HELCOM

Chlorophyll-a

INDICATOR TYPE: Core
INDICATOR CATEGORY: State
BSAP SEGMENT: Eutrophication
MSFD CRITERIA: D5C2

Chlorophyll-a

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1 Key message

This core indicator evaluates the average summer (June – September) chlorophyll-a concentration in surface water (0 – 10 m) during the assessment period 2016–2021.

In open sea areas, good status of chlorophyll-a was achieved in the Kattegat and the Kiel Bay. In the remaining 17 sub-basins, the status was not good (Figure 1). Single coastal assessment units in Sweden, Denmark, Finland, Germany, Poland and Estonia are reported to be in good status. Yet overall, in most of the coastal waters of the Baltic Sea, chlorophyll-a was evaluated to be below good status (see Annex 14.2).

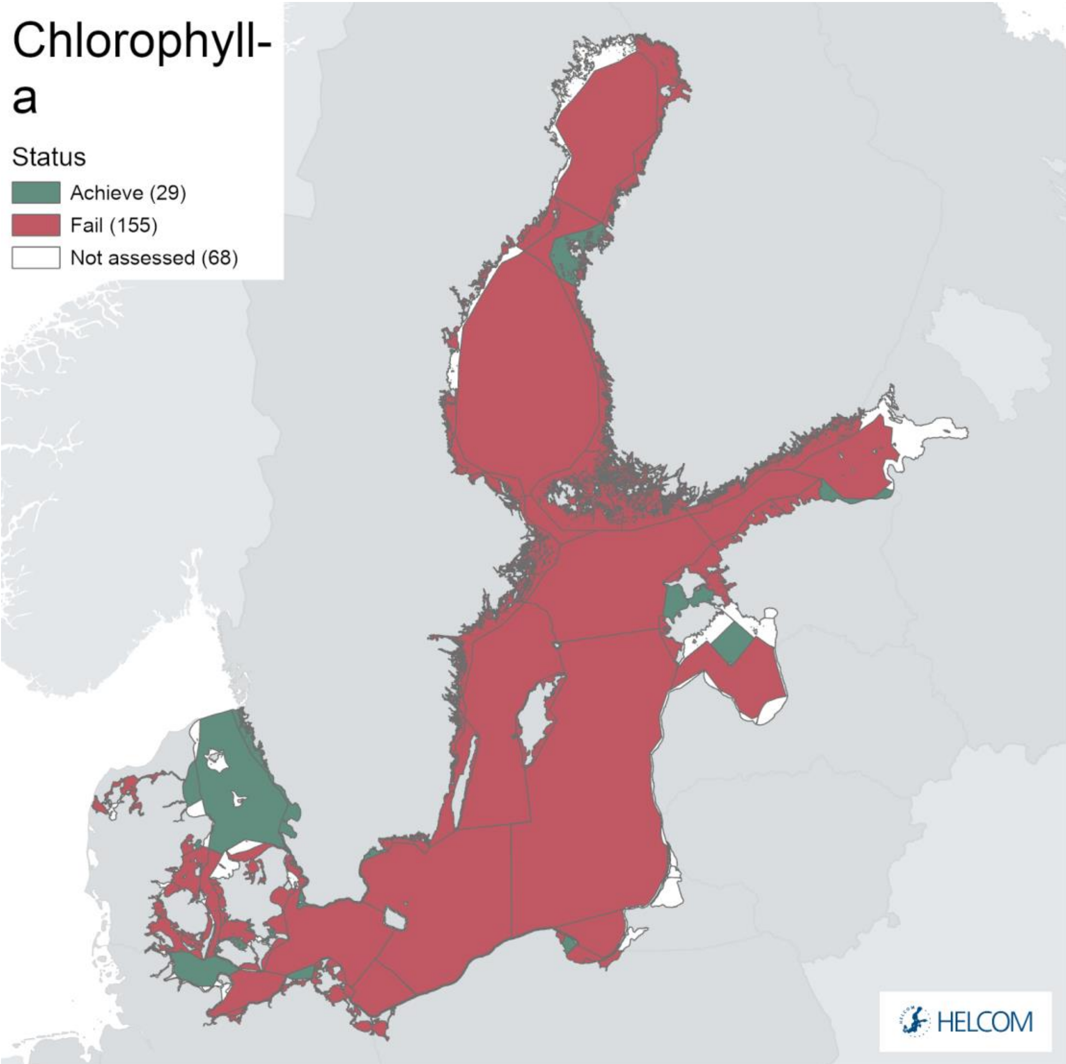

Figure 1. Status evaluation results for the indicator 'chlorophyll-a'. The evaluation is carried out using Scale 4 HELCOM assessment units (defined in the HELCOM Monitoring and Assessment Strategy Annex 4). **See 'data chapter' for interactive maps and data at the HELCOM Map and Data Service.**

In many subbasins, the summer chlorophyll-a -concentration increased until the 1990s or early 2000s (e.g., Western Gotland Basin, Gulf of Riga, Northern Baltic Proper, Gulf of Finland Eastern and Western). After that, the concentration leveled out or even decreased in most of the areas, with the exception of Bothnian Bay, where a significant deteriorating trend has been detected between 1990-2021. In the most South-Western sub-basins (Kattegat, Great Belt, Kiel Bay, Bay of Mecklenburg) the chlorophyll-a concentration has significantly decreased from 1990- 2021. However, there are recent signs of change in Kattegat, The Sound, Great Belt and adjacent estuaries, where concentrations have turned to an increase since about 2012. When comparing the latest two assessments of HOLAS II and HOLAS 3, the chlorophyll-a status has changed from ‘fail’ to ‘good status’ in Kiel Bay. Overall, the status has improved in four sub-basins and deteriorated in five sub-basins.

The confidence of the presented chlorophyll-a status estimate is high in the Bothnian Sea, Western Gulf of Finland, Northern Baltic Proper, Western Gotland Basin, Eastern Gotland Basin, Gulf of Riga, Gdansk Basin, Bornholm Basin, Pomeranian Bay, Arkona Basin, Bay of Mecklenburg, Kiel Bay and Kattegat, and moderate in the remaining open sea assessment units.

1.1 Citation

The data and resulting data products (e.g. tables, figures and maps) available on the indicator web page can be used freely given that it is used appropriately and the source is cited. The indicator should be cited as follows:

HELCOM (2023). Chlorophyll-a. HELCOM core indicator report. Online. [Date Viewed], [Web link].

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2. Relevance of the indicator

In the process of eutrophication, algal production and biomass increase as a direct effect of excess nutrient supply. Chlorophyll-a concentration is used as a proxy of phytoplankton biomass.

2.1 Ecological relevance

Phytoplankton forms the base of pelagic foodwebs, providing nutrition to higher trophic levels. It naturally blooms in spring and summer as response to elevated light and temperature when nutrients are available. Excess nutrient loads lead to higher phytoplankton growth rates and biomass, which in turn increase the settling of organic matter to the bottom, adding to the oxygen depletion (Figure 2). Transition to hypoxic conditions releases previously accumulated phosphorus from the sediments, supplementing the external nutrient loading (Conley *et al.* 2002, 2009, Vahtera *et al.* 2007).

Biotic and abiotic changes, such as climate change and changes in grazing, also affect the phytoplankton biomass.

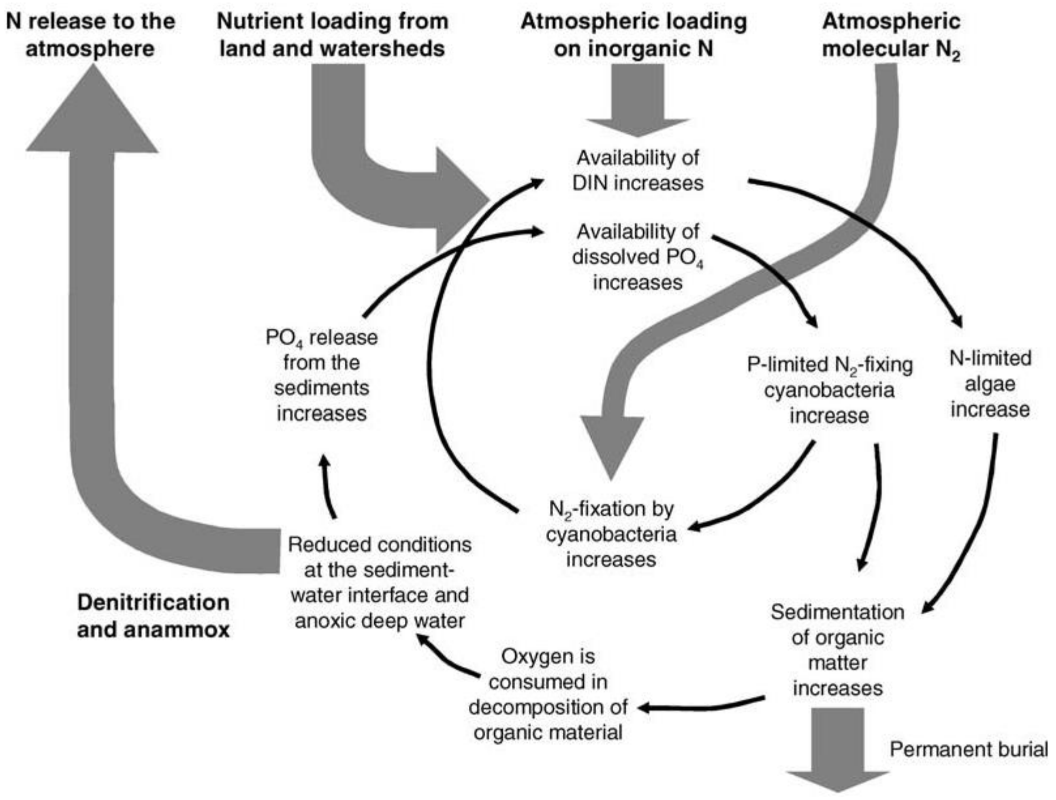


Figure 2. Simplified conceptual model of the vicious circle of eutrophication (from Vahtera *et al.* 2007).

2.2 Policy relevance

Eutrophication is one of the four thematic segments of the HELCOM Baltic Sea Action Plan (BSAP) with the specific goal of having a Baltic Sea unaffected by eutrophication (HELCOM 2021). The BSAP goal for eutrophication is defined in the BSAP as a condition in an aquatic ecosystem where excessive inputs of nutrients stimulate the growth of algae, which leads to imbalanced functioning of the system. The goal for eutrophication is broken down into five ecological objectives, of which one is "natural level of algal blooms". Increases in phytoplankton abundance and biomass can be assessed using chlorophyll-a as a proxy.

The EU Marine Strategy Framework Directive (2008/56/EU)) requires that "human-induced eutrophication is minimized, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms and oxygen deficiency in bottom waters" (Descriptor 5). "Chlorophyll-a in the water column" is listed as a criteria element in MSFD GES Decision ((EU) 2017/848) for assessing the criterion for D5C2 'Chlorophyll-a concentrations are not at levels that indicate adverse effects of nutrient enrichment'.

The EU Water Framework Directive (2000/60/EC) requires good ecological status in the European coastal waters. Good ecological status is defined in Annex V of the Water Framework Directive, in terms of the quality of the biological community, the hydromorphological characteristics and the chemical characteristics. Chlorophyll-a is used as a proxy for phytoplankton biomass and as such, it was used in the WFD intercalibration exercise.

Table 1. Eutrophication links to policy.

	Baltic Sea Action Plan (BSAP)	**Marine Strategy Framework Directive (MSFD)**
Fundamental link	Segment: Eutrophication Goal: "Baltic Sea unaffected by eutrophication" • Ecological objective: "Concentrations of nutrients close to natural levels", "Clear waters", "Natural level of algal blooms", "Natural distribution and occurrence of plants and animals", and "Natural oxygen levels". • Management objective: "Minimize inputs of nutrients from human activities" • The achievement of regional nutrient input targets – Maximum Allowable Inputs (MAI)	Descriptor 5 Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters - Macrofaunal communities of benthic habitats. • Criteria D5C2 Chlorophyll-a concentrations are not at levels that indicate adverse effects of nutrient enrichment. The threshold values are as follows: (a) in coastal waters, the values set in accordance with Directive 2000/60/EC; (b) beyond coastal waters, values consistent with those for coastal waters under Directive 2000/60/EC. Member States shall establish those values through regional or subregional cooperation.

<table>
<tr><td></td><td>and Nutrient Input Ceilings (NIC) – for all sub-basins, as identified in this BSAP, is the key prerequisite for achieving the ecological objectives.</td><td>Feature – Eutrophication.
Element of the feature assessed – Chlorophyll-a.</td></tr>
<tr><td>Complementary link</td><td>Segment: Sea-based activities
Goal: “Environmentally sustainable sea-based activities”
Ecological objective: “No or minimal disturbance to biodiversity and the ecosystem”.
Management objective: “Minimize the input of nutrients, hazardous substances and litter from sea-based activities”, “Minimize harmful air emissions”, and “Zero discharges from offshore platforms”.</td><td>Criteria D4C2 The balance of total abundance between the trophic guilds is not adversely affected due to anthropogenic pressures. Feature Shelf ecosystems, Element assessed – Trophic guilds: Pelagic primary producers (proxy for biomass)
Criteria D4C4 Productivity of the trophic guild is not adversely affected due to anthropogenic pressures. Feature Shelf ecosystems, Element assessed - Trophic guilds: Pelagic primary producers</td></tr>
<tr><td>Other relevant legislation:</td><td colspan="2">EU Water Framework Directive
UN Sustainable Development Goal 14 (Conserve and sustainably use the oceans, seas and marine resources for sustainable development) is most clearly relevant, though SDG 12 (Ensure sustainable consumption and production patterns) and 13 (Take urgent action to combat climate change and its impacts) also have relevance.</td></tr>
</table>

2.3 Relevance for other assessments

The indicator is utilised in the integrated assessment of eutrophication (HELCOM HEAT tool).

Eutrophication assessment

The status of eutrophication is assessed using several core indicators. Each indicator focuses on one important aspect of the complex process. In addition to providing an indicator-based evaluation of chlorophyll-a, this indicator also contributes to the overall eutrophication assessment along with the other eutrophication core indicators.

3. Threshold values

Status evaluation is carried out against scientifically based and commonly agreed sub-basin specific threshold values, i.e., the concentration that should not be exceeded (Figure 3).

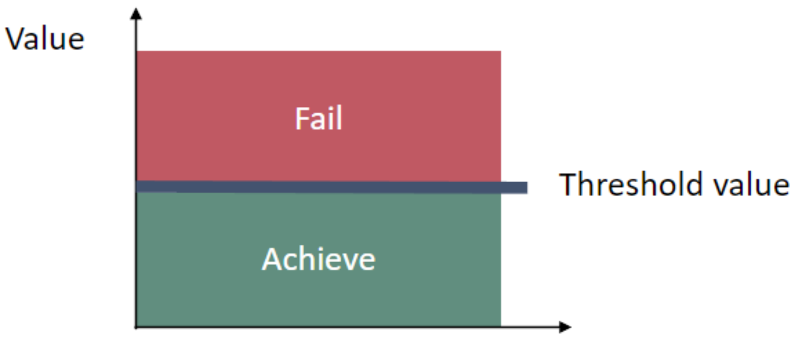


Figure 3. Schematic representation of the threshold value applied in the chlorophyll-a core indicator, the threshold values are assessment unit specific (see Thresholds and Status evaluation table 1).

3.1 Setting the threshold value(s)

For chlorophyll-a there is no data from the pre-eutrophic period. The threshold values for chlorophyll-a were set considering the results obtained in the TARGREV project accounting for the earliest available data and model simulations (HELCOM 2013), the work carried out during the EUTRO PRO process (HELCOM 2009) and national work for EU WFD implementation. The final threshold values were set through an expert evaluation process done during an intersessional activity to develop the core eutrophication indicators (HELCOM CORE EUTRO), and the threshold values were adopted by the 39th meeting of the HELCOM Heads of Delegations 2012. For the two new units in Gulf of Finland (SEA-013A and SEA-013B), threshold values were rescaled from the assessment unit (SEA-013) value used in HOLAS II (HOD 61-2021 document 5-1-Rev.1 Workspace ATT.13 Rev.1) and adopted by the 61st meeting of the HELCOM Heads of Delegations 2021. The threshold value for Pomeranian Bay is based on the rescaled threshold value for Bornholm Basin from the TARGREV project.

Table 4. Assessment unit specific threshold values for the chlorophyll-a core indicator.

HELCOM_ID	Assessment unit (open sea)	Threshold value (µg l−1)
SEA-001	Kattegat	1.5
SEA-002	Great Belt	1.7
SEA-003	The Sound	1.2
SEA-004	Kiel Bay	2.0
SEA-005	Bay of Mecklenburg	1.8
SEA-006	Arkona Basin	1.8
SEA-007	Bornholm Basin	1.6
SEA-007B	Pomeranian Bay	2.9
SEA-008	Gdansk Basin	2.2
SEA-009	Eastern Gotland Basin	1.9
SEA-010	Western Gotland Basin	1.2
SEA-011	Gulf of Riga	2.7
SEA-012	Northern Baltic Proper	1.7
SEA-013A	Gulf of Finland Western	1.9
SEA-013B	Gulf of Finland Eastern	2.3
SEA-014	Åland Sea	1.5
SEA-015	Bothnian Sea	1.5
SEA-016	The Quark	2.0
SEA-017	Bothnian Bay	2.0

4. Results and discussion

The results of the indicator evaluation underlying the key message map and information are provided below.

4.1 Status evaluation

Current status of the Baltic Sea chlorophyll-a in open-sea areas

In open sea areas, good status has been achieved in the Kattegat and in the Kiel Bay. In the remaining 17 sub-basins the threshold value was exceeded, thus the status was not good. The open sea assessment units causing greatest concern regarding chlorophyll-a status (EQRS < 0.2) are the Gulf of Finland Western, Northern Baltic Proper, Gulf of Finland Eastern and Western Gotland Basin. The Sound, Bornholm Basin, Pomeranian Bay, Gdansk Basin, Eastern Gotland Basin, Gulf of Riga, Åland Sea, Bothnian Sea, The Quark and Bothnian Bay (EQRS values between 0.2 and <0.4), and the Great Belt, Bay of Mecklenburg, and Arkona Basin (EQRS values between 0.4 and <0.6), exceeded their threshold values to lesser extent and thus also failed to reach good status (Figure 4 and Table 5). Chlorophyll-a concentrations have in general remained relatively constant during the assessment period (Figure 5). Largest annual variation occurred in the Pomeranian Bay and Gdansk Basin.

