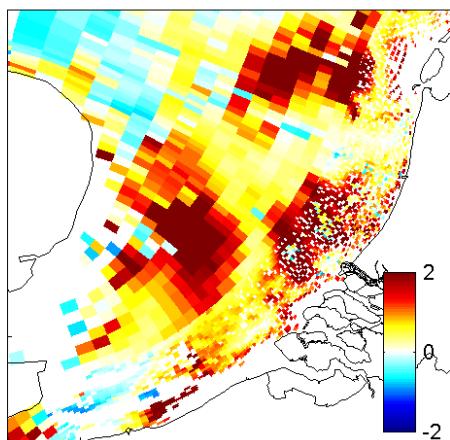
Model at bottom layer



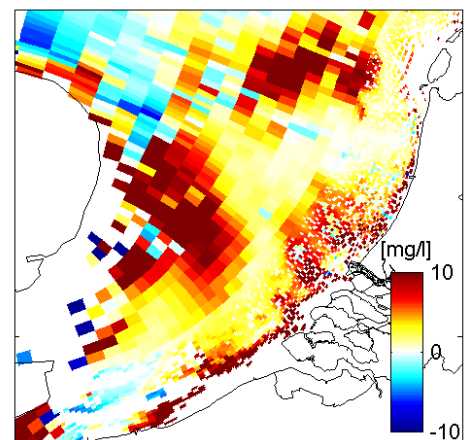
RMS difference



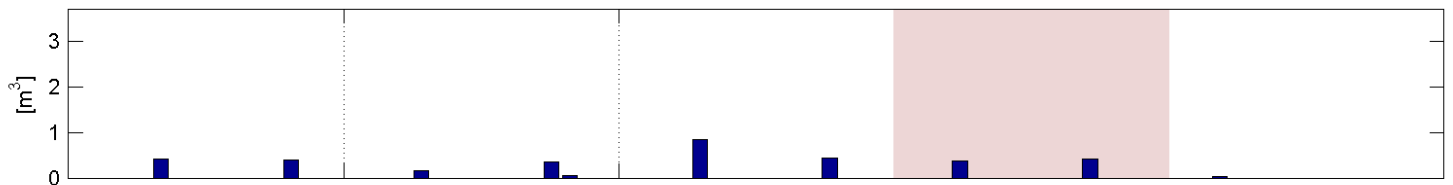
Relative difference [(MERIS-Model)/Model]



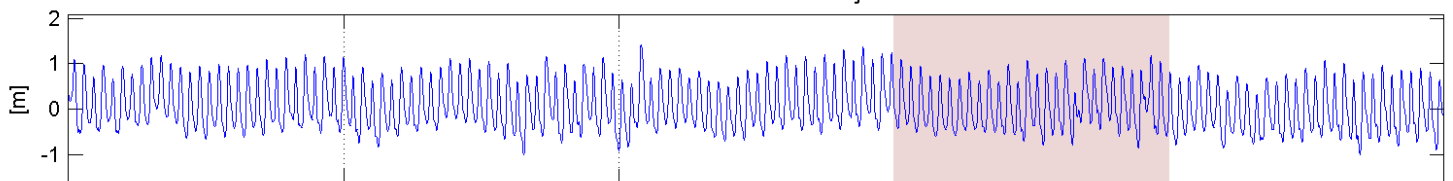
Mean difference [MERIS-Model]

 $\times 10^6$

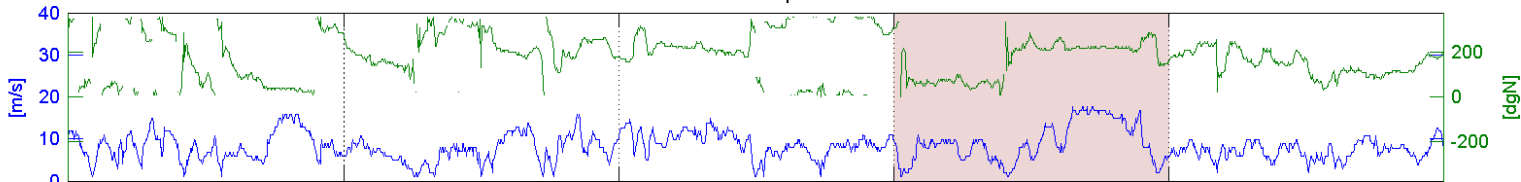
Sand mining volume for Maasvlakte 2



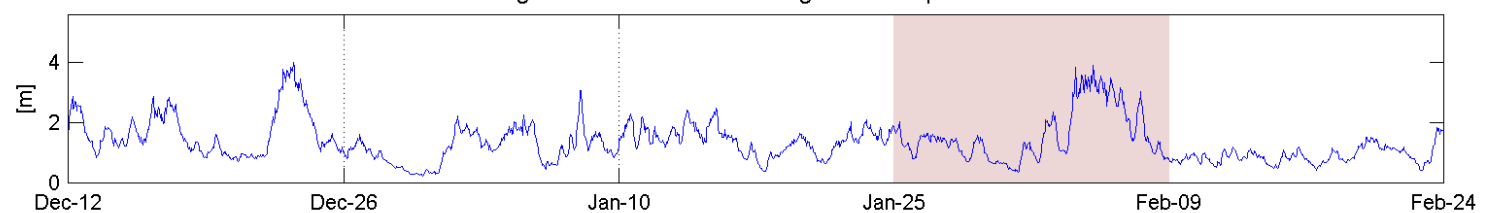
Water level at Noordwijk10



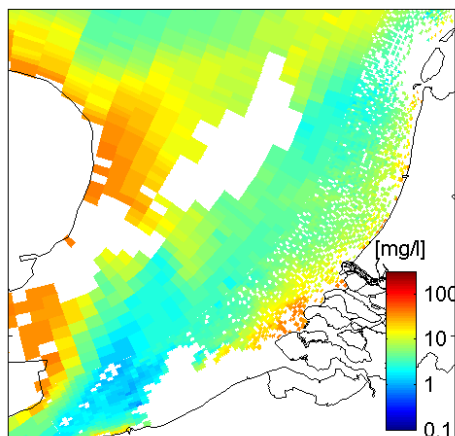
Wind at Euro platform



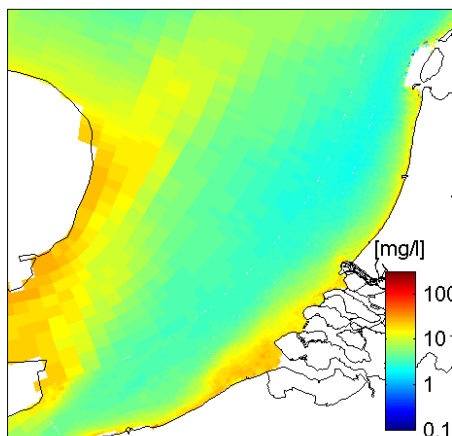
Significant surface wave height at Euro platform



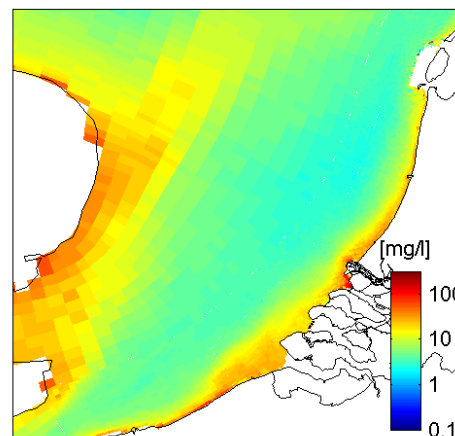
MERIS at surface layer



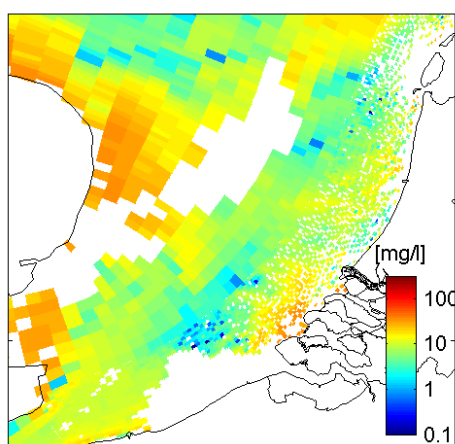
Model at surface layer



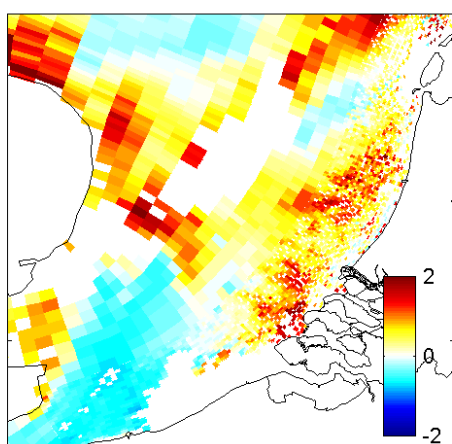
Model at bottom layer



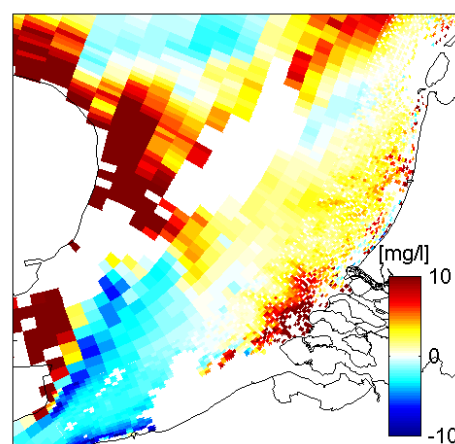
RMS difference



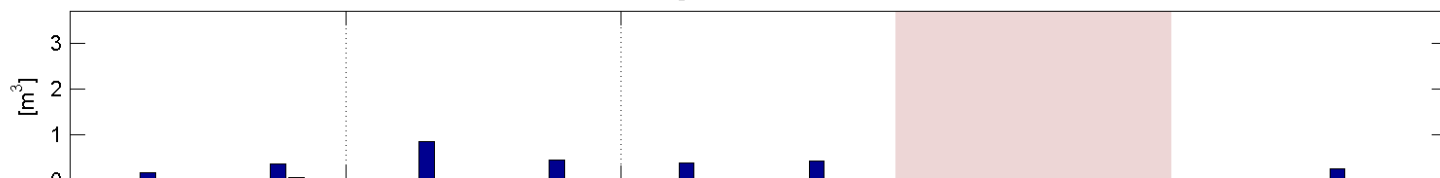
Relative difference [(MERIS-Model)/Model]



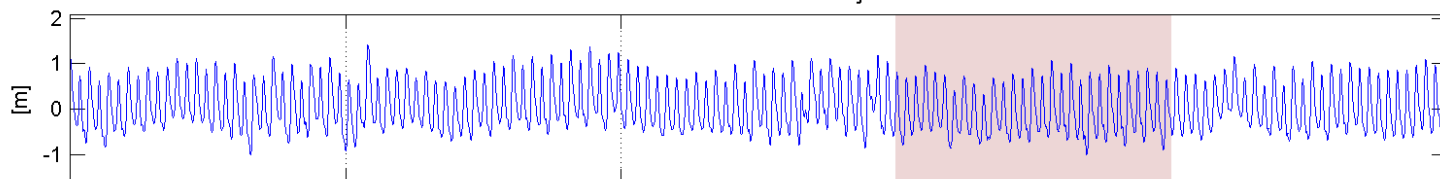
Mean difference [MERIS-Model]


 $\times 10^6$

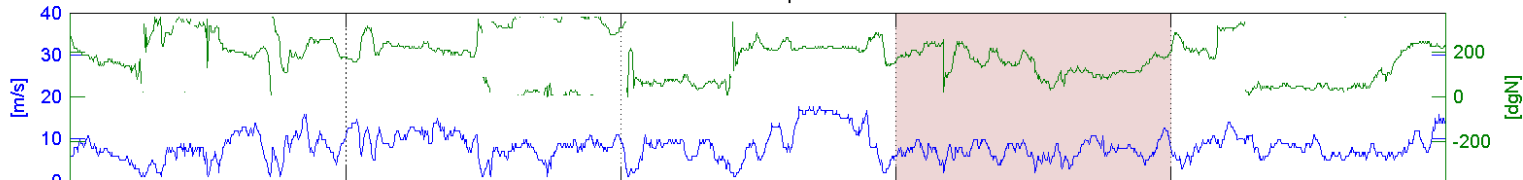
Sand mining volume for Maasvlakte 2



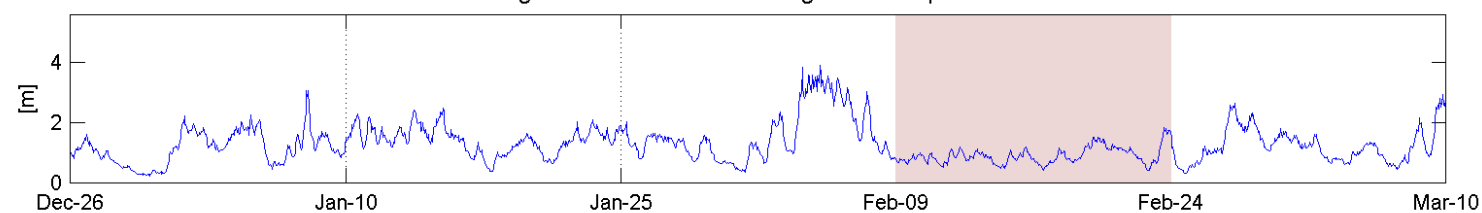
Water level at Noordwijk10



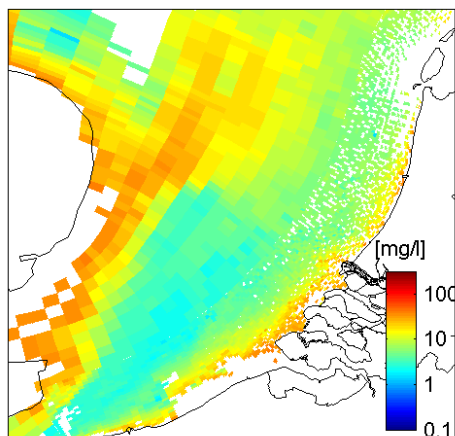
Wind at Euro platform



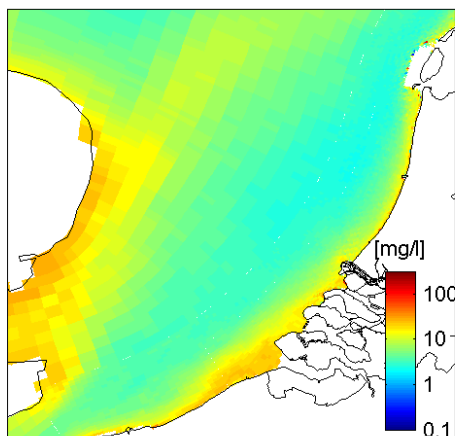
Significant surface wave height at Euro platform



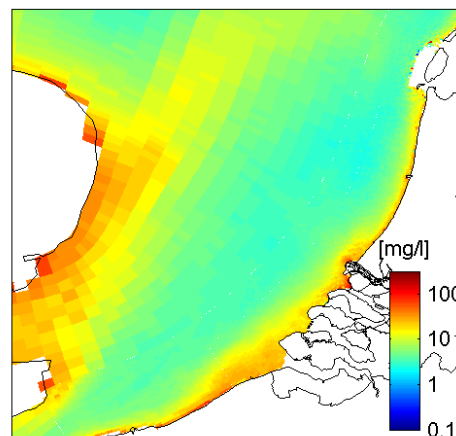
MERIS at surface layer



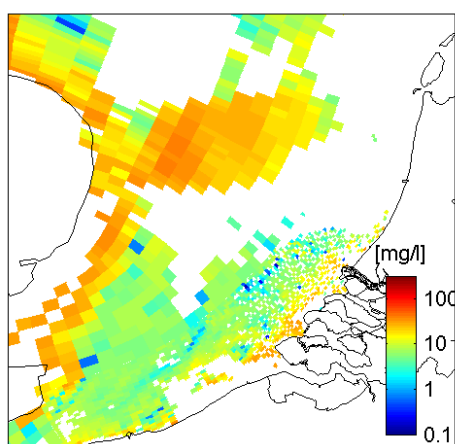
Model at surface layer



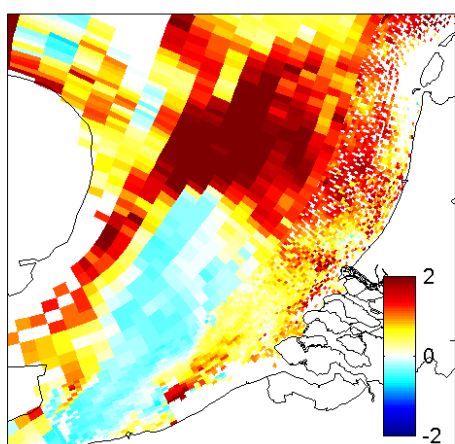
Model at bottom layer



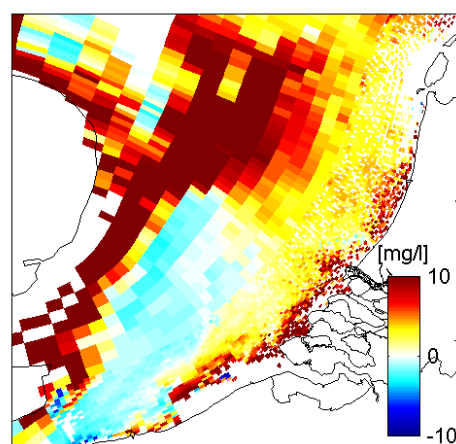
RMS difference



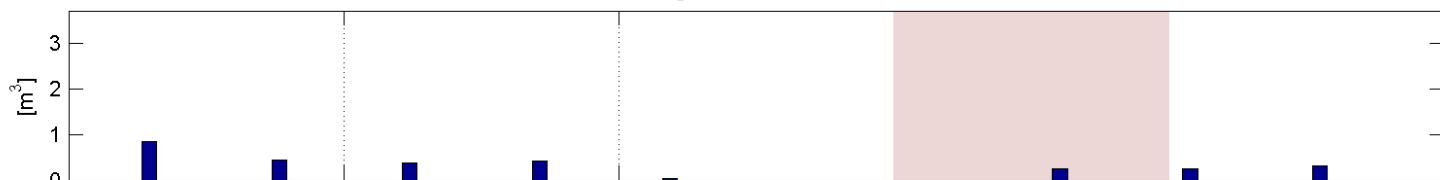
Relative difference [(MERIS-Model)/Model]



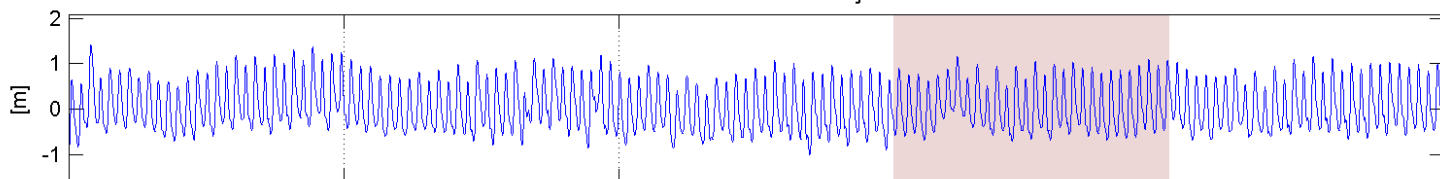
Mean difference [MERIS-Model]


x 10⁶

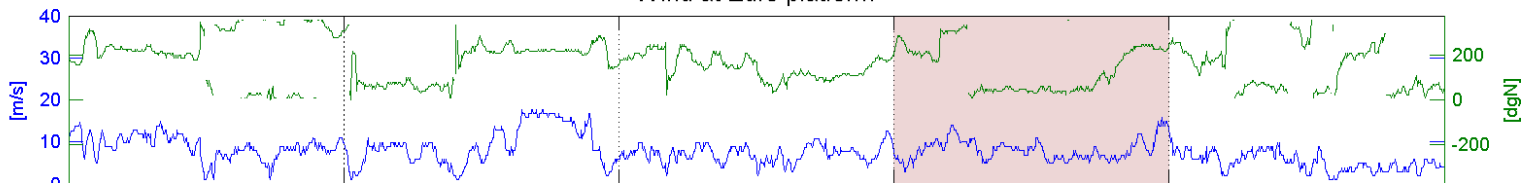
Sand mining volume for Maasvlakte 2



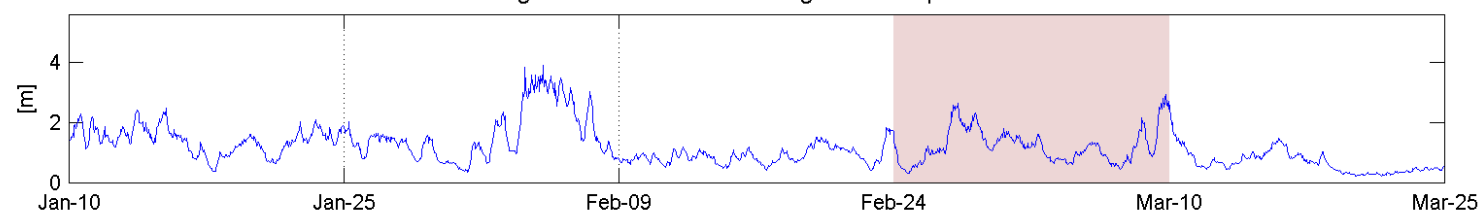
Water level at Noordwijk10



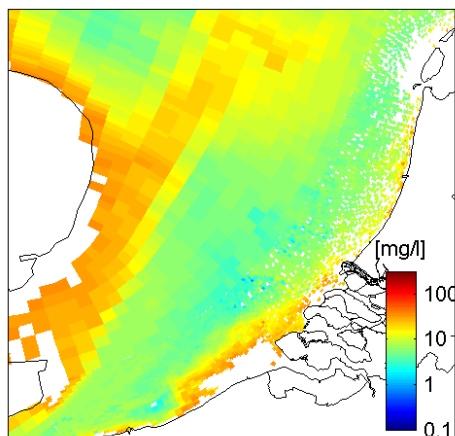
Wind at Euro platform



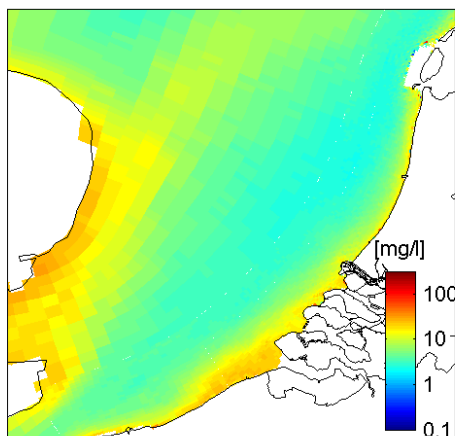
Significant surface wave height at Euro platform



