



# Annex 1. Methodology manuals

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# A1.1 Pelagic integrated assessment methodology

The integrated assessment of pelagic habitats is carried out using the HELCOM assessment level 3 (Section 2.3). The integration was carried out in two steps. Firstly, using the BEAT tool and integrating the three biological state components where assessment results where available. The result of the integration of the biological components included present some areas where good status is achieved. The confidence of the integrated assessment was

between intermediate and high. Secondly, the results from the integrated biological assessment were compared with two eutrophication state indicators, chlorophyll a and water clarity, that were weighed to one final result (Figure A.1, HELCOM 2023xx). It is stated by the European commission that if eutrophication indicators fail to achieve good status the pelagic system is affected by eutrophication. When taking the eutrophication pressure assessment results into consideration all areas in the Baltic Sea receive the status bad from a eutrophication perspective and are thereby affected by eutrophication.

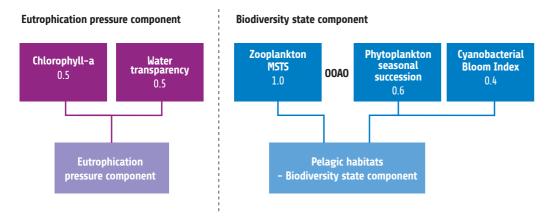


Figure A.1. Schematic presentation of the BEAT tool integrating components and weighting for the assessment of pelagic habitats. Numbers within the boxes off each separate HELCOM indicator present the weighting of that component in the BEAT integration process. The one out all out-principle is applied when integrating zooplankton and phytoplankton indicators.

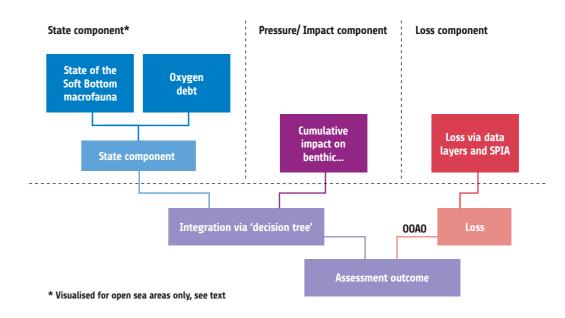


Figure A.2. Schematic presenting overview of assessment approach.



# A1.2 Benthic habitat integrated assessment methodology

The assessment is underpinned by data reported by Contracting Parties both as part of dedicated HOLAS data calls and regular reporting.

Monitoring related to the benthic biotopes is described on in the HELCOM Monitoring Manual under the programme topic Seabed habitat distribution, as well as in the agreed HELCOM monitoring guidelines for benthic habitat monitoring (HELCOM 2015). Monitoring of oxygen concentration by the Contracting Parties of HELCOM is described on a general level in the HELCOM Monitoring Manual sub-programme: Water column chemical characteristics. Specific monitoring guidelines "Guidelines for sampling and determination of dissolved oxygen in seawater" have also been agreed.

The data for the evaluation of human activities does not stem from an agreed HELCOM monitoring programme. It comes from other existing monitoring or reporting activities collecting data on the extent of physical pressures (e.g., EIAs) and data gathered from existing sources, e.g., VMS data, shipping traffic data and data giving details on other human activities such as footprint from constructions, coastal erosion defence structures, cables and pipelines, wind farms etc.

It is worth noting that the robustness of the assessment results are highly dependent on the quality of the habitat maps that underpin the assessment. For this assessment the 2021 EU SeaMap information was used as a basis for the broad habitat types, and issues with the reliability of the modelling results have been raised.

The assessment was carried out using HELCOM spatial assessment unit level 2 (See section 2.3) in two steps. The overall assessment of benthic habitats was first evaluated over two main components; a status component and a pressure/impact component. Therafter, a component reporesentingloss, was overlayed using

the one-out-all-out principle, as the first two components are not possible to evaluate where loss occurs (Figure A.2).

The state component (i.e. soft-bottom macrofauna and oxygen debt) for open sea areas was integrated based on spatial aspects (i.e. an area based integration) due to the specific relevance of the two indicators (e.g. the soft-bottom macrofauna community be relevant in areas < 60 m deep in the Baltic Proper). The soft-bottom macrofauna and oxygen debt outcomes were therefore applied in essence as a single state data layer via this spatial integration (i.e. at the level of the spatial assessment unit with some spatial integration to the depth aspect) but then applied to all BHTs within the covered spatial areas (except where soft-bottom macrofauna outcomes will be linked only to 'soft' BHTs). The pressure/impact component was reflected by the outcomes of the Cuml indicator, where the gridded information was aggregated to relevant assessment unit scales. CumI outcomes were therefore also available on a polygon level where each polygon may represent a specific section a BHT that is impacted by a specific activity from within a given assessment unit. Loss was addressed directly via data layers

A relatively simple integration approach was applied in HOLAS 3. The process (lined out in figure 8) included the following steps:

— The state components (i.e. state of the soft bottom macrofauna community and oxygen debt indicators) was spatially integrated. The process was carried out based on a depth of 60m (i.e. the permanent halocline level, where relevant) as this is the depth at which the soft bottom macrofauna indicator is applicable. Thus, for the state components there was no overlap with each other (i.e. oxygen debt and soft bottom macrofauna community outcomes in essence being spatially integrated to a single state data layer).

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- The soft bottom macrofauna community results were assigned only to BHTs that were suitable (i.e. excluding hard substrate BHTs).
- Results from the state indicators was applied to all relevant BHTs in the spatially integrated areas of each assessed assessment unit.
- The Cuml indicator results were extracted in the relevant categories and assigned a pragmatic numerical score based on the Cuml outcome categories, as presented in Table A.1. This step enabled the assessment procedure to retain the numeric information from the other assessment components. However, some deliberate choices were made under the assumption of an actual size and distribution of the Cuml categories along a proposed underlying numerical scale:
- A GIS overlay was be carried out to establish the respective polygons where different indicator components.
- Where a single indicator evaluation was present in any given polygon, that evaluation and confidence evaluation was applied as the overall result. A confidence penalty was however be applied to the overall outcomes.
- Where two indicator components were available (i.e. CumI and one of the state components) an integration of the scores was applied with equal weighting per component. The rules set out in table A.2 was be applied. These rules essentially meant that the risk/impact evaluation by CumI was only applied to reduce the state assessment outcome and never to increase the outcome of the state component (justified on the basis that state is primary and should be the focus of an assessment where avail-

Table A.1. Cumulative impacts on benthic habitats indicator numerical scoring based on the indicator outcome categories.

BEAT score (numeric value)	Cuml categorical outcome	Justification or explanation
0	Very High (CumI 'functional loss')	Score of zero applied (i.e. state is zero) since CumI considered risk of potential functional loss
0.125	High	Matching to existing BEAT 4 category system
0.313	Moderate 3	*Equal subtraction from moderate 2 score as to addition given for moderate 1.
0.375	Moderate 2	Matching to existing BEAT 4 category system
0.438	Moderate 1	Half-way point to achieving the threshold value*
BEAT TV normalis	sed to 0.5	
0.625	Low	Matching to existing BEAT 4 category system
0.875	Very low	Matching to existing BEAT 4 category system
1	Absent	A known absence of activities/pressures given possibility to achieve full potential (i.e. 1)
	No data	Identified as grey on maps top separate from no impact/results.

Table A.2. Integration of the scores in the CumI indicator.

Cuml	State	Basis of overall condition	Justification
Fail	Fail	40:60 weighting (Cuml:State)	Both components in Fail categories
Fail	Achieve	40:60 weighting (Cuml:State)	State can be reduced by risk of impact
Fail	No input	Cuml direct	Only CumI available
No input	Fail	State direct	Only State available
Achieve	Fail	State direct	State in fail category, CumI excluded so as not to inflate known state outcome
Achieve	Achieve	40:60 weighting (Cuml:State)	Both components in achieve categories
Achieve	No input	Cuml direct	Only CumI available
No input	Achieve	State direct	Only State available

able). Such an approach is considered precautionary in emphasising state assessments take a core role, where known, but was also implemented to reflect the fact that risk has a relevant role in the overall process (especially when considering the lack of information on state in areas or the spatial spread of monitoring data). Confidence in the overall assessment was calculated in the same manner.

A confidence scoring was also applied for the overall integrated assessment. This accompanying assessment of confidence defines the 'quality' or 'optimal suitability' of the underlying components integrated into the final assessment of benthic habitats, reflecting the uncertainty of the assessment applied.



# A1.3 Fish integrated assessment methodology

### A1.3.1 Methodology for integrated assessment of coastal fish

The integrated assessment of coastal fish is done using the BEAT tool, developed by HELCOM for integrated biodiversity assessment. For more information on the BEAT tool please see Chapter 2. The status results for coastal fish are progressively integrated according to the following principles. First, the abundance and size indicators (when applicable) of key species are averaged within species at the monitoring location level. Second, for key species and functional groups separately, the OOAO approach is applied between monitoring locations to the coastal area level (HELCOM assessment unit 3). Finally, the key species and functional groups are integrated using the OOAO approach to arrive at the integrated assessment of coastal fish at the assessment unit 3 level. For the confidence assessment, confidence is averaged for all used indicators (i.e. not only the indicators that decide the final OOAO result). "

# A1.3.2 Methodology for integrated assessment of commercial fish

The status of commercial fish was evaluated based on data on fishing mortality and stock size as obtained from ICES. In stocks with analytical assessment models, fishing mortality is assessed by ICES in relation to the level estimated to deliver a long term maximum sustainable yield, referred to as FMSY, and the spawning stock biomass is assessed in relation to the associated reference value 'MSY B-trigger' (European Commission 2022, ICES 2022).

Status was determined for each stock by comparing the average indicator value over the assessment period (2016-2021) with the respective reference value. To support alignment between the MFSD and the CFP, good status with respect to Fishing mortality (F) was identified based on that the average F over the assessment period should not exceed the target reference value for maximum sustainable yield (FMSY), though this may occur in individual years as a result of the conditions laid out in the CFP and multi-annual plans. Good status with regards to stock size was identified based on that the average biomass over the assessment period should not be less than the biomass reference point (FMSY B-trigger), accounting for that this may still occur in individual years as a result of the conditions laid out in the CFP and MAPs (European Commission

2022). Total status was identified by integration over the indicators fishing mortality and stock size for each stock using the One-Out-All-Out principle. If evaluation results were available for only one of the indicators, but missing for the other, total status was defined as 'not good' if the evaluation result for the available indicator showed not good status, and as 'not assessed' if the evaluation result for the available indicator showed good status.

Data for cod, sole, plaice, herring, sprat, and vendace were included in the integrated assessment using the BEAT tool, as these were the stocks for which assessment results in relation to both fishing mortality and stock size were available. The integration status across pelagic and demersal commercial stocks in the BEAT tool was based on aggregating stocks within ICES SD units using averaging.

The evaluation of changes over time in age structure stems from data taken from stocks with full age-based analytical assessments within ICES (WKREF1; Albertsen et al. 2022). This approach involves taking the age structure of a stock (described by the proportion of older fish) in any given year and comparing it (on a relative scale) to the age structure at equilibrium under constant FMSY fishing (Griffiths et al. in review). This approach is still being developed but it mirrors the methodologies used to estimate stock size and fishing mortality reference points, and in theory could use any F (not just FMSY) once stock, species or regional specific threshold values have been agreed on. To date, however, no regionally agreed threshold value for age or size structure are available in HELCOM. For the Eastern Baltic cod, age-based trends were based on qualitative assessment based on ICES advice for the stock.