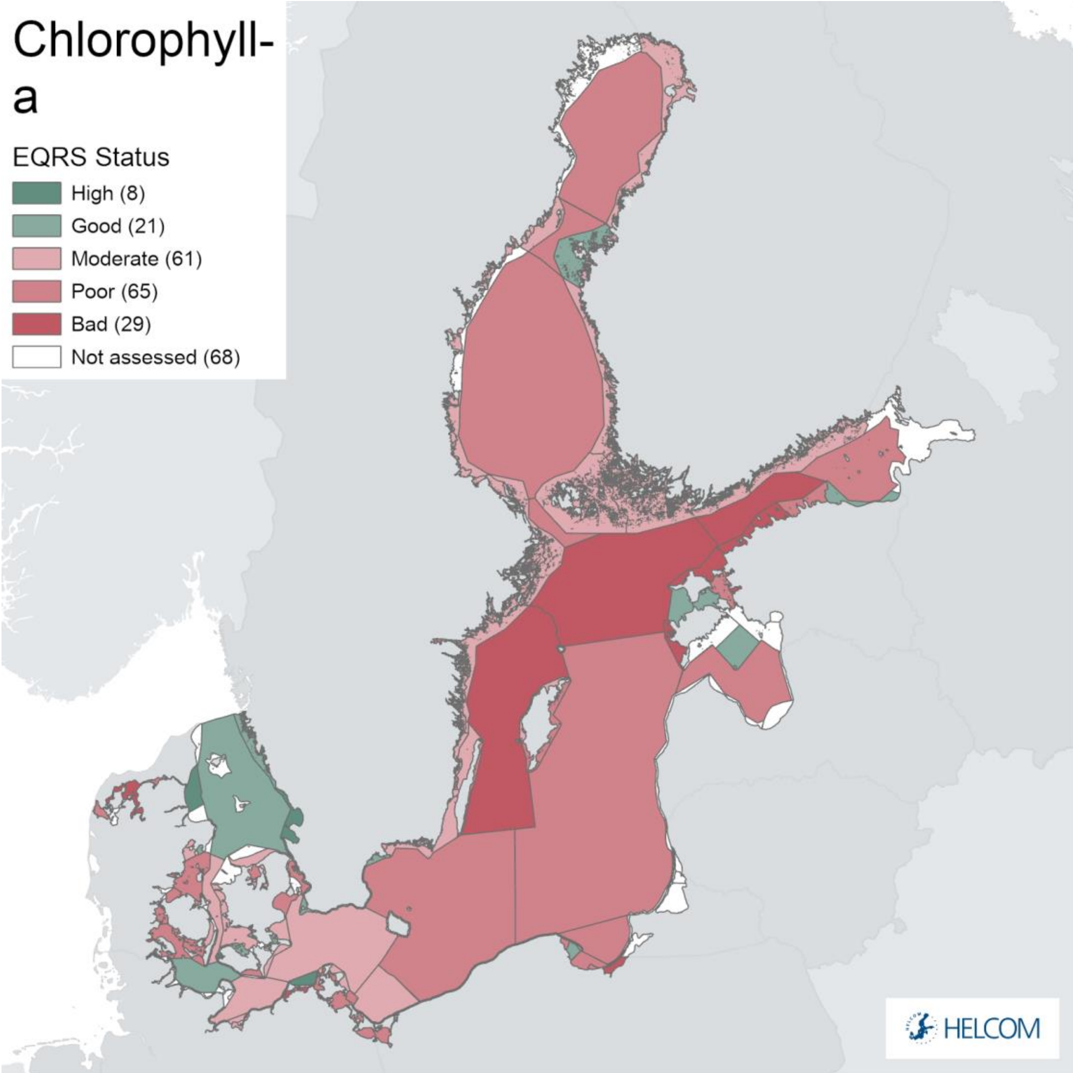


Figure 4. Status of the Chlorophyll-a indicator in 2016-2021, presented as Ecological Quality Ratio Scaled (EQRS). EQRS shows the present concentration in relation to the reference value, decreasing along with increasing eutrophication. The threshold value has been reached when EQRS = 0.6, with values above this threshold achieving good status.

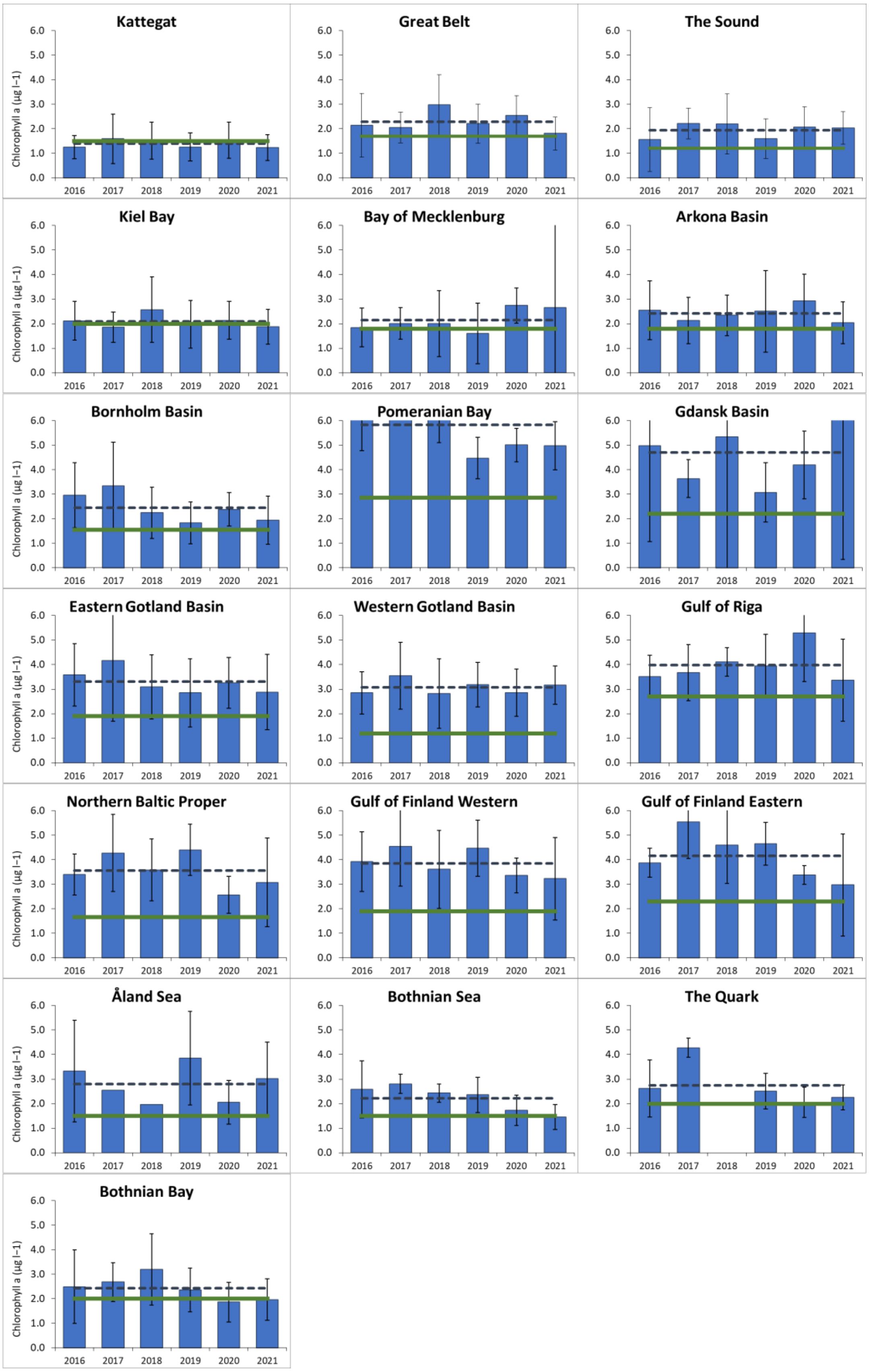


Figure 5. Summer (June-September) chlorophyll-a concentrations in µg L^{-1} with assessment period average shown as dashed dark blue line, and threshold value as agreed by HELCOM HOD 39/2012 (green line).

Table 5. Threshold values, present concentration (as average 2016-2021), Ecological Quality Ratio Scaled (EQRS) and status of Chlorophyll-a in the open-sea basins. EQRS is a quantitative value for the level of eutrophication, calculated from the ratio between the reference value and present concentration. When EQRS < 0.6, good status has not been reached.

Assessment unit (open sea)	Threshold value (µg l^{-1})	Average 2016-2021 (µg l^{-1})	Ecological quality ratio (scaled) (EQRS)	STATUS (fail/achieve threshold value)
Kattegat	1.50	1.39	0.69	Achieve
Great Belt	1.70	2.01	0.47	Fail
The Sound	1.20	1.94	0.26	Fail
Kiel Bay	2.00	1.91	0.66	Achieve
Bay of Mecklenburg	1.80	1.94	0.55	Fail
Arkona Basin	1.80	2.29	0.40	Fail
Bornholm Basin	1.55	2.37	0.29	Fail
Pomeranian Bay	2.86	4.21	0.33	Fail
Gdansk Basin	2.20	3.73	0.26	Fail
Eastern Gotland Basin	1.90	2.99	0.27	Fail
Western Gotland	1.20	2.89	0.15	Fail
Gulf of Riga	2.70	3.92	0.32	Fail
Northern Baltic	1.65	3.78	0.16	Fail
Gulf of Finland	1.90	4.20	0.16	Fail
Gulf of Finland	2.30	4.37	0.20	Fail
Åland Sea*	1.50	2.74	0.21	Fail
Bothnian Sea*	1.50	2.47	0.25	Fail
The Quark*	2.00	3.17	0.28	Fail
Bothnian Bay*	2.00	3.25	0.26	Fail

* In coastal waters, good status is found in some areas for Sweden, Denmark, Finland, Germany, Poland and Estonia (Annex 14.2).

Chlorophyll-a estimates measured on different platforms

The chlorophyll-a indicator is a multiparametric indicator and is based on combined data from *in situ* measurements, FerryBox flow-through measurements and remote sensing data (Earth Observation satellite (EO) data). *In situ* measurements and EO data are available for all open-sea areas, whereas FerryBox data is applied only in agreed open sea areas, the Northern Baltic Proper and Gulf of Finland Western.

Generally, the parameters provide a similar evaluation. Differences in relation to the threshold for good status are found in the most western assessment units. In the Kattegat, the *in situ* parameter reflects good status and EO-parameter reflects a level below GES, whereas the opposite is found in the Kiel Bay, Bay of Mecklenburg, Great Belt and Pomeranian Bay. For all these assessment units, except for Pomeranian Bay, the difference in the eutrophication status was equal or less than 0,6 µg L^{-1}, which is an understandable difference considering their very different spatial and temporal representativeness. The results were near class boundary and fell in adjacent classes above and below GES for Kiel Bay and Bay of Mecklenburg. For Kattegat and the Great Belt the difference in chlorophyll-a concentrations between data types resulted in a difference of two classes.

For Pomeranian Bay, the difference of the data type specific results was 4.6 µg L^{-1}. In this case it is likely that EO samples represent different areas in the whole assessment area than the station samples. Station samples often represent more coastal samples than EO.

Satellite observations typically cover the assessment area in spatially and temporally comprehensive way. The number of observations is huge; thus it is understandable that the summary results of EO and station sampling from the whole period over assessment area does not end up in same concentration. It is quite typical, that the summary of satellite observations fall to lower concentrations as EO samples cover also periods when the chl-a concentrations are not high, which is typical for the four month period in summer (1.6.-30.9.).

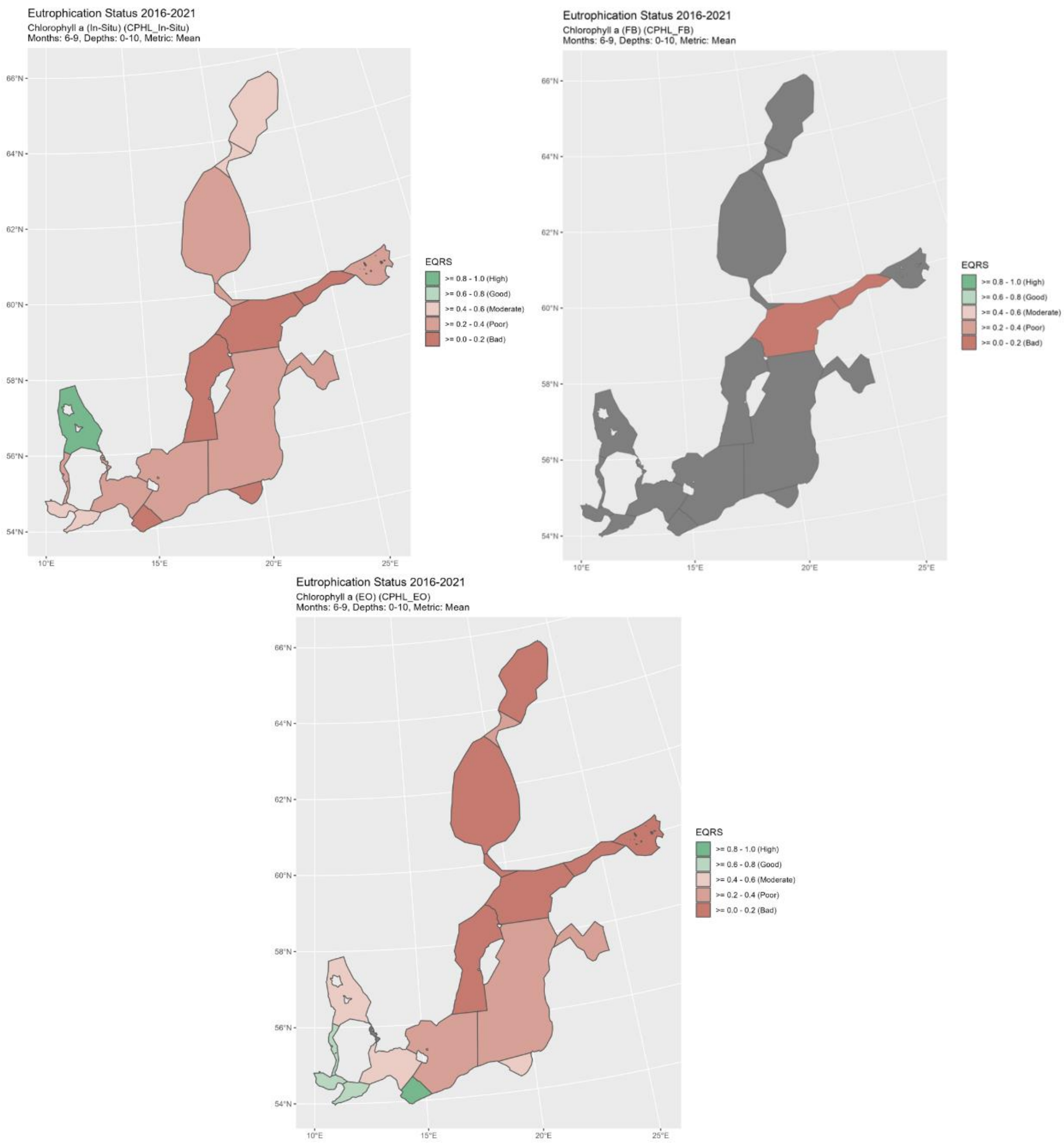


Figure 6. Status of the chlorophyll-a -indicator shown based on each individual methodology: measured *in situ* (left), FerryBox (right) and remote sensing satellite (bottom), presented as ecological quality ratio scaled (EQRS). EQRS shows the present concentration in relation to the threshold value, decreasing along with increasing eutrophication. The threshold value has been reached when EQRS ≥ 0.6. The overall chlorophyll-a status evaluation is based on combined annual information of the three parameters. Grey areas indicate that the parameter is not available in the assessment unit.

Current status of chlorophyll-a in the coastal areas

Most of the coastal assessment units throughout the Baltic Sea fail to achieve good status for chlorophyll-a. In coastal waters, good status is found in some areas for Sweden, Denmark, Finland, Germany, Poland and Estonia (Annex table 1). Such assessment units are found in Kattegat, The Sound, Great Belt, Kiel Bay, Bay of Mecklenburg, Arkona Basin, Pomeranian Basin, Bornholm Basin, Gdansk Basin, Western Gotland Basin, Northern Baltic Proper and The Quark.