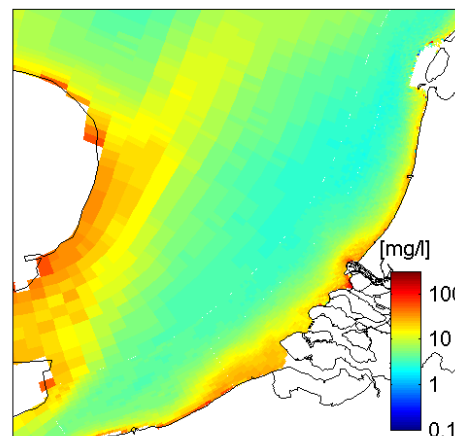
MERIS at surface layer



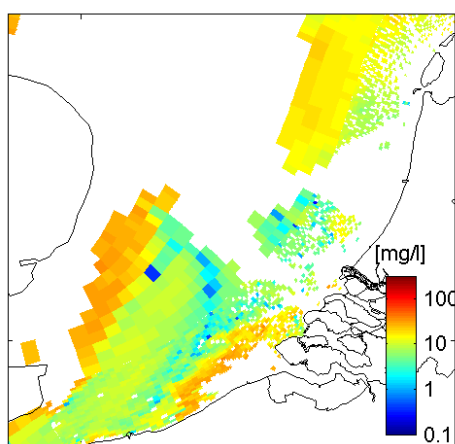
Model at surface layer



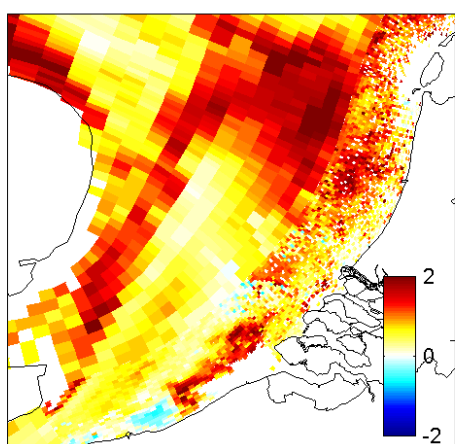
Model at bottom layer



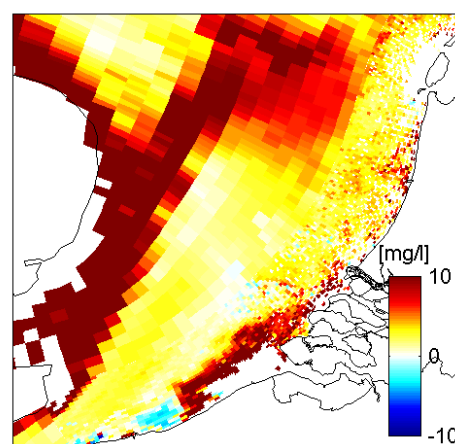
RMS difference



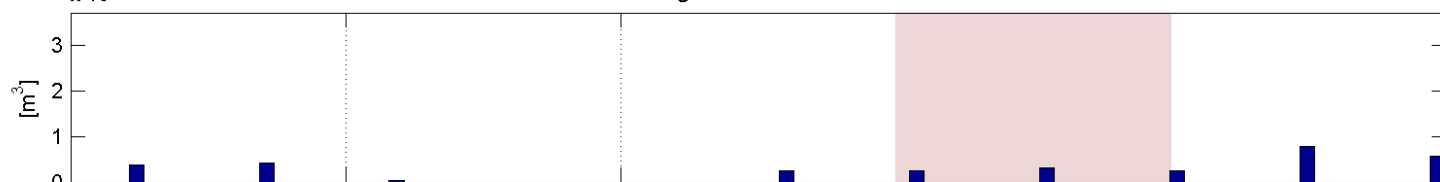
Relative difference [(MERIS-Model)/Model]



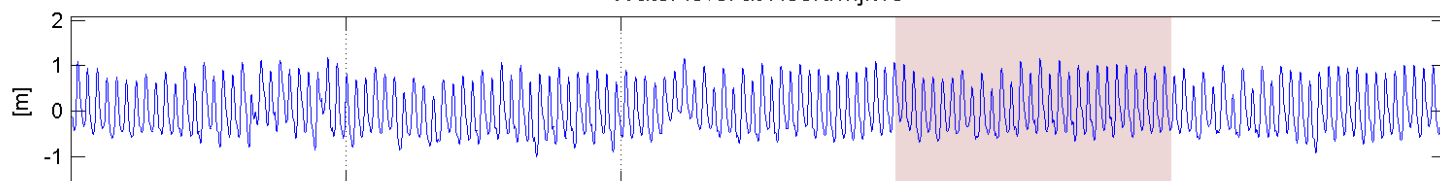
Mean difference [MERIS-Model]


x 10⁶

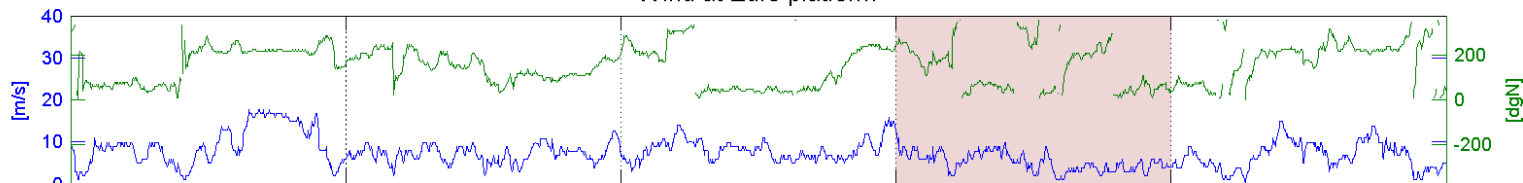
Sand mining volume for Maasvlakte 2



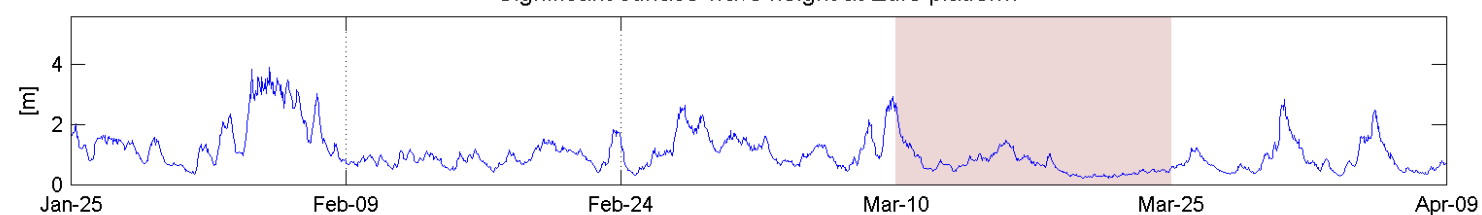
Water level at Noordwijk10



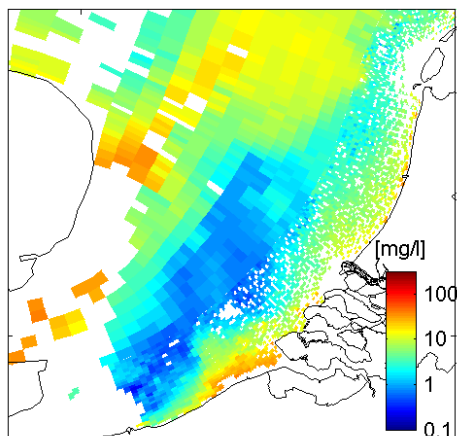
Wind at Euro platform



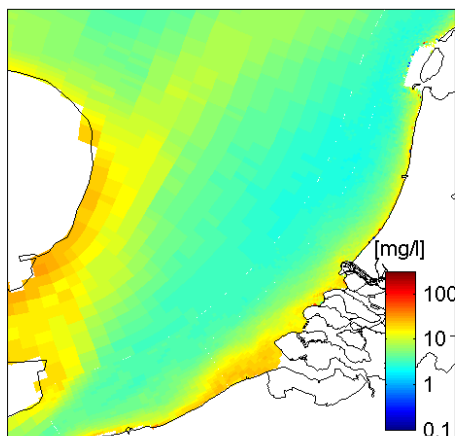
Significant surface wave height at Euro platform



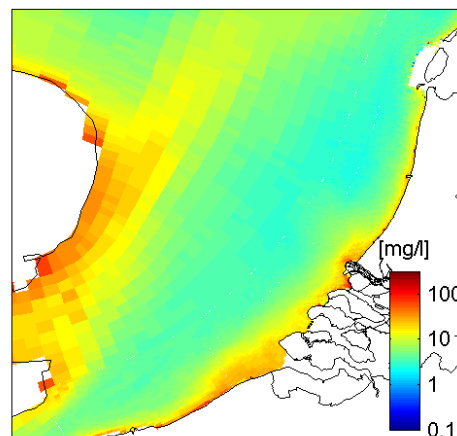
MERIS at surface layer



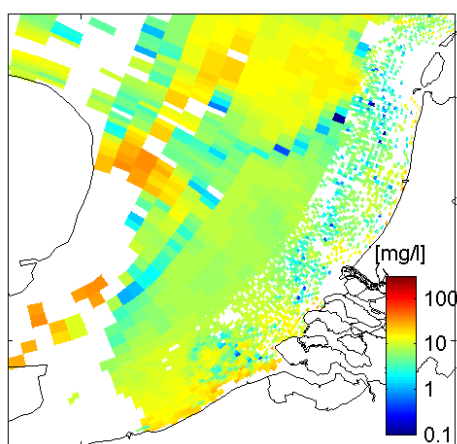
Model at surface layer



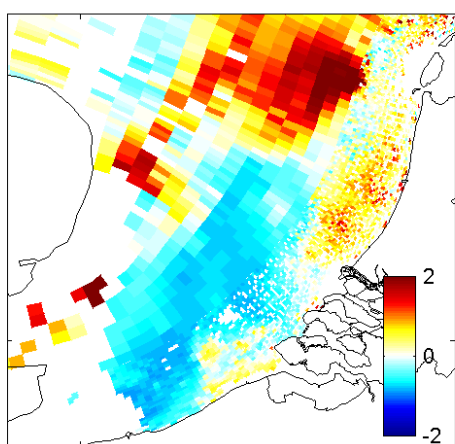
Model at bottom layer



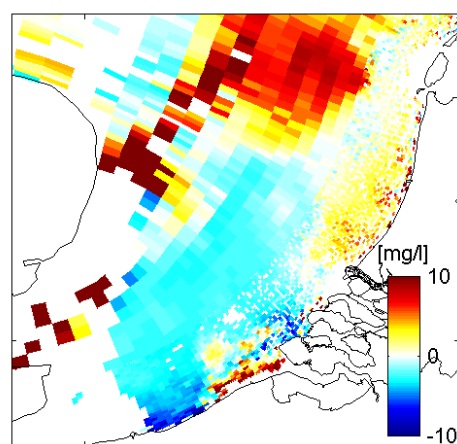
RMS difference



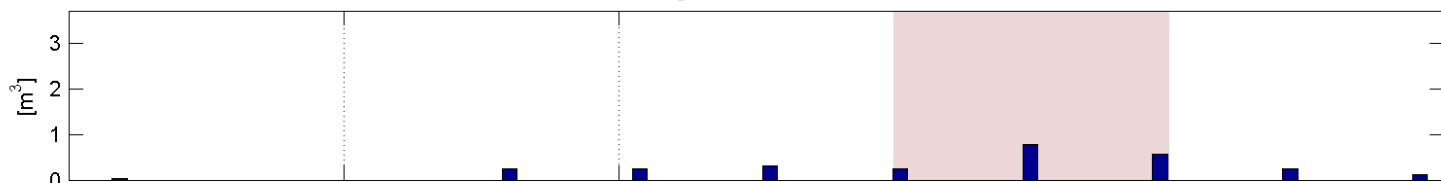
Relative difference [(MERIS-Model)/Model]



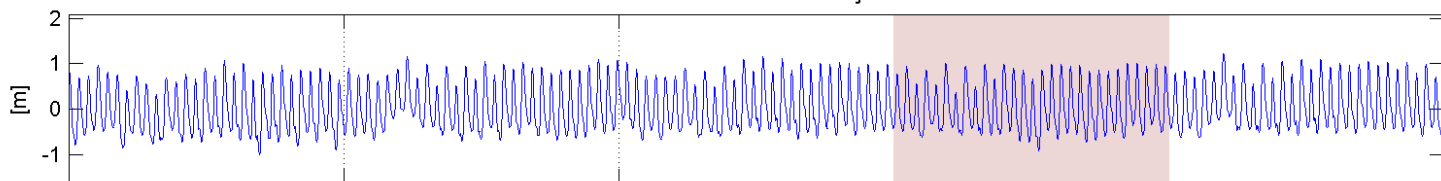
Mean difference [MERIS-Model]


 $\times 10^6$

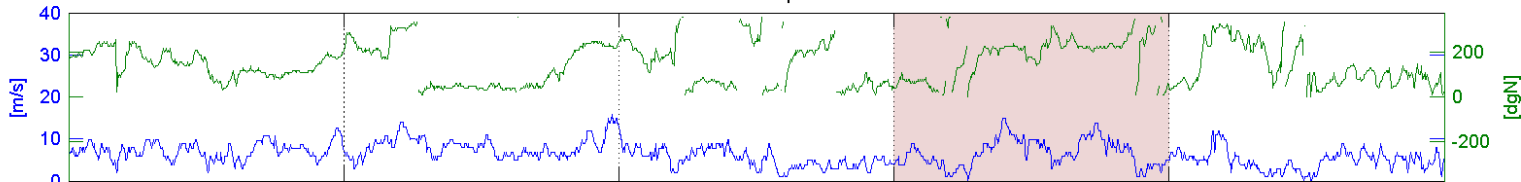
Sand mining volume for Maasvlakte 2



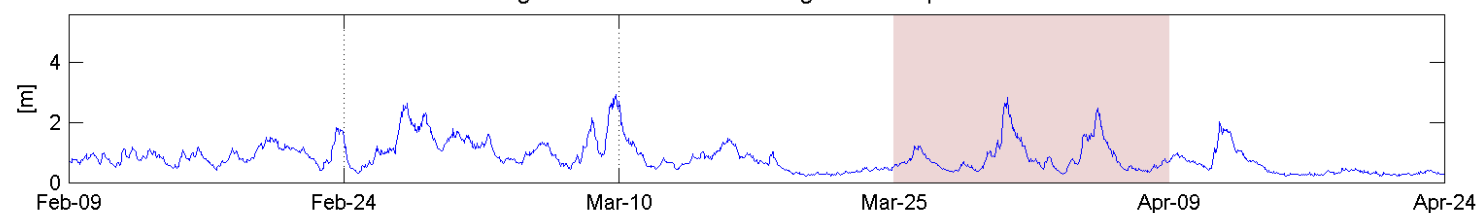
Water level at Noordwijk10



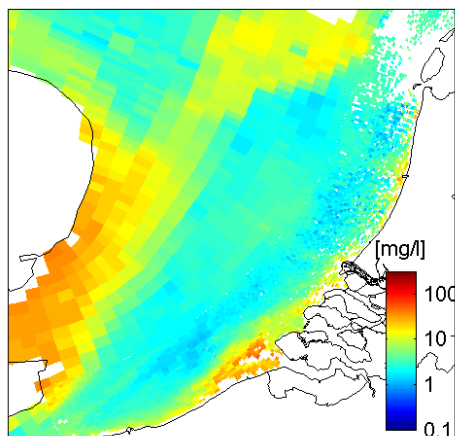
Wind at Euro platform



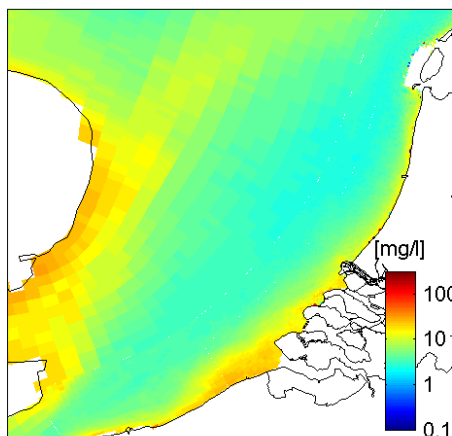
Significant surface wave height at Euro platform



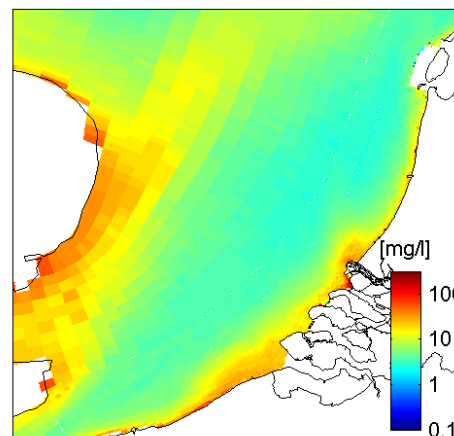
MERIS at surface layer



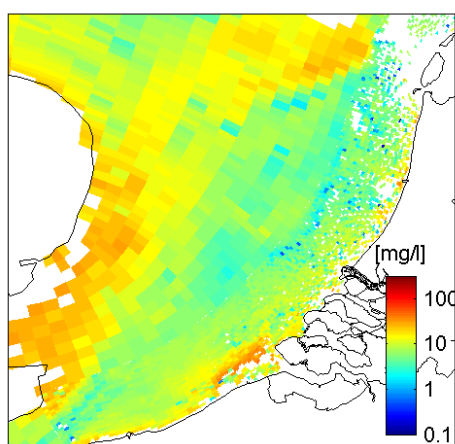
Model at surface layer



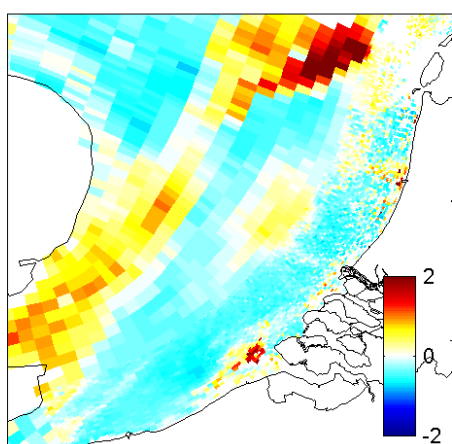
Model at bottom layer



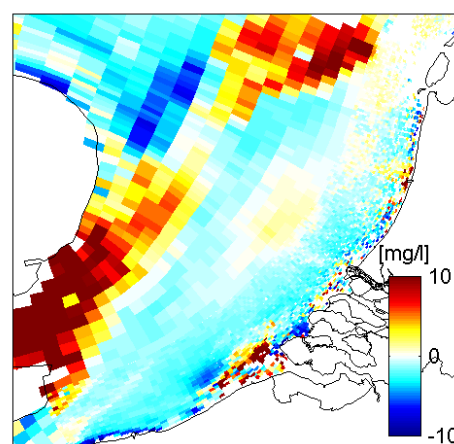
RMS difference



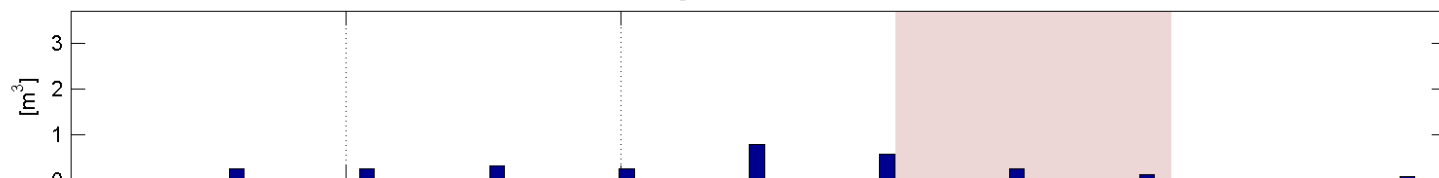
Relative difference [(MERIS-Model)/Model]



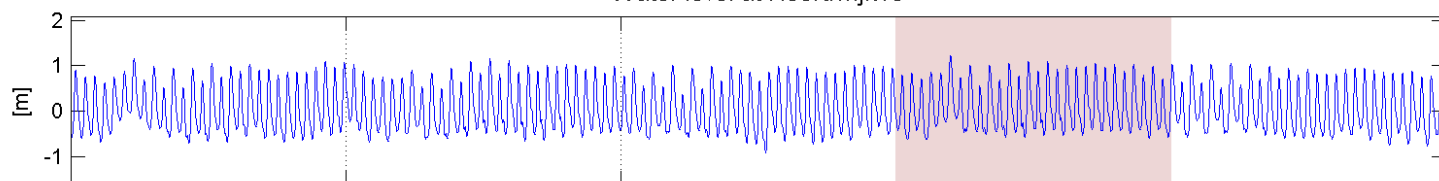
Mean difference [MERIS-Model]

 $\times 10^6$

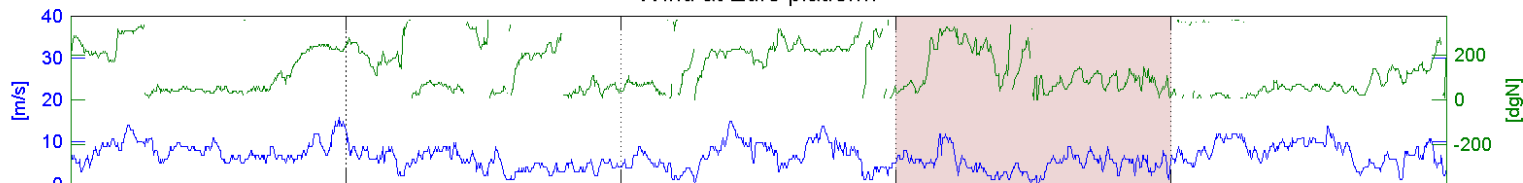
Sand mining volume for Maasvlakte 2



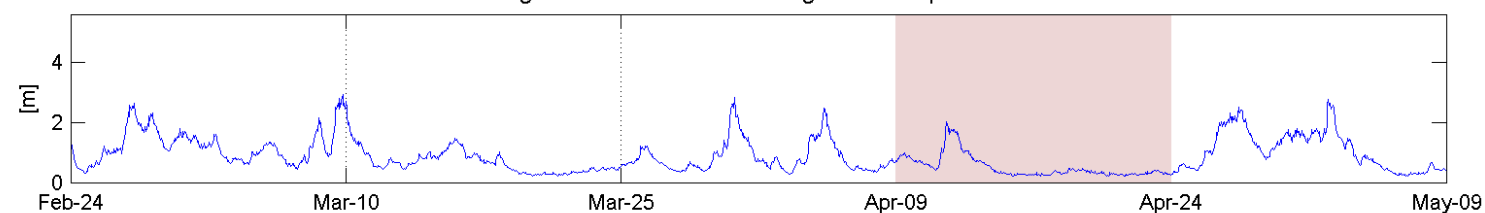
Water level at Noordwijk10



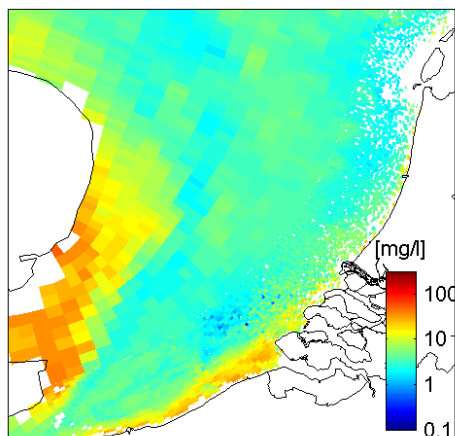
Wind at Euro platform



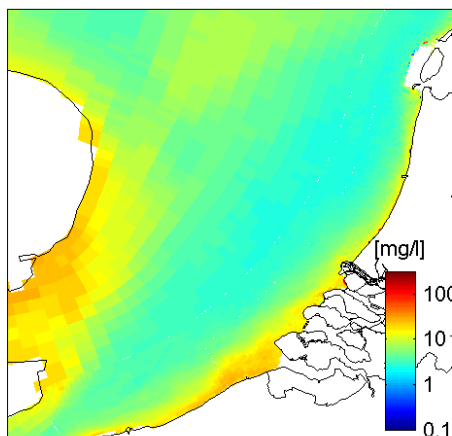
Significant surface wave height at Euro platform