For evaluation of vendace in the Bothnian Bay, national advice from Sweden was used (Gilljam et al. 2022). Vendace in the Bothnian Bay was assessed according to the principle of a long-term sustainable catch with a secured future production of recruits. The calculations regarding catch levels followed a so-called Btarget-strategy, whereby the basic principle is the highest possible sustainable catch (MSY). The vendace advice reflects the probability that the stock is reduced to a level below the biomass threshold where fishing should be reduced and where the production of recruits can no longer be secured, given different future catch scenarios. The size structure of vendace was assessed using the 90th percentile of the size distribution (excluding individuals below 10 cm length).

For data-limited stocks where sufficient data for an analytical assessment are lacking, ICES provides fisheries advice based on time-series data on catches, recruitment, harvest rate and biomass, and the resulting proxy reference points were used in the current assessment. The size structure of data-limited stocks was assessed based on data from the Baltic International Trawl Survey as available in the ICES data base DATRAS, using data up to and including 2021, with data selection procedures regarding survey years, survey quarters and fish length classes following ICES WGBFAS (2022). The 90th percentile of the length distribution was used as an indicator of size structure. In stocks with low catch rates in the surveys, the size distribution could not be assessed.

For salmon, ICES gives advice for two management units in the Baltic Sea. In the assessment, status is evaluated individually for each river stock, using a different framework for setting reference values in relation to MSY (analytical assessment based or expert opinion based on production areas and observed parr







densities; ICES 2022b). In the HELCOM core indicator evaluations, corresponding results are shown to the level of six assessment units (AU). Of these, AU1-5 are within the ICES management unit 'Salmon in the Baltic Sea, excl. Gulf of Finland (SD22-31)', and AU6 corresponds to the stock 'Salmon in the Gulf of Finland' by ICES. In the current report, the status of salmon is given as the status of salmon in the assessment unit with the poorest status within each management unit (Table 5.4).

For sea trout, ICES gives advice for the whole Baltic Sea and the advice is based on qualitative overviews on the level of assessment unit (ICES 2021b). The HELCOM core indicator on sea trout is linked to parr density, while does not fit MSFD criteria for the assessment of commercial fish very well, it could be mostly indicative of status under criterion 2 (Ref to MSFD).

Species which are fished in the Baltic Sea but have limited economic importance for Baltic Sea fisheries are not included (HELCOM 2021b, ICES 2022a).



# A1.4 Waterbird inregrated assessment methodology

The integrated assessment of waterbirds is done using the BEAT tool, developed by HELCOM for integrated biodiversity assessment. For more information on the BEAT tool please see Chapter 2.

The integrated assessment of waterbirds was based on the indicators 'Abundance of waterbirds in the breeding season' and 'Abundance of waterbirds in the wintering season'. Waterbirds were assessed based on the species groups Surface feeders, Pelagic feeders, Benthic feeders, Wading feeders and Grazing feeders in seven subdivisions of the Baltic Sea. The subdivisions consisted of aggregated scale 2 assessment units. Both indicators provided species specific index scores to be compared to the threshold value for achieving good status. The integration of species to species groups followed an approach that ≥75% of the assessed species within the species group needed to achieve good status for the species group to be in good status. As the breeding waterbird indicator and the wintering waterbird indicator both address abundance of species, but at different periods reflecting different factors of relevance for the population status, the species results were used as independent components in the integration process. Thus, if for example species A was assessed both in the breeding waterbird indicator and the wintering waterbird indicator, SpABreeding and SpAWintering were used as separate inputs in BEAT. For the overall result for

waterbirds, the one-out-all-out approach for species groups was used. A separate assessment including the bycatch indicator was performed by adding the results from the bycatch indicator (see chapter 9). As gill-net fishing and waterbird distribution overlap only during certain periods of the year, the bycatch pressure was considered relevant to affect only the wintering waterbird component in the integration. The species-specific bycatch indicator results were intergrated with the corresponding wintering waterbird species result using the one-out-all-out approach, i.e. a species cannot achieve good status if bycatch pressure is too high. The outcome of this integration step was consequtively used as the wintering waterbird species component in the integration to species groups, following the same approach as above.



# A1.5 Mammal integrated assessment methodology

The integrated assessment of marine mammals utilizes the HELCOM BEAT integrated assessment tool followed a species-based approach providing results separately for seals and the harbour porpoise. An integration to the level of marine mammals was not done as this was considered not practical and uninformative for managemental use. The BEAT assessment approach strived to be compatible with the assessment approach as set out by the Habitats Directive. However, as no HELCOM indicators address the habitat component as defined by the Habitats Directive, the BEAT assessment was based only on abundance, distribution and demographic components and providing an additional assessment where also the bycatch component was included. In practical terms, this implies applying the one-out-all-out approach between the abundance, distribution and demography components.

The following general structure was applied in HOLAS 3 to carry out the integrated assessment of marine mammals using the HELCOM Biodiversity Integrated Assessment Tool, BEAT (see Figures 1 and 2). No integration was applied to marine mammals overall as this was considered as not practical (e.g. differing assessment areas or aggregations of these) and also uninformative (e.g. aggregation to a higher level than the species or species groups is hard to apply for explanatory or management uses).

At some levels of integration, the approach will apply a One-Out-All-Out (OOAO) approach in the integration process and/or an adaptation of the Habitats Directive (HD) integration process (as presented in Table A1.5.1).

**Table A1.5.1.** Adaption of the Habitats Directive integration and evaluation process to include relevant components (e.g. criteria) of the EU Marine Strategy Framework Directive, MSFD) and to function for marine mammals under the HELCOM HOLAS 3 process.

Status of components	All components achieve their threshold value(s)	All components achieve their threshold value(s), with one 'unknown'	One or more components fail their threshold value(s)	Two or more components 'unknown*' or not assessed
Overall integrated out- come	Achieve – Good Environn	nental Status	Fail - Not Good Environmental Status	Inadequate – shortage of data/ information, not possible to draw conclusions

Additional notes: A component described in this table is in general equivalent to one of the MSFD criteria under Descriptor 1. These may also directly reflect a single HELCOM indicator or in certain cases several indicators may (now or in the future) be integrated to achieve a summary for the component described. \*where red listed species are evaluated and data is insufficient (i.e. resulting in an 'unknown' then the red listed species/population in question is evaluated as failing the assessment.

Since no integration to 'marine mammals overall' was done then the process for integration is presented separately for the harbour porpoise and for seals (a group addressing all three species).

Regional expert-based judgment may also be applied to support/ compliment this evaluation process since with the above approach and current indicator development level many outcomes may result in two or more unknowns.

### Confidence setting within the integrated assessment

A confidence setting approach is applied in the integration process. It utilises the standard approach utilised in BEAT as its root, i.e. the four input categories for confidence (spatial, temporal, methodological and outcomes) derived from the indicators.

### A1.5.1 Integration to species level - harbour porpoise

The harbour porpoise integration is carried out to the level of species, though in essence only for map presentation purposes as the two populations evaluated are largely spatially separated (harbour porpoise, see Figure A1.5.1). This species level will be generated by applying a spatial integration of the two harbour porpoise population assessments (i.e. placing the two evaluation outcomes per population in the same figure), though in any assessment units (of the 17 HELCOM sub-basins) where overlap occurs (possible to occur in the Bornholm Basin area) a OOAO approach will be applied to that assessment unit, i.e. the evaluation with the poorest outcome will be provided as the final integrated result for harbour porpoise at the species level).

The population level assessment of harbour porpoise will be carried out for the two populations (Belt Sea and Baltic Proper) based on the HD approach presented in Table A1.5.1.

For the harbour porpoise integration above information is available from qualitative assessments the indicators 'Harbour porpoise abundance' and 'Harbour porpoise distribution'. The assessment was done separately for the two Baltic populations

of harbour porpoise. The result for assessment units where the populations overlap was decided by the population with poorer status as the integration of indicators followed the one-out-allout approach.

The indicator information is integrated based on an expert interpretation of the indicator outcomes, converted into the BEAT classifications that infer distance from threshold value (or good status), applying methodology also utilised in HOLAS II (see page 23 of the HOLAS II thematic assessment on biodiversity). In simple terms the categories represent 1) far below the threshold value/good status (score of 0.125), 2) just below the threshold value/good status (score of 0.375), 3) just above the threshold value/good status (score of 0.625), far above the threshold value/good status (score of 0.825). In practice it may be needed to apply a more simplified version reflecting failure (score of 0.25) or achievement (score of 0.75). The scores are utilised within the integration process to provide the final integrated outcome where the representation of a threshold value or good status is fixed at a score of 0.6.

For HOLAS 3 the integrated assessment for harbour porpoise was run twice, once excluing bycatch and once including the bycatch indicator 'Number of drowned mammals and waterbirds in fishing gear' as described in the flowchart above.

A few examples of how integration can be carried out at population level are described below. These are examples of practical application only.

### Scenario 1 (non-red listed population)

Bycatch - Achieve – Good Environmental Status
Abundance - Achieve – Good Environmental Status
Distribution - Achieve – Good Environmental Status
Demographic - Inadequate – not possible to draw conclusions
Habitat - Inadequate – not possible to draw conclusions
Rule for HD integration outcome: 2 components Inadequate
Overall outcome – Inadequate – not possible to draw conclusions

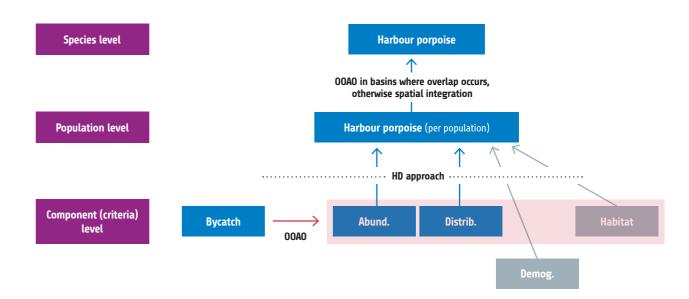


Figure A1.5.1. Generalised structure for the integration of indicators for the harbour porpoise. The grey boxes are components/criteria for which no information is expected to be available in HOLAS 3 for either harbour porpoise population. Abund = Abundance, Distrib = Distribution, Demog = Demographic.







### Scenario 2 (as above but addressing a red listed population)

Bycatch - Achieve - Good Environmental Status

Abundance - Achieve - Good Environmental Status
Distribution - Achieve - Good Environmental Status
Demographic - Inadequate (red listed) - not possible to draw conclusions

Habitat - Inadequate (red listed) – not possible to draw conclusions Rule for HD integration outcome: 2 components Inadequate but red listing converts to Fail

Overall outcome - Fail - Not Good Environmental Status

### Scenario 3 (non-red listed population)

Bycatch - Fail - Not Good Environmental Status
Abundance - Achieve - Good Environmental Status
Distribution - Achieve - Good Environmental Status
Demographic - Inadequate - not possible to draw conclusions
Habitat - Inadequate - not possible to draw conclusions
Rule for HD integration outcome: 2 components Inadequate, but
OOAO component with bycatch to be considered
Overall outcome - Fail - Not Good Environmental Status

Since demographic and habitat components will not be assessed for any management/assessment unit the integration process described above is applied for HOLAS 3 without taking these components into the process (see example provided below, scenario 1A and 2A). The absence of two key parameters under both the HD and MSFD would, if applied in full, result in all management/assessment units being classified as Inadequate (if not overridden by Fail).