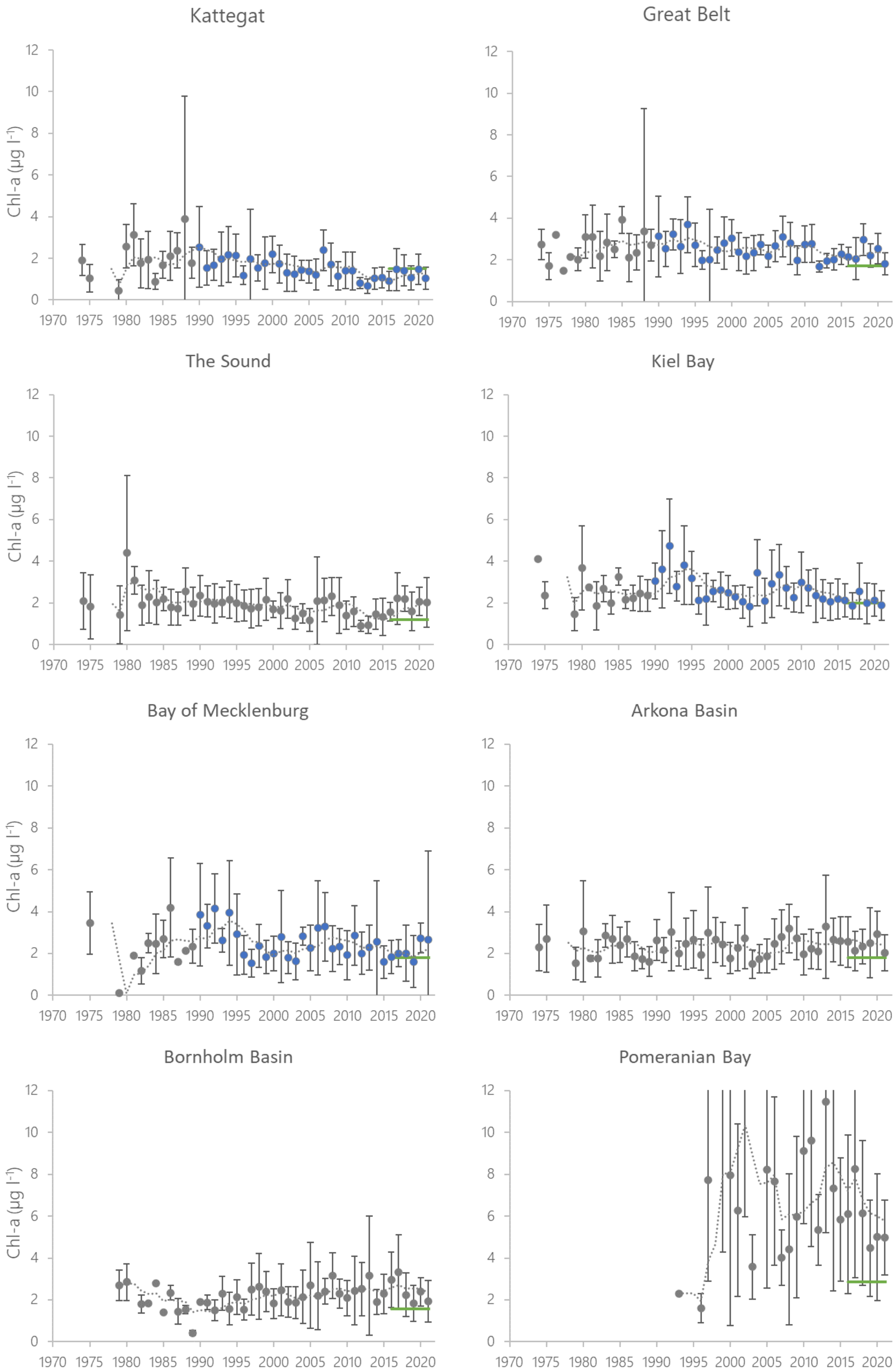
4.2 Trends

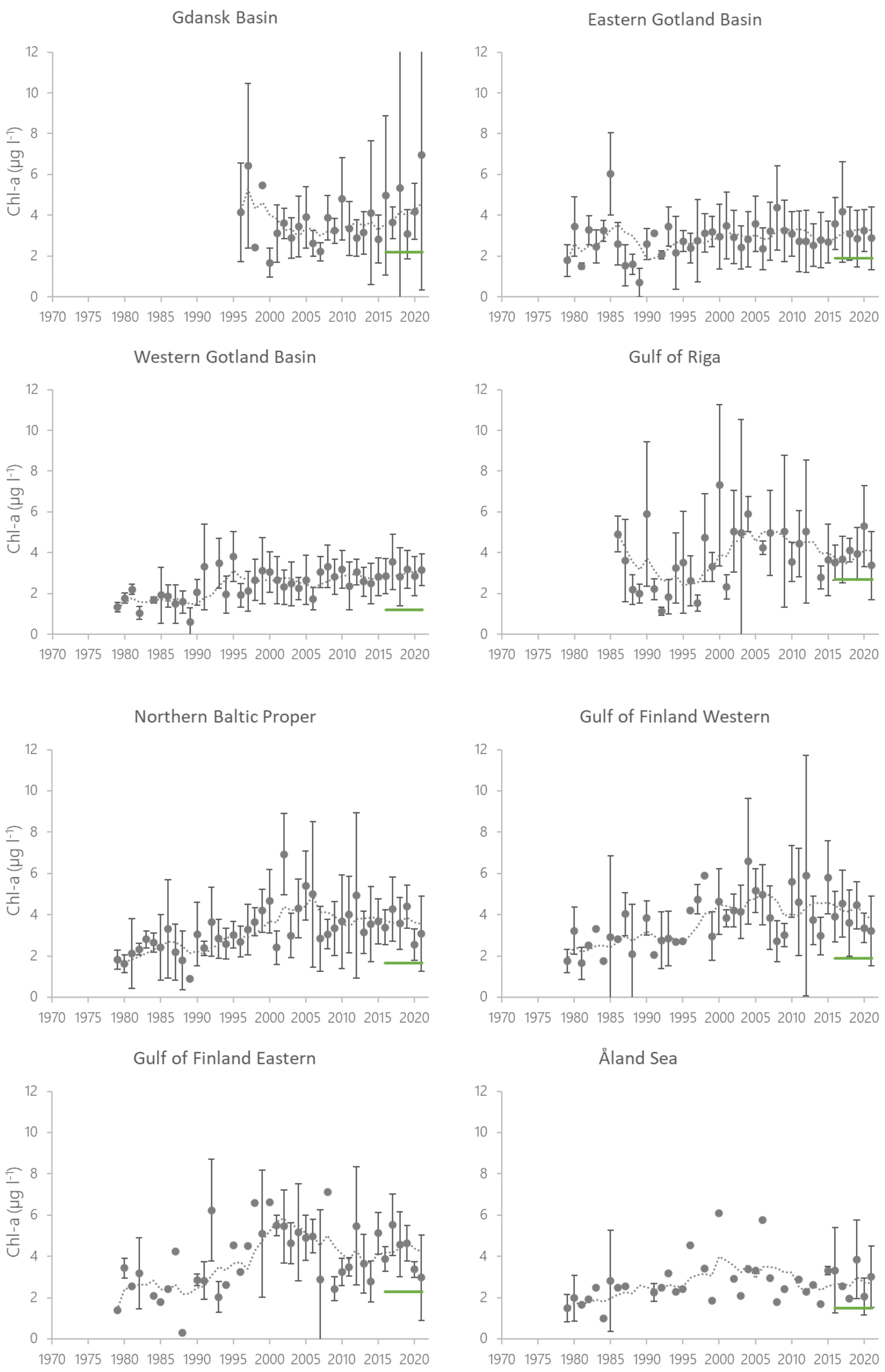
Long-term trends

The long-term trends are provided as additional information and do not influence the status assessment for the current assessment period (2016-2021).

An increase in summer chlorophyll-a concentration was evident in most of the Baltic Sea sub-basins from the 1970/80s to the late 1990s/early 2000s. Only in some southwestern areas, the Kattegat and Arkona Basin, were these increases not observed. In the Bornholm Basin a decrease in summer chlorophyll-a concentration could even be observed during this period. (Fleming-Lehtinen *et al.* 2008)

Based on chlorophyll-a concentration trends in collated *in situ* data, there has been little change during the 1990-2021 period. There are some exceptions, for example in the most southwestern parts of the Baltic Sea, where significant decreasing trends are observed (Results Figure 4). These decreasing trends correspond well with decreases in nitrogen inputs and concentrations in the southwestern parts, where nitrogen is considered the most limiting nutrient for phytoplankton growth. However, since about 2012, the concentrations have increased in Kattegat, The Sound and Great Belt (Results Figure. 4 and Results Table 2). The same is observed for the adjacent estuaries. This increase also corresponds with the nitrogen loadings, which have been increasing since about 2010. In the northern and eastern parts of the Baltic Sea, where summer chlorophyll-a concentration is more related to phosphorus concentrations the indicator shows no changes or an increasing trend (significant in Bothnian Bay an Eastern and Western Gotland Basins).


Kattegat
Great Belt
The Sound
Kiel Bay
Bay of Mecklenburg
Arkona Basin
Bornholm Basin
Pomeranian Bay
Chl-a (µg l-1)
0
2
4
6
8
10
12
1970 1975 1980 1985 1990 1995 2000 2005 2010 2015 2020


Gdansk Basin
Eastern Gotland Basin
Western Gotland Basin
Gulf of Riga
Northern Baltic Proper
Gulf of Finland Western
Gulf of Finland Eastern
Åland Sea
Chl-a (µg l-1)
0 2 4 6 8 10 12
1970 1975 1980 1985 1990 1995 2000 2005 2010 2015 2020

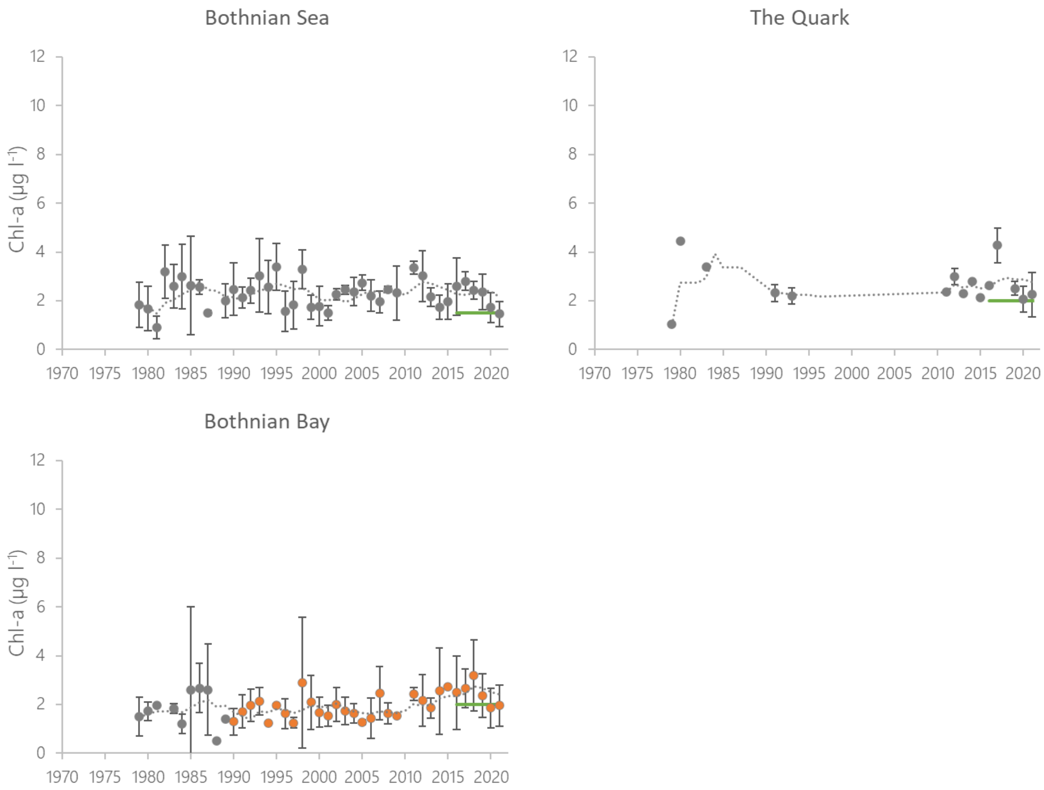


Figure 7. Temporal development of chlorophyll-a (chl-a) concentrations in the open-sea assessment units from 1970s to 2021. Dashed lines show the five-year moving averages and error bars the standard deviation. Green lines denote the indicator threshold value. Significance of trends was assessed with a Mann-Kendall non-parametric tests for the period from 1990-2021. Significant ($p<0.05$) improving trends are indicated with blue and deteriorating trends with orange colour.

4.3 Discussion text

Assessment results for chlorophyll-a were compared between the latest two assessments of HOLAS II and HOLAS 3. Status in Kattegat deteriorated but remained in good status. Kiel Bay changed its status from failing good status to achieving good status (Results table 2). The rest of the assessment units remained below good status. Status deteriorated in the Sound and in the most northern assessment units (Bothnian Bay, The Quark, Åland Sea), improved in Bay of Mecklenburg, Arkona Basin and Bornholm Basin, and remained stable in the rest of the assessment units. In the Bornholm Basin, the improvement in status was likely due to splitting off Pomeranian Bay, which is highly influenced by river Odra, from the Bornholm Basin into separate assessment unit for HOLAS 3. The Gulf of Finland assessment unit, which was used in HOLAS II (SEA-013), was split to two new assessment units (SEA-013A and SEA-013B) for HOLAS 3. Therefore, the two latest assessments cannot be directly compared. However, comparing the HOLAS II result for SEA-013 to average of the HOLAS 3 results for SEA-013A and SEA-013B suggests that the chlorophyll status in the gulf has remained relatively stable.

Table 6. Evaluations of the chlorophyll-a indicator during the HOLAS II and HOLAS 3 periods, coloured red or green depending on whether the assessment unit fails or achieves the threshold, respectively. The trend from the previous to present assessment period is addressed alongside a description of outcome (a change of 15 % is deemed significant).

HELCOM Assessment unit name (and ID)	HOLAS II Average 2011-2016 (EQRS)	HOLAS 3 Average 2016-2021 (EQRS)	Description of trend between current and previous assessment.
Kattegat	0.96	0.69	Distinct deteriorating change
Great Belt	0.46	0.47	No distinct change
The Sound	0.59	0.26	Distinct deteriorating change
Kiel Bay	0.53	0.66	Distinct improving change
Bay of Mecklenburg	0.31	0.55	Distinct improving change
Arkona Basin	0.32	0.40	Distinct improving change
Bornholm Basin	0.20	0.29	Improving and this is likely due to change in assessment unit; Pomeranian Bay was split off from Bornholm Basin
Pomeranian Bay		0.33	First indicator iteration
Gdansk Basin	0.28	0.26	No distinct change
Eastern Gotland Basin	0.25	0.27	No distinct change
Western Gotland Basin	0.16	0.15	No distinct change
Gulf of Riga	0.34	0.32	No distinct change
Northern Baltic Proper	0.15	0.16	No distinct change
Gulf of Finland Western	0.18*	0.16	Comparison not possible since the Gulf of Finland was split into two assessment units
Gulf of Finland Eastern	0.18*	0.20	Comparison not possible since the Gulf of Finland was split into two assessment units
Åland Sea	0.26	0.21	Distinct deteriorating change
Bothnian Sea	0.29	0.25	No distinct change
The Quark	0.43	0.28	Distinct deteriorating change
Bothnian Bay	0.48	0.26	Distinct deteriorating change

*) Gulf of Finland was assessed as one assessment unit (SEA-013) in HOLAS II

5. Confidence

The overall confidence of the indicator status evaluation, based on the spatial and temporal coverage of data and accuracy of the classification result, was high for the Bothnian Sea, Gulf of Finland Western, Northern Baltic Proper, Western Gotland Basin, Eastern Gotland Basin, Gulf of Riga, Gdansk Basin, Bornholm Basin, Pomeranian Bay, Arkona Basin, Bay of Mecklenburg, Kiel Bay and Kattegat, and it was moderate in the remaining assessment units.

The temporal confidence was high in all assessment units, except for the Quark, Eastern Gulf of Finland, Gulf of Riga and Gdansk Basin where it was moderate and Åland Sea where it was low (Figure 8). Temporal confidence for *in situ* data was low in the Gulf of Finland Eastern, Åland Sea and the Quark and moderate in the Gdansk Basin, Gulf of Riga and the Bothnian Bay (Annex figure 1). Temporal confidences of EO-parameter and FB-parameter were high in all assessment units, where assessed (Annex figures 2-3).

Spatial confidence was low in the Bothnian Bay, Åland Sea, Eastern Gulf of Finland, Western Gotland Basin, Eastern Gotland Basin, Pomeranian Bay, the Great Belt and the Sound, high in the Western Gulf of Finland, Arkona Basin, Kiel Bay, Bay of Mecklenburg and Kattegat and moderate in the rest of the sub-basins. The spatial confidence was high for the *in situ* parameter only in the Kattegat and Arkona Basin. For the EO-parameter it was high for all assessment units except the Bothnian Bay and Great Belt, where included results covered only 45%-47% and 52%-61% of the assessment unit area, respectively. For the FB-parameter, the spatial confidence varies based on how well the Ferrybox route represents the entire assessment unit; it was high only in the Gulf of Finland Western (Annex figures 1-3).

The accuracy confidence was high in all open-sea assessment units (Figure 8). It was also high separately for each data type (Annex figures 1-3).

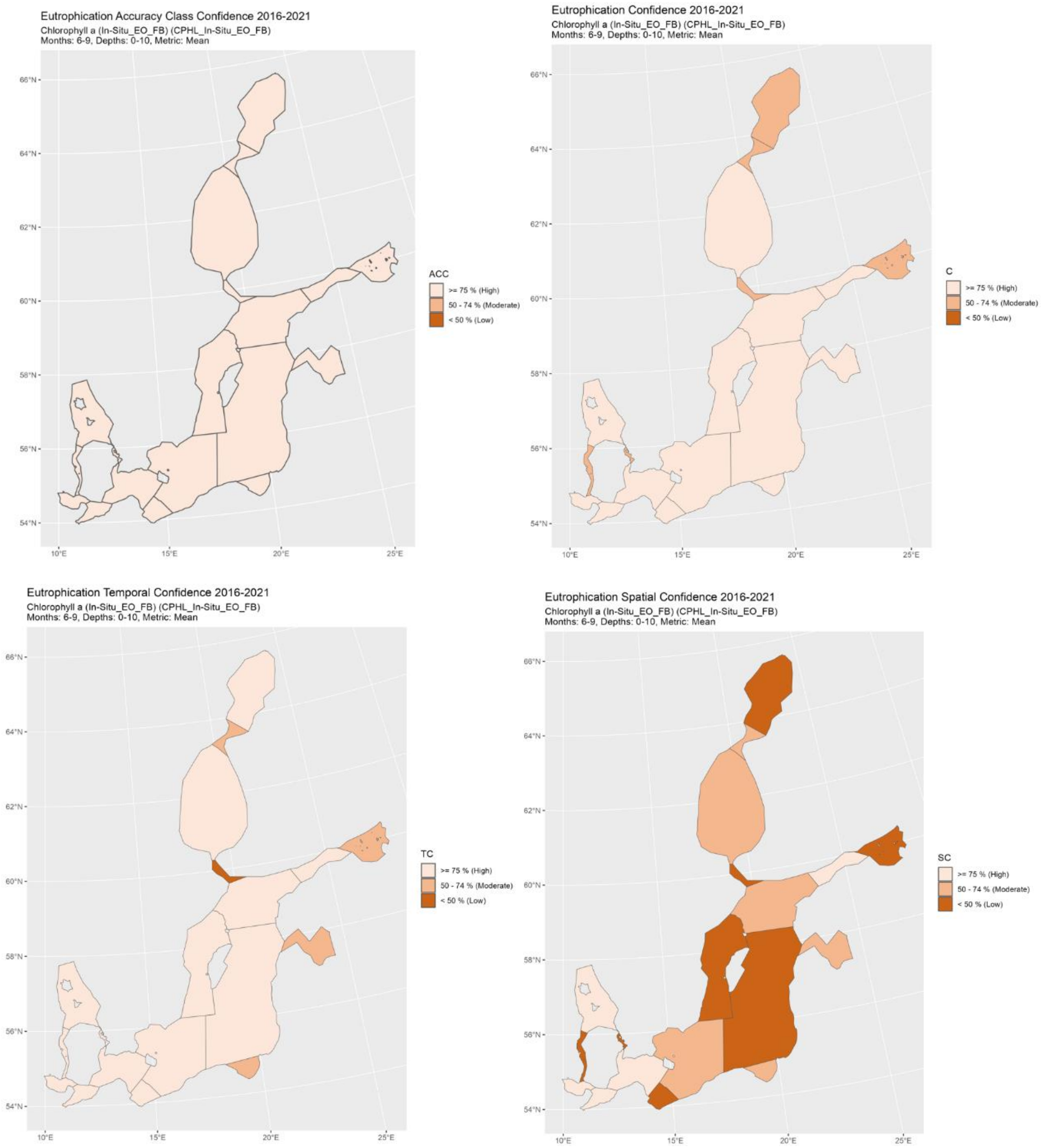


Figure 8. Indicator confidence determined by combining information from *In Situ*, Earth observations (EO) and Ferrybox (FB) data. Overall confidence (c), accuracy (ACC), spatial confidence (SC) and temporal confidence (TC) of the GES evaluation. Low indicator confidence calls for increase in monitoring.

6. Drivers, Activities, and Pressures

The increase of chlorophyll-a, a proxy of phytoplankton biomass, in the water column is dependent on nutrient inputs, and thus linked strongly to anthropogenic nutrient loads from land and air. The amount of phytoplankton in the water depends on the balance between phytoplankton growth and loss factors, such as grazing. As phytoplankton growth is stimulated by nutrients, the chlorophyll-a concentration tends to increase with nutrient inputs. However, a simultaneous increase in zooplankton biomass or other grazers, due to the higher food availability might to some degree counteract this effect.

For HOLAS 3 initial work has been carried out to explore Drivers (and driver indicators) to evaluate how such information can be utilised within such management frameworks as DAPSIM. Although it is recognised as only addressing a small portion of the drivers (via proxies) of relevance for eutrophication wastewater treatment (Drivers and driver indicators for Wastewater Treatment) and agriculture (Drivers and driver indicators for Agricultural Nutrient Balance) have been explored in these pilot studies for HOLAS 3.

Diffuse sources constitute the highest proportion of total nitrogen (nearly 50%) and total phosphorus (about 56%) inputs to the Baltic Sea (HELCOM 2022). For total nitrogen, atmospheric deposition on the sea has the second highest share (24%) followed by natural background loads (20%) and point sources (9%). Natural background loads have the second highest share of total phosphorus inputs to the Baltic Sea (20%), followed by point sources (17%) and atmospheric deposition (7%). Point sources include activities such as municipal wastewater treatment plants, industrial plants and aquacultural plants and diffuse sources consist of anthropogenic sources such as agriculture, managed forestry, scattered dwellings, storm water etc.

A significant reduction of nutrient inputs has been achieved for the whole Baltic Sea. The normalized total input of nitrogen was reduced by 12% and phosphorus by 28 % between the reference period (1997-2003) and 2020 (HELCOM 2023). The maximum allowable input (MAI) of nitrogen in this period was fulfilled in the Bothnian Bay, Bothnian Sea, Danish Straits and Kattegat and the maximum allowable input of phosphorus in the Bothnian Bay, Bothnian Sea, Danish Straits and Kattegat.