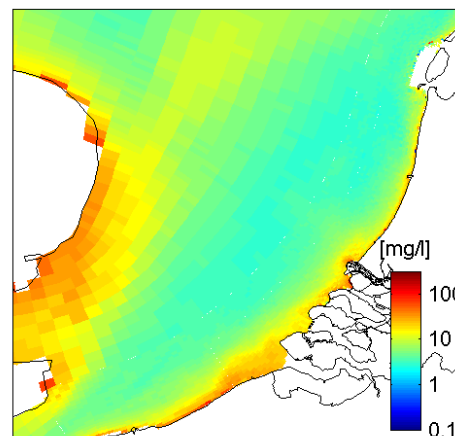
MERIS at surface layer



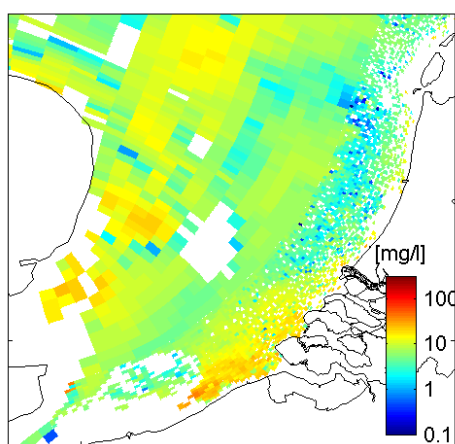
Model at surface layer



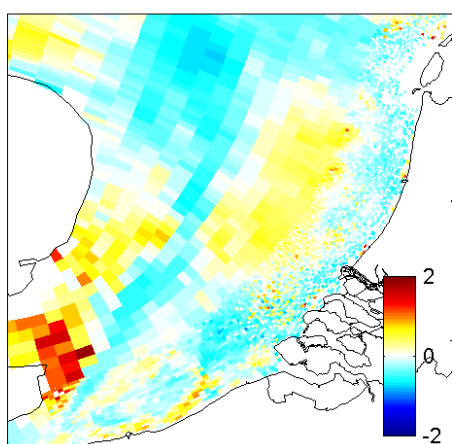
Model at bottom layer



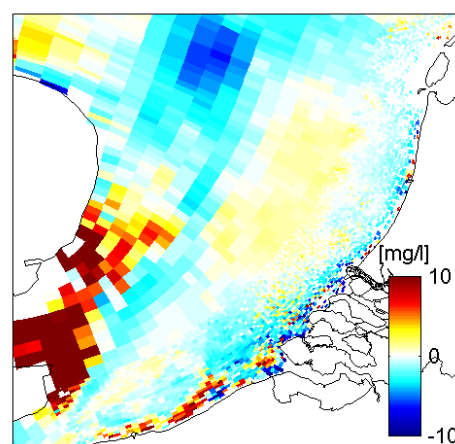
RMS difference



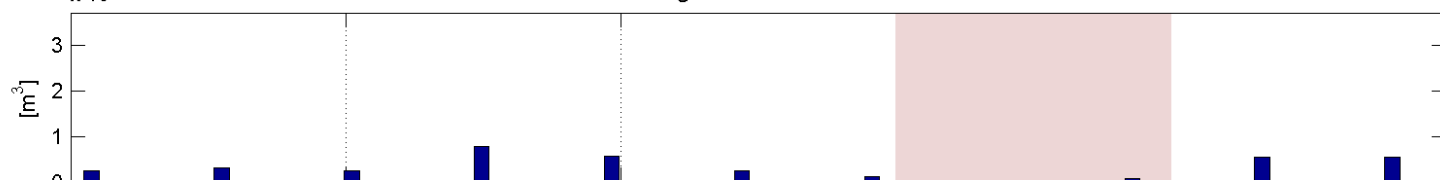
Relative difference [(MERIS-Model)/Model]



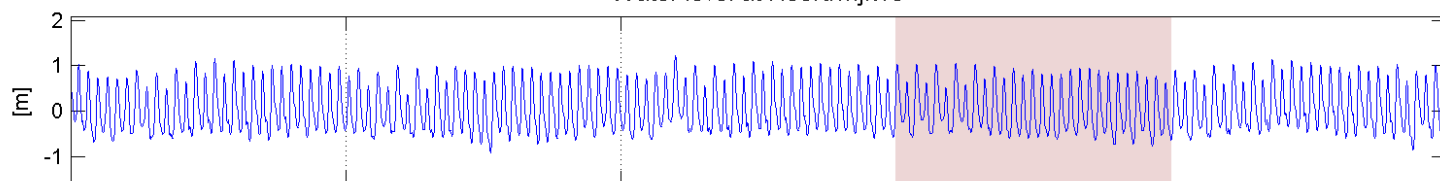
Mean difference [MERIS-Model]

x 10⁶

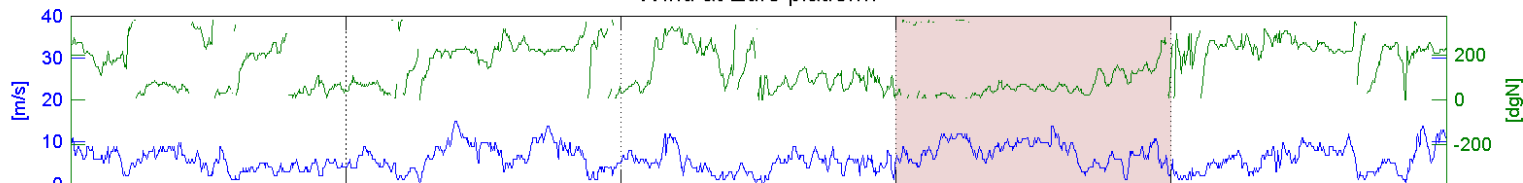
Sand mining volume for Maasvlakte 2



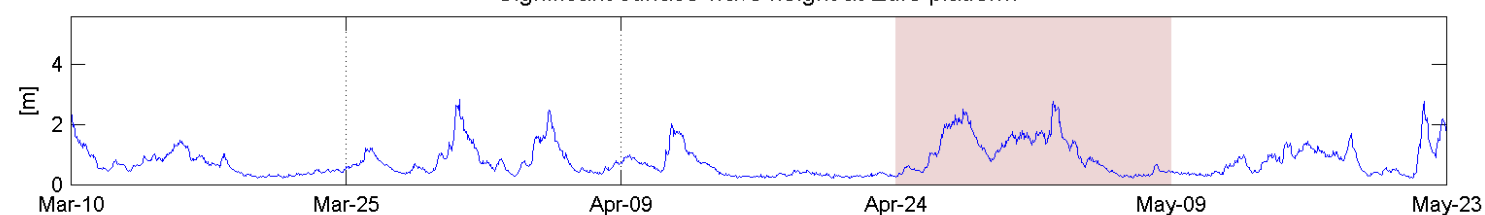
Water level at Noordwijk10



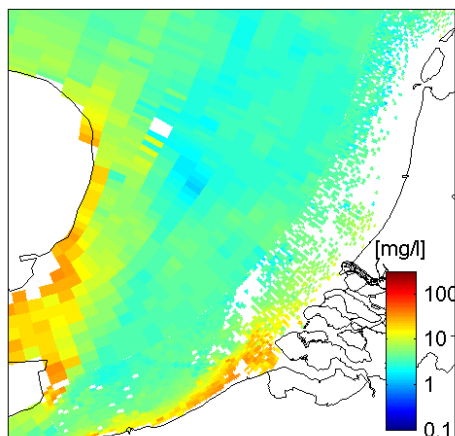
Wind at Euro platform



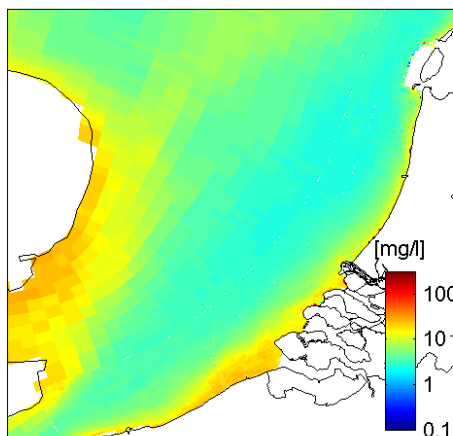
Significant surface wave height at Euro platform



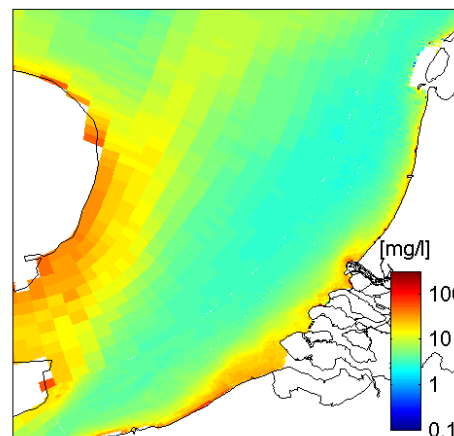
MERIS at surface layer



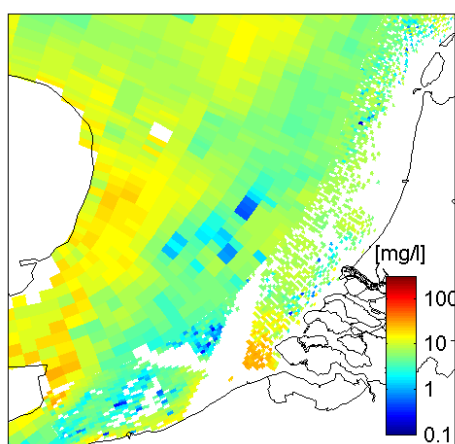
Model at surface layer



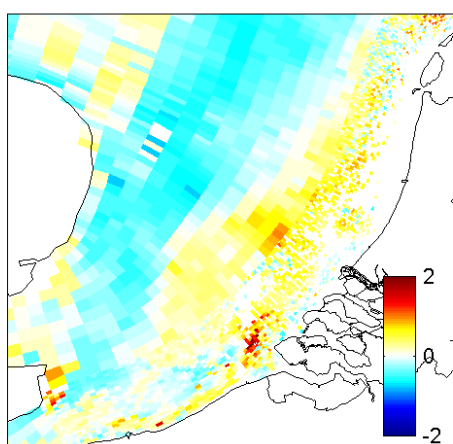
Model at bottom layer



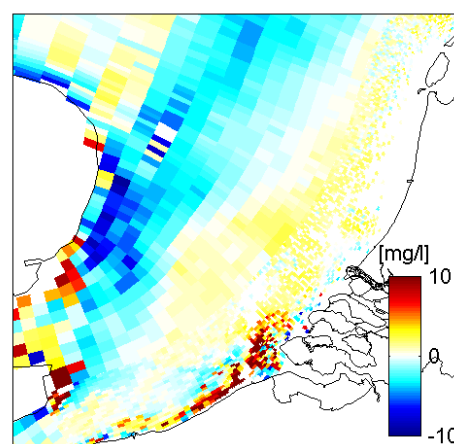
RMS difference



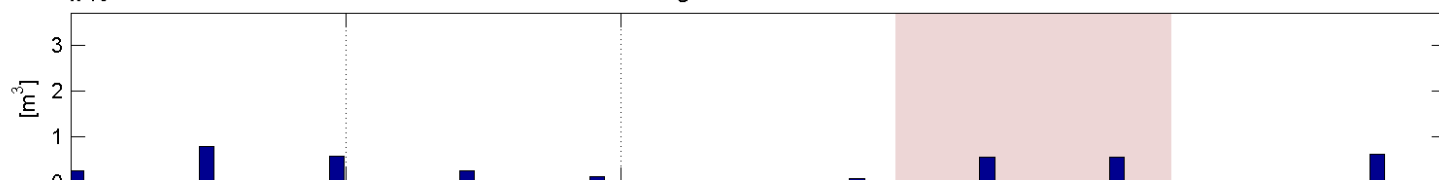
Relative difference [(MERIS-Model)/Model]



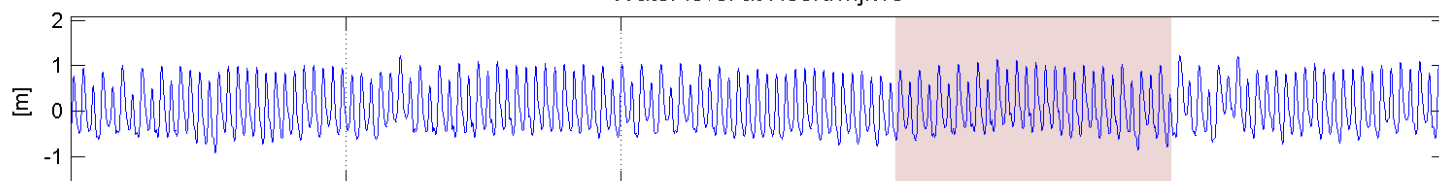
Mean difference [MERIS-Model]

 $\times 10^6$

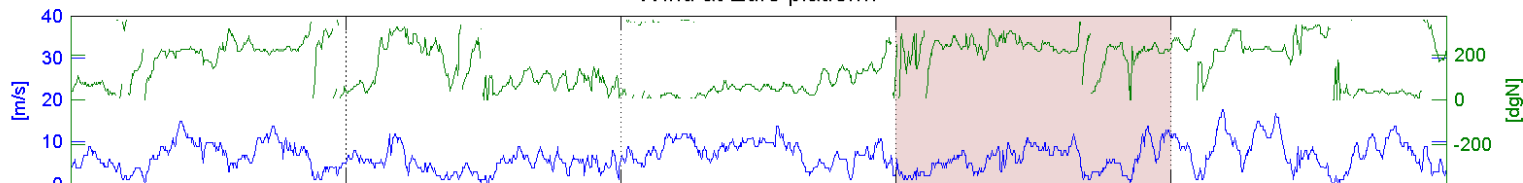
Sand mining volume for Maasvlakte 2



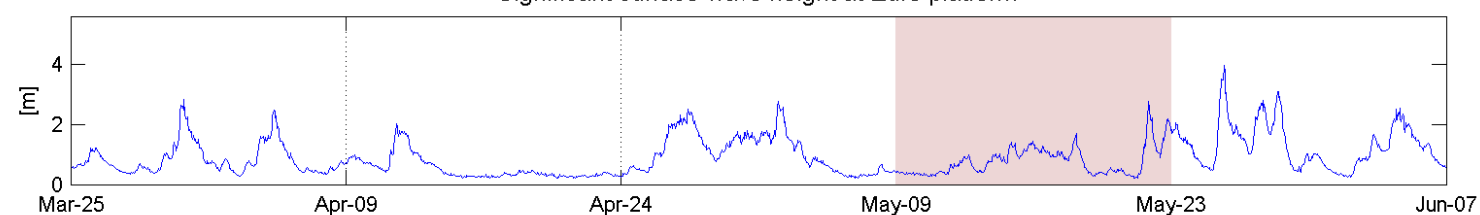
Water level at Noordwijk10



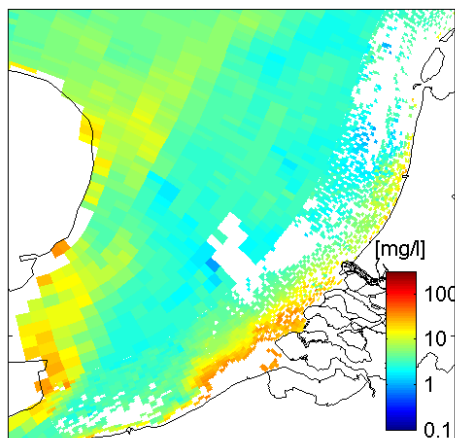
Wind at Euro platform



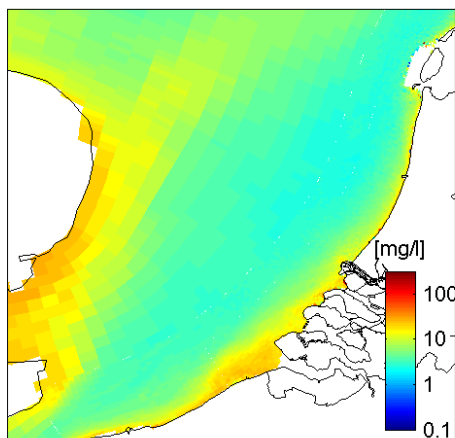
Significant surface wave height at Euro platform



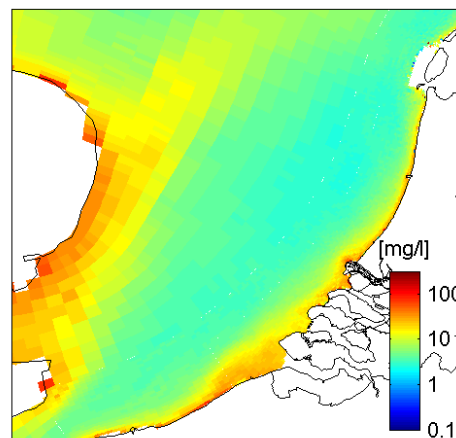
MERIS at surface layer



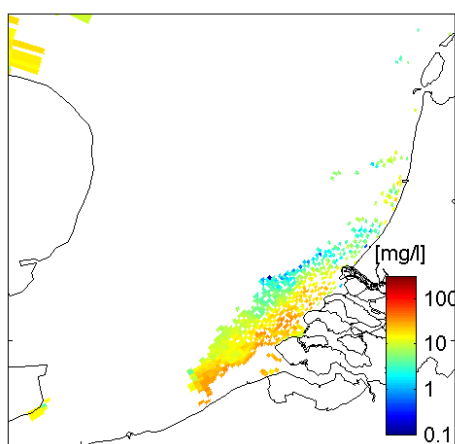
Model at surface layer



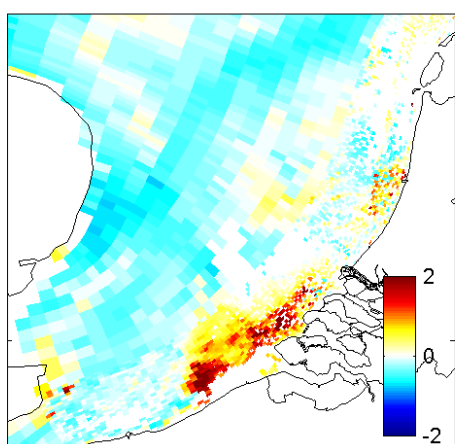
Model at bottom layer



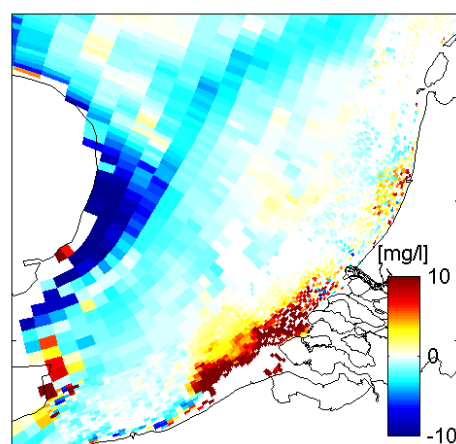
RMS difference



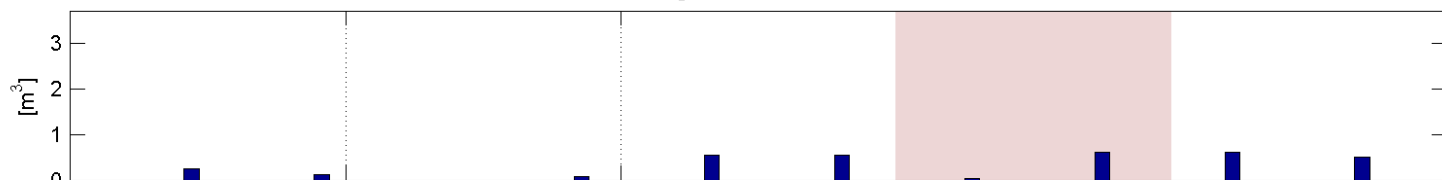
Relative difference [(MERIS-Model)/Model]