### Scenario 1A (non-red listed population)

Bycatch – Inadequate – not possible to draw conclusions Abundance - Achieve – Good Environmental Status Distribution - Achieve – Good Environmental Status Rule for HD integration outcome: All achieve their threshold value with one Inadequate

Overall outcome\*\* - Achieve - Good Environmental Status

### Scenario 2A (as above but addressing a red listed population)

Bycatch - Achieve – Good Environmental Status Abundance - Achieve – Good Environmental Status Distribution - Inadequate (red listed) – not possible to draw conclusions

Rule for HD integration outcome: 1 components Inadequate but red listing converts to Fail

Overall outcome\*\* - Fail - Not Good Environmental Status

### Scenario 3A (non-red listed population)

Bycatch - Fail - Not Good Environmental Status
Abundance - Achieve - Good Environmental Status
Distribution - Achieve - Good Environmental Status
Rule for HD integration outcome: 2 components Achieve but OOAO

component with bycatch to be considered

Overall outcome\*\* – Fail – Not Good Environmental Status

Information in the integrated assessment is presented in 2 areas (based on the two populations), each area being an aggregation of several scale 2 assessment units.

### A1.5.2 Integration to species group level - seals

For seals the integrated assessment was based on the indicators 'Population trends and abundance of seals', 'Distribution of Baltic seals', 'Nutritional status of seals' and 'Reproductive status of seals'. Grey seal was assessed as a single management unit in the Baltic Sea, whereas harbour seal and ringed seal were assessed according to their defined management units. Evaluations of nutritional status were available only for grey seal, whereas for reproductive status, ringed seal in the Bothnian Bay management unit and grey seal were evaluated. For the integrated assessment of seals, the results were presented at spatial scale 2 using the relevant species results in the assessment units. As a first step in the integration process, the nutritional status and reproductive status indicators were integrated separately for the species using equal weighting to form the result of the demographic component in the further integration. Subsequently, the abundance, distribution and demography components were integrated applying the one-out-all-out approach to achieve the assessment result of the species in each management unit. The overall seal assessment was performed using the one-out-all-out approach between species as relevant in assessment units at spatial scale 2. A.

The integration of seals was carried out to the level of species group (seals, see Figure A1.5.2). A OOAO approach is applied across the assessment.

Since habitat components are not assessed for any management/assessment unit the integration process described above is applied for HOLAS 3 without taking this components into the process. The absence of this key parameters under both the HD and MSFD would if applied in full result in some management/ assessment units being classified as Inadequate (if not overridden by Fail).

Information in the integrated assessment is included as 6 aggregated units based on the integration of the multiple species (as done in HOLAS II), each area being a Scale 2 assessment unit or an aggregation of several scale 2 assessment units. In essence the grev seal and on other seal species are integrated within each of these 6 areas when presented in the visual maps for the thematic assessment. These reflect the divisions of the Baltic Sea based on the seal management units but compiling the species and are as follows: Kalmarsund area (Western Gotland Basin + Bornholm Basin), South-Western Baltic (Arkona basin, Kiel Bay, Bay of Mecklenburg, The Sound and Belt Sea), Kattegat, Gulf of Bothnia (Bothnian Bay, Bothnian Sea and The Quark), South-Western Archipelago sea (Northern Baltic Proper, Åland Sea, Gulf of Finland and Gulf of Riga), Remaining areas (Eastern Gotland Basin and Gdansk Basin). These clusters do not specifically represent he management units as they are aggregations of the species to allow relevant integration across 1-3 species at the level of 'seals' in BEAT.

Bycatch will only be integrated in areas/populations where it is possible to carry out an evaluation against a threshold value. Assessments of risk based on bycatch risk mapping will be presented in the thematic assessment separately, but will not be formally integrated in this process.

In HOLAS 3 there aren't indicators available for all components/criteria for any of the seal species. For HOLAS 3 there were evaluations (against threshold values) for bycatch, abundance, distribution, nutritional status and reproductive status for one or more seal species that can be included in the BEAT integration.

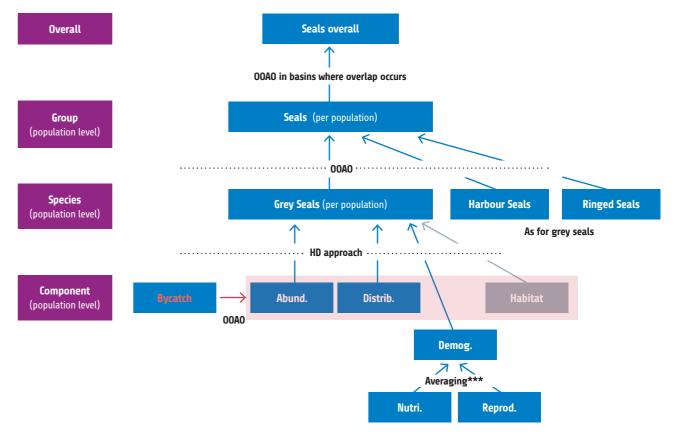


Figure A1.5.2. Generalised structure for the integration of indicators for seals (grey, harbour and ringed). The grey boxes are components/criteria for which no information is expected to be available in HOLAS 3 for any of the seal species. Abund = Abundance, Distrib = Distribution, Demog = Demographic, Nutri = Nutritional Status, Reprod = Reproductive status. \*\*\*It is proposed that 00AO is replaced at this stage by averaging of the two indicators, noting that other relevant components will in the future need to be considered under a more complex integration at this step.

The examples provided above for harbour porpoise follow the same logic on how the integration approach is applied and its alignment with the HD approach.

For HOLAS 3 the integrated assessment for harbour porpoise was run twice, once exlcuing bycatch and once including the bycatch indicator 'Number of drowned mammals and waterbirds in fishing gear' as described in the flowchart above.



### A1.6 Foodweb analysis methodoogy

### A1.6.1 Integrated trend analyses

To compare relative abundances between and within trophic guilds according to the MSFD criteria for foodwebs (D4C1 and D4C2 respectively) a constrained principal components analysis (PCO) with Chord distances was used. Phytoplankton, zooplankton and benthos data were summer means (Jun-Sept) from stations US5B and SR5 from 1989-2021. Taxa were excluded from the analysis when they occurred in less than 10% of years. Grey seal haul-out abundance index for the Bothnian Sea was based on seal counts in the Northern Baltic Proper, Åland Sea, Bothnian Sea and Bothnian Bay in May-June according to HELCOM monitoring guidelines<sup>[1]</sup>. Herring biomass was modelled spawning

stock biomass<sup>[2]</sup>. Abiotic factors used as explanatory variables were mostly taken from stations US5B and SR5: winter means (Nov-Mar) of dissolved inorganic nitrogen (DIN) and phosphorus (DIP), bottom water oxygen (OX, >100 m deep), surface salinity (SAL), Secchi depth, sea surface temperature (SpSST) in spring (Mar-Jun) and winter surface pH (pH). Winter Baltic Sea climate index (WBSI), and maximum extent of ice coverage (ICEKM) referred to the whole Baltic, as also applicable to the case study area. Mortality of herring 3-7 years old (F.3-7) was used as an additional explanatory variable, although note should be taken on its correlation with herring biomass<sup>[3]</sup>. All data were ln(y+1) transformed and normalized after transformation to standardize, to account for that not all measurements were in the same units. The set of explanatory variables were checked for covariances, to ensure that they were not contributing to high correlation coefficients or a variance inflation factor over 10. The PCO (Constrained principal components analysis) was conducted using Chord distances with the capscale function using the vegan package (Oksanen et al. 2020) in the statistical freeware R (R Core Team 2021). As principal components techniques are not directly suited to timeseries data (Zuur et al. 2003) chronological clustering and minimum-maximum factor (MAFA) analysis was used to identify shifts in community composition over time and the underlying common patterns in the data, using the Brodgar software (Highland statistics Ltd).





<sup>\*\*</sup>inclusion of relevant note on missing parameters.





### EwE model of the Western Baltic Sea

The Ecopath with Ecosim (EwE) model of the Western Baltic Sea describes structure and dynamics of the ecosystem in ICES subdivisions 22 and 24. Such a region displays homogeneous ecological characteristics distinctive from those of neighboring areas. The substrate is mostly sandy-muddy and differs from the rocky floor of the Öresund (SD 23) and the chain of lagoons along the German and Polish coast contributes to the removal of inorganic nitrogen compounds. Moreover, fitting the model to active management units has the merit of easing data retrieval from ICES fishery regions. Potentially, this match with reference management areas might also facilitate knowledge transfer and the implementation of strategies for biodiversity conservation.

Ecopath provides a static, mass-balanced snapshot of carbon exchanges in 1994 and represents the starting point to perform simulations with Ecosim. The model was built to simulate the dynamics of the entire ecosystem.

After validation, the model was applied to calculate various whole-system indices, with the goal of quantifying changes in the performance, stability and resilience of the entire ecosystem during the years 1994-2019. The ecological meaning of indices applied and which are shown in Figure EWE.1 of the main text are shown in Table EWE.1.

11 https://helcom.fi/wp-content/uploads/2019/08/6uidelines-for-monitoring-Seal-abundance-and-distribution-in-the-HELOM-area.pdf
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tration through recovery of exploited stocks: The western Baltic Sea case study. Frontiers in Marine Science 9:879998.

Table EWE.1. Whole-system indices calculated using the time series of discrete, mass-balanced networks extracted using the EwE model of the Western Baltic Sea. Altogether, 26 carbon flow networks were built (period 1994-2019). Symbol, full name, ecological meaning and literature references are provided for each index.

Symbol	Full name	Meaning	Reference
Н	Shannon's index of diversity	Informs on the diversity of trophic groups in the ecosystem. The higher the value of H, the higher the diversity of trophic groups. Higher values of H reflect higher levels of biodiversity and are therefore seen as a positive attribute.	Shannon 1948 <sup>(4)</sup>
MTLC	Mean trophic level of catches	MTLC is calculated as the weighted average trophic level of fish groups (cod, herring, sprat and flatfish in the Western Baltic Sea model). The weight reflects the relative biomass contribution to total catch. MTLC declines when the exploitation of fish stocks increases.	Pauly et al. 1998 <sup>©</sup>
FCI	Finn cycling index	FCI quantifies the fraction of total energy transfers generated by cycling. In general, increasing the degree of cycling promotes foodweb stability but exceptions exist (e.g., eutrophication that results in most of cycling occurring via shorter pathways; see Patrício et al. 2004 <sup>[6]</sup> ).	Finn 1976 <sup>11</sup>
A/DC	Relative ascendency	A/DC expresses the fraction of energy processed efficiently by the ecosystem. An increase of A/DC is observed when a few pathways prevail in transferring energy, which may indicate an ecosystem under stress (e.g., see Scotti et al. 2022b <sup>[8]</sup> ).	Ulanowicz 1986 <sup>©</sup>
R	Internal pathway redundancy	R quantifies the degrees of freedom at disposal of energy to flow in the ecosystem. An increase of this index is associated with lower transfer efficiency. However, higher values of R represent a positive attribute as they enhance foodweb stability and resilience (Scotti et al. 2022b).	Ulanowicz 1986
CF	Carbon flows from fish stocks and top predators to detritus	Is calculated as the net flow of carbon to detritus (i.e., the sum of natural mortality and egestion from which consumption over detritus is subtracted). Higher CF values are associated with a higher potential for carbon sequestration (i.e., the potential contribution of fish stocks and top predators to blue carbon).	Scotti et al. 2022a <sup>[10]</sup>

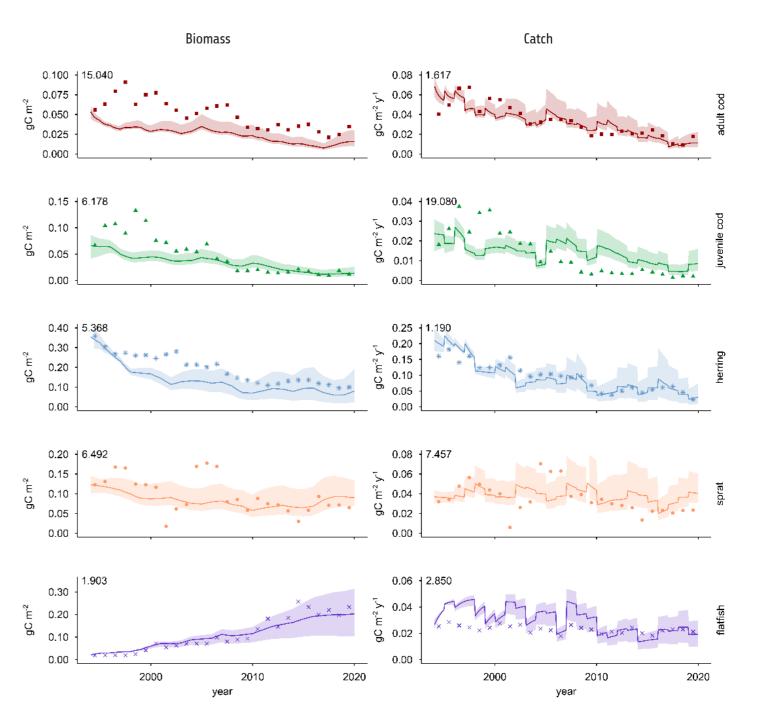


Figure EWE.1. Comparison between Ecosim predictions on biomass and catch of main commercial stocks (solid lines) vs. independent ICES data (points). Shaded areas define confidence intervals (2% and 98% percentiles) from Monte Carlo randomizations of input data. Sum of squares in the upper-left corner of each plot quantifies the goodness of fits. Low average sum of squares (SS = 6.72) suggests the model provides a valid description of Western Baltic Sea dynamics in the period 1994-2019. Fishing mortality was the driving factor used for simulations. Figure modified from Scotti et al. (2022a).