Further developing an overview of such components and the relevant data to be able to better quantify the linkages within a causal framework provide the opportunity for more informed management decisions, for example targeting of measures, and can thereby support the achievement of Good Environmental Status.

Table 7. Brief summary of relevant pressures and activities with relevance to the indicator.

	General	**Activities MSFD Annex III, Table 2b**	**Pressures: MSFD Annex III, Table 2a**
Strong link		Cultivation of living resources; Transport; Urban and industrial uses; Physical restructuring of rivers, coastline or seabed (water management)	Input of nutrients; input of organic matter
Weak link			

7. Climate change and other factors

The current knowledge of the effects of climate change to eutrophication is summarized in the HELCOM climate change fact sheet (HELCOM and Baltic Earth 2021). The effect of climate change to the nutrient pools is not yet separable from the other pressures, and the future nutrient pools will dominantly be affected by the development of nutrient loading. The phytoplankton growth season has already prolonged due to changes in cloud cover and stratification. Climate change is, with medium confidence, considered to increase the stratification, further deteriorate near-bottom oxygen conditions, and increase the internal nutrient loading.

8. Conclusions

The status evaluation fails to achieve good environmental status in all assessed sub-basins except for the Kattegat and the Kiel Bay. A better harmonization of the thresholds for Chlorophyll-a between coastal waters and the open Baltic Sea Basins might be necessary in the future, in particular in areas where coastal waters are already assessed as achieving good status while the open basins still fail to achieve good status, since such a gradient would not be expected to occur assuming that high nutrient concentrations are mainly caused by riverine nutrient inputs.

8.1 Future work or improvements needed

The use of Ferrybox data in all assessment units should be investigated.

9. Methodology

9.1 Scale of assessment

The core indicator is applicable in all the 19 open sea assessment units (exceeding one nautical mile seawards from the baseline).

In the coastal units the indicator is assessed using comparable indicators developed nationally for the purposes of assessments under the EU Water Framework Directive.

The assessment units are defined in the HELCOM Monitoring and Assessment Strategy Annex 4.

9.2 Methodology applied

The average chlorophyll-a concentration in open sea assessment units is a combined estimate of three types of data (depending on availability, applicability, and regional agreement): 1) *in situ* measurements 2) Earth Observation (EO) remote sensing satellite data, and 3) FerryBox data. These data are combined as annual averages, applying weighting based on data availability and confidence. The indicator specifics are presented in **Table 8**.

More information is found in the eutrophication assessment manual.

Table 8. Specifications of the core indicator chlorophyll-*a*.

Indicator	Chlorophyll-*a*
Response to eutrophication	positive
Parameters	Chlorophyll-*a* concentration (µg l^{-1})
Assessment period	2016 – 2021
Assessment season	Summer = June + July + August + September
Depth	Surface: *in situ* data: average in the 0 – 10 m layer FerryBox data: 3-5 m depth
Removing outliers	On responsibility of data submitter
Removing close observations	No close observations removed
Indicator level (ES)	Defined using the following datatypes: 1) water sample measurements from HELCOM COMBINE (*in situ*), 2) daily earth observation on 20K grid (EO) and in part of the assessment units additionally 3) FerryBox observations (fb).

The final ES is defined as an average of the annual estimates, which are defined as weighted averages of the data type specific ES estimates,

M = datatype weight, agreed by the eutrophication network and State & Conservation 17-2022. weights are given in table below, and *M(in situ)* + *M(eo)* + *M(fb)* = 1

Sub-basin	$M_{in\ situ}$	M_{EO}	M_{fb}
SEA-001 The Kattegat	0.55	0.45	0
SEA-002 Great Belt	0.55	0.45	0
SEA-003 The Sound	0.55	0.45	0
SEA-004 Kiel Bay	0.55	0.45	0
SEA-005 Bay of Mecklenburg	0.55	0.45	0
SEA-006 Arkona Basin	0.55	0.45	0
SEA-007 Bornholm Basin	0.55	0.45	0
SEA-007B Pomeranian Bay	0.55	0.45	0
SEA-008 Gdansk Basin	0.55	0.45	0
SEA-009 Eastern Gotland Basin	0.55	0.45	0
SEA-010 Western Gotland Basin	0.55	0.45	0
SEA-011 Gulf of Riga	0.70	0.30	0
SEA-012 Northern Baltic Proper	0.40	0.30	0.30
SEA-013A Gulf of Finland Western	0.40	0.30	0.30
SEA-013B Gulf of Finland Eastern	0.55	0.45	0
SEA-014 Åland Sea	0.55	0.45	0
SEA-015 Bothnian Sea	0.55	0.45	0
SEA-016 The Quark	0.55	0.45	0
SEA-017 Bothnian Bay	0.55	0.45	0

ES(in situ) = arithmetic average of *in situ* observations in assessment unit during assessment season during year *y*

ES(eo) and *ES(fb)* = geometric average of EO/fb grid cell data in assessment unit during assessment season during year *y*

Eutrophication quality ratio (EQR)	EQR = BEST/ ES, where BEST= ET / (1 + ACDEV / 100) ET= threshold (table 1) ACDEV= acceptable deviation: 50 % for chlorophyll-a The final EQR values are scaled after normalisation to five classes of 0.2 width.
Indicator confidence	The confidence assessment for eutrophication indicators is included in HEAT, and includes aspects of temporal, spatial and accuracy confidence. The general methodology of the confidence assessment is described in Document 4.2 of IN-Eutrophication 16-2020 and updates are described in documents 4J-80 of State & Conservation 14-2021 and 4-2 of EG-EUTRO 20-2021. The R-code is available via https://github.com/ices-tools-prod/HEAT. Confidence is calculated separately for each data type. The overall indicator confidence is calculated using the weighted average of the data type specific values. The datatype weights (M) presented above are used in the weighing. The same criteria are used for all data types, based on their *n*, as described below. n_y*(in situ)* = number of observations n_y*(EO)*, n_y*(fb)* = the number of 20K grid cells containing data, multiplied with the number of observation days during year *y* For each datatype, confidence is calculated as the average of the aspects of temporal, spatial, accuracy and methodological confidence. The evaluation criteria for temporal confidence are given in the table below.

Confidence class	Evaluation criteria for general temporal confidence	Evaluation criteria for specific temporal confidence
High (100)	The evaluation is based on > 20 annual observations during the given assessment period	0 missing months per year
Medium (50)	The evaluation is based on 7 - 20 annual observations	1 missing month per year

Low (0)	The evaluation is based on < 7 annual observations	≥ 2 missing months per year

If the specific temporal confidence is high (100) for at least half of the assessed years, it is set as high (100) for the assessment period. The total temporal confidence is the average of the general and specific temporal confidence aspects.

The evaluation criteria for spatial confidence are given in the table below.

Confidence class	Evaluation criteria for spatial confidence
High (100)	Sampled grid cells cover > 80 % of the assessment-unit area
Medium (50)	Sampled grid cells cover 60-80 % of the assessment-unit area
Low (0)	Sampled grid cells cover < 60 % of the assessment-unit area

The accuracy aspect assesses the probability of correct classification (the classification being below or above the threshold for good status).

The evaluation criteria for accuracy aspect are given in table below.

Confidence class	Evaluation criteria for accuracy confidence
High (100)	GES has been/ not been achieved by ≥ 90% probability
Medium (50)	GES has been/ not been achieved by 70 - < 90% probability
Low (0)	GES has been/ not been achieved by < 70% probability

The *in situ* chlorophyll-a data (1) is collected in the ship-based monitoring and the samples are handled and analyzed, as explained in the HELCOM Guidelines for monitoring of chlorophyll-a. Measurements made at the depth of 0 – 10 m from the surface are used in the assessment.

The satellite-based EO-dataset (2) was calculated at SYKE using the Copernicus programme Sentinel-satellite series instrument data. The EO chl-a values for the surface layer depends on the transparency of the water. Cloudy areas have been removed from the dataset. The data was reported as daily statistics of 20K grid cells (Figure 9).

Information based on flow-through system onboard ferrylines (FerryBox data, 3) was collected and validated by SYKE, and was reported to ICES. As selected ferries operating on the Baltic Sea are the platform for FerryBox flow-through systems and only specific routes are followed (https://www.ferrybox.com/routes_data/routes/baltic_sea/index.php.en) then data availability is not evenly distributed across all HELCOM sub-basins. To remove possible spatial bias, which might be considerable in areas with spatial sampling gradients, the Ferrybox-based chl-a estimate is corrected to represent the entire area. This correction is done separately for each HELCOM sub-basin, based on a longer-term reference data, which was achieved using long term statistics on chl-a concentrations derived from satellite instrument MERIS (years 2002-2011). The correction is done separately for each year within the assessment period, according to the following formula:

$$F_{\text{corr}} = \frac{1}{n}\sum_{i=1}^{n} \frac{ref_{\text{ave}}}{ref_{\text{i}}} F_i \text{ , where}$$

F_{corr} is the corrected Ferrybox chla estimate in a HELCOM sub-basin,
n is the number of grid cells in the HELCOM sub-basin,
ref_i is the grid cell (geometrical) average for the reference data (MERIS 2002-2011),
ref_{ave} is the sub-basin average of the reference data and
F_i is the (geometrical) average Ferrybox chla estimate for grid cell ‘i’.

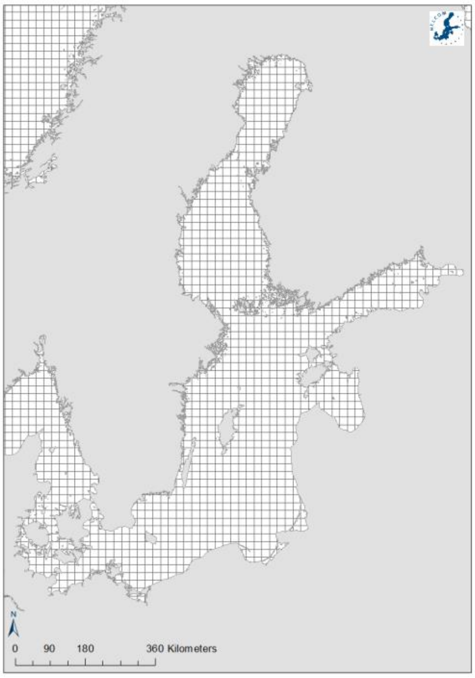


Figure 9. Earth observation data are reported as 20K grid cells.

In coastal areas the indicator is assessed using comparable indicators developed nationally for the purposes of assessments under the EU Water Framework Directive and data can be derived from different seasons (see Results table 2).

9.3 Monitoring and reporting requirements

Monitoring methodology

Monitoring of chlorophyll-a in the Contracting Parties of HELCOM is described on a general level in the HELCOM Monitoring Manual in the sub-programme Pigments. The sampling strategy is described in more detail in the Monitoring guidelines, which are adopted and published.

Data is reported annually to the COMBINE database hosted by ICES.

Current monitoring

The monitoring activities relevant to the indicator that are currently carried out by HELCOM Contracting Parties as described in the HELCOM Monitoring Manual in the sub-programme: Pigments.

Description of optimal monitoring

Regional monitoring of chlorophyll-a concentration is considered sufficient to support the indicator evaluation.

10. Data

The data and resulting data products (e.g., tables, figures and maps) available on the indicator web page can be used freely given that it is used appropriately, and the source is cited.

Result: Chlorophyll-a

Data: Chlorophyll-a – Ferry Box

Data: Chlorophyll-a – Earth Observation

Data source: The average chlorophyll-a is a combined estimate of three types of data:

1) *In situ* monitoring data provided by the HELCOM Contracting Parties, and kept in the HELCOM COMBINE database, hosted by ICES (www.ices.dk), added with data from the Gulf of Finland year database, hosted by the Finnish Environment Institute.

2) The original source of the satellite-based EO-chl-a dataset is calculated at SYKE. It has been validated by SYKE and kept at the eutrophication assessment database hosted by ICES.

3) FerryBox flow-through data is reported to ICES by Contracting Parties, to be included into the eutrophication assessment database. It is reported according to the QA/QC guidance for FerryBox Flow-through information, providing adequate metadata and quality information, including the following:

- (arithmetic and) geometric mean
- mode (most frequently occurring value in dataset)
- standard deviation
- percentiles (5,25, 50, 75, 95)
- N of observations that were used to derive statistics

Geographical coverage: The observations are distributed in the sub-basins according to the HELCOM monitoring programme, added occasionally with data from research cruises. *In situ* and EO data were used in all open-sea assessment units, whereas FB data was used in the Northern Baltic Proper and Gulf of Finland Western assessment units.

Temporal coverage: The estimates are based on observations made between June–September. Estimates include observations made during 2016–2021.

Data aggregation: The 2016–2021 value for each assessment unit was estimated as an inter-annual summer (June-September) average.

11. Contributors

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12. Archive

This version of the HELCOM core indicator report was published in April 2023:

The current version of this indicator (including as a PDF) can be found on the HELCOM indicator web page.

Earlier versions of the core indicator report include:

Chlorophyll a HELCOM core indicator 2018 (pdf)

HOLAS II component - Core indicator report – web-based version July 2017 (pdf)

13. References

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14. Other relevant resources

Eutrophication status of the Baltic Sea 2007-2011 - A concise thematic assessment (2014)

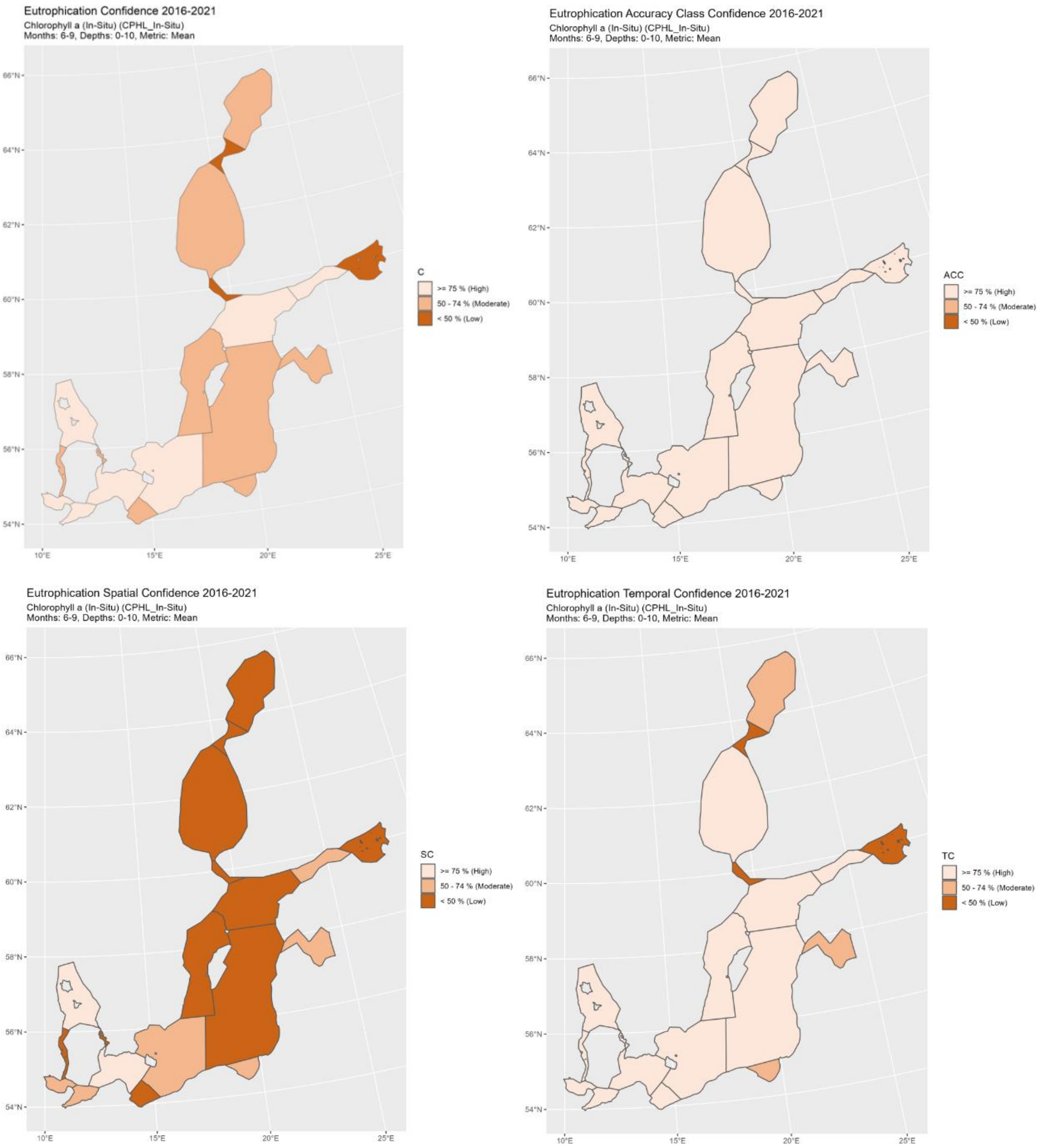
Approaches and methods for eutrophication target setting in the Baltic Sea region (2013)

HELCOM core indicators. Final report of the HELCOM CORESET project (2013)

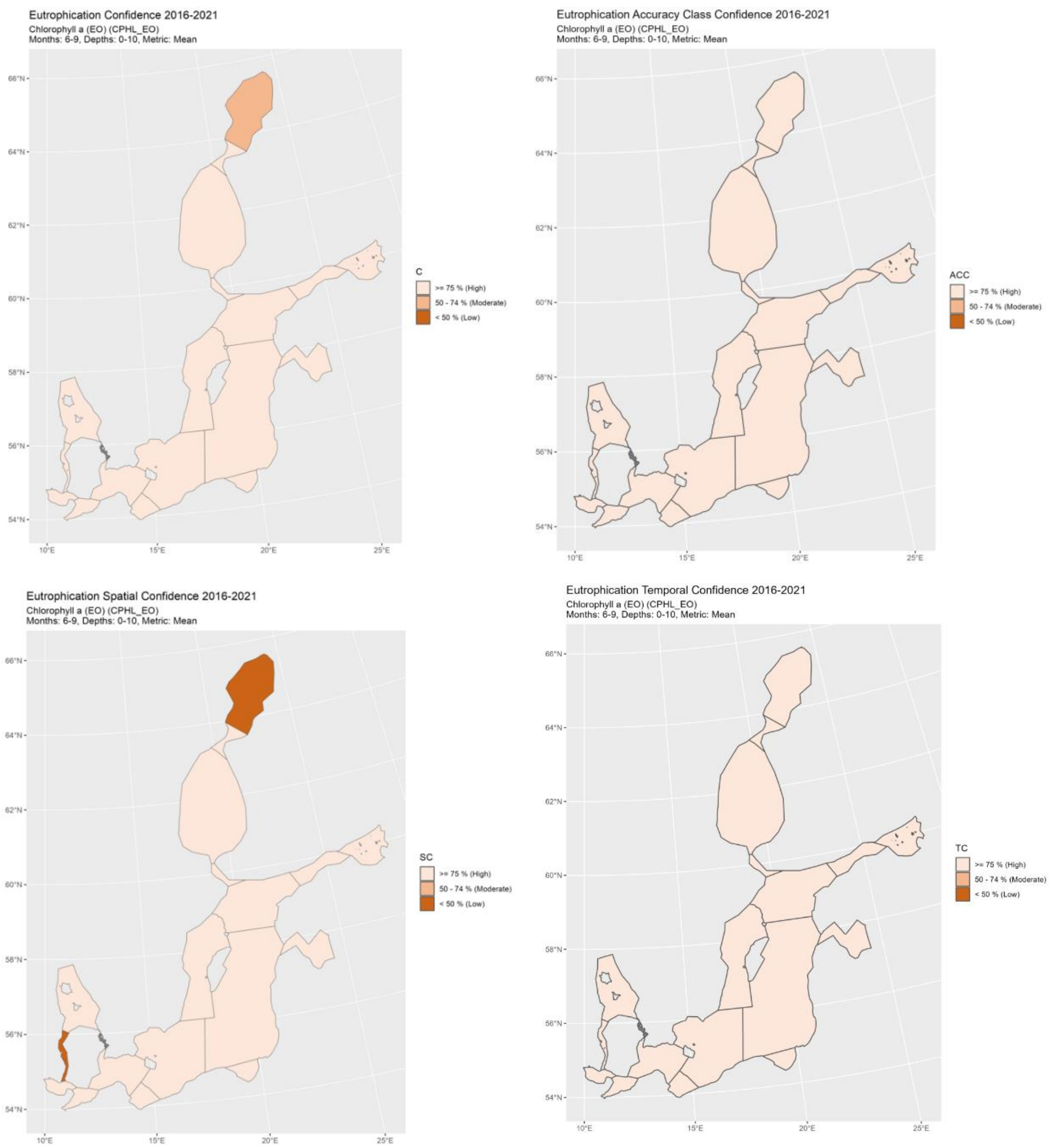
Eutrophication in the Baltic Sea. An integrated thematic assessment of the effects of nutrient enrichment in the Baltic Sea region (2009)