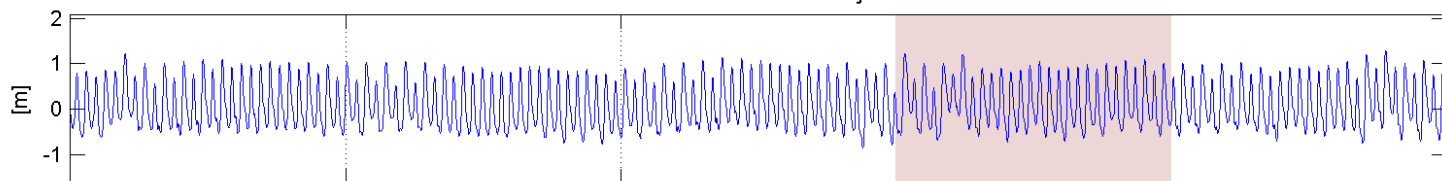
Mean difference [MERIS-Model]


x 10⁶

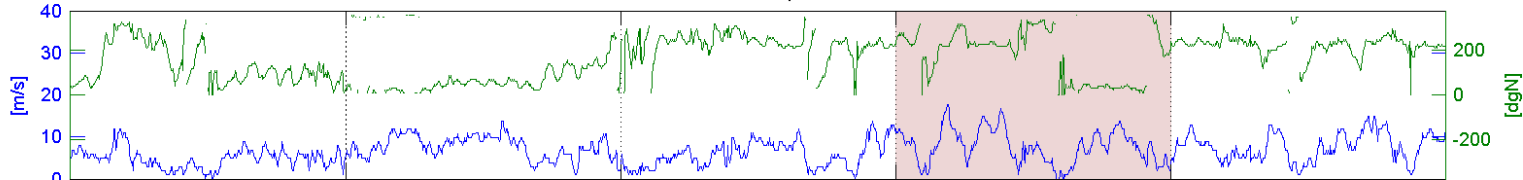
Sand mining volume for Maasvlakte 2



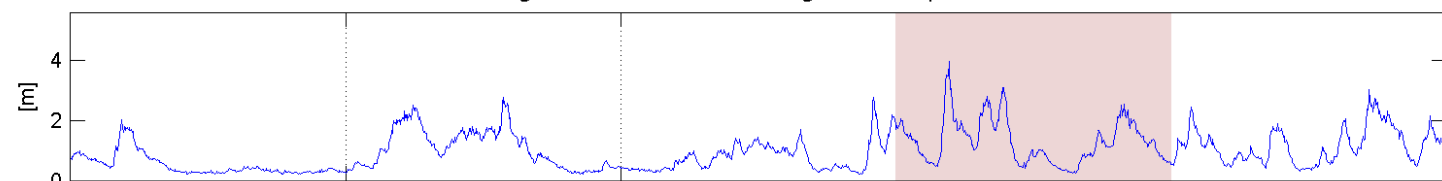
Water level at Noordwijk10



Wind at Euro platform

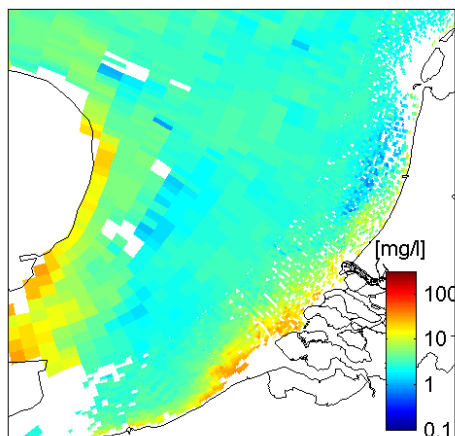


Significant surface wave height at Euro platform

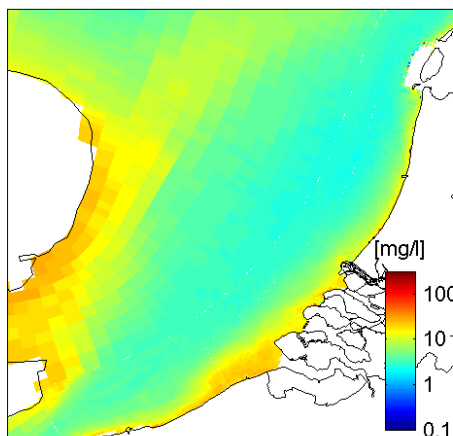


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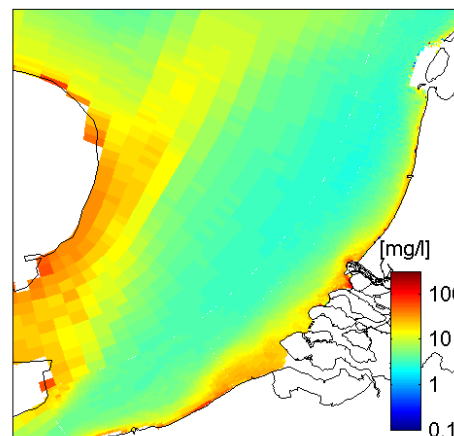
MERIS at surface layer



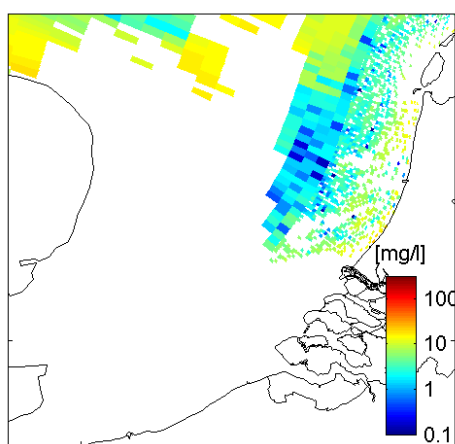
Model at surface layer



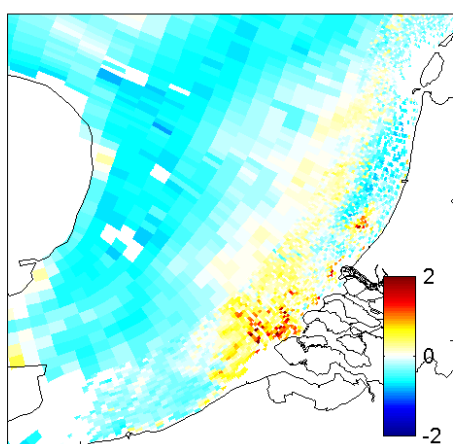
Model at bottom layer



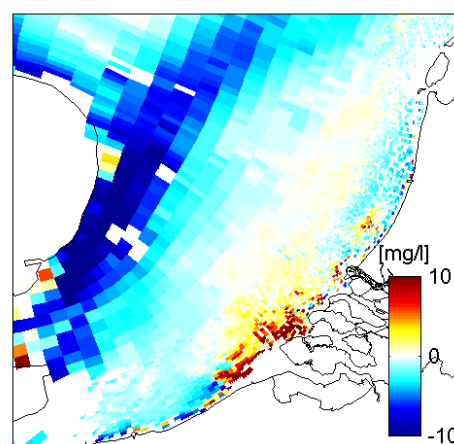
RMS difference



Relative difference [(MERIS-Model)/Model]



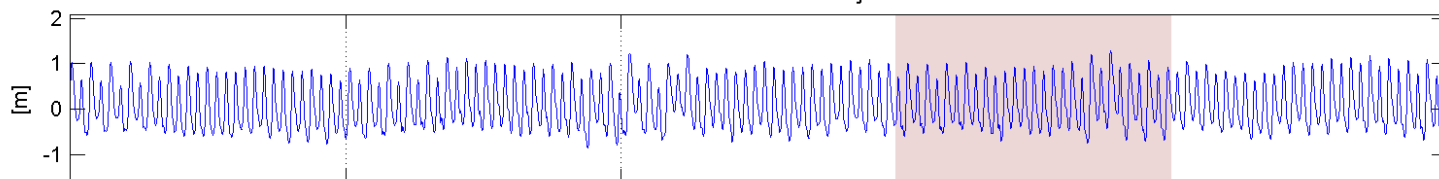
Mean difference [MERIS-Model]


 $\times 10^6$

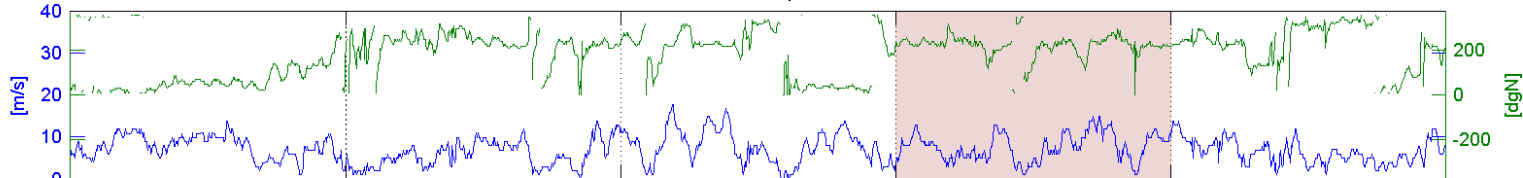
Sand mining volume for Maasvlakte 2



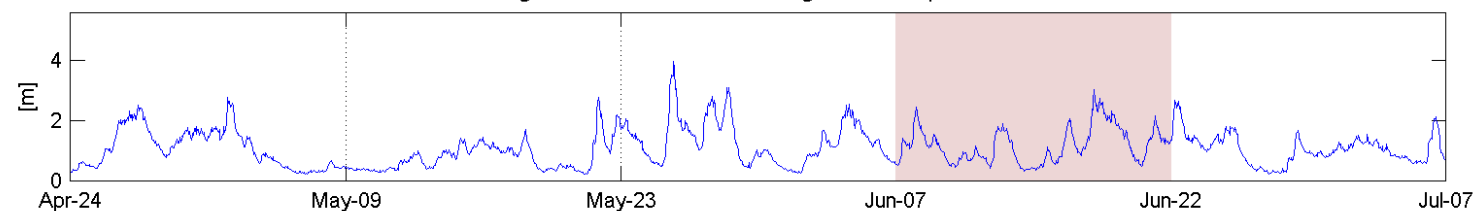
Water level at Noordwijk10



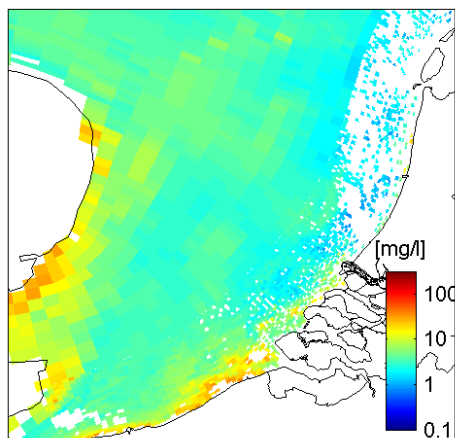
Wind at Euro platform



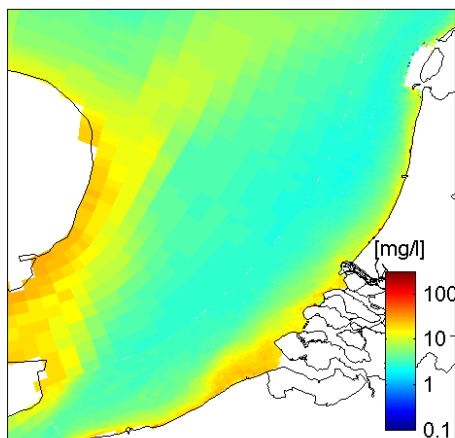
Significant surface wave height at Euro platform



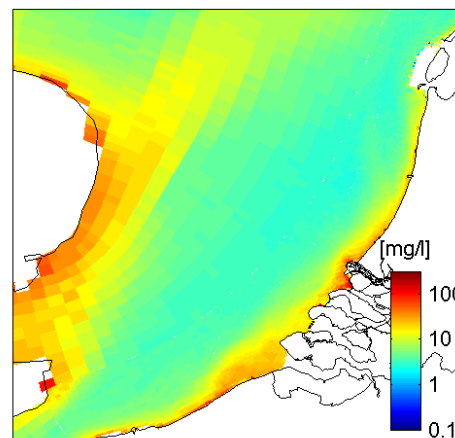
MERIS at surface layer



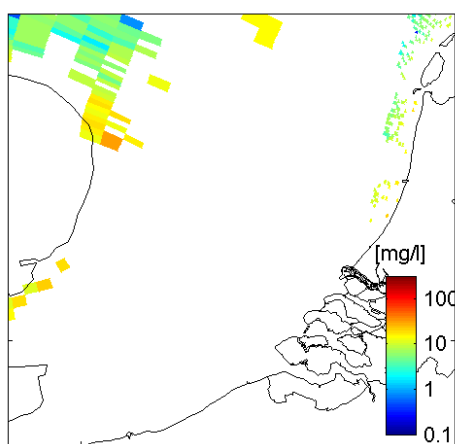
Model at surface layer



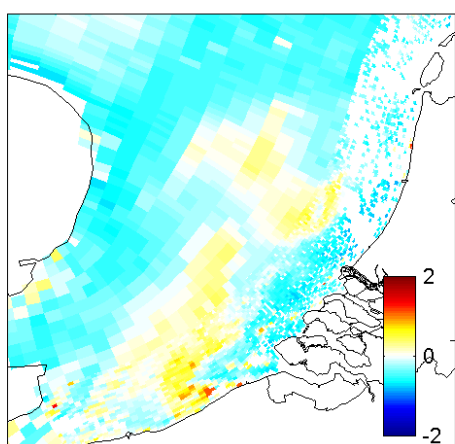
Model at bottom layer



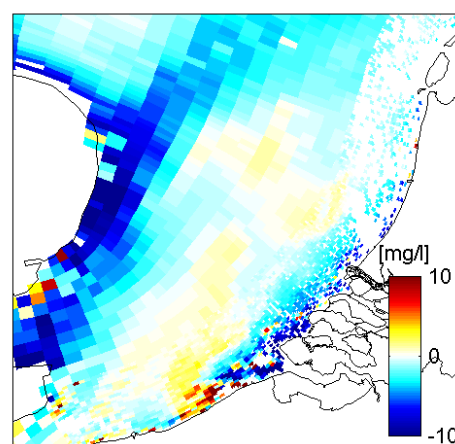
RMS difference



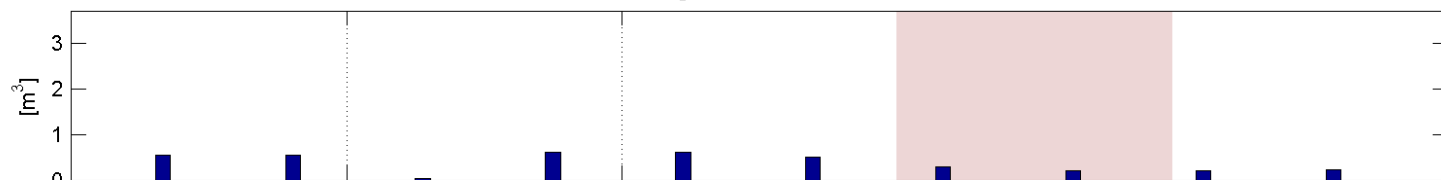
Relative difference [(MERIS-Model)/Model]



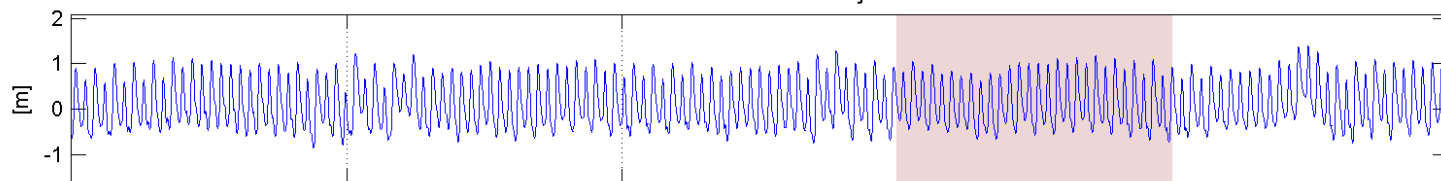
Mean difference [MERIS-Model]


x 10⁶

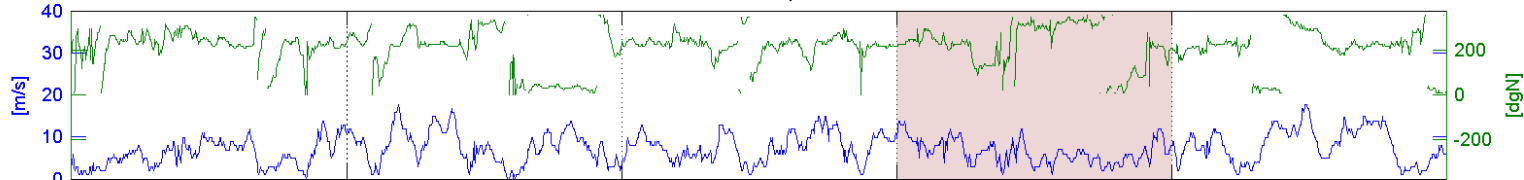
Sand mining volume for Maasvlakte 2



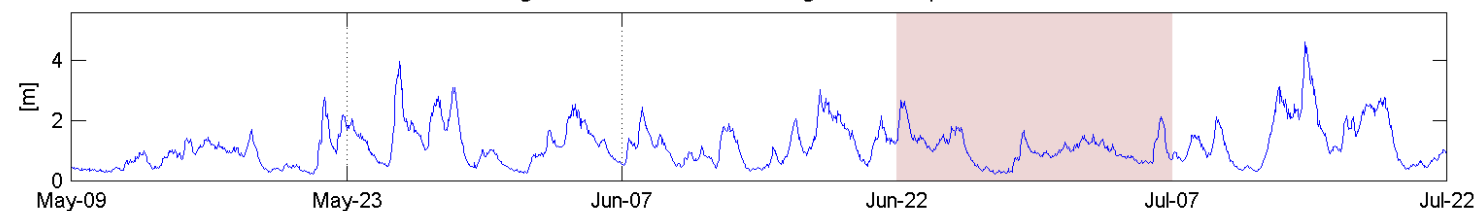
Water level at Noordwijk10



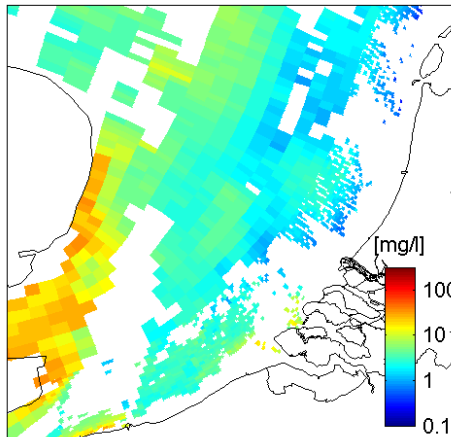
Wind at Euro platform



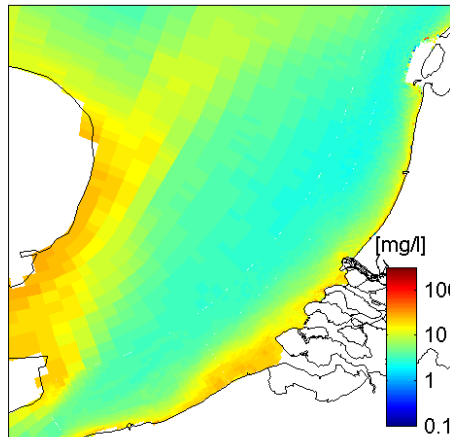
Significant surface wave height at Euro platform



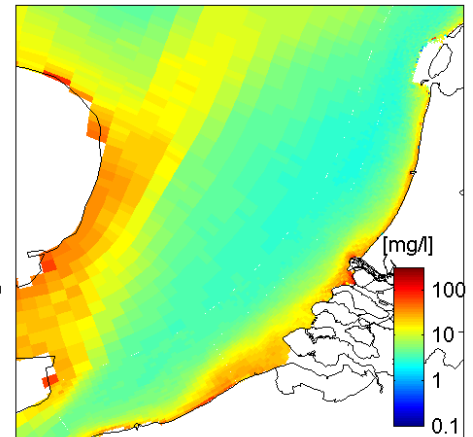
MERIS at surface layer



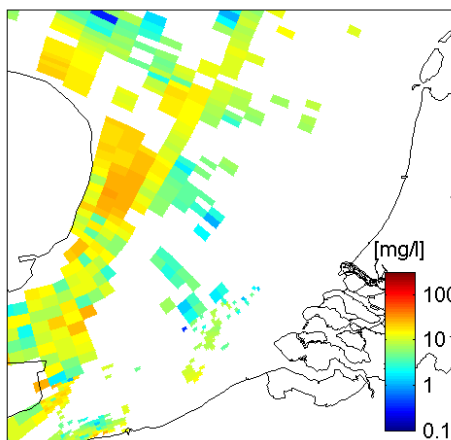
Model at surface layer



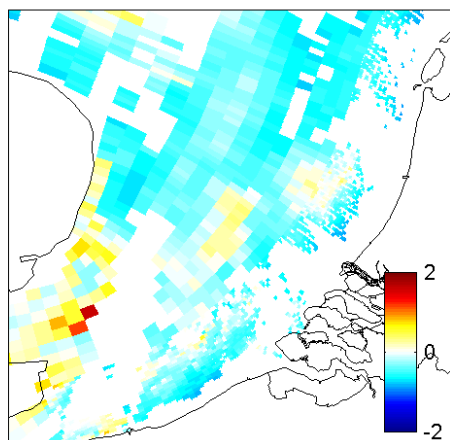
Model at bottom layer



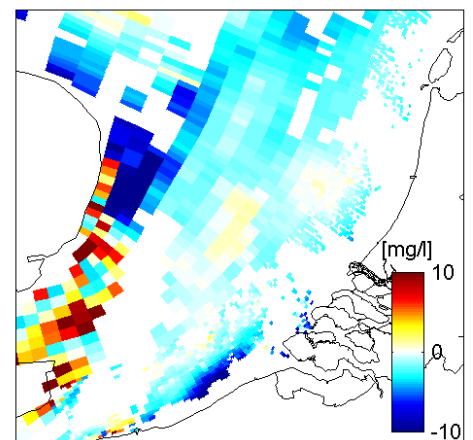
RMS difference



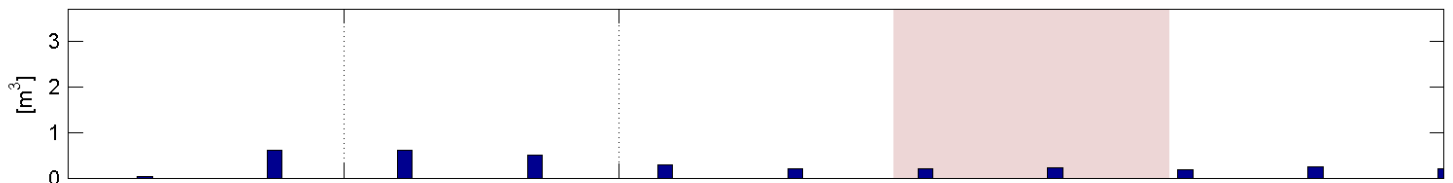
Relative difference [(MERIS-Model)/Model]



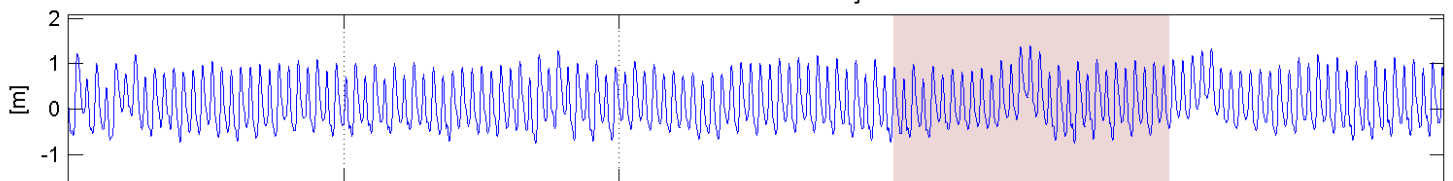
Mean difference [MERIS-Model]