# Annex 2. Overviews of indicator evaluation results and threshold values included in the thematic assessment of biodiversity 2016-2021



### A2.1 Pelagic habitats

Table A2.1. Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of pelagic habitats for 2016-2021.

Indicator/other variable	Assessment area	Type of evaluation	Threshold value	Result	Assessment scale	Source
Zooplankton mean size and total stock	Bornholm Basin	Quantitative	14.9/273	13.3/481	2	Indicator report
Zooplankton mean size and total stock	Gdansk Basin	Quantitative	10.2/103	16.6/833	2	Indicator report
Zooplankton mean size and total stock	Eastern Gotland Basin	Quantitative	14.1/104	9.4/230	2	Indicator report
Zooplankton mean size and total stock	Western Gotland Basin	Quantitative	5.1/220	4.9/220	2	Indicator report
Zooplankton mean size and total stock	Gulf of Riga	Quantitative	4.7/253	5.5/569	2	Indicator report
Zooplankton mean size and total stock	Northern Baltic Proper	Quantitative	9.8/123	6.3/244	2	Indicator report
Zooplankton mean size and total stock	Gulf of Finland	Quantitative	8.6/125	8.2/259	2	Indicator report
Zooplankton mean size and total stock	Åland Sea	Quantitative	10.3/55	13/120	2	Indicator report
Zooplankton mean size and total stock	Bothnian Sea	Quantitative	8.5/84	39.9/190	2	Indicator report
Zooplankton mean size and total stock	Bothnian Bay	Quantitative	23.7/161	77.2/131	2	Indicator report
Seasonal succession of dominating phytoplankton groups	Kattegat	Quantitative	0.56	0.55	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Kiel Bay	Quantitative	0.55	0.50	3	Indicator report

Table A2.1. (continued). Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of pelagic habitats for 2016-2021.

Indicator/other variable	Assessment area	Type of evaluation	Threshold value	Result	Assessment scale	Source
Seasonal succession of dominating phytoplankton groups	Bay of Mecklenburg	Quantitative	0.61	0.60	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Arkona Basin	Quantitative	0.55	0.61	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Bornholm Basin	Quantitative	0.66	0.54	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Gdansk Basin	Quantitative	0.61	0.67	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Eastern Gotland Basin	Quantitative	0.64	0.68	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Western Gotland Basin	Quantitative	0.70	0.56	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Gulf of Riga	Quantitative	0.68	0.51	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Northern Baltic Proper	Quantitative	0.70	0.57	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Gulf of Finland	Quantitative	0.70	0.62	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Bothnian Sea	Quantitative	0.63	0,45	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Bothnian Bay	Quantitative	0.61	0.65	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Bothnian Bay Finnish coastal waters	Quantitative	0.56	0.47	3	Indicator report
Seasonal succession of dominating phytoplankton groups	The Quark Finnish Coastal waters	Quantitative	0.63	0.43	3	Indicator report
Seasonal succession of dominating phytoplankton groups	The Quark Swedish Coastal waters	Quantitative	0.55	0.71	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Åland Sea Finnish Coastal waters	Quantitative	0.74	0.71	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Gulf of Finland Finnish Coastal waters	Quantitative	0.79	0.78	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Gulf of Finland Estonian Coastal waters, western par	Quantitative	0.65	0.49	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Gulf of Finland Estonian Coastal waters, eastern part	Quantitative	0.66	0.63	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Gulf of Riga Estonian Coastal waters	Quantitative	0.68	0.61	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Gulf of Riga Latvian Coastal waters	Quantitative	0.66	0.68	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Western Gotland Basin Swedish Coastal waters	Quantitative	0.71	0.64	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Eastern Gotland Basin Lithuanian Coastal waters	Quantitative	0.66	0.62	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Gdansk Basin Polish Coastal waters	Quantitative	0.60	0.56	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Mecklenburg Bight German Coastal waters	Quantitative	0.62	0.64	3	Indicator report
Seasonal succession of dominating phytoplankton groups	Kiel Bight German Coastal waters	Quantitative	0.63	0.65	3	Indicator report







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Table A2.1. (continued). Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of pelagic habitats for 2016-2021.

Indicator/other variable	Assessment area	Type of evaluation	Threshold value	Result	Assessment scale	Source
Cyanobacterial bloom index	Bay of Mecklenburg	Quantitative	0.89	0.49	2	Indicator report
Cyanobacterial bloom index	Arkona Basin	Quantitative	0.85	0.61	2	Indicator report
Cyanobacterial bloom index	Bornholm Basin	Quantitative	0.83	0.61	2	Indicator report
Cyanobacterial bloom index	Pomeranian Sea	Quantitative	0.81	0.43	2	Indicator report
Cyanobacterial bloom index	Gdansk basin	Quantitative	0.77	0.45	2	Indicator report
Cyanobacterial bloom index	Eastern Gotland Basin	Quantitative	0.89	0.44	2	Indicator report
Cyanobacterial bloom index	Western Gotland basin	Quantitative	0.85	0.41	2	Indicator report
Cyanobacterial bloom index	Gulf of Riga	Quantitative	0.90	0.51	2	Indicator report
Cyanobacterial bloom index	Northern Baltic Proper	Quantitative	0.82	0.43	2	Indicator report
Cyanobacterial bloom index	Western Gulf of Finland	Quantitative	0.88	0.45	2	Indicator report
Cyanobacterial bloom index	Eastern Gulf of Finland	Quantitative	0.91	0.65	2	Indicator report
Cyanobacterial bloom index	Åland Sea	Quantitative	.091	0.35	2	Indicator report
Cyanobacterial bloom index	Bothnian Sea	Quantitative	0.92	0.36	2	Indicator report
Diatom-dinoflagellate index	Bay of Mecklenburg	Quantitative	0.75	0.94	2	Indicator report
Diatom-dinoflagellate index	Kiel Bay	Quantitative	0.75	0.97	2	Indicator report
Diatom-dinoflagellate index	Eastern Gotland Basin	Quantitative	0.50	0.44	2	Indicator report







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# A2.2 Benthic habitat

**Table A2.2a.** Details of indicator evaluation results for each specific indicator and area included in the thematic assessment of benthic habitats for 2016-2021. In the case where more than one option for threshold value is available the one used for HOLAS3 is presented in bold.