Development of tools for assessment of eutrophication in the Baltic Sea (2006)

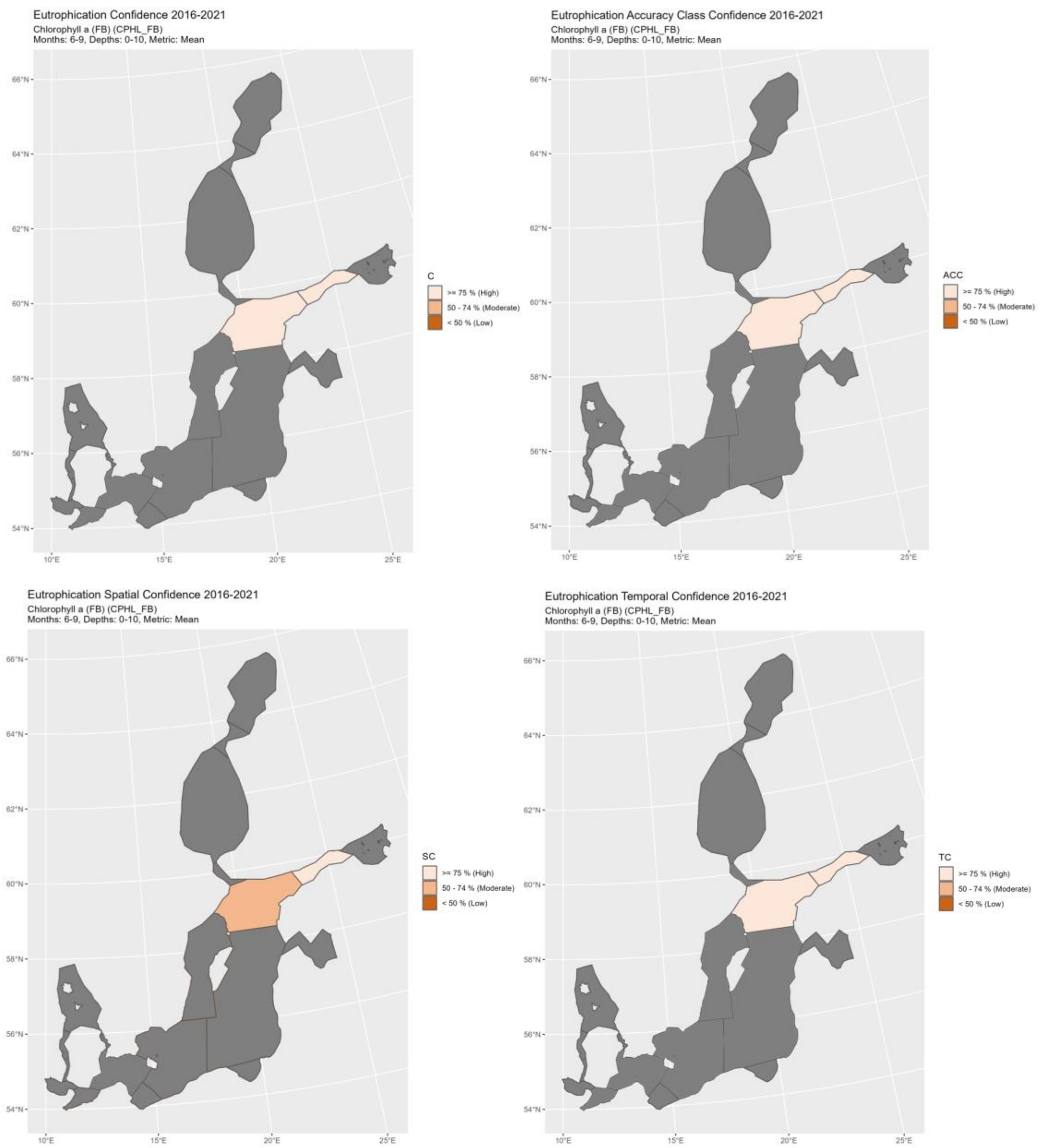
Annex providing data type specific overall, accuracy, spatial and temporal confidence



Annex figure 1. Data type specific confidence for *In situ* data regarding Overall Confidence (C), Accuracy Class (ACC), Spatial Confidence (SC) and Temporal Confidence (TC). Low indicator confidence calls for increase in monitoring.



Annex figure 2. Data type specific confidence for Earth observations (EO) regarding Overall Confidence (C), Accuracy Class (ACC), Spatial Confidence (SC) and Temporal Confidence (TC).



Annex figure 3. Data type specific confidence for Ferrybox (FB) regarding Overall Confidence (C), Accuracy Class (ACC), Spatial Confidence (SC) and Temporal Confidence (TC). Low indicator confidence calls for increase in monitoring.

Annex providing overview of additional coastal evaluations reported by certain Contracting Parties.

Annex table 1. Results for national coastal chlorophyll-a indicators by coastal WFD water type/water body. The table includes information on the assessment unit (CODE, defined in the HELCOM Monitoring and Assessment Strategy Annex 4), assessment period (start year and end year), average concentration (µg l^{-1}) during assessment period (ES) with standard deviation (SD), threshold values (ET) measured in µg l^{-1}, units, Ecological Quality Ratio (EQR) and Ecological Quality Ratio Scaled (EQRS). EQRS shows the present concentration in relation to the threshold value, decreasing along with increasing eutrophication. EQRS_class estimates the ecological status based on the EQRS value.

Indicator ID	Data name	UnitID	HELCOMAU	Unit Code/ Information	Assessment Unit	Period	ES	EQR	EQRS	EQRS_Class
1010	Phytoplankton biovolume	1001	GER-001	mesohaline inner coastal waters, Wismarbucht, Suedteil	Bay of Mecklenburg	20182018			0.57	Moderate
1010	Phytoplankton biovolume	1002	GER-002	mesohaline inner coastal waters, Wismarbucht, Nordteil	Bay of Mecklenburg	20182018			0.57	Moderate
1010	Phytoplankton biovolume	1003	GER-003	mesohaline inner coastal waters, Wismarbucht, Salzhaff	Bay of Mecklenburg	20182018			0.52	Moderate
1010	Phytoplankton biovolume	1004	GER-004	mesohaline open coastal waters, Suedliche Mecklenburger Bucht/ Travemuende bis Warnemünde	Bay of Mecklenburg	20182018			0.50	Moderate
1010	Phytoplankton biovolume	1005	GER-005	mesohaline inner coastal waters, Unterwarnow	Bay of Mecklenburg	20182018			0.52	Moderate
1010	Phytoplankton biovolume	1006	GER-006	mesohaline open coastal waters, Suedliche Mecklenburger Bucht/ Warnemünde bis Darss	Bay of Mecklenburg	20182018			0.43	Moderate
1010	Phytoplankton biovolume	1007	GER-007	oligohaline inner coastal waters, Ribnitzer See / Saaler Bodden	Arkona Basin	20182018			0.18	Bad

1010	Phytoplankton biovolume	1008	GER-008	oligohaline inner coastal waters, Koppelstrom / Bodstedter Bodden	Arkona Basin	20182018			0.26	Poor
1010	Phytoplankton biovolume	1009	GER-009	mesohaline inner coastal waters, Barther Bodden, Grabow	Arkona Basin	20182018			0.18	Bad
1010	Phytoplankton biovolume	1010	GER-010	mesohaline open coastal waters, Prerowbucht/ Darsser Ort bis Dornbusch	Arkona Basin	20182018			0.87	High
1010	Phytoplankton biovolume	1011	GER-011	mesohaline inner coastal waters, Westruegensche Bodden	Arkona Basin	20182018			0.38	Poor
1010	Phytoplankton biovolume	1012	GER-012	mesohaline inner coastal waters, Strelasund	Arkona Basin	20182018			0.37	Poor
1010	Phytoplankton biovolume	1013	GER-013	mesohaline inner coastal waters, Greifswalder Bodden	Arkona Basin	20182018			0.38	Poor
1010	Phytoplankton biovolume	1014	GER-014	mesohaline inner coastal waters, Kleiner Jasmunder Bodden	Arkona Basin	20182018			0.18	Bad
1010	Phytoplankton biovolume	1015	GER-015	mesohaline open coastal waters, Nord- und Ostruegensche Gewaesser	Arkona Basin	20182018			0.51	Moderate
1010	Phytoplankton biovolume	1016	GER-016	oligohaline inner coastal waters, Peenestrom	Bornholm Basin	20182018			0.27	Poor

1010	Phytoplankton biovolume	1017	GER-017	oligohaline inner coastal waters, Achterwasser	Bornholm Basin	20182018			0.24	Poor
1010	Phytoplankton biovolume	1018	GER-018	mesohaline open coastal waters, Pommersche Bucht, Nordteil	Arkona Basin	20182018			0.35	Poor
1010	Phytoplankton biovolume	1019	GER-019	mesohaline open coastal waters, Pommersche Bucht, Südteil	Bornholm Basin	20182018			0.28	Poor
1010	Phytoplankton biovolume	1020	GER-020	oligohaline inner coastal waters, Kleines Haff	Bornholm Basin	20182018			0.28	Poor
1005	Chlorophyll a (In-Situ)	1021	GER-021	mesohaline inner coastal waters, Flensburg Innenfoerde	Kiel Bay	20182018	5.09	0.26	0.13	Bad
1005	Chlorophyll a (In-Situ)	1022	GER-022	mesohaline open coastal waters, Geltinger Bucht	Kiel Bay	20182018	2.04	0.64	0.56	Moderate
1005	Chlorophyll a (In-Situ)	1023	GER-023	meso- to polyhaline open coastal waters, seasonally stratified, Flensburger Aussenfoerde	Kiel Bay	20182018	2.04	0.64	0.56	Moderate
1005	Chlorophyll a (In-Situ)	1024	GER-024	mesohaline open coastal waters, Aussenschlei	Kiel Bay	20182018	2.06	0.63	0.55	Moderate
1005	Chlorophyll a (In-Situ)	1025	GER-025	mesohaline inner coastal waters, Schleimuende	Kiel Bay	20182018	21.68	0.06	0.03	Bad
1005	Chlorophyll a (In-Situ)	1026	GER-026A	A.mesohaline inner coastal waters, Mittlere Schlei	Kiel Bay	20182018	53.31	0.03	0.02	Bad

1005	Chlorophyll a (In-Situ)	1027	GER-026B	B.mesohaline inner coastal waters, Mittlere Schlei	Kiel Bay	20182018	68.37	0.02	0.01	Bad
1005	Chlorophyll a (In-Situ)	1028	GER-027	mesohaline inner coastal waters, Innere Schlei	Kiel Bay	20182018	68.37	0.02	0.01	Bad
1005	Chlorophyll a (In-Situ)	1029	GER-028	mesohaline open coastal waters, Eckerfoerder Bucht, Rand	Kiel Bay	20182018	1.73	0.75	0.72	Good
1005	Chlorophyll a (In-Situ)	1030	GER-029	meso- to polyhaline open coastal waters, seasonally stratified, Eckerfoerderbucht, Tiefe	Kiel Bay	20182018	1.97	0.66	0.59	Moderate
1005	Chlorophyll a (In-Situ)	1031	GER-030	mesohaline open coastal waters, Buelk	Kiel Bay	20182018	1.97	0.66	0.59	Moderate
1005	Chlorophyll a (In-Situ)	1032	GER-031	meso- to polyhaline open coastal waters, seasonally stratified, Kieler Aussenfoerde	Kiel Bay	20182018	2.04	0.64	0.56	Moderate
1005	Chlorophyll a (In-Situ)	1033	GER-032	mesohaline inner coastal waters, Kieler Innenfoerde	Kiel Bay	20182018	4.53	0.29	0.15	Bad
1005	Chlorophyll a (In-Situ)	1034	GER-033	mesohaline open coastal waters, Probstei	Kiel Bay	20182018	1.80	0.72	0.68	Good
1005	Chlorophyll a (In-Situ)	1035	GER-034	mesohaline open coastal waters, Putlos	Kiel Bay	20182018	1.80	0.72	0.68	Good
1005	Chlorophyll a (In-Situ)	1036	GER-035	meso- to polyhaline open coastal waters, seasonally stratified, Hohwachter Bucht	Kiel Bay	20182018	1.65	0.79	0.77	Good

1005	Chlorophyll a (In-Situ)	1037	GER-036A	A.mesohaline open coastal waters, Fehmarnsund	Kiel Bay	20182018	1.77	0.74	0.70	Good
1005	Chlorophyll a (In-Situ)	1038	GER-036B	B.mesohaline open coastal waters, Fehmarnsund	Bay of Mecklenburg	20182018	1.79	0.73	0.69	Good
1005	Chlorophyll a (In-Situ)	1039	GER-037	mesohaline inner coastal waters, Orther Bucht	Kiel Bay	20182018	1.86	0.70	0.64	Good
1005	Chlorophyll a (In-Situ)	1040	GER-038A	A.mesohaline open coastal waters, Fehmarnbelt	Kiel Bay	20182018	1.47	0.88	0.88	High
1005	Chlorophyll a (In-Situ)	1041	GER-038B	B.mesohaline open coastal waters, Fehmarnbelt	Bay of Mecklenburg	20182018	1.47	0.88	0.88	High
1005	Chlorophyll a (In-Situ)	1042	GER-039	meso- to polyhaline open coastal waters, seasonally stratified, Fehmarn Sund Ost	Bay of Mecklenburg	20182018	1.59	0.82	0.81	High
1005	Chlorophyll a (In-Situ)	1043	GER-040	mesohaline open coastal waters, Groemitz	Bay of Mecklenburg	20182018	2.13	0.61	0.52	Moderate
1005	Chlorophyll a (In-Situ)	1044	GER-041	mesohaline open coastal waters, Neustaedter Bucht	Bay of Mecklenburg	20182018	2.20	0.59	0.49	Moderate
1005	Chlorophyll a (In-Situ)	1045	GER-042	mesohaline inner coastal waters, Travemuende	Bay of Mecklenburg	20182018	19.77	0.07	0.03	Bad
1005	Chlorophyll a (In-Situ)	1046	GER-043	mesohaline inner coastal waters, Poetenitzer Wiek	Bay of Mecklenburg	20182018	19.77	0.08	0.04	Bad
1005	Chlorophyll a (In-Situ)	1047	GER-044	mesohaline inner coastal waters, Untere Trave	Bay of Mecklenburg	20182018	20.19	0.08	0.04	Bad

1010	Phytoplankton biovolume	1048	GER-111	mesohaline inner coastal waters, Nordruegensche Bodden	Arkona Basin	20182018			0.22	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2001	DEN-001	Roskilde Fjord, ydre	Kattegat	20162021		0.43	0.41	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2002	DEN-002	Roskilde Fjord, indre	Kattegat	20162021		0.60	0.56	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2016	DEN-016	Korsør Nor	Great Belt	20162021		0.67	0.64	Good
2005	Chlorophyll a (In-Situ_EO_FB)	2017	DEN-017	Basnæs Nor	Great Belt	20162021		0.95	0.95	High
2005	Chlorophyll a (In-Situ_EO_FB)	2018	DEN-018	Holsteinborg Nor	Great Belt	20162021		1.09	1.09	High
2005	Chlorophyll a (In-Situ_EO_FB)	2024	DEN-024	Isefjord, ydre	Kattegat	20162021		0.42	0.39	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2025	DEN-025	Skælskør Fjord og Nor	Great Belt	20162021		0.37	0.35	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2029	DEN-029	Kalundborg Fjord	Great Belt	20162021		0.47	0.44	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2034	DEN-034	Smålandsfarvandet, syd	Great Belt	20162021		0.68	0.68	Good
2005	Chlorophyll a (In-Situ_EO_FB)	2035	DEN-035	Karrebæk Fjord	Great Belt	20162021		0.68	0.68	Good

2005	Chlorophyll a (In-Situ_EO_FB)	2036	DEN-036	Dybsø Fjord	Great Belt	20162021		0.71	0.71	Good
2005	Chlorophyll a (In-Situ_EO_FB)	2037	DEN-037	Avnø Fjord	Great Belt	20162021		0.77	0.77	Good
2005	Chlorophyll a (In-Situ_EO_FB)	2044	DEN-044	Hjelm Bugt	Arkona Basin	20162021		0.43	0.41	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2046	DEN-046	Fakse Bugt	Arkona Basin	20162021		0.44	0.43	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2047	DEN-047	Præstø Fjord	Arkona Basin	20162021		0.42	0.41	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2048	DEN-048	Stege Bugt	Arkona Basin	20162021		0.74	0.75	Good
2005	Chlorophyll a (In-Situ_EO_FB)	2049	DEN-049	Stege Nor	Arkona Basin	20162021		0.30	0.29	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2059	DEN-059	Nærå Strand	Great Belt	20162021		0.31	0.29	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2062	DEN-062	Lillestrand	Great Belt	20162021		0.47	0.44	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2068	DEN-068	Lindelse Nor	Great Belt	20162021		1.13	1.13	High
2005	Chlorophyll a (In-Situ_EO_FB)	2072	DEN-072	Kløven	Great Belt	20162021		0.60	0.60	Moderate

2005	Chlorophyll a (In-Situ_EO_FB)	2074	DEN-074	Bredningen	Great Belt	20162021		0.22	0.22	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2080	DEN-080	Gamborg Fjord	Great Belt	20162021		0.40	0.40	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2082	DEN-082	Aborg Minde Nor	Great Belt	20162021		0.20	0.20	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2083	DEN-083	Holckenhavn Fjord	Great Belt	20162021		0.23	0.22	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2084	DEN-084	Kerteminde Fjord	Great Belt	20162021		0.37	0.35	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2085	DEN-085	Kertinge Nor	Great Belt	20162021		0.41	0.38	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2086	DEN-086	Nyborg Fjord	Great Belt	20162021		0.40	0.38	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2087	DEN-087	Helnæs Bugt	Great Belt	20162021		0.24	0.24	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2089	DEN-089	Lunkebugten	Great Belt	20162021		0.35	0.35	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2090	DEN-090	Langelandssund	Great Belt	20162021		0.44	0.44	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2092	DEN-092	Odense Fjord, ydre	Great Belt	20162021		0.48	0.45	Moderate