 $\times 10^6$

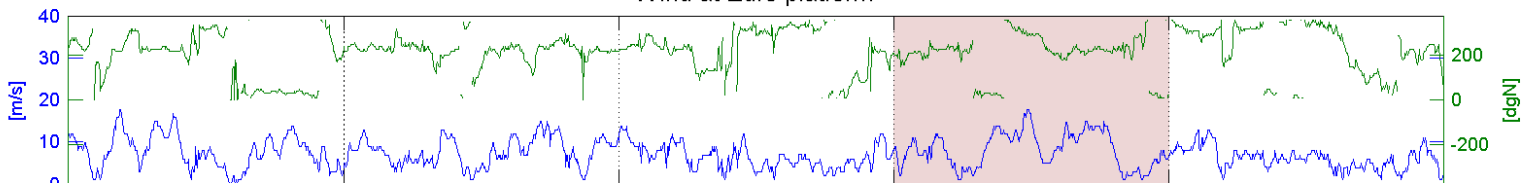
Sand mining volume for Maasvlakte 2



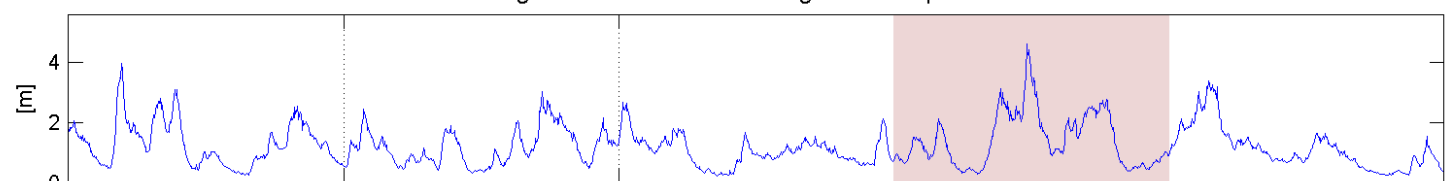
Water level at Noordwijk10



Wind at Euro platform

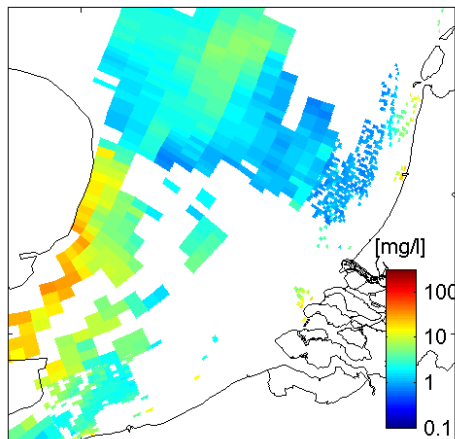


Significant surface wave height at Euro platform

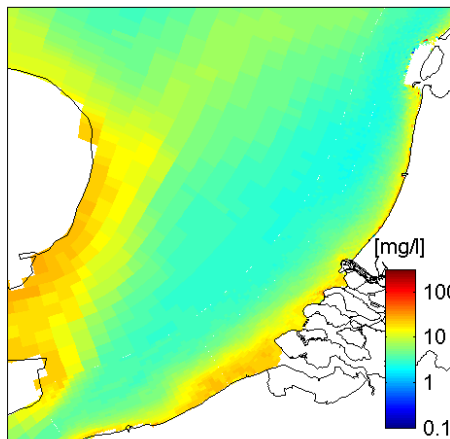


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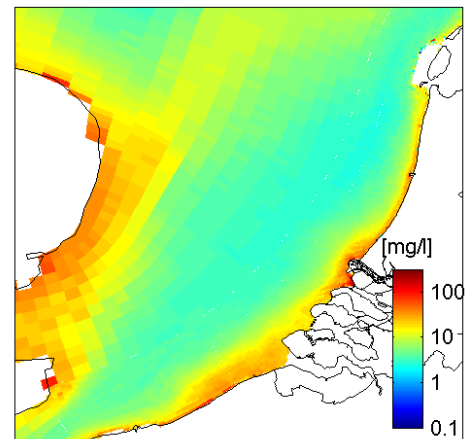
MERIS at surface layer



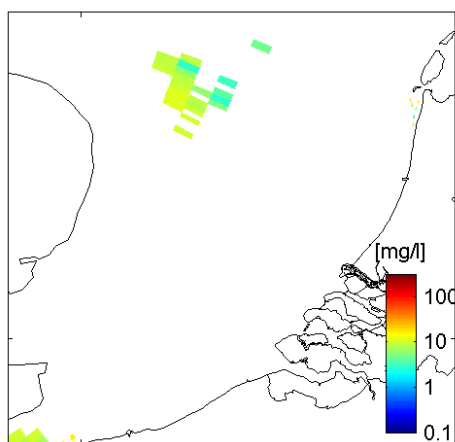
Model at surface layer



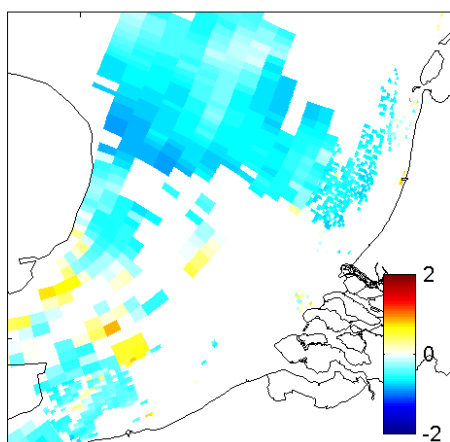
Model at bottom layer



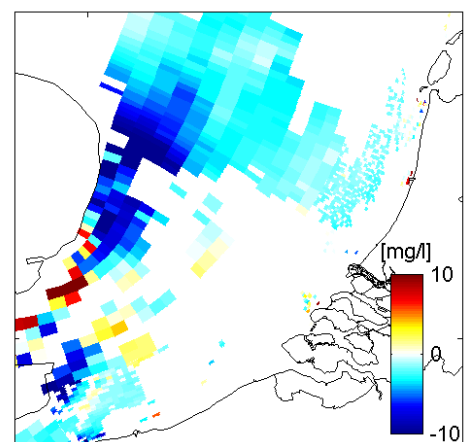
RMS difference



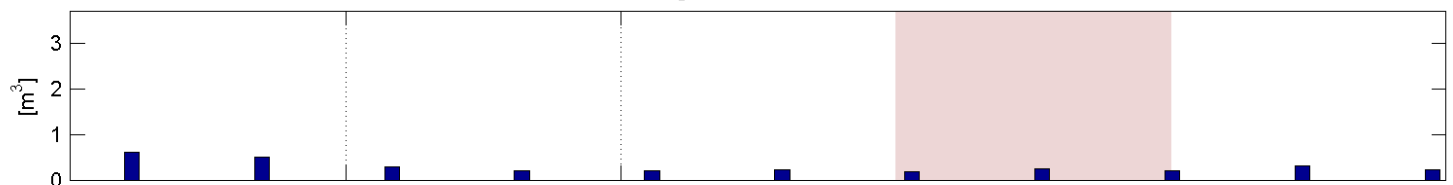
Relative difference [(MERIS-Model)/Model]



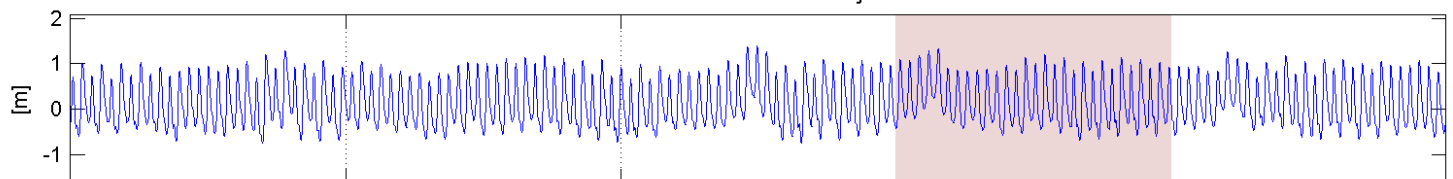
Mean difference [MERIS-Model]

 $\times 10^6$

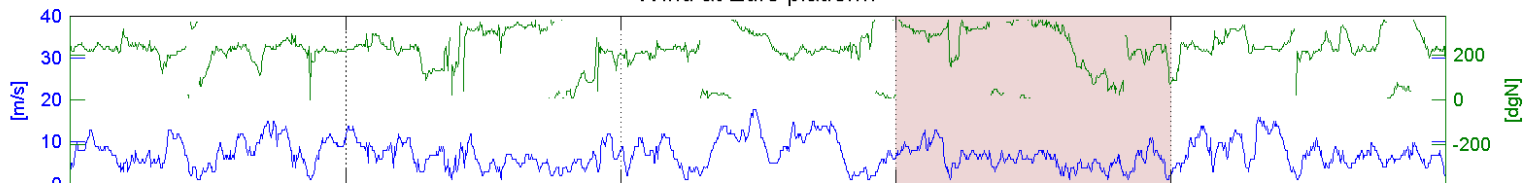
Sand mining volume for Maasvlakte 2



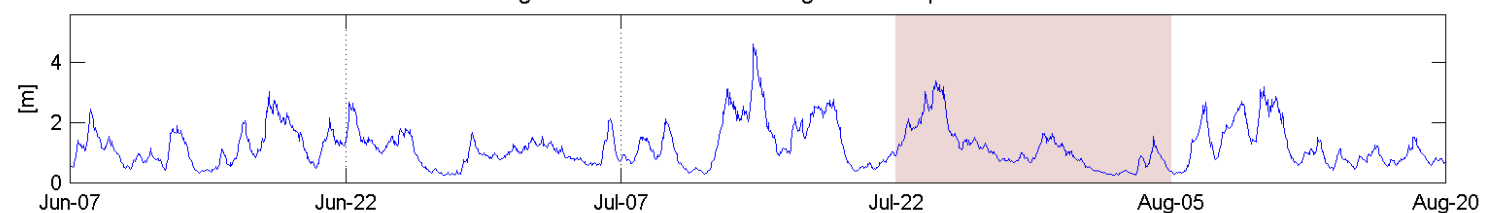
Water level at Noordwijk10



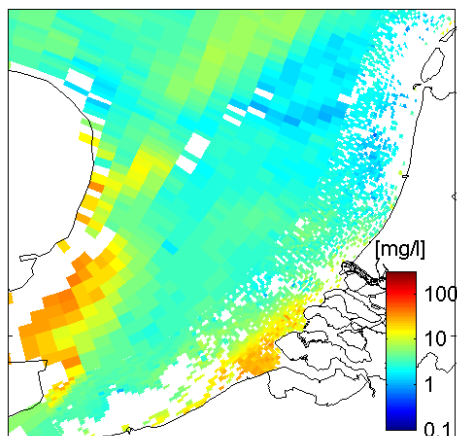
Wind at Euro platform



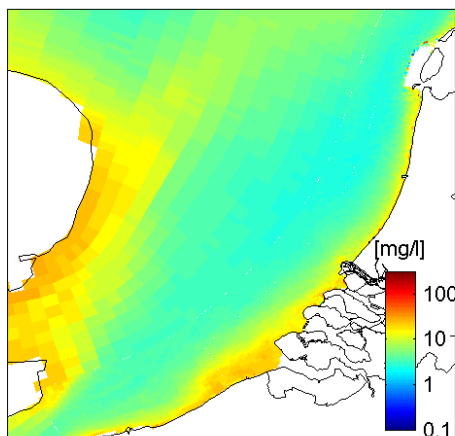
Significant surface wave height at Euro platform



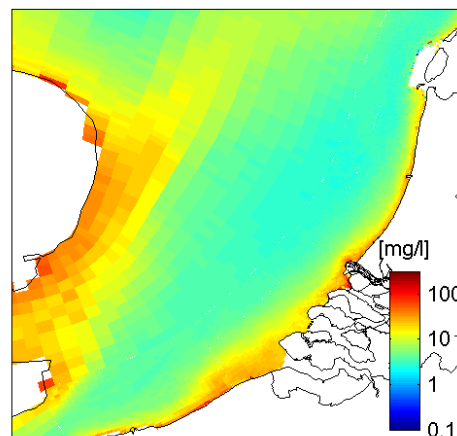
MERIS at surface layer



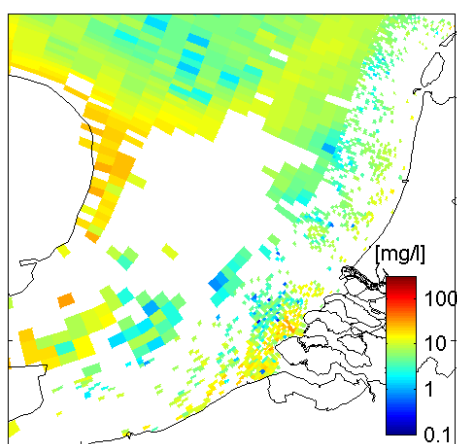
Model at surface layer



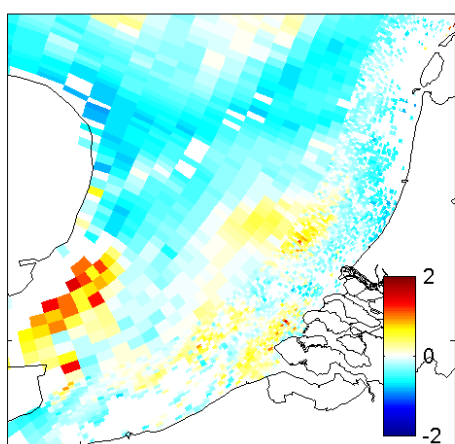
Model at bottom layer



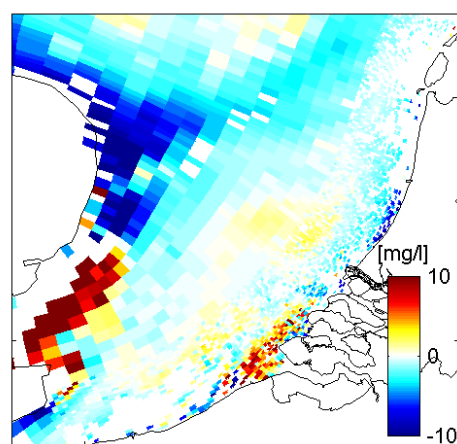
RMS difference



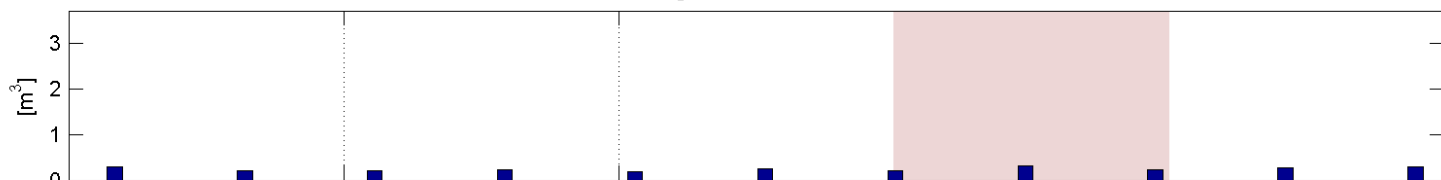
Relative difference [(MERIS-Model)/Model]



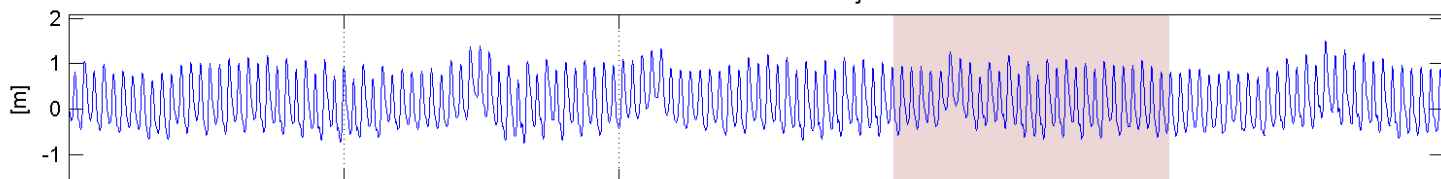
Mean difference [MERIS-Model]


x 10⁶

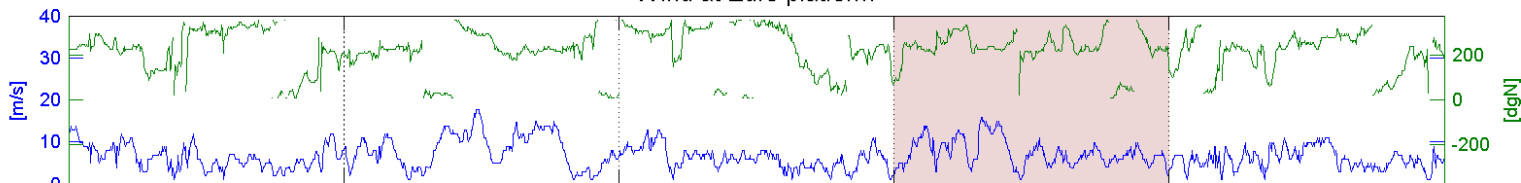
Sand mining volume for Maasvlakte 2



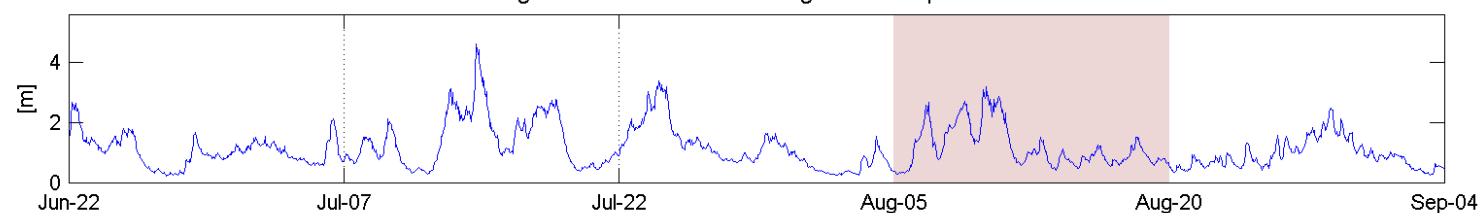
Water level at Noordwijk10



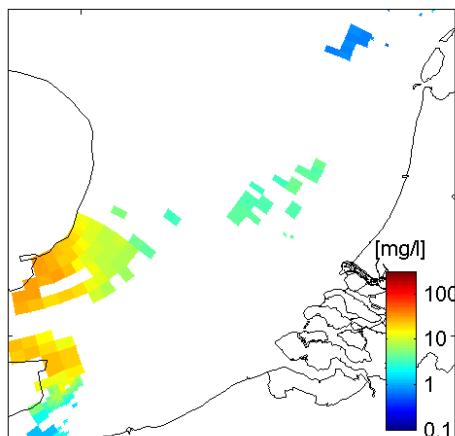
Wind at Euro platform



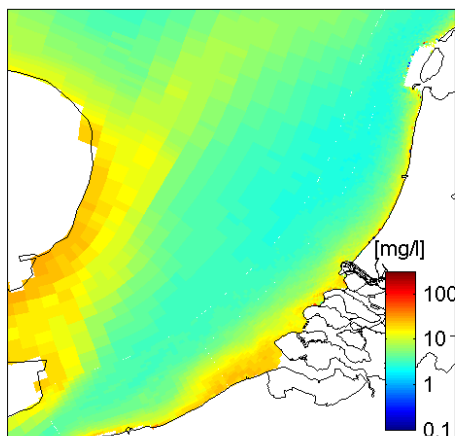
Significant surface wave height at Euro platform



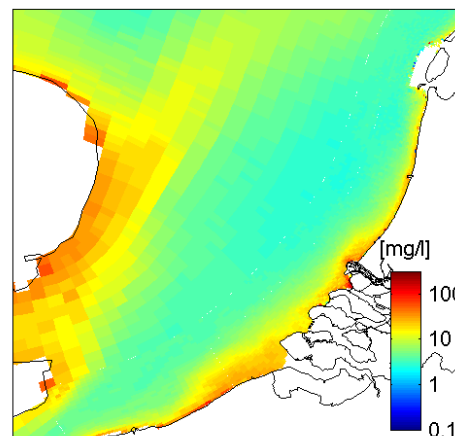
MERIS at surface layer



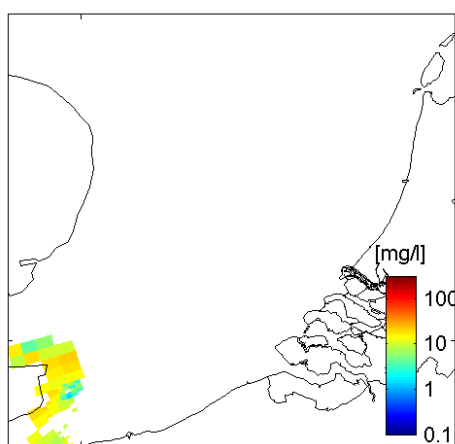
Model at surface layer



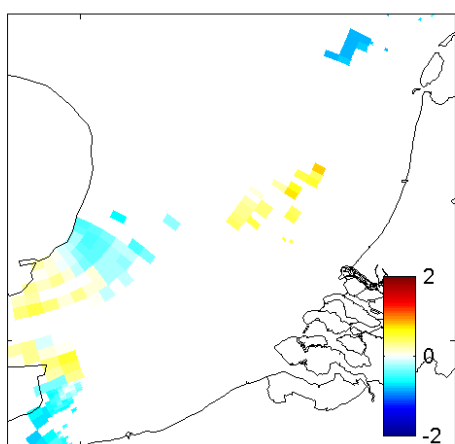
Model at bottom layer



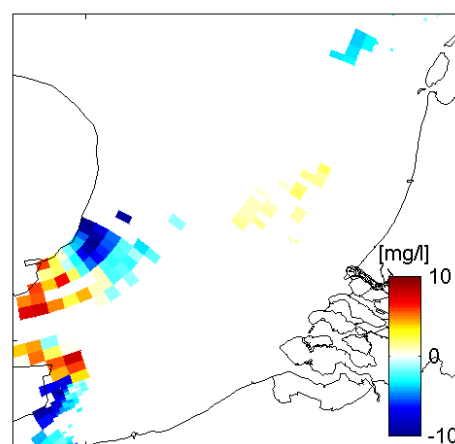
RMS difference



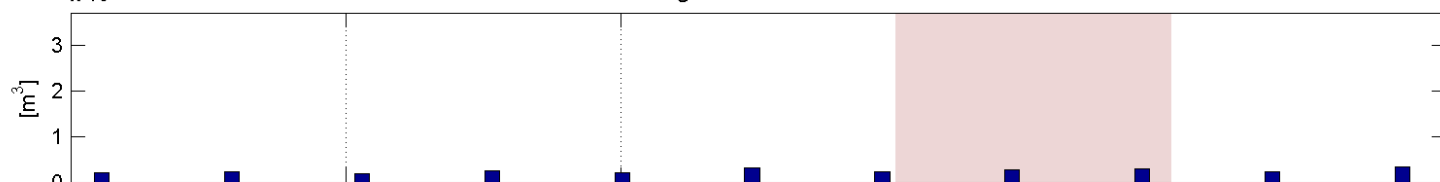
Relative difference [(MERIS-Model)/Model]