State of soft bottom macro-fauna 2 Qantitative Bothnian Bay 1.5 5.43 Achieved Indicator report	Indicator	Assessment scale 2016-2021	Type of evaluation	Sub-basin	Threshold value 2016-2021	Result 2016-2021	Status 2016-2021	Source
State of soft bottom macro-fauna 2 2 Note valuated 7 Note valuated 7 Note valuated 8 Note valuated 8 Note valuated 8 State of soft bottom macro-fauna 2 2 Qantitative 8 State of soft bottom macro-fauna 2 2 Qanti	State of soft bottom macro-fauna	2	Not evaluated	Kattegat	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna 2 Qantitative 3 Sept of Mecklenburg 5 Sept of Soft bottom macro-fauna 2 Qantitative 3 Sept of Mecklenburg 5 Sept of Soft bottom macro-fauna 2 Qantitative 3 Sept of Mecklenburg 5 Sept of Soft bottom macro-fauna 2 Qantitative 3 Sept of Mecklenburg 5 Sept of Soft bottom macro-fauna 2 Qantitative 3 Sept of Soft bottom macro-fauna 3 Qantitative 3 Sept of Soft bottom macro-fauna 3 Qantitative 3 Sept of Soft bottom macro-fauna 4 Qantitative 3 Sept of Soft bottom macro-fauna 4 Qantitative 4 Sept of Soft bottom macro-fauna 4 Sept of Soft bottom macro-fauna 4 Qantitative 4 Sept of Soft bottom macro-fauna 4	State of soft bottom macro-fauna	2	Not evaluated	Great Belt	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna 2 Qantitative Bay of Mecklenburg 0.5 Not evaluated No	State of soft bottom macro-fauna	2	Not evaluated	The Sound	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna 2 Not evaluated 2 Not evaluated 3 Not evaluated 4 Not evaluated 3 Not evaluated 4 Not evaluated 5 Not evaluat	State of soft bottom macro-fauna	2	Qantitative	Kiel Bay	0.5	0.53	Achieved	Indicator report
State of shottom marco-fauna 2 Not evaluated 8 omholm Basin Not evaluated Not evaluate	State of soft bottom macro-fauna	2	Qantitative	Bay of Mecklenburg	0.5	0.44	Failed	Indicator report
State of soft bottom macro-fauna 2 Note-valuated 6 Gansk Basin Note-valuated 0.5 Note-valuated 0.6 Not	State of soft bottom macro-fauna	2	Not evaluated	Arkona Basin	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna 2 Qantitative Eastern Gotland Basin 0.5 0.62 Achieved Indicator report State of soft bottom macro-fauna 2 Qantitative Western Gotland Basin 4 0.5 0.5 0.47 State of soft bottom macro-fauna 2 Qantitative Gulf of Riga 0.5 0.5 0.47 State of soft bottom macro-fauna 2 Qantitative Norther Baltic Proper 4 0.5 0.47 State of soft bottom macro-fauna 2 Qantitative Norther Baltic Proper 4 0.5 0.47 State of soft bottom macro-fauna 2 Qantitative Gulf of Finland 0.5 0.5 0.47 State of soft bottom macro-fauna 2 Qantitative Gulf of Finland 0.5 0.5 0.47 State of soft bottom macro-fauna 2 Qantitative Gulf of Finland 0.5 0.47 State of soft bottom macro-fauna 2 Qantitative Bothnian Sea 4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0	State of soft bottom macro-fauna	2	Not evaluated	Bornholm Basin	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna 2 Quntitative Western Gotland Basin 4 5.11 Achieved Indicator report State of soft bottom macro-fauna 2 Quntitative Gulf of Riga 0.5 0.5 0.47 Failed Indicator report State of soft bottom macro-fauna 2 Quntitative Gulf of Finga 0.5 0.47 Failed Indicator report State of soft bottom macro-fauna 2 Quntitative Gulf of Finland 0.5 0.47 Failed Indicator report State of soft bottom macro-fauna 2 Quntitative Gulf of Finland 0.5 0.47 Achieved Indicator report State of soft bottom macro-fauna 2 Quntitative Bothnian Sea 4 Achieved 7.27 Achieved Indicator report State of soft bottom macro-fauna 2 Quntitative Bothnian Sea 4 Achieved 7.27 Achieved Indicator report State of soft bottom macro-fauna 2 Quntitative Bothnian Sea 4 Achieved 7.28 Achieved Indicator report State of soft bottom macro-fauna 2 Quntitative Bothnian Sea 4 Achieved 7.28 Achieved Indicator report State of soft bottom macro-fauna 2 Quntitative Bothnian Bay 1.5 State of soft bottom macro-fauna 2 Quntitative Bothnian Bay 1.5 Shallow water bottom oxygen 2 Quntitative Great Belt 7.4 And 6 mg L-1/175 km2 7.5 And 6 mg L-1/175	State of soft bottom macro-fauna	2	Not evaluated	Gdansk Basin	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna 2 Qantitative Sulf of Riga 0.5 Qantitative 0.	State of soft bottom macro-fauna	2	Qantitative	Eastern Gotland Basin	0.5	0.62	Achieved	Indicator report
State of soft bottom macro-fauna 2 Qantitative Northern Baltic Proper 4 Scale of soft bottom macro-fauna 2 Qantitative Gulf of Finland 0.5 O.5 O.47 Scale	State of soft bottom macro-fauna	2	Qantitative	Western Gotland Basin	4	5.11	Achieved	Indicator report
State of soft bottom macro-fauna 2 Qantitative Gulf of Finland 0.5 0.47 Failed Indicator report State of soft bottom macro-fauna 2 Qantitative Aland Sea 4.0 C.7.27 Achieved Indicator report State of soft bottom macro-fauna 2 Qantitative Bothnian Sea 4.0 C.7.27 Achieved Indicator report State of soft bottom macro-fauna 2 Qantitative Bothnian Sea 4.0 C.7.28 Achieved Indicator report State of soft bottom macro-fauna 2 Qantitative Bothnian Sea 4.5 Achieved Indicator report State of soft bottom macro-fauna 2 Qantitative Bothnian Bay 1.5 Sallow water bottom oxygen 2 Qantitative Rattegat 2,4 and 6 mg L-1/1752 km2 0.59 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Geat Belt 2,4 and 6 mg L-1/348 km2 0.54 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Resource Stead Stead 2,4 and 6 mg L-1/57 km2 0.41 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Resource Stead Stead 2,4 and 6 mg L-1/57 km2 0.41 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Resource Stead Stead 2,4 and 6 mg L-1/58 km2 0.41 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Resource Stead Stead Stead 2,4 and 6 mg L-1/58 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Resource Stead St	State of soft bottom macro-fauna	2	Qantitative	Gulf of Riga	0.5	0.47	Failed	Indicator report
State of soft bottom macro-fauna 2 Qantitative Bothnian Sea 4.   State of soft bottom macro-fauna 2 Qantitative Bothnian Sea 4.   State of soft bottom macro-fauna 2 Qantitative Bothnian Sea 4.   State of soft bottom macro-fauna 2 Qantitative The Quark 1.5   State of soft bottom macro-fauna 2 Qantitative Bothnian Bay 1.5   State of soft bottom macro-fauna 2 Qantitative Bothnian Bay 1.5   State of soft bottom macro-fauna 2 Qantitative Bothnian Bay 1.5   State of soft bottom macro-fauna 2 Qantitative Rattegat 2,4 and 6 mg L-1/1752 km2 0.59 Fail Indicator report 1.5   Shallow water bottom oxygen 2 Qantitative Great Belt 2,4 and 6 mg L-1/348 km2 0.54 Fail Indicator report 1.5   Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/57 km2 0.41 Fail Indicator report 1.5   Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/57 km2 0.48   Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/58 km2 0.48   Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/58 km2 0.48   Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/58 km2 0.48   Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/58 km2 0.48   Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/58 km2 0.48   Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/58 km2 0.48   Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/58 km2 0.48   Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/58 km2 0.48   Shallow water bottom oxygen 2 Qantitative The Sound	State of soft bottom macro-fauna	2	Qantitative	Northern Baltic Proper	4	6.14	Achieved	Indicator report
State of soft bottom macro-fauna 2 Qantitative Bothnian Sea 4 Acfordance 7.82 Achieved Indicator report State of soft bottom macro-fauna 2 Qantitative Bothnian Bay 1.5 Achieved 1.5 Achieved Indicator report State of soft bottom macro-fauna 2 Qantitative Bothnian Bay 1.5 Achieved 5.43 Achieved Indicator report Shallow water bottom oxygen 2 Qantitative Kattegat 2.4 and 6 mg L-1/1752 km2 0.59 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Great Belt 2.4 and 6 mg L-1/248 km2 0.54 Fail Indicator report Shallow water bottom oxygen 2 Qantitative The Sound 2.4 and 6 mg L-1/257 km2 0.41 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Kiel Bay 2.4 and 6 mg L-1/257 km2 0.41 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/257 km2 0.41 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 mg L-1/258 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2.4 and 6 m	State of soft bottom macro-fauna	2	Qantitative	Gulf of Finland	0.5	0.47	Failed	Indicator report
State of soft bottom macro-fauna 2 Qantitative The Quark 1.5 1.5 1.5 4.85 Achieved Indicator report State of soft bottom macro-fauna 2 Qantitative Bottnian Bay 1.5 5.43 Achieved Indicator report Shallow water bottom oxygen 2 Qantitative Kattegat 2,4 and 6 mg L-1/1752 km2 0.59 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Great Belt 2,4 and 6 mg L-1/348 km2 0.54 Fail Indicator report Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/57 km2 0.41 Fail Indicator report Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/57 km2 0.41 Fail Indicator report Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Kiel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Kiel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Kiel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Kiel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Kiel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Kiel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative 3 Qantitative	State of soft bottom macro-fauna	2	Qantitative	Åland Sea	4	7.27	Achieved	Indicator report
State of soft bottom macro-fauna 2 Qantitative Bothnian Bay 1.5 S.43 Achieved Indicator report Shallow water bottom oxygen 2 Qantitative Great Belt 2,4 and 6 mg L-1/1752 km2 0.59 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Great Belt 2,4 and 6 mg L-1/348 km2 0.54 Fail Indicator report Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/348 km2 0.41 Fail Indicator report Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Siel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Siel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Siel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Siel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Siel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Siel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report Shallow water bottom oxygen 3 Qantitative Siel Bay	State of soft bottom macro-fauna	2	Qantitative	Bothnian Sea	4	7.82	Achieved	Indicator report
Shallow water bottom oxygen 2 Qantitative Kattegat 2,4 and 6 mg L-1/1752 km2 0.59 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Great Belt 2,4 and 6 mg L-1/348 km2 0.54 Fail Indicator report Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/57 km2 0.41 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Kiel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report 0.48 Fail Indicator report 0.48 Fail Indicator report 0.49 Fail I	State of soft bottom macro-fauna	2	Qantitative	The Quark	1.5	4.85	Achieved	Indicator report
Shallow water bottom oxygen 2 Qantitative Great Belt 2,4 and 6 mg L-1/348 km2 0.54 Fail Indicator report  Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/57 km2 0.41 Fail Indicator report  Shallow water bottom oxygen 2 Qantitative Kiel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report	State of soft bottom macro-fauna	2	Qantitative	Bothnian Bay	1.5	5.43	Achieved	Indicator report
Shallow water bottom oxygen 2 Qantitative The Sound 2,4 and 6 mg L-1/57 km2 0.41 Fail Indicator report Shallow water bottom oxygen 2 Qantitative Kiel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report	Shallow water bottom oxygen	2	Qantitative	Kattegat	2, 4 and 6 mg L-1/1752 km2	0.59	Fail	Indicator report
Shallow water bottom oxygen 2 Qantitative Kiel Bay 2,4 and 6 mg L-1/684 km2 0.48 Fail Indicator report	Shallow water bottom oxygen	2	Qantitative	Great Belt	2, 4 and 6 mg L-1/348 km2	0.54	Fail	Indicator report
	Shallow water bottom oxygen	2	Qantitative	The Sound	2, 4 and 6 mg L-1/57 km2	0.41	Fail	Indicator report
Shallow water bottom oxygen 2 Qantitative Bay of Mecklenburg 2,4 and 6 mg L-1/710 km2 0.3 Fail Indicator report	Shallow water bottom oxygen	2	Qantitative	Kiel Bay	2, 4 and 6 mg L-1/684 km2	0.48	Fail	Indicator report
	Shallow water bottom oxygen	2	Qantitative	Bay of Mecklenburg	2, 4 and 6 mg L-1/710 km2	0.3	Fail	Indicator report







**Table A2.2a.** (continued). Details of indicator evaluation results for each specific indicator and area included in the thematic assessment of benthic habitats for 2016–2021. In the case where more than one option for threshold value is available the one used for HOLAS3 is presented in bold.

Indicator	Assessment scale 2016-2021	Type of evaluation	Sub-basin	Threshold value 2016-2021	Result 2016-2021	Status 2016-2021	Source
Shallow water bottom oxygen	2	Qantitative	Arkona Basin	2, 4 and 6 mg L-1/1730 km2	0.4	Fail	Indicator report
Shallow water bottom oxygen	2	Not applicable	Bornholm Basin	Not applicable	Not applicable	Not applicable	Not applicable
Shallow water bottom oxygen	2	Qantitative	Pomeranian Sea	$4\mbox{mg}$ L-1 (seasonally stratified) and $6\mbox{mg}$ L-1 (well mixed	0.72	Achieve	Indicator report
Shallow water bottom oxygen	2	Not applicable	Gdansk Basin	Not applicable	Not applicable	Not applicable	Not applicable
Shallow water bottom oxygen	2	Not applicable	Eastern Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable
Shallow water bottom oxygen	2	Not applicable	Western Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable
Shallow water bottom oxygen	2	Qantitative	Gulf of Riga	4mg L-1 (seasonally stratified) and $6mg$ L-1 (well mixed)	0.7	Achieve	Indicator report
Shallow water bottom oxygen	2	Not applicable	Northern Baltic Proper	Not applicable	Not applicable	Not applicable	Not applicable
Shallow water bottom oxygen	2	Not applicable	Gulf of Finland, western	Not applicable	Not applicable	Not applicable	Not applicable
Shallow water bottom oxygen	2	Qantitative	Gulf of Finland, eastern	6.0 (volume below threshold)/14 km3	0.29	Fail	Indicator report
Shallow water bottom oxygen	2	Not evaluated	Åland Sea	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Shallow water bottom oxygen	2	Qantitative	Bothnian Sea	7.7 mg L-1	0.75	Achieve	Indicator report
Shallow water bottom oxygen	2	Qantitative	The Quark	8.1 mg L-1	0.73	Achieve	Indicator report
Shallow water bottom oxygen	2	Qantitative	Bothnian Bay	8.8 mg L-1	0.98	Achieve	Indicator report
Oxygen debt	2	Not applicable	Kattegat	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Not applicable	Great Belt	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Not applicable	The Sound	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Not applicable	Kiel Bay	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Not applicable	Bay of Mecklenburg	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Not applicable	Arkona Basin	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Qantitative	Bornholm Basin	6.7 mg L-1	0.38	Fail	Indicator report
Oxygen debt	2	Not applicable	Pomeranian Sea	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Qantitative	Gdansk Basin	8.66 mg L-1	0.29	Fail	Indicator report
Oxygen debt	2	Qantitative	Eastern Gotland Basin	8.66 mg L-1	0.29	Fail	Indicator report





**Table A2.2a.** (continued). Details of indicator evaluation results for each specific indicator and area included in the thematic assessment of benthic habitats for 2016–2021. In the case where more than one option for threshold value is available the one used for HOLAS3 is presented in bold.