2005	Chlorophyll a (In-Situ_EO_FB)	2093	DEN-093	Odense Fjord, Seden Strand	Great Belt	20162021		0.74	0.70	Good
2005	Chlorophyll a (In-Situ_EO_FB)	2101	DEN-101	Genner Bugt	Great Belt	20162021		0.23	0.23	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2102	DEN-102	Åbenrå Fjord	Great Belt	20162021		0.18	0.18	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	2103	DEN-103	Als Fjord	Great Belt	20162021		0.26	0.26	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2105	DEN-105	Augustenborg Fjord	Great Belt	20162021		0.37	0.37	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2106	DEN-106	Haderslev Fjord	Great Belt	20162021		0.13	0.13	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	2108	DEN-108	Avnø Vig	Great Belt	20162021		0.28	0.28	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2109	DEN-109	Hejlsminde Nor	Great Belt	20162021		0.38	0.38	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2110	DEN-110	Nybøl Nor	Great Belt	20162021		0.38	0.38	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2113	DEN-113	Flensborg Fjord, indre	Great Belt	20162021		0.19	0.19	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	2114	DEN-114	Flensborg Fjord, ydre	Great Belt	20162021		0.38	0.38	Poor

2005	Chlorophyll a (In-Situ_EO_FB)	2123	DEN-123	Vejle Fjord, indre	Great Belt	20162021		0.50	0.47	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2124	DEN-124	Kolding Fjord, indre	Great Belt	20162021		0.24	0.23	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2125	DEN-125	Kolding Fjord, ydre	Great Belt	20162021		0.18	0.17	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	2128	DEN-128	Horsens Fjord, indre	Great Belt	20162021		0.24	0.23	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2136	DEN-136	Randers Fjord, indre	Kattegat	20162021		0.53	0.50	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2137	DEN-137	Randers Fjord, ydre	Kattegat	20162021		0.77	0.73	Good
2005	Chlorophyll a (In-Situ_EO_FB)	2141	DEN-141	Ebeltoft Vig	Great Belt	20162021		0.78	0.75	Good
2005	Chlorophyll a (In-Situ_EO_FB)	2142	DEN-142	Stavns Fjord	Great Belt	20162021		0.75	0.72	Good
2005	Chlorophyll a (In-Situ_EO_FB)	2144	DEN-144	Knebel Vig	Great Belt	20162021		0.45	0.42	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2145	DEN-145	Kalø Vig	Great Belt	20162021		0.51	0.48	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2146	DEN-146	Norsminde Fjord	Great Belt	20162021		0.58	0.54	Moderate

2005	Chlorophyll a (In-Situ_EO_FB)	2147	DEN-147	Århus Bugt og Begtrup Vig	Great Belt	20162021		0.51	0.48	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2157	DEN-157	Bjørnholms Bugt, Riisgårde Bredning, Skive Fjord og Lovns Bredning	Kattegat	20162021		0.11	0.10	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	2158	DEN-158	Hjarbæk Fjord	Kattegat	20162021		0.12	0.11	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	2159	DEN-159	Mariager Fjord, indre	Kattegat	20162021		0.06	0.06	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	2160	DEN-160	Mariager Fjord, ydre	Kattegat	20162021		0.36	0.33	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2165	DEN-165	Isefjord, indre	Kattegat	20162021		0.43	0.40	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2200	DEN-200	Kattegat, Nordsjælland	Kattegat	20162021		0.57	0.53	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2201	DEN-201	Køge Bugt	Arkona Basin	20162021		0.32	0.31	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2204	DEN-204	Jammerland Bugt og Musholm Bugt	Great Belt	20162021		0.53	0.49	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2206	DEN-206	Smålandsfarvandet, åbne del	Great Belt	20162021		0.44	0.44	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	2207	DEN-207	Nakskov Fjord	Great Belt	20162021		0.89	0.89	High

2005	Chlorophyll a (In-Situ_EO_FB)	2209	DEN-209	Rødsand og Bredningen	Great BeltandBay of Mecklenburg	20162021		0.28	0.28	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2212	DEN-212	Faaborg Fjord	Great Belt	20162021		0.36	0.36	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2214	DEN-214	Det Sydfynske Øhav	Great Belt	20162021		0.28	0.28	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2216	DEN-216	Lillebælt, syd	Great Belt	20162021		0.28	0.28	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2217	DEN-217	Lillebælt, Bredningen	Great Belt	20162021		0.32	0.32	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2219	DEN-219	Århus Bugt syd, Samsø og Nordlige Bælthav	Great Belt	20162021		0.42	0.40	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2222	DEN-222	Kattegat, Aalborg Bugt	Kattegat	20162021		1.06	1.07	High
2005	Chlorophyll a (In-Situ_EO_FB)	2224	DEN-224	Nordlige Lillebælt	Great Belt	20162021		0.37	0.34	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2232	DEN-232	Nissum Bredning	Kattegat	20162021		0.32	0.30	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	2234	DEN-234	Løgstør Bredning	Kattegat	20162021		0.20	0.19	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	2235	DEN-235	Nibe Bredning og Langerak	Kattegat	20162021		0.27	0.26	Poor

2005	Chlorophyll a (In-Situ_EO_FB)	2236	DEN-236	Thisted Bredning	Kattegat	20162021		0.14	0.13	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	2238	DEN-238	Halkær Bredning	Kattegat	20162021		0.12	0.11	Bad
3004	Chlorophyll a	3001	EST-001	Narva-Kunda Bay CWB	Gulf of Finland	20162021		0.52	0.51	Moderate
3005	Phytoplankton biomass	3001	EST-001	Narva-Kunda Bay CWB	Gulf of Finland	20162021		0.76	0.71	Good
3004	Chlorophyll a	3002	EST-002	Eru-Käsmu Bay CWB	Gulf of Finland	20162020		0.71	0.68	Good
3005	Phytoplankton biomass	3002	EST-002	Eru-Käsmu Bay CWB	Gulf of Finland	20162020		0.29	0.32	Poor
3004	Chlorophyll a	3003	EST-003	Hara and Kolga Bay CWB	Gulf of Finland	20212021		0.31	0.36	Poor
3005	Phytoplankton biomass	3003	EST-003	Hara and Kolga Bay CWB	Gulf of Finland	20212021		0.31	0.36	Poor
3004	Chlorophyll a	3004	EST-005	Muuga-Tallinna-Kakumäe Bay CWB	Gulf of Finland	20162021		0.48	0.47	Moderate
3005	Phytoplankton biomass	3004	EST-005	Muuga-Tallinna-Kakumäe Bay CWB	Gulf of Finland	20162021		0.20	0.19	Bad
3004	Chlorophyll a	3005	EST-006	Pakri Bay CWB	Gulf of Finland	20212021		0.39	0.43	Moderate
3005	Phytoplankton biomass	3005	EST-006	Pakri Bay CWB	Gulf of Finland	20212021		0.20	0.18	Bad
3004	Chlorophyll a	3006	EST-007	Hiiu Shallow CWB	Gulf of Riga	20212021		0.63	0.58	Moderate
3005	Phytoplankton biomass	3006	EST-007	Hiiu Shallow CWB	Gulf of Riga	20212021		0.17	0.16	Bad
3004	Chlorophyll a	3007	EST-008	Haapsalu Bay CWB	Gulf of Riga	20182021		0.26	0.27	Poor
3005	Phytoplankton biomass	3007	EST-008	Haapsalu Bay CWB	Gulf of Riga	20182021		0.19	0.17	Bad
3004	Chlorophyll a	3008	EST-009	Matsalu Bay CWB	Gulf of Riga	20212021		0.31	0.36	Poor
3005	Phytoplankton biomass	3008	EST-009	Matsalu Bay CWB	Gulf of Riga	20212021		0.20	0.18	Bad

3004	Chlorophyll a	3009	EST-010	Soela Strait CWB	Northern Baltic Proper	20212021		0.32	0.39	Poor
3005	Phytoplankton biomass	3009	EST-010	Soela Strait CWB	Northern Baltic Proper	20212021		0.79	0.75	Good
3004	Chlorophyll a	3010	EST-011	Kihelkonna Bay CWB	Eastern Gotland Basin	20212021		1.00	1.00	High
3005	Phytoplankton biomass	3010	EST-011	Kihelkonna Bay CWB	Eastern Gotland Basin	20212021		0.21	0.19	Bad
3004	Chlorophyll a	3011	EST-013	Pärnu Bay CWB	Gulf of Riga	20162021		0.50	0.50	Moderate
3004	Chlorophyll a	3012	EST-014	Kassari-Õunaku Bay CWB	Gulf of Riga	20162018		0.88	0.86	High
3005	Phytoplankton biomass	3012	EST-014	Kassari-Õunaku Bay CWB	Gulf of Riga	20162018		0.66	0.64	Good
3004	Chlorophyll a	3013	EST-016	Väinameri CWB	Gulf of Riga	20212021		0.61	0.57	Moderate
3005	Phytoplankton biomass	3013	EST-016	Väinameri CWB	Gulf of Riga	20212021		0.22	0.20	Poor
3004	Chlorophyll a	3014	EST-017	NW part of the Gulf of Riga CWB	Gulf of Riga	20212021				
3005	Phytoplankton biomass	3014	EST-017	NW part of the Gulf of Riga CWB	Gulf of Riga	20212021				
3004	Chlorophyll a	3015	EST-018	NE part of the Gulf of Riga CWB	Gulf of Riga	20212021				
3005	Phytoplankton biomass	3015	EST-018	NE part of the Gulf of Riga CWB	Gulf of Riga	20212021				
3004	Chlorophyll a	3016	EST-019	Central part of the Gulf of Riga CWB	Gulf of Riga	20212021		0.53	0.52	Moderate
3005	Phytoplankton biomass	3016	EST-019	Central part of the Gulf of Riga CWB	Gulf of Riga	20212021		0.80	0.76	Good
4003	Chlorophyll a (summer)	4001	FIN-001	Lounainen sisäsaaristo	Åland Sea	20112016			0.40	Moderate

4003	Chlorophyll a (summer)	4002	FIN-002	Lounainen ulkosaaristo	Åland Sea	20112016			0.48	Moderate
4004	Phytoplankton biomass	4002	FIN-002	Lounainen ulkosaaristo	Åland Sea	20112016			0.43	Moderate
4003	Chlorophyll a (summer)	4003	FIN-003	Suomenlahden sisäsaaristo	Gulf of Finland	20112016			0.45	Moderate
4003	Chlorophyll a (summer)	4004	FIN-004	Suomenlahden ulkosaaristo	Gulf of Finland	20112016			0.41	Moderate
4004	Phytoplankton biomass	4004	FIN-004	Suomenlahden ulkosaaristo	Gulf of Finland	20112016			0.44	Moderate
4003	Chlorophyll a (summer)	4005	FIN-005	Lounainen välisaaristo	Åland Sea	20112016			0.49	Moderate
4004	Phytoplankton biomass	4005	FIN-005	Lounainen välisaaristo	Åland Sea	20112016			0.55	Moderate
4003	Chlorophyll a (summer)	4006	FIN-006	Merenkurkun sisäsaaristo	The Quark	20112016			0.55	Moderate
4003	Chlorophyll a (summer)	4007	FIN-007	Merenkurkun ulkosaaristo	The Quark	20112016			0.66	Good
4004	Phytoplankton biomass	4007	FIN-007	Merenkurkun ulkosaaristo	The Quark	20112016			0.60	Good
4003	Chlorophyll a (summer)	4008	FIN-008	Selkämeren sisemmät rannikkovedet	Bothnian Sea	20112016			0.53	Moderate
4003	Chlorophyll a (summer)	4009	FIN-009	Selkämeren ulommat rannikkovedet	Bothnian Sea	20112016			0.59	Moderate
4004	Phytoplankton biomass	4009	FIN-009	Selkämeren ulommat rannikkovedet	Bothnian Sea	20112016			0.56	Moderate
4003	Chlorophyll a (summer)	4010	FIN-010	Perämeren sisemmät rannikkovedet	Bothnian Bay	20112016			0.54	Moderate
4003	Chlorophyll a (summer)	4011	FIN-011	Perämeren ulommat rannikkovedet	Bothnian Bay	20112016			0.60	Moderate
4004	Phytoplankton biomass	4011	FIN-011	Perämeren ulommat rannikkovedet	Bothnian Bay	20112016			0.72	Good
4003	Chlorophyll a (summer)	4012	FIN-012	Åland innerskärgård	Åland Sea	20112016		0.46	0.47	Moderate

4003	Chlorophyll a (summer)	4013	FIN-013	Åland mellanskärgård	Åland Sea	20112016		0.54	0.52	Moderate
4003	Chlorophyll a (summer)	4014	FIN-014	Åland ytterskärgård	Åland Sea	20112016		0.52	0.50	Moderate
7009	Chlorophyll a (In-Situ_EO_FB)	7001	POL-001	PL TW I WB 9 very sheltered, fully mixed, substratum: silt/sandy silt/silty sand; ice cover >90 days, water residence time 52 days	Bornholm Basin	20162021	23.64	0.62	0.52	Moderate
7009	Chlorophyll a (In-Situ_EO_FB)	7002	POL-002	PL TW I WB 8 very sheltered, fully mixed, substratum: silt/sandy silt/silty sand; ice cover >90 days, water residence time 52 days	Bornholm Basin	20162021	29.04	0.49	0.36	Poor
7009	Chlorophyll a (In-Situ_EO_FB)	7003	POL-003	PL TW I WB 1 very sheltered, fully mixed, substratum: silt/sandy silt/silty sand; ice cover >90 days, water residence time 52 days	Gdansk Basin	20162021	69.57	0.23	0.12	Bad
7009	Chlorophyll a (In-Situ_EO_FB)	7004	POL-004	PL TW II WB 2 very sheltered, fully mixed, substratum: lagoonal fine snd medium grained sand/silty sand; residence time 138	Gdansk Basin	20162021	4.24	0.35	0.22	Poor

				day, ice cover >90 days						
7010	Chlorophyll a (In-Situ_EO_FB)	7005	POL-005	PL TW III WB 3 partly protected, partly stratified, substratum: medium grained sand/pebbles/marine silty sand; ice-incidental	Gdansk Basin	20162021	3.83	0.67	0.60	Good
7010	Chlorophyll a (In-Situ_EO_FB)	7006	POL-006	PL TW IV WB 4 partly stratified, moderately exposed, substratum: sand/silt; ice - incidental	Gdansk Basin	20162021	4.96	0.51	0.37	Poor
7010	Chlorophyll a (In-Situ_EO_FB)	7007	POL-007	PL TW V WB 6 river mouth, partly stratified, partly sheltered, substratum: medium grained sand/silty sand	Bornholm Basin	20162021	6.88	0.40	0.27	Poor
7010	Chlorophyll a (In-Situ_EO_FB)	7008	POL-008	PL TW V WB 5 river mouth, partly stratified, partly sheltered, substratum: medium grained sand/silty sand	Gdansk Basin	20162021	9.65	0.41	0.27	Poor

7010	Chlorophyll a (In-Situ_EO_FB)	7009	POL-009	PL TW V WB 7 river mouth, partly stratified, partly sheltered, substratum: medium grained sand/silty sand	Bornholm Basin	20162021	9.80	0.53	0.41	Moderate
7010	Chlorophyll a (In-Situ_EO_FB)	7010	POL-010	PL CWI WB2 coastal waters, moderately exposed, fully mixed, substratum:sand/fine sand	Gdansk Basin	20162021	3.24	0.43	0.29	Poor
7010	Chlorophyll a (In-Situ_EO_FB)	7011	POL-011	PL CWI WB1 coastal waters, moderately exposed, fully mixed, substratum:sand/fine sand	Gdansk Basin	20162021	11.03	0.26	0.15	Bad
7010	Chlorophyll a (In-Situ_EO_FB)	7012	POL-012	PL CWI WB3 coastal waters, moderately exposed, fully mixed, substratum:sand/fine sand	Gdansk Basin	20162021	7.24	0.19	0.10	Bad
7010	Chlorophyll a (In-Situ_EO_FB)	7013	POL-013	PL CW II WB 8 central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Bornholm Basin	20162021	4.65	0.31	0.18	Bad
7010	Chlorophyll a (In-Situ_EO_FB)	7014	POL-014	PL CW II WB 6W central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Bornholm Basin	20162021	5.39	0.27	0.15	Bad

7010	Chlorophyll a (In-Situ_EO_FB)	7015	POL-015	PL CW II WB 6E central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Bornholm Basin	20162021	5.05	0.28	0.16	Bad
7010	Chlorophyll a (In-Situ_EO_FB)	7016	POL-016	PL CWII WB5 central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Eastern Gotland Basin	20162021	6.56	0.26	0.16	Bad
7010	Chlorophyll a (In-Situ_EO_FB)	7017	POL-017	PL CWII WB4 central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Gdansk Basin	20162021	2.71	0.54	0.43	Moderate
7010	Chlorophyll a (In-Situ_EO_FB)	7018	POL-018	PL CW III WB 9 central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Bornholm Basin	20162021	5.10	0.44	0.30	Poor
7010	Chlorophyll a (In-Situ_EO_FB)	7019	POL-019	PL CW III WB 7 central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Bornholm Basin	20162021	3.88	0.37	0.24	Poor
80051	Chlorophyll a	8001	SWE-001	1s West Coast inner coastal water	Kattegat	20182018	1.70	0.94	0.95	High
80051	Chlorophyll a	8002	SWE-003	4 West Coast outer coastal water, Kattegat	Kattegat	20182018	1.22	0.82	0.79	Good

80052	Total phytoplankton biomass	8002	SWE-003	4 West Coast outer coastal water, Kattegat	Kattegat	20182018	0.68	0.73	0.84	High
80051	Chlorophyll a	8003	SWE-004	5 South Halland and north Öresund coastal water	Kattegat	20182018	1.20	0.83	0.80	High
80052	Total phytoplankton biomass	8003	SWE-004	5 South Halland and north Öresund coastal water	Kattegat	20182018	0.89	0.79	0.90	High
80051	Chlorophyll a	8004	SWE-005	6 Öresund inner coastal water	The Sound	20172017	1.26	0.71	0.71	Good
80052	Total phytoplankton biomass	8004	SWE-005	6 Öresund inner coastal water	The Sound	20172017	0.28	0.90	0.95	High
80051	Chlorophyll a	8005	SWE-006	7 Skåne coastal water	Arkona Basin	20182018	1.74	0.69	0.64	Good
80052	Total phytoplankton biomass	8005	SWE-006	7 Skåne coastal water	Arkona Basin	20172017	0.19	0.96	0.97	High
80051	Chlorophyll a	8006	SWE-007	8 Blekinge archipelago and Kalmarsund, inner	Western Gotland Basin	20182018	2.75	0.53	0.51	Moderate
80051	Chlorophyll a	8007	SWE-008	9 Blekinge archipelago and Kalmarsund, outer	Western Gotland Basin	20182018	3.46	0.71	0.60	Moderate
80051	Chlorophyll a	8008	SWE-009	10 Öland and Gotland coastal water	Eastern Gotland Basin	20182018	4.11	0.34	0.39	Poor
80051	Chlorophyll a	8009	SWE-010	11 Gotland north-west coastal water	Western Gotland Basin	20182018	3.77	0.37	0.41	Moderate
80051	Chlorophyll a	8010	SWE-011	12n Östergötland and Stockholm archipelago	Northern Baltic Proper	20182018	3.41	0.46	0.47	Moderate