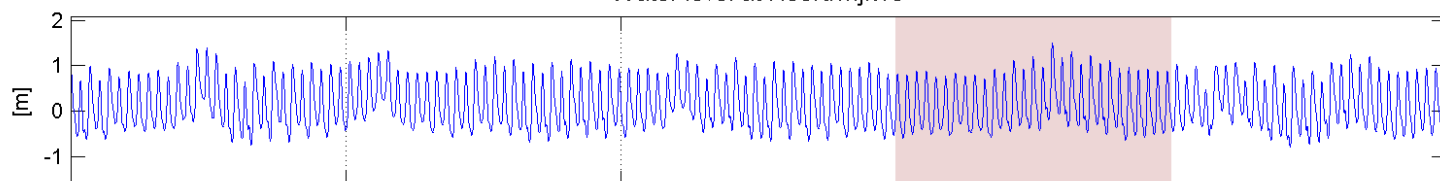
Mean difference [MERIS-Model]


x 10⁶

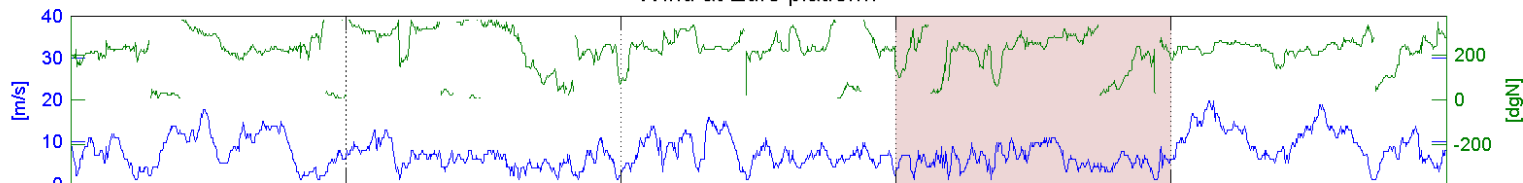
Sand mining volume for Maasvlakte 2



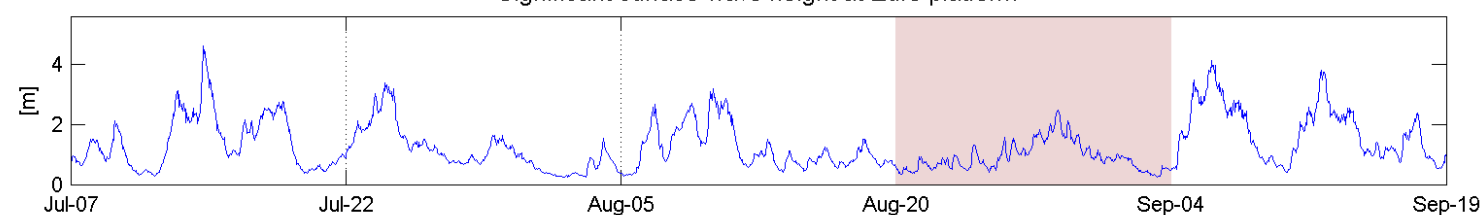
Water level at Noordwijk10



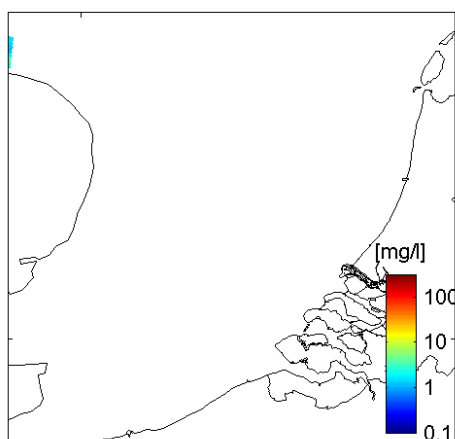
Wind at Euro platform



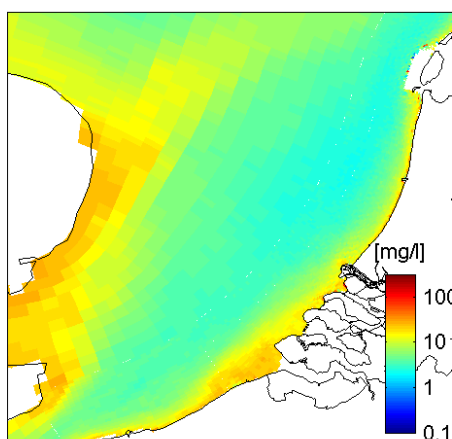
Significant surface wave height at Euro platform



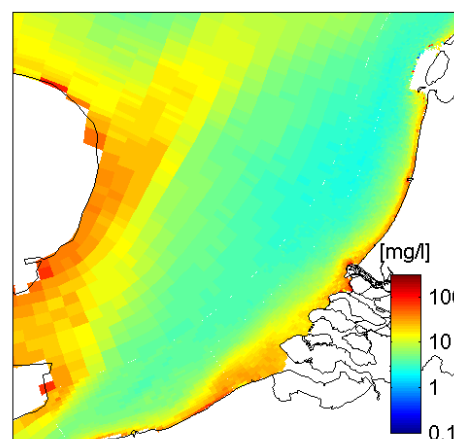
MERIS at surface layer



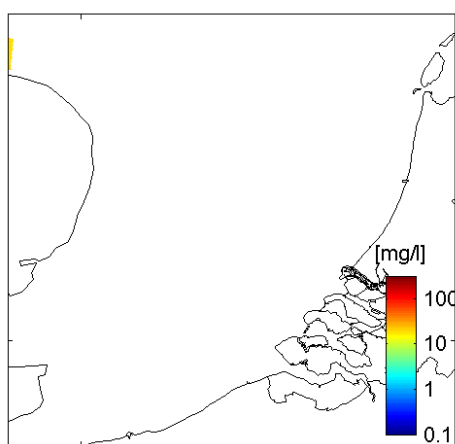
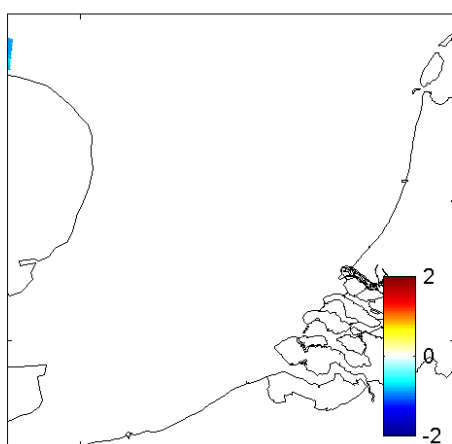
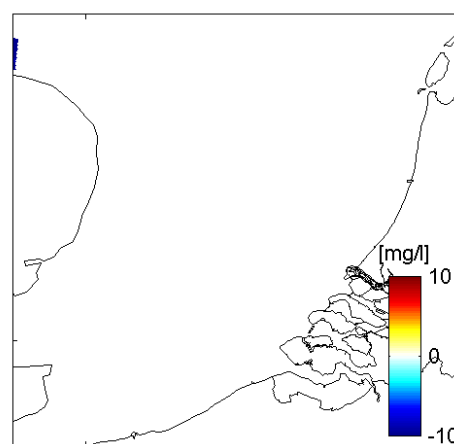
Model at surface layer



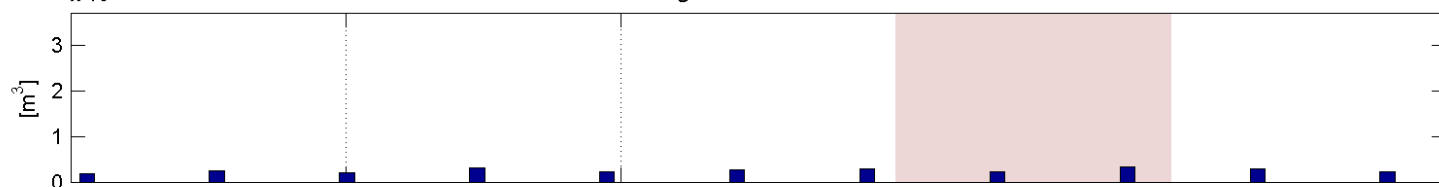
Model at bottom layer



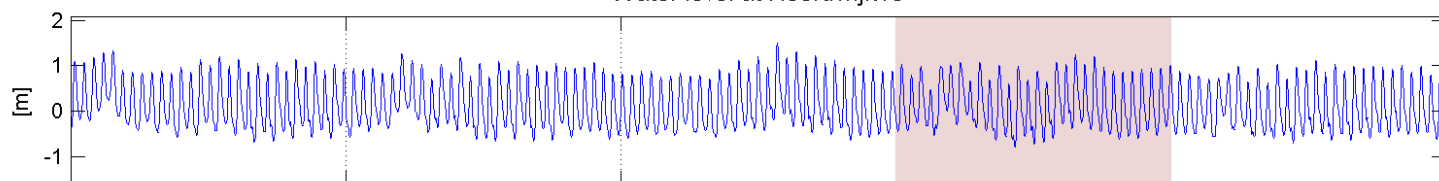
RMS difference

Relative difference $[(\text{MERIS}-\text{Model})/\text{Model}]$ Mean difference $[\text{MERIS}-\text{Model}]$  $\times 10^6$

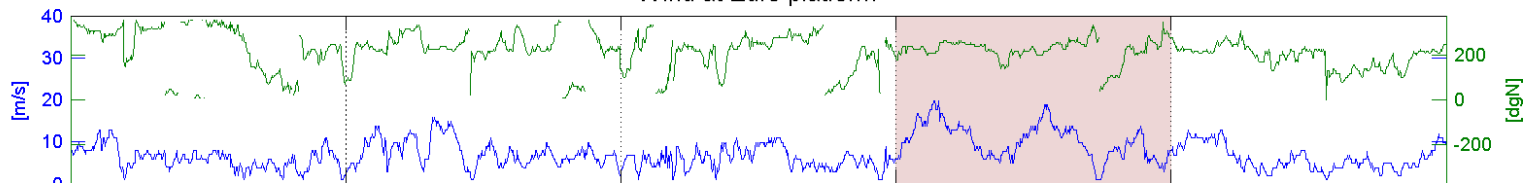
Sand mining volume for Maasvlakte 2



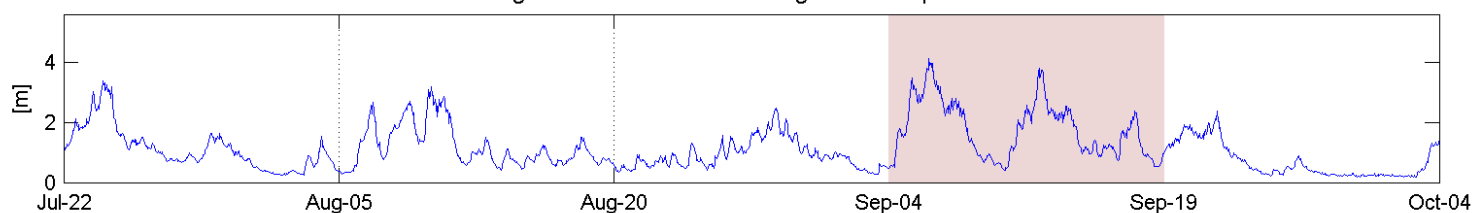
Water level at Noordwijk10



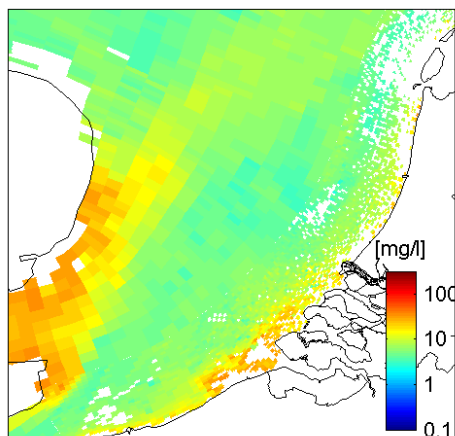
Wind at Euro platform



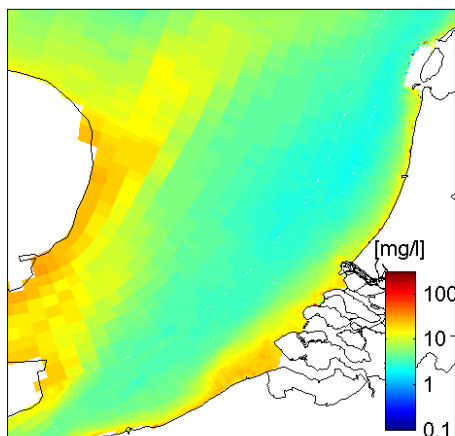
Significant surface wave height at Euro platform



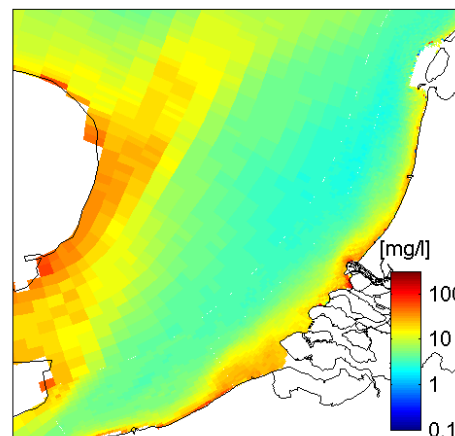
MERIS at surface layer



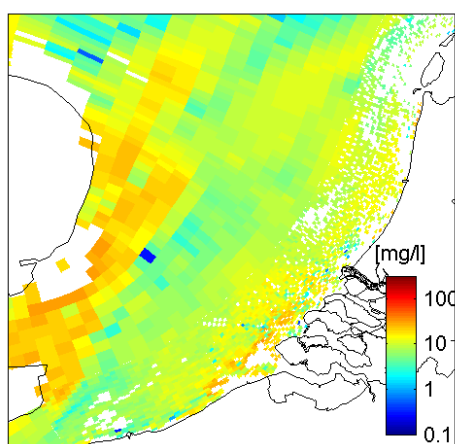
Model at surface layer



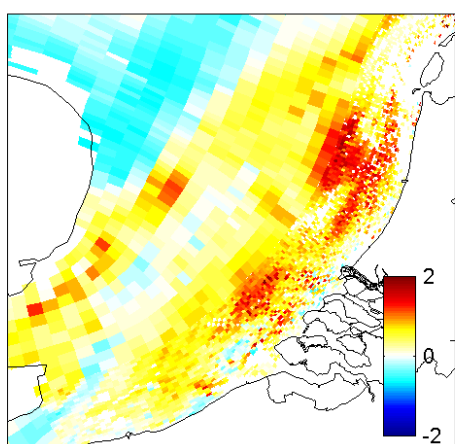
Model at bottom layer



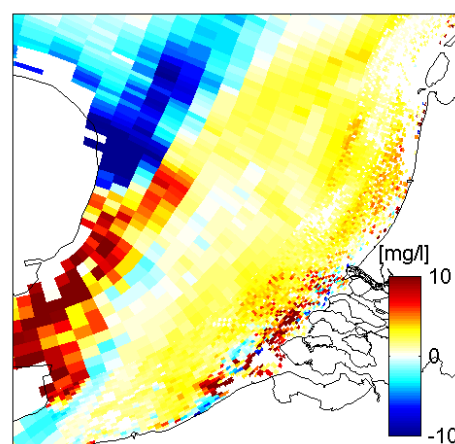
RMS difference



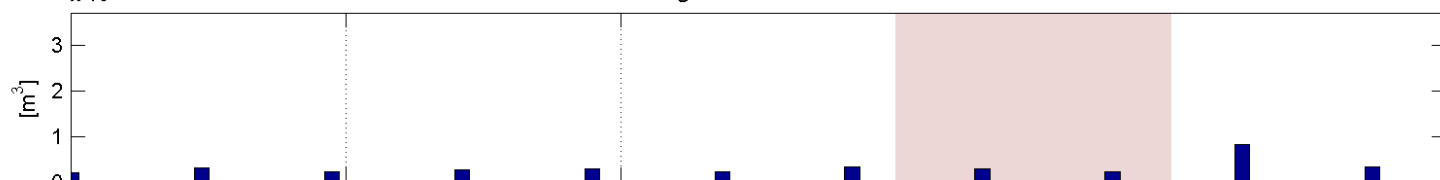
Relative difference [(MERIS-Model)/Model]



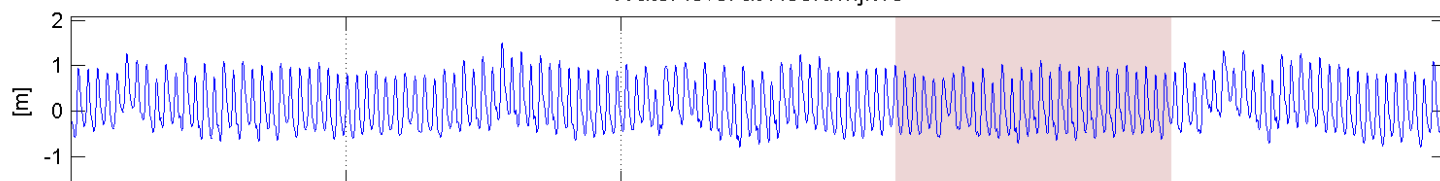
Mean difference [MERIS-Model]


x 10⁶

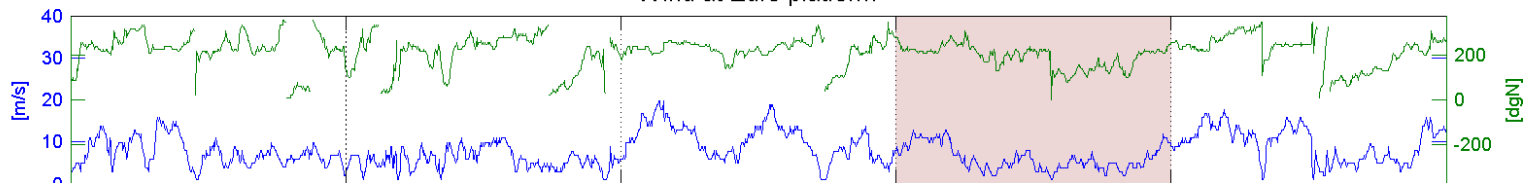
Sand mining volume for Maasvlakte 2



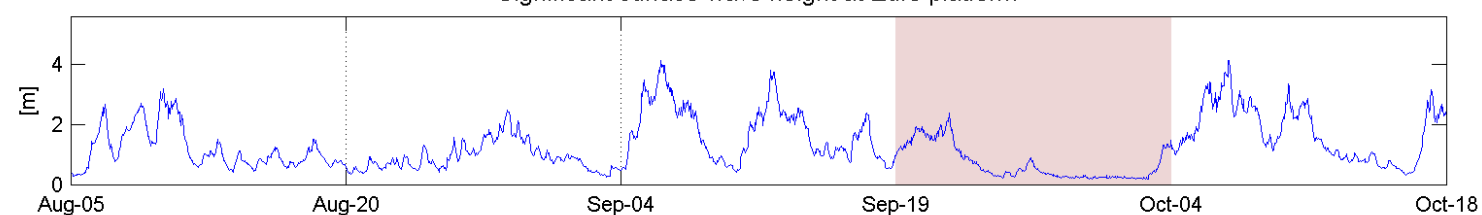
Water level at Noordwijk10



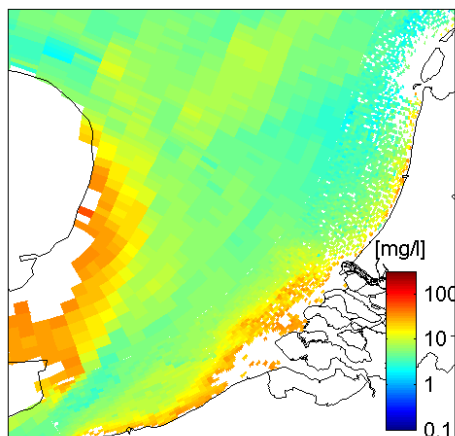
Wind at Euro platform



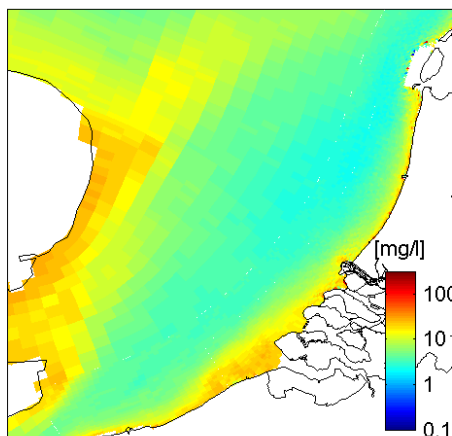
Significant surface wave height at Euro platform