Indicator	Assessment scale 2016-2021	Type of evaluation	Sub-basin	Threshold value 2016-2021	Result 2016-2021	Status 2016-2021	Source
Oxygen debt	2	Qantitative	Western Gotland Basin	8.66 mg L-1	0.29	Fail	Indicator report
Oxygen debt	2	Not applicable	Gulf of Riga	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Qantitative	Northern Baltic Proper	8.66 mg L-1	0.29	Fail	Indicator report
Oxygen debt	2	Qantitative	Gulf of Finland, western	8.66 mg L-1	0.29	Fail	Indicator report
Oxygen debt	2	Not applicable	Gulf of Finland, eastern	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Not applicable	Åland Sea	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Not applicable	Bothnian Sea	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Not applicable	The Quark	Not applicable	Not applicable	Not applicable	Not applicable
Oxygen debt	2	Not applicable	Bothnian Bay	Not applicable	Not applicable	Not applicable	Not applicable







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State of the Baltic Sea



Table A2.2b. Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### Åland Sea

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infralittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud
none	58.3	52.3	62.8	53.9	40.6	55.2	67.7	83.4	69.4	54.2	80.4	54.8	100	-	99.9	-	100	-
very low	0	0	0	0	0	0	0	0	0.9	0	0	0	0	-	0	-	0	-
low	< 0.1	0	31.7	23.9	48.6	38.2	0	0	25.2	24.9	15.1	30.5	0	-	0	-	0	-
1011	0.1			··· <del></del>	··· <del>·</del>	··· <del>·</del>		-										
m¹	39.3	46.6	4.8	21.4	9.6	5.1	31.3	16.5	4.2	20.8	4.3	14.4	0	-	0	-	0	-
		····				1	31.3 0.8	16.5 <0.1	4.2 0.2	20.8	4.3 <0.1	14.4 <0.1	0 0	-	0 0	-	0	-
m¹	39.3	46.6	4.8	21.4	9.6	5.1		:	-									
m¹ m²	39.3 1.9	46.6 0.7	4.8 0.2	21.4 <0.1	9.6 0.3	5.1 0.2	0.8	<0.1	0.2	0	<0.1	<0.1	0	-	0	-	0	-

Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### Arkona Basin

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infralittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud
	Ē	<u></u>	Ē	<u></u>	Ē	<u>=</u>	ซิ	ີ້	ਹਿ	ਹੁੰ	<del>ט</del> ֿ	ָּבָי <u>י</u> בֿי	9	ō	ō	2	δ	ō
none	0.9	8.9	<u>E</u> 6.8	4.8	<u>Ē</u>	3.0	້ວີ 34.3	ប៊ី 41.4	ਹ 25.1	້ວີ 19.6	์ -	້ວີ 1.4		5 7.7	້ວ 11.9	ර් 17.5		1.0
none very low				-														
	0.9	8.9	6.8	4.8	-	3.0	34.3	41.4	25.1	19.6 0.4	-	1.4	0 0	7.7	11.9	17.5	-	1.0
very low	0.9 0	8.9 0	6.8 1.5	4.8 8.8	-	3.0 0	34.3 0	41.4 0	25.1 7.3	19.6 0.4 34.7	-	1.4 0	0 0	7.7 0	11.9 38.5	17.5 0	- - -	1.0 0
very low low	0.9 0 0	8.9 0 <0.1	6.8 1.5 5.0	4.8 8.8 42.0	- -	3.0 0 55.8	34.3 0 0	41.4 0 0	25.1 7.3 51.7	19.6 0.4 34.7 9.3	- - -	1.4 0 20.4	0 0 0 52.2	7.7 0 0	11.9 38.5 30.7	17.5 0 34.8	- - -	1.0 0 5.3
very low low m <sup>1</sup>	0.9 0 0 72.7	8.9 0 <0.1 64.0	6.8 1.5 5.0 74.8	4.8 8.8 42.0 20.2	- - -	3.0 0 55.8 31.9	34.3 0 0 41.2	41.4 0 0 44.3	25.1 7.3 51.7 12.3	19.6 0.4 34.7 9.3	- - -	1.4 0 20.4 7.3	0 0 0 52.2	7.7 0 0 87.7	11.9 38.5 30.7 11.7	17.5 0 34.8 12.6	- - - -	1.0 0 5.3 9.9
very low low m <sup>1</sup> m <sup>2</sup>	0.9 0 0 72.7 26.0	8.9 0 <0.1 64.0 24.4	6.8 1.5 5.0 74.8 9.2	4.8 8.8 42.0 20.2 3.6	- - - -	3.0 0 55.8 31.9 4.1	34.3 0 0 41.2 22.1	41.4 0 0 44.3 11.6	25.1 7.3 51.7 12.3 0.1	19.6 0.4 34.7 9.3 0.3 27.9	- - - -	1.4 0 20.4 7.3 3.2	0 0 0 52.2 0	7.7 0 0 87.7 2.5	11.9 38.5 30.7 11.7 0.4	17.5 0 34.8 12.6 <0.1	- - - -	1.0 0 5.3 9.9 1.0







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Biodiversity
Annex 2

Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### **Bay of Mecklenburg**

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infralittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud	
none	-	<0.1	<0.1	3.6	-	0.6	-	0	0	<0.1	-	0	-	-	-	-	-	-	
very low	-	0	0	9.0	-	0	-	0	15.7	6.1	-	0	-	-	-	-	-	-	
low	-	0	1.5	23.2	-	44.6	-	0	23.5	25.9	-	10.4	-	-	-	-	-	-	
m¹	-	27.8	95.9	28.6	-	20.2	-	5.4	58.1	8.4	-	6.7	-	-	-	-	-	-	
m²	-	54.0	2.2	13.0	-	14.0	-	35.4	1.0	1.8	-	10.0	-	-	-	-	-	-	
m³	-	<0.1	0	<0.1	-	10.8	-	0	0	36.3	-	<0.1	-	-	-	-	-	-	
high	-	16.6	0.2	22.2	-	9.7	-	59.2	1.7	21.5	-	72.9	-	-	-	-	-	-	
loss	-	1.6	0.1	0.5	-	0.2	-	<0.1	<0.1	0.1	-	<0.1	-	-	-	-	-	-	

Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### **Bornholm Basin**

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	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infraiittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud
none	9.7	14.9	26.9	2.6	38.1	28.8	31.1	65.3	58.2	22.4	20.8	4.4	38.5	23.4	4.9	4.1	44.5	3.9
very low	0	0	0.9	0.5	0	0	0	0	4.5	<0.1	0	0	0	0	13.3	0	0	0
low	0	0.3	57.5	63.7	7.0	18.4	0	0	25.1	34.9	57.2	40.4	0	0	39.6	25.6	45.7	35.4
m¹	80.1	66.2	13.7	10.8	52.6	50.1	67.6	28.1	6.0	10.0	10.8	9.5	61.5	68.3	16.2	8.3	3.5	9.6
m²	10.0	17.6	0.8	<0.1	1.9	2.5	0.6	3.0	0.9	<0.1	<0.1	<0.1	0	0	3.5	0	0	0
m³	0	<0.1	0.2	13.8	<0.1	<0.1	0	0	4.1	24.0	10.9	20.9	0	0	8.9	21.6	4.0	24.6
high	<0.1	0.9	<0.1	7.8	0.2	<0.1	0.7	3.6	1.3	8.5	0.4	24.7	0	8.3	13.6	40.3	2.2	26.5
loss	0.2	0.2	<0.1	0.6	0.2	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	0	0	<0.1	<0.1	<0.1	0.1







Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### **Bothnian Bay**

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infraittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud	
none	77.3	43.6	59.3	73.3	65.1	28.9	89.2	55.3	76.4	68.1	88.2	77.0	-	-	-	-	-	-	
very low	0	7.0	5.9	1.5	4.9	<0.1	0	0.9	0.9	0.2	1.2	0.7	-	-	-	-	-	-	
low	0	0	31.2	24.1	27.4	66.4	0	0	22.3	31.3	9.7	19.6	-	-	_	-	-	-	
m¹	22.3	46.5	3.0	0.9	2.3	3.7	10.8	43.5	0.4	0.3	0.9	2.7	-	-	-	-	-	-	
m²	0	2.9	0.3	<0.1	<0.1	0	0	0.2	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	
m³	0	0	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	<0.1	0	-	-	-	-	-	-	
high	0	<0.1	<0.1	<0.1	<0.1	0	0	0	<0.1	<0.1	<0.1	0	-	-	-	-	-	-	
loss	0.4	<0.1	0.3	<0.1	0.2	0.9	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	





Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### **Bothnian Sea**

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infraüttoral mixed sediment	Infraittoral sand	Infraüttoral mud or Infralittoral sand	Infralittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud
none	64.2	56.6	64.8	56.8	59.5	34.3	72.9	81.5	91.0	79.1	91.7	84.2	-	100	100	100	97.3	100
very low	0.1	<0.1	0.2	0	0.1	0	<0.1	<0.1	1.8	0	0.1	<0.1	-	0	<0.1	0	2.8	0
low	0	<0.1	32.6	43.3	39.2	63.6	<0.1	<0.1	7.1	20.9	7.1	14.5	-	0	0	0	0	0
m¹	33.5	42.3	1.9	0	0.8	1.1	26.6	18.0	<0.1	0	0.7	1.0	-	0	0	0	0	0
m²	1.6	1.0	<0.1	0	0	0	0.3	0.3	<0.1	0	0	0	-	0	0	0	0	0
m³	0	<0.1	0.2	0	0.3	0.4	0	0	<0.1	0	0.4	0.2	-	0	0	0	0	0
high	0.4	<0.1	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	<0.1	-	0	0	0	0	0
loss	0.3	<0.1	0.3	<0.1	0.2	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0	0	0	0	0







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Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### **Eastern Gotland Basin**

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infralittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud	
none	18.4	17.8	38.5	42.6	86.8	16.7	49.2	74.9	71.2	57.8	58.3	59.6	100	84.4	48.4	53.5	76.7	15.9	
very low	0	0	0	0	0	0	0	0	3.5	0	0	0	0	0	1.1	0	0	0	
low	15.5	1.6	57.2	54.8	13.2	80.9	12.4	1.7	20.5	36.4	35.4	27.3	0	0	12.5	7.6	16.8	18.7	
m¹	65.0	73.1	4.3	2.6	0	2.5	33.3	18.3	2.7	3.6	4.9	4.3	0	15.1	4.6	2.9	3.9	13.1	
m²	1.0	7.3	<0.1	<0.1	0	0	4.7	4.5	0.1	<0.1	0	0	0	0	<0.1	0	0	0	
m³	0	0.2	0	<0.1	0	0	0	0	1.3	1.4	1.3	5.5	0	0	16.4	4.6	2.1	25.7	
high	<0.1	<0.1	<0.1	<0.1	0	0	0.4	0.6	0.7	0.7	<0.1	3.2	0	0.4	17.1	31.4	0.6	26.6	
loss	<0.1	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	<0.1	<0.1	<0.1	<0.1	

Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### **Gdansk Basin**

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infraüttoral sand	Infraüttoral mud or Infraüttoral sand	Infraittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud	
none	79.5	6.3	77.0	31.7	56.8	68.1	49.1	2.6	2.6	29.4	90.8	7.9	-	-	0	0	83.1	0	
very low	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	
low	7.9	64.2	5.3	41.4	36.6	18.9	50.8	91.4	97.4	45.0	7.5	21.9	-	-	0	0	14.2	13.7	
m¹	12.6	22.5	16.9	19.5	6.7	0	<0.1	2.6	0	9.9	1.7	29.8	-	-	93.4	8.6	1.6	45.8	
m²	0	6.8	0	6.6	0	13.0	0	1.2	0	2.6	0	0.2	-	-	0	0	0	0	
m³	0	0	0	<0.1	0	0	0	0	0	3.2	0	38.3	-	-	6.6	40.7	1.2	37.6	
high	0	0	0	0.7	0	0	0	2.3	0	9.6	0	2.0	-	-	0	50.7	0	2.9	
loss	0	0.3	0.7	0.1	0	0	0	0	0	0.4	0	<0.1	-	-	0	0	0	0	