80051	Chlorophyll a	8011	SWE-012	12s Östergötland and Stockholm archipelago	Western Gotland Basin	20182018	3.28	0.46	0.47	Moderate
80051	Chlorophyll a	8012	SWE-013	13 Östergötland inner coastal water	Western Gotland Basin	20172017	6.01	0.32	0.37	Poor
80051	Chlorophyll a	8013	SWE-014	14 Östergötland outer coastal water	Western Gotland Basin	20172017	2.34	0.60	0.56	Moderate
80051	Chlorophyll a	8014	SWE-015	15 Stockholm archipelago, outer coastal water	Northern Baltic Proper	20182018	2.95	0.47	0.48	Moderate
80051	Chlorophyll a	8015	SWE-016	16 South Bothnian Sea,inner coastal water	Bothnian Sea	20182018	4.04	0.35	0.41	Moderate
80051	Chlorophyll a	8016	SWE-017	17 South Bothnian Sea, outer coastal water	Bothnian Sea	20182018	2.74	0.44	0.48	Moderate
80051	Chlorophyll a	8017	SWE-018	18 North Bothnian Sea, Höga kusten, inner	Bothnian Sea	20182018	2.73	0.51	0.53	Moderate
80052	Total phytoplankton biomass	8017	SWE-018	18 North Bothnian Sea, Höga kusten, inner	Bothnian Sea	20172017	0.38	0.54	0.68	Good
80051	Chlorophyll a	8019	SWE-020	20 North Quark inner coastal water	The Quark	20182018	3.67	0.35	0.45	Moderate
80051	Chlorophyll a	8019	SWE-020	20 North Quark inner coastal water	The Quark	20182018	3.67	0.35	0.45	Moderate
80052	Total phytoplankton biomass	8019	SWE-020	20 North Quark inner coastal water	The Quark	20172017	0.77	0.21	0.36	Poor
80051	Chlorophyll a	8020	SWE-021	21 North Quark outer coastal water	The Quark	20182018	2.24	0.54	0.57	Moderate
80051	Chlorophyll a	8020	SWE-021	21 North Quark outer coastal water	The Quark	20182018	2.24	0.54	0.57	Moderate

80052	Total phytoplankton biomass	8020	SWE-021	21 North Quark outer coastal water	The Quark	20172017	0.32	0.47	0.70	Good
80051	Chlorophyll a	8023	SWE-024	24 Stockholm inner archipelago	Northern Baltic Proper	20182018	5.56	0.36	0.41	Moderate
80051	Chlorophyll a	8023	SWE-024	24 Stockholm inner archipelago	Northern Baltic Proper	20182018	5.56	0.36	0.41	Moderate

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IndicatorID	Name	Period	Unit ID	HELCOMID	HELCOM ID description	Assessment Unit	ET	ES	SD	EQR	EQRS	EQRS Class
1005	Chlorophyll a (In-Situ)	20132018	1021	GER-021	mesohaline inner coastal waters, Flensburg Innenfoerde	Kiel Bay	1.95	5.09	NA	0.26	0.13	Bad
1005	Chlorophyll a (In-Situ)	20132018	1022	GER-022	mesohaline open coastal waters, Geltinger Bucht	Kiel Bay	1.95	2.04	NA	0.64	0.56	Moderate
1005	Chlorophyll a (In-Situ)	20132018	1023	GER-023	meso- to polyhaline open coastal waters, seasonally stratified, Flensburger Aussenfoerde	Kiel Bay	1.95	2.04	NA	0.64	0.56	Moderate
1005	Chlorophyll a (In-Situ)	20132018	1024	GER-024	mesohaline open coastal waters, Aussenschlei	Kiel Bay	1.95	2.06	NA	0.63	0.55	Moderate
1005	Chlorophyll a (In-Situ)	20132018	1025	GER-025	mesohaline inner coastal waters, Schleimuende	Kiel Bay	1.95	21.68	NA	0.06	0.03	Bad
1005	Chlorophyll a (In-Situ)	20132018	1026	GER-026A	A.mesohaline inner coastal waters, Mittlere Schlei	Kiel Bay	2.40	53.31	NA	0.03	0.02	Bad

1005	Chlorophyll a (In-Situ)	20132018	1027	GER-026B	B.mesohaline inner coastal waters, Mittlere Schlei	Kiel Bay	2.40	68.37	NA	0.02	0.01	Bad
1005	Chlorophyll a (In-Situ)	20132018	1028	GER-027	mesohaline inner coastal waters, Innere Schlei	Kiel Bay	2.40	68.37	NA	0.02	0.01	Bad
1005	Chlorophyll a (In-Situ)	20132018	1029	GER-028	mesohaline open coastal waters, Eckerfoerder Bucht, Rand	Kiel Bay	1.95	1.73	NA	0.75	0.72	Good
1005	Chlorophyll a (In-Situ)	20132018	1030	GER-029	meso- to polyhaline open coastal waters, seasonally stratified, Eckerfoerderbucht, Tiefe	Kiel Bay	1.95	1.97	NA	0.66	0.59	Moderate
1005	Chlorophyll a (In-Situ)	20132018	1031	GER-030	mesohaline open coastal waters, Buelk	Kiel Bay	1.95	1.97	NA	0.66	0.59	Moderate
1005	Chlorophyll a (In-Situ)	20132018	1032	GER-031	meso- to polyhaline open coastal waters, seasonally stratified, Kieler Aussenfoerde	Kiel Bay	1.95	2.04	NA	0.64	0.56	Moderate
1005	Chlorophyll a (In-Situ)	20132018	1033	GER-032	mesohaline inner coastal waters, Kieler Innenfoerde	Kiel Bay	1.95	4.53	NA	0.29	0.15	Bad
1005	Chlorophyll a (In-Situ)	20132018	1034	GER-033	mesohaline open coastal waters, Probstei	Kiel Bay	1.95	1.80	NA	0.72	0.68	Good
1005	Chlorophyll a (In-Situ)	20132018	1035	GER-034	mesohaline open coastal waters, Putlos	Kiel Bay	1.95	1.80	NA	0.72	0.68	Good
1005	Chlorophyll a (In-Situ)	20132018	1036	GER-035	meso- to polyhaline open coastal waters, seasonally stratified, Hohwachter Bucht	Kiel Bay	1.95	1.65	NA	0.79	0.77	Good

1005	Chlorophyll a (In-Situ)	20132018	1037	GER-036A	A.mesohaline open coastal waters, Fehmarnsund	Kiel Bay	1.95	1.77	NA	0.74	0.70	Good
1005	Chlorophyll a (In-Situ)	20132018	1038	GER-036B	B.mesohaline open coastal waters, Fehmarnsund	Bay of Mecklenburg	1.95	1.79	NA	0.73	0.69	Good
1005	Chlorophyll a (In-Situ)	20132018	1039	GER-037	mesohaline inner coastal waters, Orther Bucht	Kiel Bay	1.95	1.86	NA	0.70	0.64	Good
1005	Chlorophyll a (In-Situ)	20132018	1040	GER-038A	A.mesohaline open coastal waters, Fehmarnbelt	Kiel Bay	1.95	1.47	NA	0.88	0.88	High
1005	Chlorophyll a (In-Situ)	20132018	1041	GER-038B	B.mesohaline open coastal waters, Fehmarnbelt	Bay of Mecklenburg	1.95	1.47	NA	0.88	0.88	High
1005	Chlorophyll a (In-Situ)	20132018	1042	GER-039	meso- to polyhaline open coastal waters, seasonally stratified, Fehmarn Sund Ost	Bay of Mecklenburg	1.95	1.59	NA	0.82	0.81	High
1005	Chlorophyll a (In-Situ)	20132018	1043	GER-040	mesohaline open coastal waters, Groemitz	Bay of Mecklenburg	1.95	2.13	NA	0.61	0.52	Moderate
1005	Chlorophyll a (In-Situ)	20132018	1044	GER-041	mesohaline open coastal waters, Neustaedter Bucht	Bay of Mecklenburg	1.95	2.20	NA	0.59	0.49	Moderate
1005	Chlorophyll a (In-Situ)	20132018	1045	GER-042	mesohaline inner coastal waters, Travemuende	Bay of Mecklenburg	1.95	19.77	NA	0.07	0.03	Bad
1005	Chlorophyll a (In-Situ)	20132018	1046	GER-043	mesohaline inner coastal waters, Poetenitzer Wiek	Bay of Mecklenburg	2.40	19.77	NA	0.08	0.04	Bad
1005	Chlorophyll a (In-Situ)	20132018	1047	GER-044	mesohaline inner coastal waters, Untere Trave	Bay of Mecklenburg	2.40	20.19	NA	0.08	0.04	Bad

1010	Phytoplankton biovolume	20132018	1001	GER-001	mesohaline inner coastal waters, Wismarbucht, Suedteil	Bay of Mecklenburg	NA	NA	NA	NA	0.57	Moderate
1010	Phytoplankton biovolume	20132018	1002	GER-002	mesohaline inner coastal waters, Wismarbucht, Nordteil	Bay of Mecklenburg	NA	NA	NA	NA	0.57	Moderate
1010	Phytoplankton biovolume	20132018	1003	GER-003	mesohaline inner coastal waters, Wismarbucht, Salzhaff	Bay of Mecklenburg	NA	NA	NA	NA	0.52	Moderate
1010	Phytoplankton biovolume	20132018	1004	GER-004	mesohaline open coastal waters, Suedliche Mecklenburger Bucht/ Travemuende bis Warnemünde	Bay of Mecklenburg	NA	NA	NA	NA	0.50	Moderate
1010	Phytoplankton biovolume	20132018	1005	GER-005	mesohaline inner coastal waters, Unterwarnow	Bay of Mecklenburg	NA	NA	NA	NA	0.52	Moderate
1010	Phytoplankton biovolume	20132018	1006	GER-006	mesohaline open coastal waters, Suedliche Mecklenburger Bucht/ Warnemünde bis Darss	Bay of Mecklenburg	NA	NA	NA	NA	0.43	Moderate
1010	Phytoplankton biovolume	20132018	1007	GER-007	oligohaline inner coastal waters, Ribnitzer See / Saaler Bodden	Arkona Basin	NA	NA	NA	NA	0.18	Bad
1010	Phytoplankton biovolume	20132018	1008	GER-008	oligohaline inner coastal waters, Koppelstrom / Bodstedter Bodden	Arkona Basin	NA	NA	NA	NA	0.26	Poor
1010	Phytoplankton biovolume	20132018	1009	GER-009	mesohaline inner coastal waters, Barther Bodden, Grabow	Arkona Basin	NA	NA	NA	NA	0.18	Bad

1010	Phytoplankton biovolume	20132018	1010	GER-010	mesohaline open coastal waters, Prerowbucht/ Darsser Ort bis Dornbusch	Arkona Basin	NA	NA	NA	NA	0.87	High
1010	Phytoplankton biovolume	20132018	1011	GER-011	mesohaline inner coastal waters, Westruegensche Bodden	Arkona Basin	NA	NA	NA	NA	0.38	Poor
1010	Phytoplankton biovolume	20132018	1012	GER-012	mesohaline inner coastal waters, Strelasund	Arkona Basin	NA	NA	NA	NA	0.37	Poor
1010	Phytoplankton biovolume	20132018	1013	GER-013	mesohaline inner coastal waters, Greifswalder Bodden	Arkona Basin	NA	NA	NA	NA	0.38	Poor
1010	Phytoplankton biovolume	20132018	1014	GER-014	mesohaline inner coastal waters, Kleiner Jasmunder Bodden	Arkona Basin	NA	NA	NA	NA	0.18	Bad
1010	Phytoplankton biovolume	20132018	1015	GER-015	mesohaline open coastal waters, Nord- und Ostruegensche Gewaesser	Arkona Basin	NA	NA	NA	NA	0.51	Moderate
1010	Phytoplankton biovolume	20132018	1016	GER-016	oligohaline inner coastal waters, Peenestrom	Bornholm Basin	NA	NA	NA	NA	0.27	Poor
1010	Phytoplankton biovolume	20132018	1017	GER-017	oligohaline inner coastal waters, Achterwasser	Bornholm Basin	NA	NA	NA	NA	0.24	Poor
1010	Phytoplankton biovolume	20132018	1018	GER-018	mesohaline open coastal waters, Pommersche Bucht, Nordteil	Arkona Basin	NA	NA	NA	NA	0.35	Poor
1010	Phytoplankton biovolume	20132018	1019	GER-019	mesohaline open coastal waters, Pommersche Bucht, Südteil	Bornholm Basin	NA	NA	NA	NA	0.28	Poor

1010	Phytoplankton biovolume	20132018	1020	GER-020	oligohaline inner coastal waters, Kleines Haff	Bornholm Basin	NA	NA	NA	NA	0.28	Poor
1010	Phytoplankton biovolume	20132018	1048	GER-111	mesohaline inner coastal waters, Nordruegensche Bodden	Arkona Basin	NA	NA	NA	NA	0.22	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2001	DEN-001	Roskilde Fjord, ydre	Kattegat	NA	NA	NA	0.43	0.41	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2002	DEN-002	Roskilde Fjord, indre	Kattegat	NA	NA	NA	0.60	0.56	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2016	DEN-016	Korsør Nor	Great Belt	NA	NA	NA	0.67	0.64	Good
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2017	DEN-017	Basnæs Nor	Great Belt	NA	NA	NA	0.95	0.95	High
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2018	DEN-018	Holsteinborg Nor	Great Belt	NA	NA	NA	1.09	1.09	High
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2024	DEN-024	Isefjord, ydre	Kattegat	NA	NA	NA	0.42	0.39	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2025	DEN-025	Skælskør Fjord og Nor	Great Belt	NA	NA	NA	0.37	0.35	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2029	DEN-029	Kalundborg Fjord	Great Belt	NA	NA	NA	0.47	0.44	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2034	DEN-034	Smålandsfarvandet, syd	Great Belt	NA	NA	NA	0.68	0.68	Good

2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2035	DEN-035	Karrebæk Fjord	Great Belt	NA	NA	NA	0.68	0.68	Good
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2036	DEN-036	Dybsø Fjord	Great Belt	NA	NA	NA	0.71	0.71	Good
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2037	DEN-037	Avnø Fjord	Great Belt	NA	NA	NA	0.77	0.77	Good
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2044	DEN-044	Hjelm Bugt	Arkona Basin	NA	NA	NA	0.43	0.41	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2046	DEN-046	Fakse Bugt	Arkona Basin	NA	NA	NA	0.44	0.43	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2047	DEN-047	Præstø Fjord	Arkona Basin	NA	NA	NA	0.42	0.41	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2048	DEN-048	Stege Bugt	Arkona Basin	NA	NA	NA	0.74	0.75	Good
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2049	DEN-049	Stege Nor	Arkona Basin	NA	NA	NA	0.30	0.29	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2059	DEN-059	Nærå Strand	Great Belt	NA	NA	NA	0.31	0.29	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2062	DEN-062	Lillestrand	Great Belt	NA	NA	NA	0.47	0.44	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2068	DEN-068	Lindelse Nor	Great Belt	NA	NA	NA	1.13	1.13	High

2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2072	DEN-072	Kløven	Great Belt	NA	NA	NA	0.60	0.60	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2074	DEN-074	Bredningen	Great Belt	NA	NA	NA	0.22	0.22	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2080	DEN-080	Gamborg Fjord	Great Belt	NA	NA	NA	0.40	0.40	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2082	DEN-082	Aborg Minde Nor	Great Belt	NA	NA	NA	0.20	0.20	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2083	DEN-083	Holckenhavn Fjord	Great Belt	NA	NA	NA	0.23	0.22	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2084	DEN-084	Kerteminde Fjord	Great Belt	NA	NA	NA	0.37	0.35	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2085	DEN-085	Kertinge Nor	Great Belt	NA	NA	NA	0.41	0.38	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2086	DEN-086	Nyborg Fjord	Great Belt	NA	NA	NA	0.40	0.38	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2087	DEN-087	Helnæs Bugt	Great Belt	NA	NA	NA	0.24	0.24	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2089	DEN-089	Lunkebugten	Great Belt	NA	NA	NA	0.35	0.35	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2090	DEN-090	Langelandssund	Great Belt	NA	NA	NA	0.44	0.44	Moderate

2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2092	DEN-092	Odense Fjord, ydre	Great Belt	NA	NA	NA	0.48	0.45	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2093	DEN-093	Odense Fjord, Seden Strand	Great Belt	NA	NA	NA	0.74	0.70	Good
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2101	DEN-101	Genner Bugt	Great Belt	NA	NA	NA	0.23	0.23	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2102	DEN-102	Åbenrå Fjord	Great Belt	NA	NA	NA	0.18	0.18	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2103	DEN-103	Als Fjord	Great Belt	NA	NA	NA	0.26	0.26	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2105	DEN-105	Augustenborg Fjord	Great Belt	NA	NA	NA	0.37	0.37	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2106	DEN-106	Haderslev Fjord	Great Belt	NA	NA	NA	0.13	0.13	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2108	DEN-108	Avnø Vig	Great Belt	NA	NA	NA	0.28	0.28	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2109	DEN-109	Hejlsminde Nor	Great Belt	NA	NA	NA	0.38	0.38	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2110	DEN-110	Nybøl Nor	Great Belt	NA	NA	NA	0.38	0.38	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2113	DEN-113	Flensborg Fjord, indre	Great Belt	NA	NA	NA	0.19	0.19	Bad

2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2114	DEN-114	Flensborg Fjord, ydre	Great Belt	NA	NA	NA	0.38	0.38	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2123	DEN-123	Vejle Fjord, indre	Great Belt	NA	NA	NA	0.50	0.47	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2124	DEN-124	Kolding Fjord, indre	Great Belt	NA	NA	NA	0.24	0.23	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2125	DEN-125	Kolding Fjord, ydre	Great Belt	NA	NA	NA	0.18	0.17	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2128	DEN-128	Horsens Fjord, indre	Great Belt	NA	NA	NA	0.24	0.23	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2136	DEN-136	Randers Fjord, indre	Kattegat	NA	NA	NA	0.53	0.50	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2137	DEN-137	Randers Fjord, ydre	Kattegat	NA	NA	NA	0.77	0.73	Good
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2141	DEN-141	Ebeltoft Vig	Great Belt	NA	NA	NA	0.78	0.75	Good
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2142	DEN-142	Stavns Fjord	Great Belt	NA	NA	NA	0.75	0.72	Good
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2144	DEN-144	Knebel Vig	Great Belt	NA	NA	NA	0.45	0.42	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2145	DEN-145	Kalø Vig	Great Belt	NA	NA	NA	0.51	0.48	Moderate

2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2146	DEN-146	Norsminde Fjord	Great Belt	NA	NA	NA	0.58	0.54	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2147	DEN-147	Århus Bugt og Begtrup Vig	Great Belt	NA	NA	NA	0.51	0.48	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2157	DEN-157	Bjørnholms Bugt, Riisgårde Bredning, Skive Fjord og Lovns Bredning	Kattegat	NA	NA	NA	0.11	0.10	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2158	DEN-158	Hjarbæk Fjord	Kattegat	NA	NA	NA	0.12	0.11	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2159	DEN-159	Mariager Fjord, indre	Kattegat	NA	NA	NA	0.06	0.06	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2160	DEN-160	Mariager Fjord, ydre	Kattegat	NA	NA	NA	0.36	0.33	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2165	DEN-165	Isefjord, indre	Kattegat	NA	NA	NA	0.43	0.40	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2200	DEN-200	Kattegat, Nordsjælland	Kattegat	NA	NA	NA	0.57	0.53	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2201	DEN-201	Køge Bugt	Arkona Basin	NA	NA	NA	0.32	0.31	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2204	DEN-204	Jammerland Bugt og Musholm Bugt	Great Belt	NA	NA	NA	0.53	0.49	Moderate
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2206	DEN-206	Smålandsfarvandet, åbne del	Great Belt	NA	NA	NA	0.44	0.44	Moderate