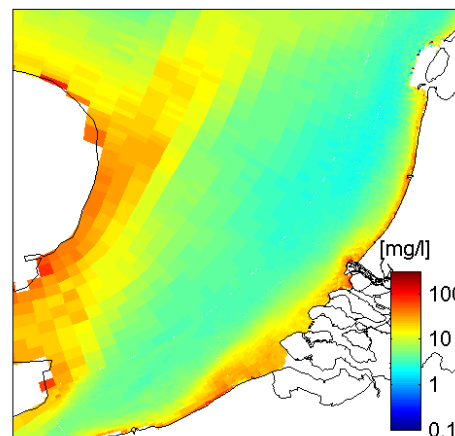
MERIS at surface layer



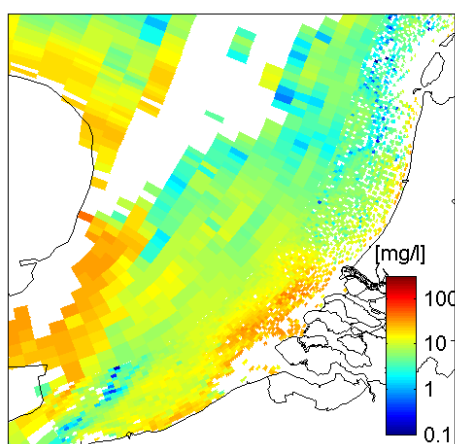
Model at surface layer



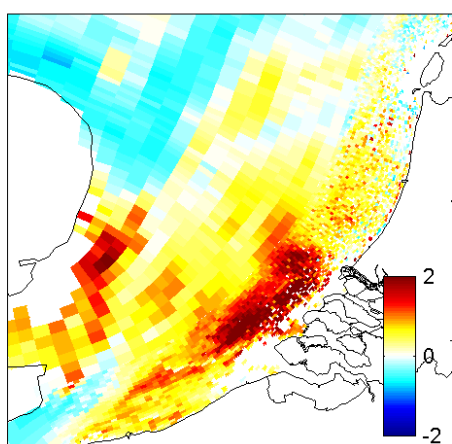
Model at bottom layer



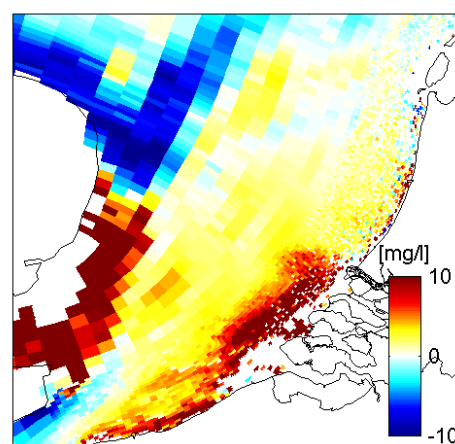
RMS difference



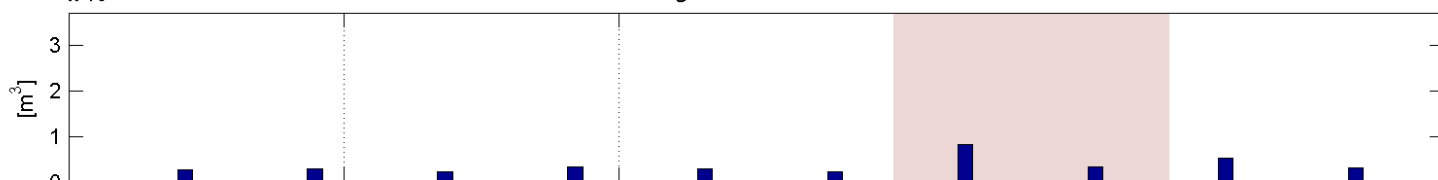
Relative difference [(MERIS-Model)/Model]



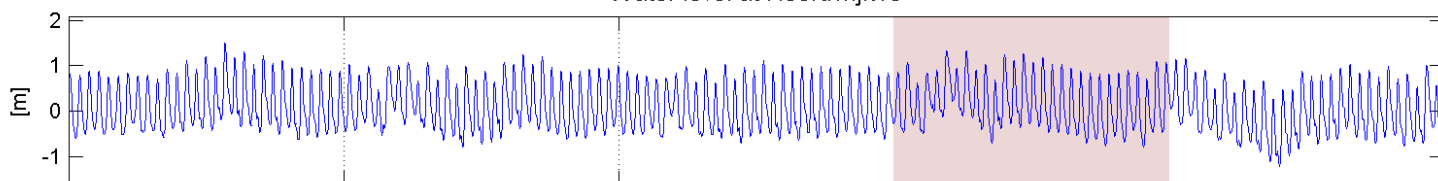
Mean difference [MERIS-Model]

 $\times 10^6$

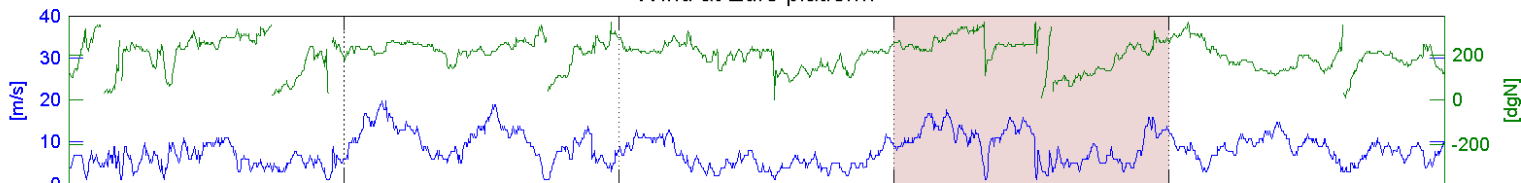
Sand mining volume for Maasvlakte 2



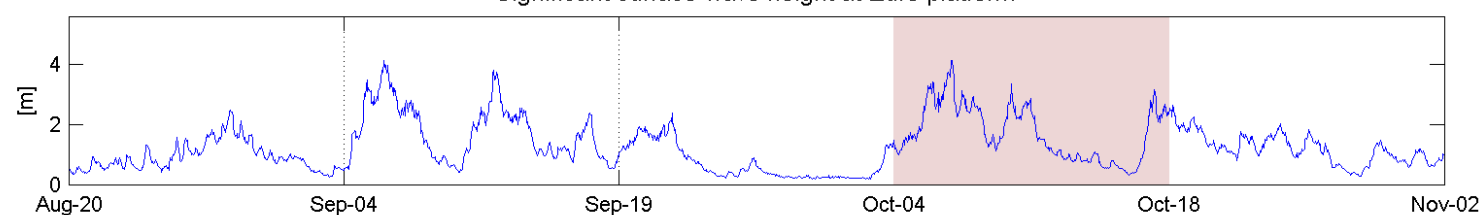
Water level at Noordwijk10



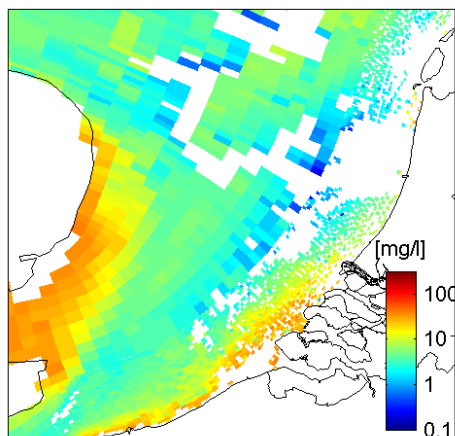
Wind at Euro platform



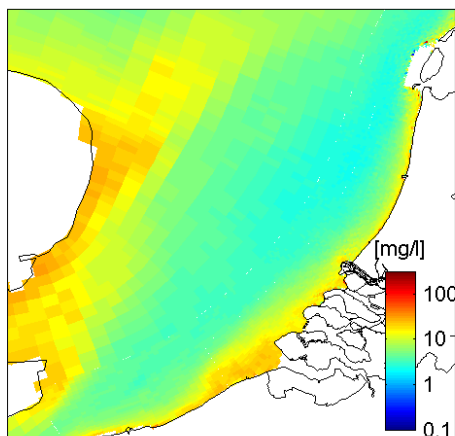
Significant surface wave height at Euro platform



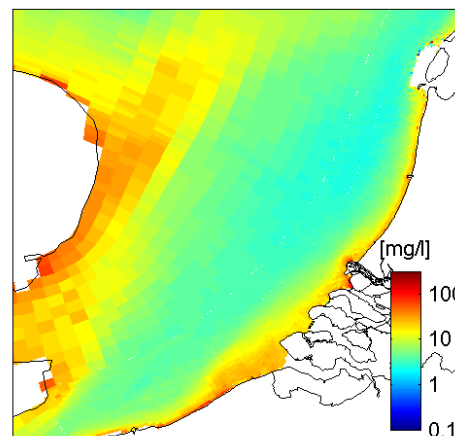
MERIS at surface layer



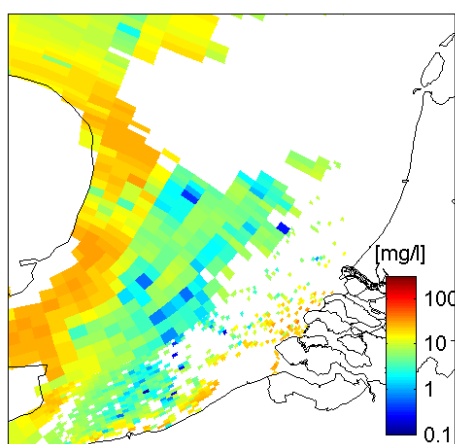
Model at surface layer



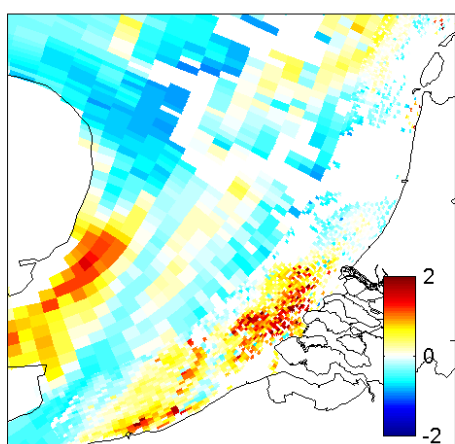
Model at bottom layer



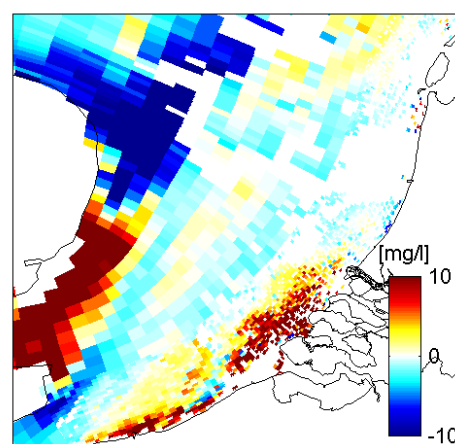
RMS difference



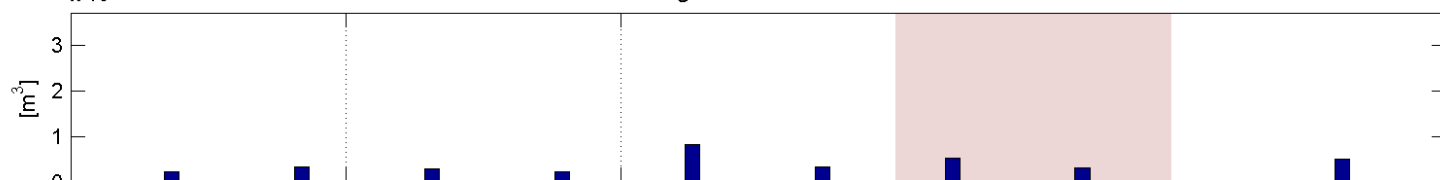
Relative difference [(MERIS-Model)/Model]



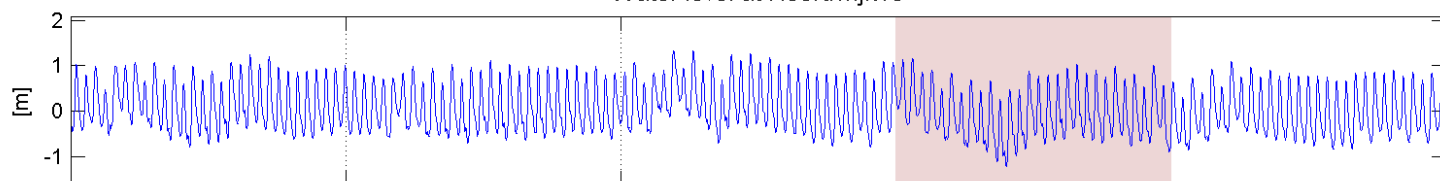
Mean difference [MERIS-Model]


x 10⁶

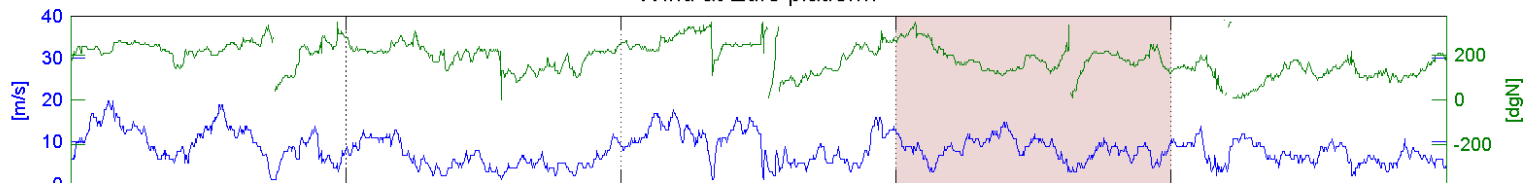
Sand mining volume for Maasvlakte 2



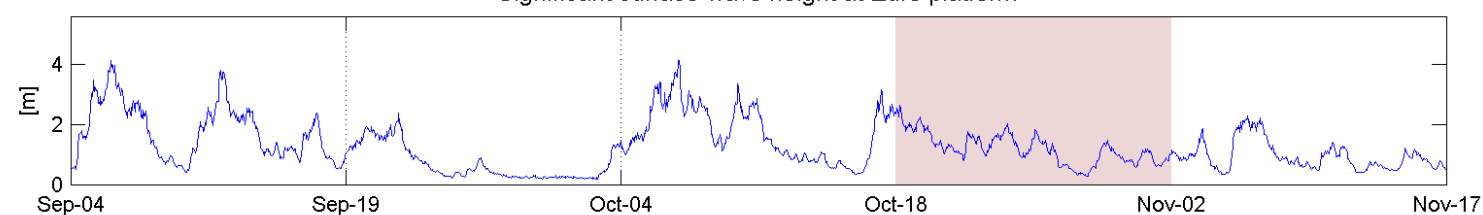
Water level at Noordwijk10



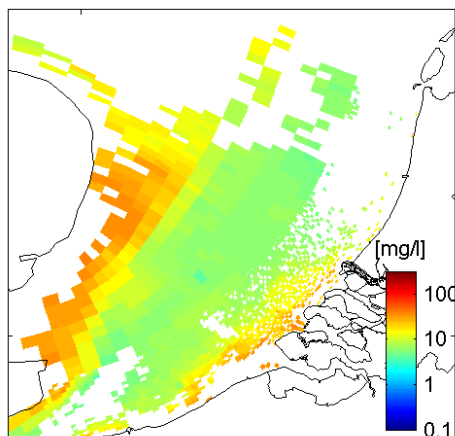
Wind at Euro platform



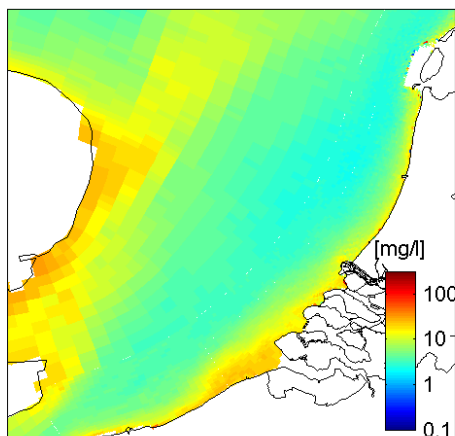
Significant surface wave height at Euro platform



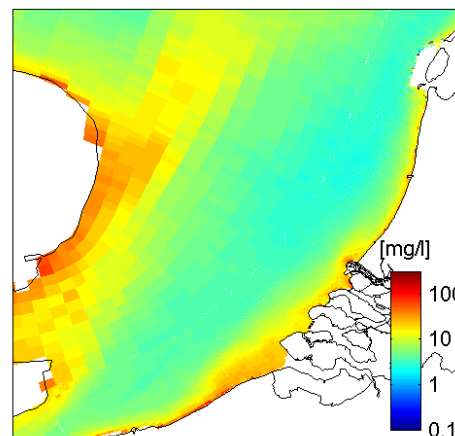
MERIS at surface layer



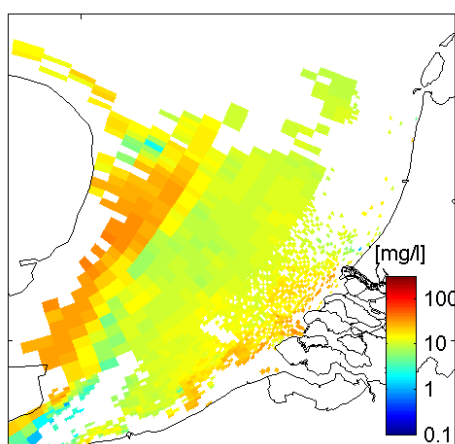
Model at surface layer



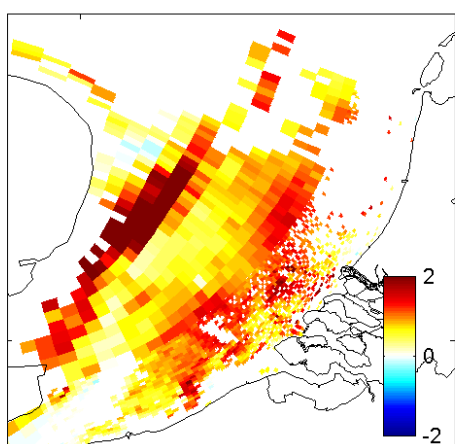
Model at bottom layer



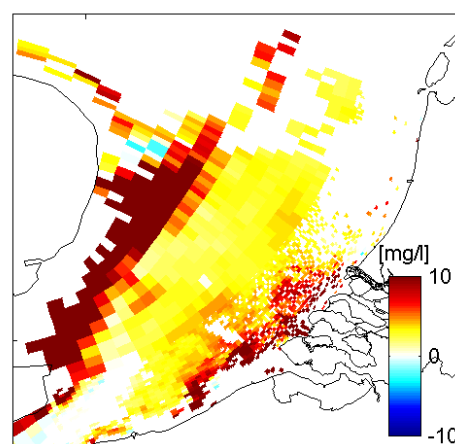
RMS difference



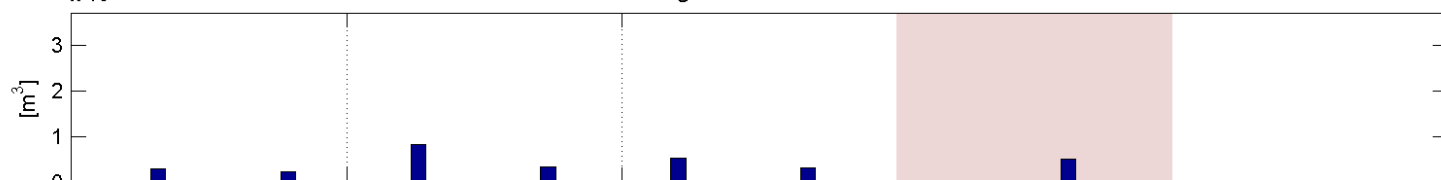
Relative difference [(MERIS-Model)/Model]



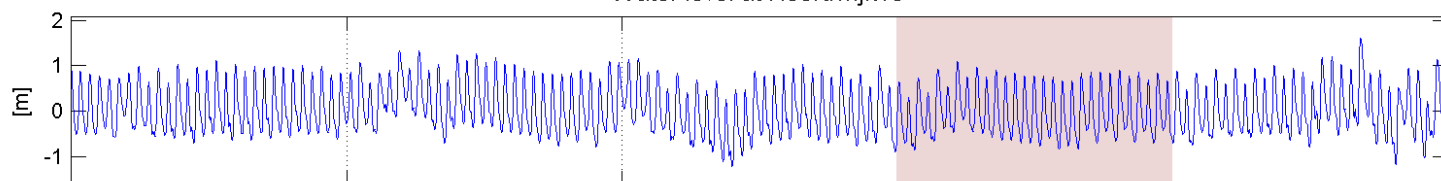
Mean difference [MERIS-Model]


 $\times 10^6$

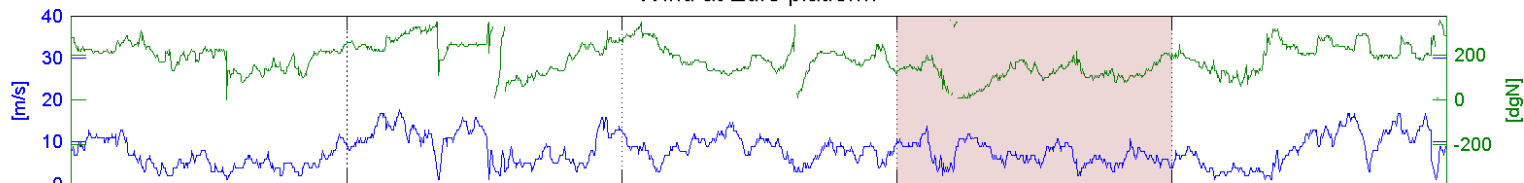
Sand mining volume for Maasvlakte 2



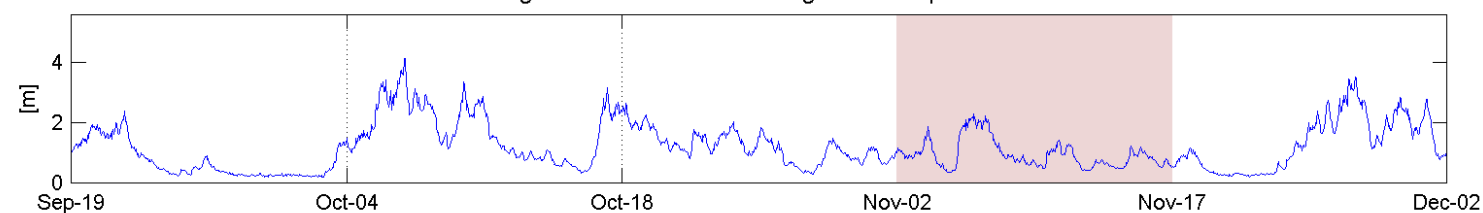
Water level at Noordwijk10



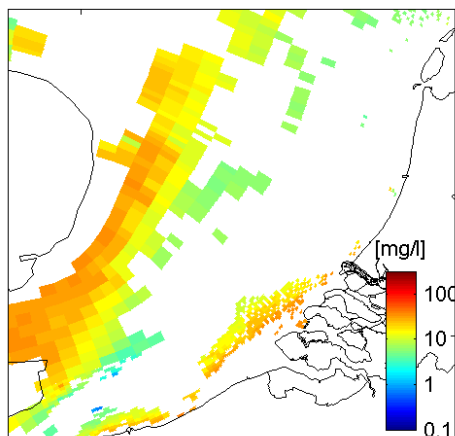
Wind at Euro platform



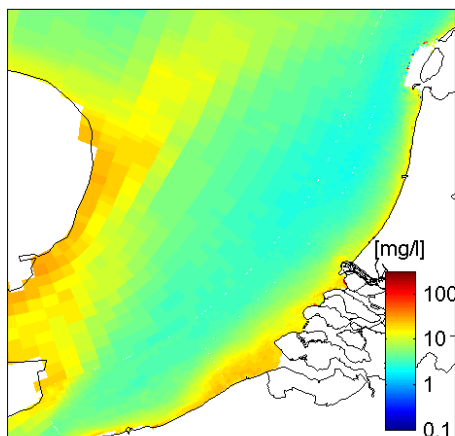
Significant surface wave height at Euro platform