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Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### **Great Belt**

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infralittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud	
none	0.2	12.1	6.8	8.8	-	1.6	0	0.3	9.3	3.7	-	0.4	-	0	35.2	17.0	-	0	
very low	0	0	0.2	42.0	-	0	0	0	4.4	35.9	-	0	-	0	6.7	18.7	-	0	
low	0	0	<0.1	4.3	-	58.4	0	0	1.5	6.0	-	34.4	-	0	0.9	6.1	-	6.8	
m¹	53.2	70.1	69.1	33.2	-	30.8	100	49.2	68.7	24.1	-	33.1	-	71.0	39.9	20.7	-	4.7	
m²	46.3	15.2	19.4	7.0	-	8.8	0	28.0	16.1	7.0	-	7.2	-	25.8	17.2	5.7	-	6.1	
m³	0	<0.1	<0.1	0.6	-	<0.1	0	0.3	0	2.2	-	4.5	-	0	0	7.4	-	18.6	
high	0.3	2.4	3.7	3.4	-	0.2	0	22.1	0.1	21.1	-	20.5	-	3.3	0	24.3	-	63.9	
loss	<0.1	0.2	0.8	0.8	-	0.2	0	<0.1	<0.1	0.1	-	<0.1	-	0	<0.1	<0.1	-	<0.1	

Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### **Gulf of Finland**

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infralittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud
none	39.8	33.0	48.0	42.7	26.7	20.6	55.1	63.7	66.9	47.9	68.4	80.4	98.9	100	93.3	100	94.3	99.7
very low	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
low	34.1	45.4	37.7	49.8	68.8	60.7	16.7	32.2	30.7	50.7	28.9	16.3	1.0	0	4.2	0	3.6	0.2
m¹	23.9	18.8	12.8	6.2	3.2	17.9	26.8	3.6	1.9	0.8	2.0	3.1	0.1	0	2.0	0	1.6	<0.1
m²	1.3	1.8	0.5	0.2	0.1	0.4	1.0	0.1	0.1	<0.1	<0.1	<0.1	0	0	0	0	0	0
m³	<0.1	0.1	0.1	0.2	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	0	0	0
high	0.2	0.3	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	0	0	0	0
loss	0.7	0.6	0.8	0.8	0.8	0.4	0.4	0.3	0.4	0.4	0.6	<0.1	0	<0.1	0.5	<0.1	0.5	<0.1







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Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### **Gulf of Riga**

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infralittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Gircalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud	
none	50.0	54.7	49.8	53.6	43.0	28.8	17.4	11.4	24.9	56.1	72.9	78.4	-	-	-	-	-	-	
very low	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	
low	0	0	18.7	30.6	13.3	37.4	0	0	73.0	43.3	26.9	20.7	-	-	-	-	-	-	
m¹	48.5	42.5	30.5	15.5	43.3	32.8	82.6	87.9	2.1	0.6	0.1	0.9	-	-	-	-	-	-	
m²	1.4	2.3	0.7	0.2	0.3	0.8	0	0.7	<0.1	0	0	<0.1	-	-	-	-	-	-	
m³	0	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	<0.1	<0.1	<0.1	<0.1	_	-	-	-	-	-	
high	0.1	0.5	0.2	<0.1	<0.1	0.2	0	0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	
loss	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	<0.1	0	0	<0.1	_	-	-	-	-	-	

Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### Kattegat

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infralittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud
none	7.2	15.4	14.0	15.1	-	17.3	8.4	5.0	2.2	1.9	-	6.4	0.4	<0.1	0.7	10.8	-	1.9
very low	0	0	0	62.7	-	0	0	0	1.4	38.8	_	0	0	0	4.9	1.0	-	0
low	<0.1	0.2	5.9	3.5	-	48.9	0	0.2	33.9	4.5	-	27.1	0	0	14.8	0.1	-	0.1
m¹	60.1	68.4	65.9	15.4	-	27.1	54.5	48.8	50.2	31.4	_	15.7	31.3	9.1	15.6	20.6	-	3.1
m²	32.0	13.0	13.2	2.2	-	5.3	34.4	35.5	7.1	8.5	-	7.4	16.4	16.6	16.0	7.0	-	1.1
m³	0	<0.1	<0.1	<0.1	-	0.5	0	<0.1	1.8	<0.1	_	0.1	0	0	11.8	0	-	<0.1
high	0.4	3.0	0.8	0.9	-	0.7	2.7	10.6	3.4	14.9	-	43.2	51.3	74.2	36.3	60.4	-	93.8
loss	0.3	<0.1	<0.1	0.1	-	0.3	<0.1	<0.1	<0.1	<0.1	-	<0.1	0.5	<0.1	0	<0.1	-	<0.1







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Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### Kiel Bay

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infralittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud
none	0	<0.1	2.8	<0.1	-	<0.1	-	0	0	<0.1	-	0	-	0	0	0	-	0
very low	0	0	<0.1	1.6	-	0	-	0	2.0	0.1	-	0	-	0	0	0	-	0
low	0	0	<0.1	15.0	-	12.4	-	0	0	10.8	-	0.7	-	0	0	67.2	-	0
m¹	79.6	23.3	64.7	37.0	-	15.6	-	4.0	36.0	11.9	-	7.1	-	46.8	82.9	3.9	-	26.2
m²	20.4	66.8	15.0	20.2	-	34.2	-	41.4	59.0	3.2	-	11.9	-	52.9	17.1	2.3	-	35.2
m³	0	<0.1	0	1.3	-	14.2	_	0	0	21.4	-	<0.1	-	0	0	11.9	-	0
high	0	9.8	17.3	24.6	-	23.2	-	54.6	3.0	52.5	-	80.3	-	0.3	0	14.7	-	38.7
loss	0	<0.1	0.1	0.2	-	0.4	-	0	0	<0.1	-	<0.1	-	0	0	0	-	0

Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### **Norther Baltic Proper**

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	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infraüttoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud	
none	54.3	11.9	30.4	27.8	84.7	31.0	92.0	87.1	92.1	85.7	98.7	85.6	100	100	98.5	100	95.1	100.0	
very low	0	0	0	0	0	0	0	0	<0.1	0	0	0	0	0	0.4	0	0	0	
low	0	0	51.4	25.5	15.4	52.9	0	0	6.8	14.2	1.1	13.3	0	0	0.6	0	4.1	0	
m¹	45.7	87.1	18.0	46.7	0	15.1	8.0	12.8	1.1	<0.1	0.2	1.1	0	0	0.3	0	0.7	0	
m²	<0.1	0.7	0.1	0	0	0.9	0	<0.1	<0.1	0	0	0	0	0	0	0	0	0	
m³	0	<0.1	<0.1	0	0	<0.1	0	0	0	0	0	<0.1	0	0	0	0	0	0	
high	0	0.1	<0.1	0	0	0.1	0	<0.1	0	0	0	<0.1	0	0	0	0	0	0	
loss	<0.1	0.1	<0.1	0	0	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1	0	0	<0.1	0	0.2	<0.1	







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Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### The Quark

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infraüttoral sand	Infralittoral mud or Infralittoral sand	Infratitional mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud
none	73.9	55.5	79.7	95.5	85.2	76.8	70.5	65.4	71.4	91.9	94.4	80.7	-	-	-	-	_	-
very low	0	0	0	0	0	0	0	0	0.5	0	0	0	_	-	-	-	-	-
low	0	0	19.8	4.5	14.8	22.5	0	0	28.1	8.1	5.7	19.3	_	-	-	-	-	-
m¹	25.8	44.2	0.1	0	0	0.6	29.5	34.6	<0.1	0	0	0	-	-	-	-	-	-
m²	0	0.3	0	0	0	0	0	<0.1	0	0	0	0	-	-	-	-	-	-
m³	0	0	0	0	0	<0.1	0	0	0	0	0	0	_	-	-	-	-	-
high	0	<0.1	0	0	0	<0.1	0	<0.1	0	0	0	0	-	-	-	-	-	-
loss	0.3	<0.1	0.5	0	0	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1	-	-	-	-	-	-

Table A2.2b. (continued). Indicator evaluation results for the indicators included in the integrated assessment of benthic habitats.

Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### The Sound

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infralittoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Circalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud	
none	0	18.2	0.4	3.2	-	0.7	0	0.7	0.2	4.1	-	11.4	0	<0.1	0	0	-	21.6	
very low	0	0	0	39.3	-	0	0	0	0	15.8	-	0	0	0	0	0	-	0	
low	0	0	2.0	10.2	-	58.9	0	0	0	37.8	-	54.7	0	0	0	50.4	-	39.5	
m¹	97.2	77.4	92.9	44.8	-	39.9	99.8	97.1	99.8	39.0	-	33.6	100	99.8	100	34.4	-	39.0	
m²	2.5	3.6	3.1	1.3	-	0.4	0	1.2	0	3.4	-	0.4	0	0	0	15.2	-	0	
m³	0	<0.1	<0.1	<0.1	_	<0.1	0	0	0	0	-	0	0	0	0	0	-	0	
high	0.3	0.5	1.3	0.8	-	<0.1	0	0.7	0	<0.1	-	0	0	0	0	0	-	0	
loss	<0.1	0.3	0.3	0.4	_	<0.1	0.2	0.3	0	<0.1	-	0	0	0.2	0	<0.1	-	0	









Evaluation results of the Cumulative impact from physical pressures on benthic biotopes for Baltic Sea subbasins in alphabetical order including the disturbance category very high which is considered as loss (very high = loss). The tables show the percentage (area) of the individual broad habitat types potentially disturbed and the corresponding disturbance category (m1, m2 and m3 are three different grades of moderate disturbance, the category "none/n.a." represents unaffected areas (none) including areas not evaluated (n.a.) due to lack of data; delivered data do not indicate areas with lack of data). If there is a minus (-) in the table, the broad habitat type is not present in the subbasin:

### **Western Gotland Basin**

	Infralittoral rock and biogenic reef	Infralittoral coarse sediment	Infralittoral mixed sediment	Infralittoral sand	Infralittoral mud or Infralittoral sand	Infraüttoral mud	Circalittoral rock and biogenic reef	Circalittoral coarse sediment	Circalittoral mixed sediment	Gircalittoral sand	Circalittoral mud or Circalittoral sand	Circalittoral mud	Offshore circalittoral rock and biogenic reef	Offshore circalittoral coarse sediment	Offshore circalittoral mixed sediment	Offshore circalittoral sand	Offshore circalittoral mud or Offshore circalittoral sand	Offshore circalittoral mud
none	50.5	43.2	47.4	30.3	62.0	43.9	85.6	82.1	90.8	71.6	88.8	80.9	100	100	100	100	99.4	100
very low	0	0	0	0	0	0	0	0	0.7	0	0	0	0	0	0	0	0	0
low	0	0	43.8	58.7	20.6	37.7	0	0	6.5	21.2	7.7	13.9	0	0	0	0	0.6	<0.1
m¹	49.3	56.3	8.7	10.7	17.4	18.3	14.4	16.9	1.8	7.0	0.9	4.8	0	0	0	0	0	0
m²	0.2	0.5	<0.1	0	0	0	<0.1	0.9	<0.1	0	0	<0.1	0	0	0	0	0	0
m³	0	<0.1	<0.1	<0.1	<0.1	<0.1	0	0	<0.1	0.2	2.1	0.2	0	0	0	0	0	0
high	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0	0.4	0.2	0	0	0	0	0	0
loss	<0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1