2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2207	DEN-207	Nakskov Fjord	Great Belt	NA	NA	NA	0.89	0.89	High
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2209	DEN-209	Rødsand og Bredningen	Great BeltandBay of Mecklenburg	NA	NA	NA	0.28	0.28	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2212	DEN-212	Faaborg Fjord	Great Belt	NA	NA	NA	0.36	0.36	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2214	DEN-214	Det Sydfynske Øhav	Great Belt	NA	NA	NA	0.28	0.28	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2216	DEN-216	Lillebælt, syd	Great Belt	NA	NA	NA	0.28	0.28	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2217	DEN-217	Lillebælt, Bredningen	Great Belt	NA	NA	NA	0.32	0.32	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2219	DEN-219	Århus Bugt syd, Samsø og Nordlige Bælthav	Great Belt	NA	NA	NA	0.42	0.40	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2222	DEN-222	Kattegat, Aalborg Bugt	Kattegat	NA	NA	NA	1.06	1.07	High
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2224	DEN-224	Nordlige Lillebælt	Great Belt	NA	NA	NA	0.37	0.34	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2232	DEN-232	Nissum Bredning	Kattegat	NA	NA	NA	0.32	0.30	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2234	DEN-234	Løgstør Bredning	Kattegat	NA	NA	NA	0.20	0.19	Bad

2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2235	DEN-235	Nibe Bredning og Langerak	Kattegat	NA	NA	NA	0.27	0.26	Poor
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2236	DEN-236	Thisted Bredning	Kattegat	NA	NA	NA	0.14	0.13	Bad
2005	Chlorophyll a (In-Situ_EO_FB)	20162021	2238	DEN-238	Halkær Bredning	Kattegat	NA	NA	NA	0.12	0.11	Bad
3004	Chlorophyll a	20162021	3001	EST-001	Narva-Kunda Bay CWB	Gulf of Finland	NA	NA	NA	0.52	0.51	Moderate
3004	Chlorophyll a	20162020	3002	EST-002	Eru-Käsmu Bay CWB	Gulf of Finland	NA	NA	NA	0.71	0.68	Good
3004	Chlorophyll a	20212021	3003	EST-003	Hara and Kolga Bay CWB	Gulf of Finland	NA	NA	NA	0.31	0.36	Poor
3004	Chlorophyll a	20162021	3004	EST-005	Muuga-Tallinna-Kakumäe Bay CWB	Gulf of Finland	NA	NA	NA	0.48	0.47	Moderate
3004	Chlorophyll a	20212021	3005	EST-006	Pakri Bay CWB	Gulf of Finland	NA	NA	NA	0.39	0.43	Moderate
3004	Chlorophyll a	20212021	3006	EST-007	Hiiu Shallow CWB	Gulf of Riga	NA	NA	NA	0.63	0.58	Moderate
3004	Chlorophyll a	20182021	3007	EST-008	Haapsalu Bay CWB	Gulf of Riga	NA	NA	NA	0.26	0.27	Poor
3004	Chlorophyll a	20212021	3008	EST-009	Matsalu Bay CWB	Gulf of Riga	NA	NA	NA	0.31	0.36	Poor
3004	Chlorophyll a	20212021	3009	EST-010	Soela Strait CWB	Northern Baltic Proper	NA	NA	NA	0.32	0.39	Poor
3004	Chlorophyll a	20212021	3010	EST-011	Kihelkonna Bay CWB	Eastern Gotland Basin	NA	NA	NA	1.00	1.00	High
3004	Chlorophyll a	20162021	3011	EST-013	Pärnu Bay CWB	Gulf of Riga	NA	NA	NA	0.50	0.50	Moderate
3004	Chlorophyll a	20162018	3012	EST-014	Kassari-Õunaku Bay CWB	Gulf of Riga	NA	NA	NA	0.88	0.86	High
3004	Chlorophyll a	20212021	3013	EST-016	Väinameri CWB	Gulf of Riga	NA	NA	NA	0.61	0.57	Moderate
3004	Chlorophyll a	20212021	3014	EST-017	NW part of the Gulf of Riga CWB	Gulf of Riga	NA	NA	NA	NA	NA	NA

3004	Chlorophyll a	20212021	3015	EST-018	NE part of the Gulf of Riga CWB	Gulf of Riga	NA	NA	NA	NA	NA	NA
3004	Chlorophyll a	20212021	3016	EST-019	Central part of the Gulf of Riga CWB	Gulf of Riga	NA	NA	NA	0.53	0.52	Moderate
3005	Phytoplankton biomass	20162021	3001	EST-001	Narva-Kunda Bay CWB	Gulf of Finland	NA	NA	NA	0.76	0.71	Good
3005	Phytoplankton biomass	20162020	3002	EST-002	Eru-Käsmu Bay CWB	Gulf of Finland	NA	NA	NA	0.29	0.32	Poor
3005	Phytoplankton biomass	20212021	3003	EST-003	Hara and Kolga Bay CWB	Gulf of Finland	NA	NA	NA	0.31	0.36	Poor
3005	Phytoplankton biomass	20162021	3004	EST-005	Muuga-Tallinna-Kakumäe Bay CWB	Gulf of Finland	NA	NA	NA	0.20	0.19	Bad
3005	Phytoplankton biomass	20212021	3005	EST-006	Pakri Bay CWB	Gulf of Finland	NA	NA	NA	0.20	0.18	Bad
3005	Phytoplankton biomass	20212021	3006	EST-007	Hiiu Shallow CWB	Gulf of Riga	NA	NA	NA	0.17	0.16	Bad
3005	Phytoplankton biomass	20182021	3007	EST-008	Haapsalu Bay CWB	Gulf of Riga	NA	NA	NA	0.19	0.17	Bad
3005	Phytoplankton biomass	20212021	3008	EST-009	Matsalu Bay CWB	Gulf of Riga	NA	NA	NA	0.20	0.18	Bad
3005	Phytoplankton biomass	20212021	3009	EST-010	Soela Strait CWB	Northern Baltic Proper	NA	NA	NA	0.79	0.75	Good
3005	Phytoplankton biomass	20212021	3010	EST-011	Kihelkonna Bay CWB	Eastern Gotland Basin	NA	NA	NA	0.21	0.19	Bad
3005	Phytoplankton biomass	20162018	3012	EST-014	Kassari-Õunaku Bay CWB	Gulf of Riga	NA	NA	NA	0.66	0.64	Good
3005	Phytoplankton biomass	20212021	3013	EST-016	Väinameri CWB	Gulf of Riga	NA	NA	NA	0.22	0.20	Poor
3005	Phytoplankton biomass	20212021	3014	EST-017	NW part of the Gulf of Riga CWB	Gulf of Riga	NA	NA	NA	NA	NA	NA
3005	Phytoplankton biomass	20212021	3015	EST-018	NE part of the Gulf of Riga CWB	Gulf of Riga	NA	NA	NA	NA	NA	NA

3005	Phytoplankton biomass	20212021	3016	EST-019	Central part of the Gulf of Riga CWB	Gulf of Riga	NA	NA	NA	0.80	0.76	Good
4003	Chlorophyll a (summer)	20162021	4001	FIN-001	Lounainen sisäsaaristo	Åland Sea	NA	NA	NA	NA	0.40	Moderate
4003	Chlorophyll a (summer)	20162021	4002	FIN-002	Lounainen ulkosaaristo	Åland Sea	NA	NA	NA	NA	0.48	Moderate
4003	Chlorophyll a (summer)	20162021	4003	FIN-003	Suomenlahden sisäsaaristo	Gulf of Finland	NA	NA	NA	NA	0.45	Moderate
4003	Chlorophyll a (summer)	20162021	4004	FIN-004	Suomenlahden ulkosaaristo	Gulf of Finland	NA	NA	NA	NA	0.41	Moderate
4003	Chlorophyll a (summer)	20162021	4005	FIN-005	Lounainen välisaaristo	Åland Sea	NA	NA	NA	NA	0.49	Moderate
4003	Chlorophyll a (summer)	20162021	4006	FIN-006	Merenkurkun sisäsaaristo	The Quark	NA	NA	NA	NA	0.55	Moderate
4003	Chlorophyll a (summer)	20162021	4007	FIN-007	Merenkurkun ulkosaaristo	The Quark	NA	NA	NA	NA	0.66	Good
4003	Chlorophyll a (summer)	20162021	4008	FIN-008	Selkämeren sisemmät rannikkovedet	Bothnian Sea	NA	NA	NA	NA	0.53	Moderate
4003	Chlorophyll a (summer)	20162021	4009	FIN-009	Selkämeren ulommat rannikkovedet	Bothnian Sea	NA	NA	NA	NA	0.59	Moderate
4003	Chlorophyll a (summer)	20162021	4010	FIN-010	Perämeren sisemmät rannikkovedet	Bothnian Bay	NA	NA	NA	NA	0.54	Moderate
4003	Chlorophyll a (summer)	20162021	4011	FIN-011	Perämeren ulommat rannikkovedet	Bothnian Bay	NA	NA	NA	NA	0.60	Moderate
4003	Chlorophyll a (summer)	20162021	4012	FIN-012	Åland innerskärgård	Åland Sea	NA	NA	NA	0.46	0.47	Moderate
4003	Chlorophyll a (summer)	20162021	4013	FIN-013	Åland mellanskärgård	Åland Sea	NA	NA	NA	0.54	0.52	Moderate
4003	Chlorophyll a (summer)	20162021	4014	FIN-014	Åland ytterskärgård	Åland Sea	NA	NA	NA	0.52	0.50	Moderate
4004	Phytoplankton biomass	20162021	4002	FIN-002	Lounainen ulkosaaristo	Åland Sea	NA	NA	NA	NA	0.43	Moderate
4004	Phytoplankton biomass	20162021	4004	FIN-004	Suomenlahden ulkosaaristo	Gulf of Finland	NA	NA	NA	NA	0.44	Moderate

4004	Phytoplankton biomass	20162021	4005	FIN-005	Lounainen välisaaristo	Åland Sea	NA	NA	NA	NA	0.55	Moderate
4004	Phytoplankton biomass	20162021	4007	FIN-007	Merenkurkun ulkosaaristo	The Quark	NA	NA	NA	NA	0.60	Good
4004	Phytoplankton biomass	20162021	4009	FIN-009	Selkämeren ulommat rannikkovedet	Bothnian Sea	NA	NA	NA	NA	0.56	Moderate
4004	Phytoplankton biomass	20162021	4011	FIN-011	Perämeren ulommat rannikkovedet	Bothnian Bay	NA	NA	NA	NA	0.72	Good
7009	Chlorophyll a (In-Situ_EO_FB)	20162021	7001	POL-001	PL TW I WB 9 very sheltered, fully mixed, substratum: silt/sandy silt/silty sand; ice cover >90 days, water residence time 52 days	Bornholm Basin	###	23.64	7.54	0.62	0.52	Moderate
7009	Chlorophyll a (In-Situ_EO_FB)	20162021	7002	POL-002	PL TW I WB 8 very sheltered, fully mixed, substratum: silt/sandy silt/silty sand; ice cover >90 days, water residence time 52 days	Bornholm Basin	###	29.04	8.12	0.49	0.36	Poor
7009	Chlorophyll a (In-Situ_EO_FB)	20162021	7003	POL-003	PL TW I WB 1 very sheltered, fully mixed, substratum: silt/sandy silt/silty sand; ice cover >90 days, water residence time 52 days	Gdansk Basin	###	69.57	10.35	0.23	0.12	Bad
7009	Chlorophyll a (In-Situ_EO_FB)	20162021	7004	POL-004	PL TW II WB 2 very sheltered, fully mixed, substratum: lagoonal fine snd medium grained sand/silty sand; residence time 138 day, ice cover >90 days	Gdansk Basin	2.00	4.24	1.43	0.35	0.22	Poor

7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7005	POL-005	PL TW III WB 3 partly protected, partly stratified, substratum: medium grained sand/pebbles/marine silty sand; ice-incidental	Gdansk Basin	3.76	3.83	0.63	0.67	0.60	Good
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7006	POL-006	PL TW IV WB 4 partly stratified, moderately exposed, substratum: sand/silt; ice - incidental	Gdansk Basin	3.76	4.96	0.21	0.51	0.37	Poor
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7007	POL-007	PL TW V WB 6 river mouth, partly stratified, partly sheltered, substratum: medium grained sand/silty sand	Bornholm Basin	3.80	6.88	2.08	0.40	0.27	Poor
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7008	POL-008	PL TW V WB 5 river mouth, partly stratified, partly sheltered, substratum: medium grained sand/silty sand	Gdansk Basin	5.50	9.65	3.32	0.41	0.27	Poor
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7009	POL-009	PL TW V WB 7 river mouth, partly stratified, partly sheltered, substratum: medium grained sand/silty sand	Bornholm Basin	7.50	9.80	2.34	0.53	0.41	Moderate
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7010	POL-010	PL CWI WB2 coastal waters, moderately exposed, fully mixed, substratum:sand/fine sand	Gdansk Basin	1.90	3.24	1.05	0.43	0.29	Poor

7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7011	POL-011	PL CWI WB1 coastal waters, moderately exposed, fully mixed, substratum:sand/fine sand	Gdansk Basin	3.15	11.03	6.18	0.26	0.15	Bad
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7012	POL-012	PL CWI WB3 coastal waters, moderately exposed, fully mixed, substratum:sand/fine sand	Gdansk Basin	1.90	7.24	2.20	0.19	0.10	Bad
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7013	POL-013	PL CW II WB 8 central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Bornholm Basin	1.90	4.65	1.74	0.31	0.18	Bad
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7014	POL-014	PL CW II WB 6W central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Bornholm Basin	1.90	5.39	2.44	0.27	0.15	Bad
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7015	POL-015	PL CW II WB 6E central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Bornholm Basin	1.90	5.05	2.12	0.28	0.16	Bad
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7016	POL-016	PL CWII WB5 central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Eastern Gotland Basin	1.90	6.56	3.95	0.26	0.16	Bad
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7017	POL-017	PL CWII WB4 central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Gdansk Basin	1.90	2.71	1.19	0.54	0.43	Moderate

7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7018	POL-018	PL CW III WB 9 central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Bornholm Basin	3.15	5.10	1.48	0.44	0.30	Poor
7010	Chlorophyll a (In-Situ_EO_FB)	20162021	7019	POL-019	PL CW III WB 7 central Polish coast, coastal waters, exposed, fully mixed, substratum: sand/pebbles/gravel	Bornholm Basin	1.90	3.88	1.30	0.37	0.24	Poor
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8001	SWE-001	1s West Coast inner coastal water	Kattegat	2.81	1.70	NA	0.94	0.95	High
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8002	SWE-003	4 West Coast outer coastal water, Kattegat	Kattegat	1.49	1.22	NA	0.82	0.79	Good
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8003	SWE-004	5 South Halland and north Öresund coastal water	Kattegat	1.49	1.20	NA	0.83	0.80	High
80051	Chlorophyll a (In-Situ_EO_FB)	20172017	8004	SWE-005	6 Öresund inner coastal water	The Sound	1.53	1.26	NA	0.71	0.71	Good
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8005	SWE-006	7 Skåne coastal water	Arkona Basin	1.80	1.74	NA	0.69	0.64	Good
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8006	SWE-007	8 Blekinge archipelago and Kalmarsund, inner	Western Gotland Basin	2.17	2.75	NA	0.53	0.51	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8007	SWE-008	9 Blekinge archipelago and Kalmarsund, outer	Western Gotland Basin	1.94	3.46	2.00	0.71	0.60	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8008	SWE-009	10 Öland and Gotland coastal water	Eastern Gotland Basin	2.09	4.11	NA	0.34	0.39	Poor

80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8009	SWE-010	11 Gotland north-west coastal water	Western Gotland Basin	2.09	3.77	NA	0.37	0.41	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8010	SWE-011	12n Östergötland and Stockholm archipelago	Northern Baltic Proper	2.33	3.41	NA	0.46	0.47	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8011	SWE-012	12s Östergötland and Stockholm archipelago	Western Gotland Basin	2.24	3.28	NA	0.46	0.47	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20172017	8012	SWE-013	13 Östergötland inner coastal water	Western Gotland Basin	2.91	6.01	NA	0.32	0.37	Poor
80051	Chlorophyll a (In-Situ_EO_FB)	20172017	8013	SWE-014	14 Östergötland outer coastal water	Western Gotland Basin	2.09	2.34	NA	0.60	0.56	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8014	SWE-015	15 Stockholm archipelago, outer coastal water	Northern Baltic Proper	2.09	2.95	NA	0.47	0.48	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8015	SWE-016	16 South Bothnian Sea,inner coastal water	Bothnian Sea	2.30	4.04	NA	0.35	0.41	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8016	SWE-017	17 South Bothnian Sea, outer coastal water	Bothnian Sea	2.00	2.74	NA	0.44	0.48	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8017	SWE-018	18 North Bothnian Sea, Höga kusten, inner	Bothnian Sea	2.27	2.73	NA	0.51	0.53	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8019	SWE-020	20 North Quark inner coastal water	The Quark	2.28	3.67	0.00	0.35	0.45	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8019	SWE-020	20 North Quark inner coastal water	The Quark	1.26	3.67	0.00	0.35	0.45	Moderate

80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8020	SWE-021	21 North Quark outer coastal water	The Quark	2.07	2.24	0.00	0.54	0.57	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8020	SWE-021	21 North Quark outer coastal water	The Quark	1.29	2.24	0.00	0.54	0.57	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8023	SWE-024	24 Stockholm inner archipelago	Northern Baltic Proper	3.00	5.56	0.00	0.36	0.41	Moderate
80051	Chlorophyll a (In-Situ_EO_FB)	20182018	8023	SWE-024	24 Stockholm inner archipelago	Northern Baltic Proper	1.19	5.56	0.00	0.36	0.41	Moderate
80052	Total phytoplankton biomass	20182018	8002	SWE-003	4 West Coast outer coastal water, Kattegat	Kattegat	1.11	0.68	NA	0.73	0.84	High
80052	Total phytoplankton biomass	20182018	8003	SWE-004	5 South Halland and north Öresund coastal water	Kattegat	2.12	0.89	NA	0.79	0.90	High
80052	Total phytoplankton biomass	20172017	8004	SWE-005	6 Öresund inner coastal water	The Sound	0.76	0.28	NA	0.90	0.95	High
80052	Total phytoplankton biomass	20172017	8005	SWE-006	7 Skåne coastal water	Arkona Basin	0.32	0.19	NA	0.96	0.97	High
80052	Total phytoplankton biomass	20172017	8017	SWE-018	18 North Bothnian Sea, Höga kusten, inner	Bothnian Sea	0.46	0.38	NA	0.54	0.68	Good
80052	Total phytoplankton biomass	20172017	8019	SWE-020	20 North Quark inner coastal water	The Quark	0.37	0.77	NA	0.21	0.36	Poor
80052	Total phytoplankton biomass	20172017	8020	SWE-021	21 North Quark outer coastal water	The Quark	0.39	0.32	NA	0.47	0.70	Good

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