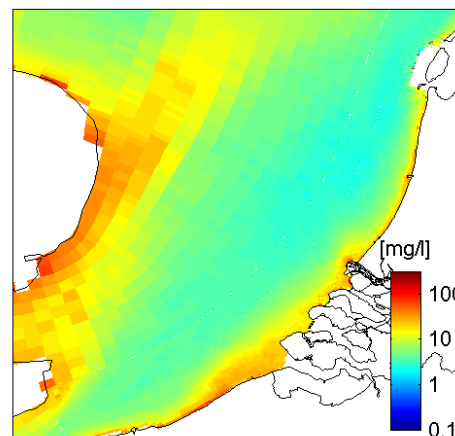
MERIS at surface layer



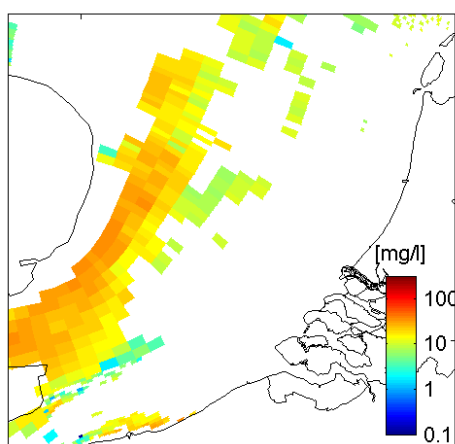
Model at surface layer



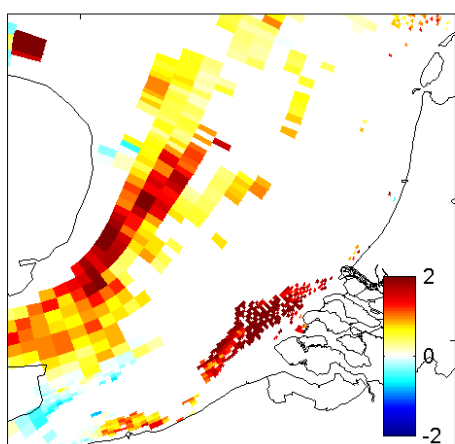
Model at bottom layer



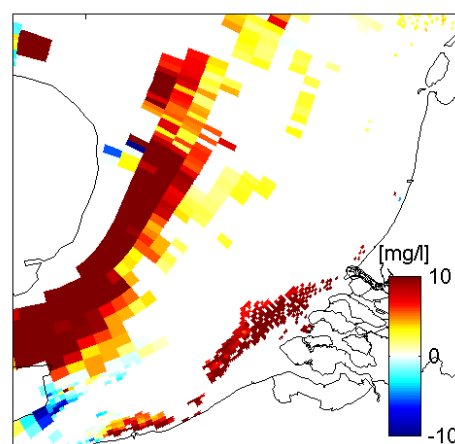
RMS difference



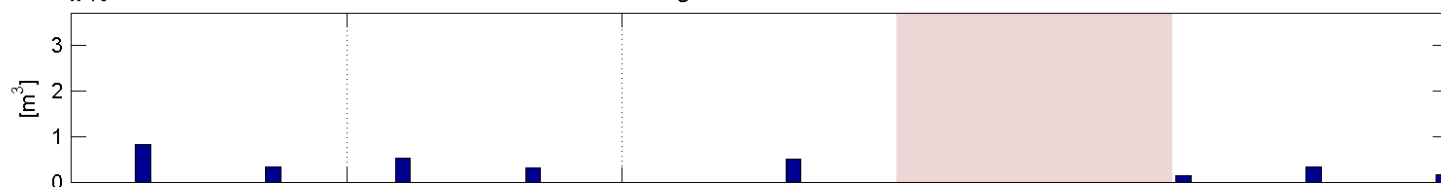
Relative difference [(MERIS-Model)/Model]



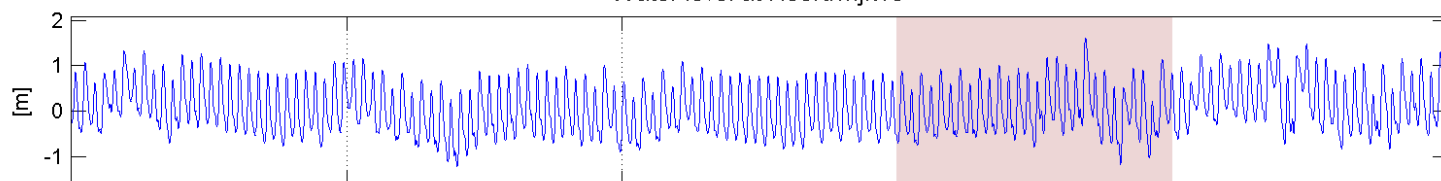
Mean difference [MERIS-Model]


 $\times 10^6$

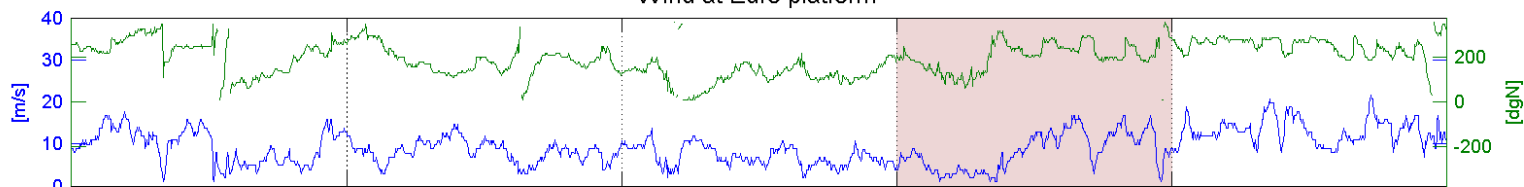
Sand mining volume for Maasvlakte 2



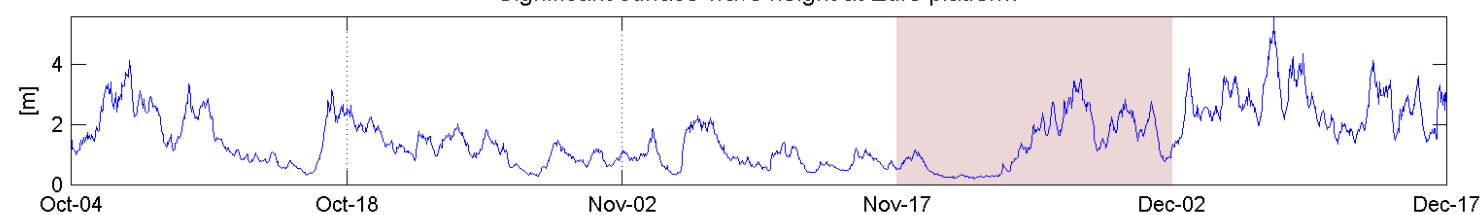
Water level at Noordwijk10



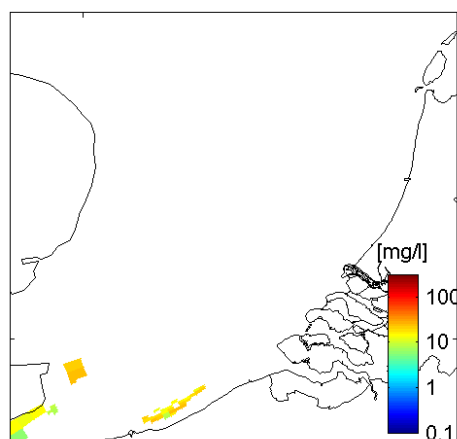
Wind at Euro platform



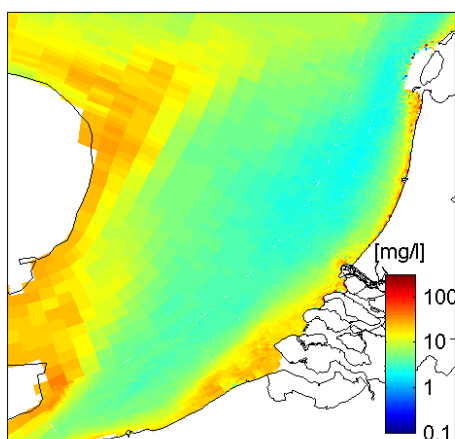
Significant surface wave height at Euro platform



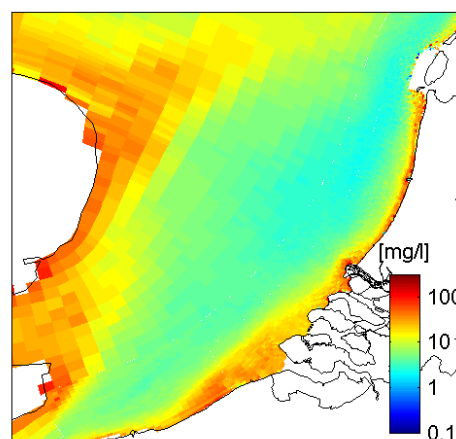
MERIS at surface layer



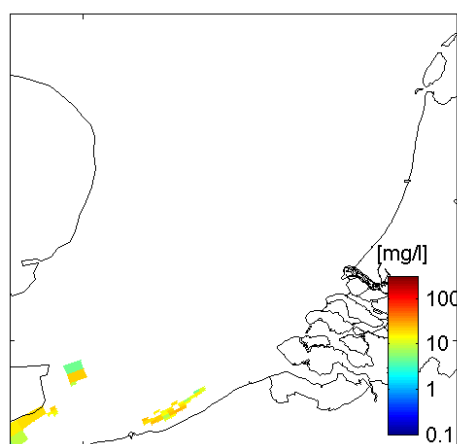
Model at surface layer



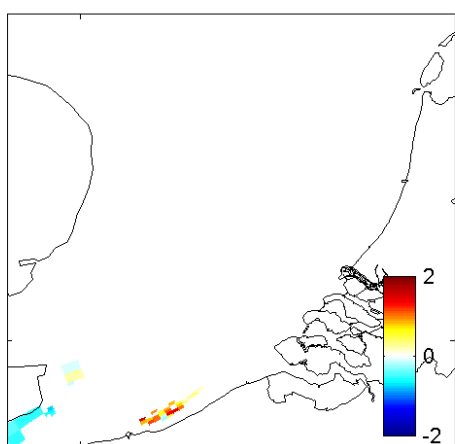
Model at bottom layer



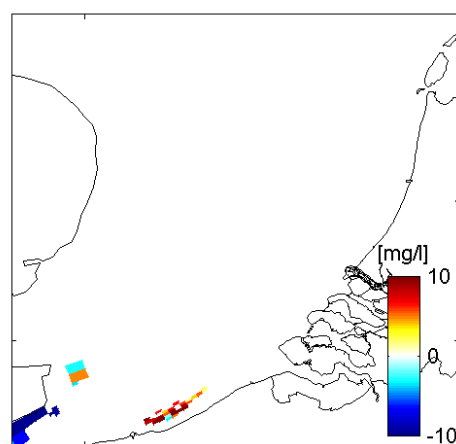
RMS difference



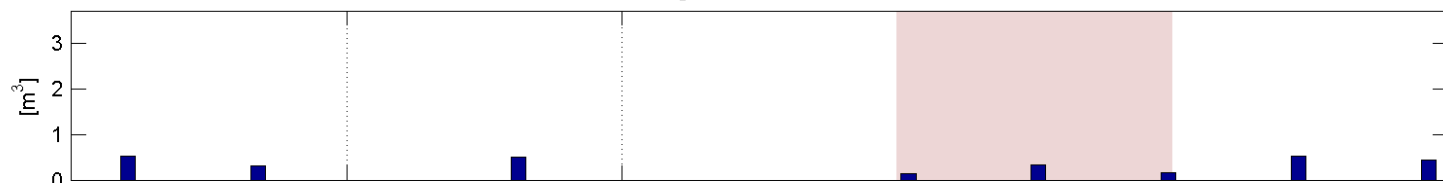
Relative difference [(MERIS-Model)/Model]



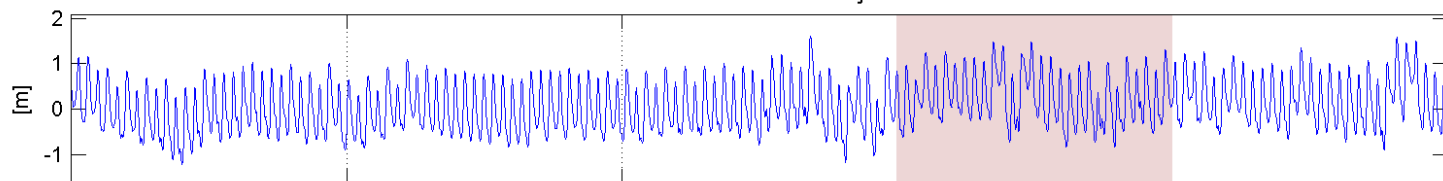
Mean difference [MERIS-Model]

 $\times 10^6$

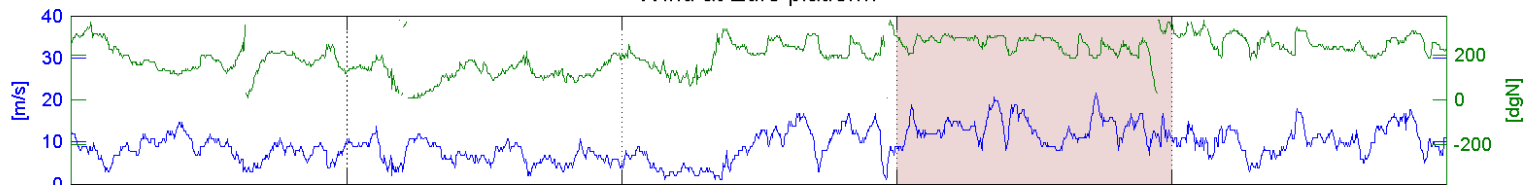
Sand mining volume for Maasvlakte 2



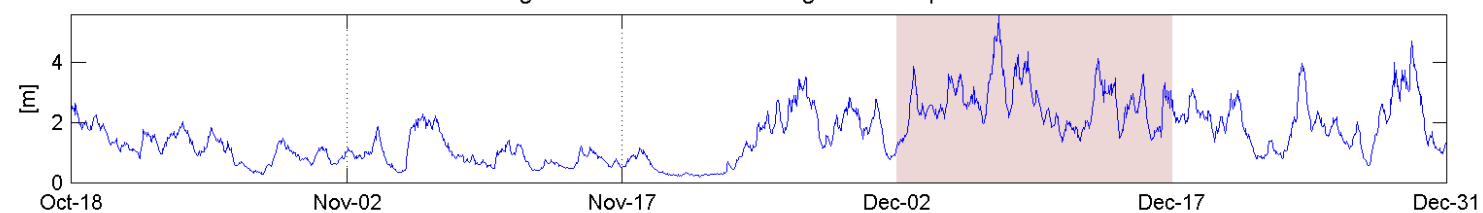
Water level at Noordwijk10



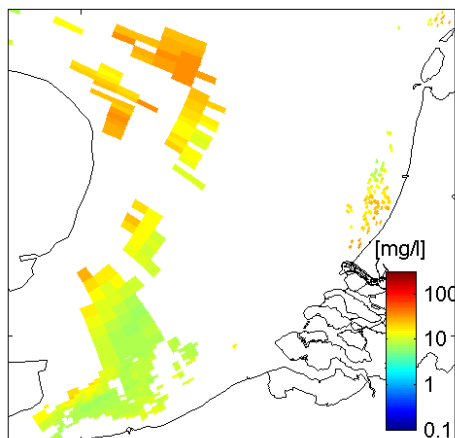
Wind at Euro platform



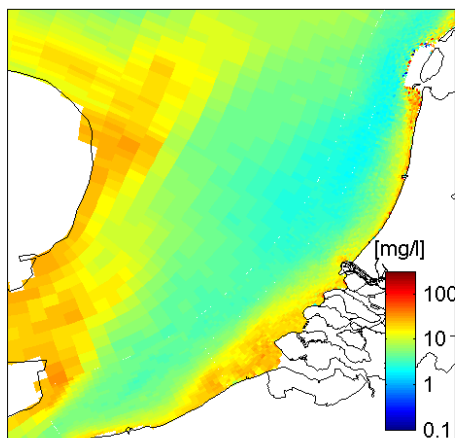
Significant surface wave height at Euro platform



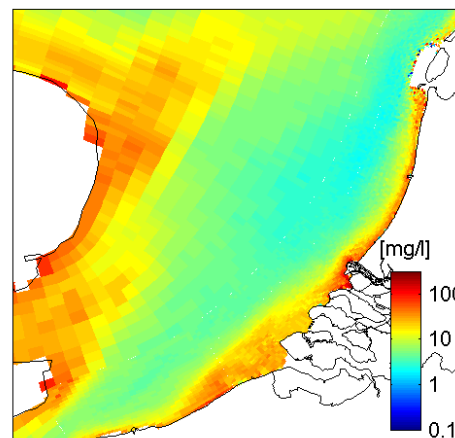
MERIS at surface layer



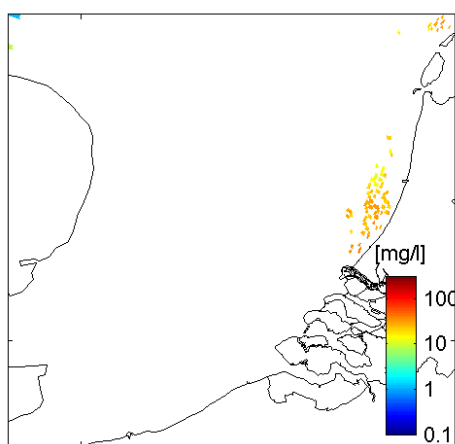
Model at surface layer



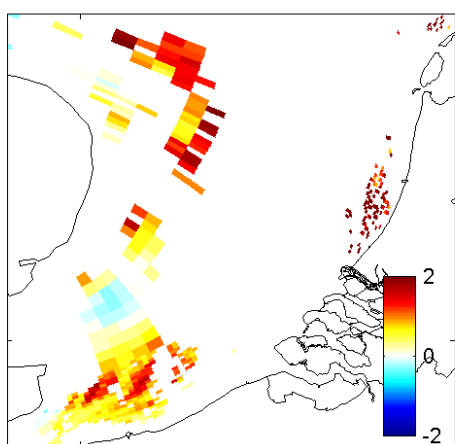
Model at bottom layer



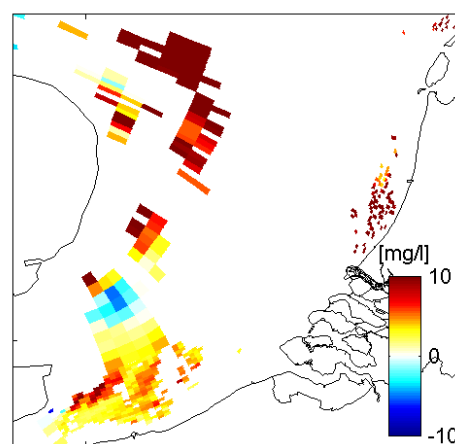
RMS difference



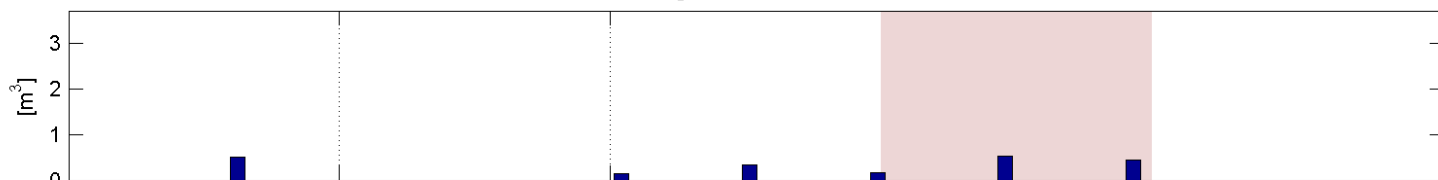
Relative difference [(MERIS-Model)/Model]



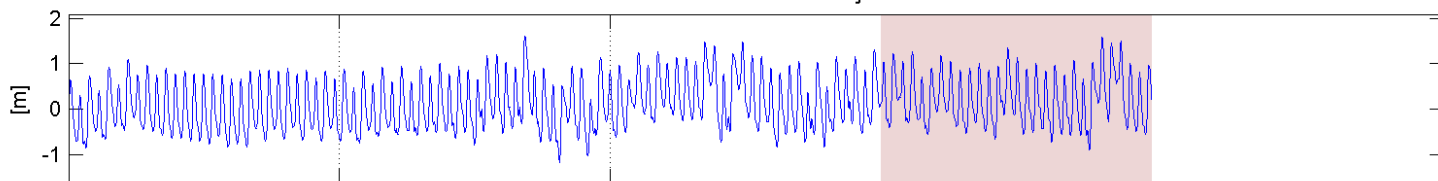
Mean difference [MERIS-Model]


x 10⁶

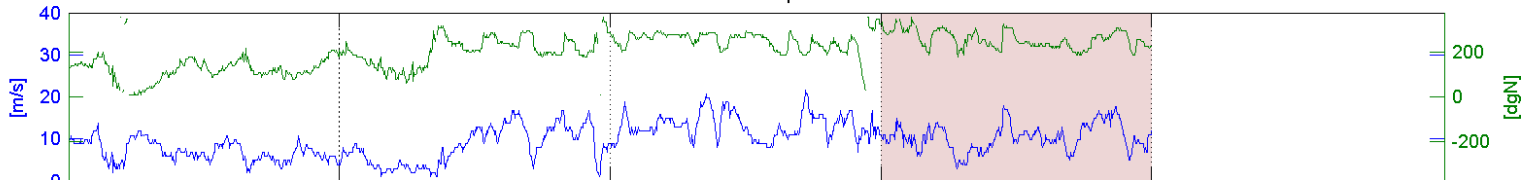
Sand mining volume for Maasvlakte 2



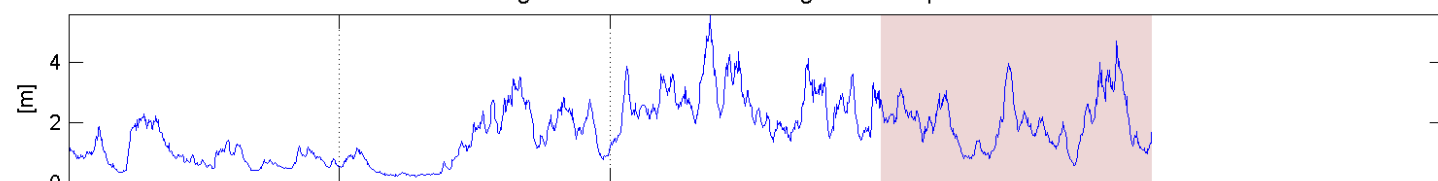
Water level at Noordwijk10



Wind at Euro platform



Significant surface wave height at Euro platform



Nov-02 Nov-17 Dec-02 Dec-17 Dec-31 Jan-16