### A2.3 Coastal fish

Table A2.3. Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of coastal fish for 2016-2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Threshold value 2016- 2021	Results 2016-2021	Status 2016-2021	Source
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Bothnian Bay Finnish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Bothnian Bay Swedish Coastal waters	0.5	0.625	achieved	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	The Quark Finnish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	The Quark Swedish Coastal waters	0.5	0.375	failed	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Bothnian Sea Finnish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Bothnian Sea Swedish Coastal waters	0.5	0.625	achieved	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Åland Sea Swedish Coastal waters	0.5	0.125	failed	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Åland Sea – Archipelago Sea Finnish Coastal waters	0.5	0.375	failed	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Northern Baltic Proper Swedish Coastal waters	0.5	0.375	failed	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Northern Baltic Proper Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Gulf of Finland Finnish Coastal waters	0.5	0.375	failed	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Gulf of Finland Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Gulf of Finland Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	









Table A2.3. (Continued). Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of coastal fish for 2016-2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Threshold value 2016- 2021	Results 2016-2021	Status 2016-2021	Source
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Gulf of Riga Estonian Coastal waters	0.5	0.125	failed	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Gulf of Riga Latvian Coastal waters	0.5	0.375	failed	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Western Gotland Basin Swedish Coastal waters	0.5	0.375	failed	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Eastern Gotland Basin Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Eastern Gotland Basin Latvian Coastal waters	0.5	0.125	failed	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Eastern Gotland Basin Lithuanian Coastal waters	0.5	0.375	failed	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Eastern Gotland Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Eastern Gotland Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Eastern Gotland Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Gdansk Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Gdansk Basin Polish Coastal waters	0.5	0.625	achieved	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Bornholm Basin Swedish Coastal waters	0.5		achieved	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Bornholm Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	

Table A2.3. (Continued). Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of coastal fish for 2016–2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Threshold value 2016- 2021	Results 2016-2021	Status 2016-2021	Source
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Arkona Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Arkona Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Arkona Basin German Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Mecklenburg Bight German Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Mecklenburg Bight Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Kiel Bight German Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Kiel Bight Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Belts Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	The Sound Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	The Sound Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Kattegat Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Kattegat Danish Coastal waters, including Limfjorden	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Bothnian Bay Finnish Coastal waters	0.5	0.875	achieved	









Table A2.3. (Continued). Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of coastal fish for 2016-2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Threshold value 2016- 2021	Results 2016-2021	Status 2016-2021	Source
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Bothnian Bay Swedish Coastal waters	0.5	0.625	achieved	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	The Quark Finnish Coastal waters	0.5	0.875	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	The Quark Swedish Coastal waters	0.5	0.375	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Bothnian Sea Finnish Coastal waters	0.5	0.625	achieved	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Bothnian Sea Swedish Coastal waters	0.5	0.125	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Åland Sea Swedish Coastal waters	0.5	0.125	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Åland Sea – Archipelago Sea Finnish Coastal waters	0.5	0.125	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Northern Baltic Proper Swedish Coastal waters	0.5	0.125	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Northern Baltic Proper Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Gulf of Finland Finnish Coastal waters	0.5	0.375	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Gulf of Finland Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Gulf of Finland Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Gulf of Riga Estonian Coastal waters	0.5	0.625	achieved	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Gulf of Riga Latvian Coastal waters	0.5	0.625	achieved	

Table A2.3. (Continued). Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of coastal fish for 2016–2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Threshold value 2016- 2021	Results 2016-2021	Status 2016-2021	Source
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Western Gotland Basin Swedish Coastal waters	0.5	0.125	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Eastern Gotland Basin Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Eastern Gotland Basin Latvian Coastal waters	0.5	0.625	achieved	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Eastern Gotland Basin Lithuanian Coastal waters	0.5	0.375	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Eastern Gotland Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Eastern Gotland Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Eastern Gotland Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Gdansk Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Gdansk Basin Polish Coastal waters	0.5	0.625	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Bornholm Basin Swedish Coastal waters	0.5	0.375	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Bornholm Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Bornholm Basin German Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Arkona Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	









Table A2.3. (Continued). Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of coastal fish for 2016-2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Threshold value 2016- 2021	Results 2016-2021	Status 2016-2021	Source
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Arkona Basin Danish Coastal waters	0.5	0.375	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Arkona Basin German Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Mecklenburg Bight German Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Mecklenburg Bight Danish Coastal waters	0.5	0.375	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Kiel Bight German Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Kiel Bight Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Belts Danish Coastal waters	0.5	0.375	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	The Sound Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	The Sound Danish Coastal waters	0.5	0.375	failed	
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Kattegat Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Kattegat Danish Coastal waters, including Limfjorden	0.5	0.125	failed	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Bothnian Bay Finnish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Bothnian Bay Swedish Coastal waters	0.5	0.375	failed	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	The Quark Finnish Coastal waters	0.5	0.875	achieved	

Table A2.3. (Continued). Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of coastal fish for 2016–2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Threshold value 2016- 2021	Results 2016-2021	Status 2016-2021	Source
Size structure of coastal fish (Coastal fish size)	3	Quantitative	The Quark Swedish Coastal waters	0.5	0.375	failed	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Bothnian Sea Finnish Coastal waters	0.5	0.875	achieved	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Bothnian Sea Swedish Coastal waters	0.5		achieved	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Åland Sea Swedish Coastal waters	0.5	0.375	failed	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Åland Sea – Archipelago Sea Finnish Coastal waters	0.5	0.375	failed	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Northern Baltic Proper Swedish Coastal waters	0.5	0.375	failed	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Northern Baltic Proper Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Gulf of Finland Finnish Coastal waters	0.5	0.125	failed	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Gulf of Finland Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Gulf of Finland Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Gulf of Riga Estonian Coastal waters	0.5	0.625	achieved	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Gulf of Riga Latvian Coastal waters	0.5	0.125	failed	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Western Gotland Basin Swedish Coastal waters	0.5	0.375	failed	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Eastern Gotland Basin Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	









Table A2.3. (Continued). Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of coastal fish for 2016-2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Threshold value 2016- 2021	Results 2016-2021	Status 2016-2021	Source
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Eastern Gotland Basin Latvian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Eastern Gotland Basin Lithuanian Coastal waters	0.5	0.375	failed	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Eastern Gotland Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Eastern Gotland Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Eastern Gotland Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Gdansk Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Gdansk Basin Polish Coastal waters	0.5	0.125	failed	
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Bornholm Basin Swedish Coastal waters	0.5	0.375	failed	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Bornholm Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Arkona Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Arkona Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Arkona Basin German Coastal waters	Not evaluated	Not evaluated	Not evaluated	

Table A2.3. (Continued). Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of coastal fish for 2016-2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Threshold value 2016- 2021	Results 2016-2021	Status 2016-2021	Source
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Mecklenburg Bight German Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Mecklenburg Bight Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Kiel Bight German Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Kiel Bight Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Belts Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	The Sound Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	The Sound Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Kattegat Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Kattegat Danish Coastal waters, including Limfjorden	Not evaluated	Not evaluated	Not evaluated	









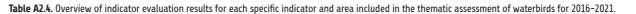




### A2.4 Waterbirds

Table A2.4. Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of waterbirds for 2016-2021.

Indicator	Ass. scale 2016-2021	Type of evaluation	AU Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Abundance of waterbirds in the breeding season	2	Quantitative	Kattegat	Kattegatt	Surace feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Great Belt	Belt Group	Surace feeders	75%	71%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	The Sound	Belt Group	Surace feeders	75%	71%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Kiel Bay	Bornholm Group	Surace feeders	75%	56%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Surace feeders	75%	56%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Arkona Basin	Bornholm Group	Surace feeders	75%	56%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bornholm Basin	Bornholm Group	Surace feeders	75%	56%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Gdansk Basin	Gotland Group	Surace feeders	75%	56%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Surace feeders	75%	56%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Western Gotland Basin	Gotland Group	Surace feeders	75%	56%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Riga	Gotland Group	Surace feeders	75%	56%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Northern Baltic Proper	Åland Group	Surace feeders	75%	75%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Finland	Gulf of Finland	Surace feeders	75%	43%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Åland Sea	Åland Group	Surace feeders	75%	75%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Sea	Bothnian Group	Surace feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	The Quark	Bothnian Group	Surace feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Bay	Bothnian Group	Surace feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Kattegat	Kattegatt	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the breeding season	2	Quantitative	Great Belt	Belt Group	Pelagic feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	The Sound	Belt Group	Pelagic feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Kiel Bay	Bornholm Group	Pelagic feeders	75%	83%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Pelagic feeders	75%	83%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Arkona Basin	Bornholm Group	Pelagic feeders	75%	83%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bornholm Basin	Bornholm Group	Pelagic feeders	75%	83%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Gdansk Basin	Gotland Group	Pelagic feeders	75%	86%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Pelagic feeders	75%	86%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Western Gotland Basin	Gotland Group	Pelagic feeders	75%	86%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Riga	Gotland Group	Pelagic feeders	75%	86%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Northern Baltic Proper	Åland Group	Pelagic feeders	75%	80%	achieve	Indicator report



Indicator	Ass. scale 2016-2021	Type of evaluation	AU Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Finland	Gulf of Finland	Pelagic feeders	75%	71%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Åland Sea	Åland Group	Pelagic feeders	75%	80%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Sea	Bothnian Group	Pelagic feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	The Quark	Bothnian Group	Pelagic feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Bay	Bothnian Group	Pelagic feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Kattegat	Kattegatt	Benthic feeders	75%	0%	Fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Great Belt	Belt Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the breeding season	2	Quantitative	The Sound	Belt Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the breeding season	2	Quantitative	Kiel Bay	Bornholm Group	Benthic feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Benthic feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Arkona Basin	Bornholm Group	Benthic feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bornholm Basin	Bornholm Group	Benthic feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Gdansk Basin	Gotland Group	Benthic feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Benthic feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Western Gotland Basin	Gotland Group	Benthic feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Riga	Gotland Group	Benthic feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Northern Baltic Proper	Åland Group	Benthic feeders	75%	67%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Finland	Gulf of Finland	Benthic feeders	75%	33%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Åland Sea	Åland Group	Benthic feeders	75%	67%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Sea	Bothnian Group	Benthic feeders	75%	33%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	The Quark	Bothnian Group	Benthic feeders	75%	33%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Bay	Bothnian Group	Benthic feeders	75%	33%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Kattegat	Kattegatt	Waders	75%	25%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Great Belt	Belt Group	Waders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	The Sound	Belt Group	Waders	75%	50%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Kiel Bay	Bornholm Group	Waders	75%	60%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Waders	75%	60%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Arkona Basin	Bornholm Group	Waders	75%	60%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Bornholm Basin	Bornholm Group	Waders	75%	60%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Gdansk Basin	Gotland Group	Waders	75%	60%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Waders	75%	60%	fail	Indicator report
Abundance of waterbirds in the breeding season	2	Quantitative	Western Gotland Basin	Gotland Group	Waders	75%	60%	fail	Indicator report











**Table A2.4.** Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of waterbirds for 2016-2021.

Indicator	Ass. scale 2016-2021	Type of evaluation	AU Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Riga	Gotland Group	Waders	75%	60%	fail	Indicator report
abundance of waterbirds in the breeding season	2	Quantitative	Northern Baltic Proper	Åland Group	Waders	75%	75%	achieve	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Gulf of Finland	Gulf of Finland	Waders	75%	75%	achieve	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Åland Sea	Åland Group	Waders	75%	75%	achieve	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Bothnian Sea	Bothnian Group	Waders	75%	67%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	The Quark	Bothnian Group	Waders	75%	67%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Bothnian Bay	Bothnian Group	Waders	75%	67%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Kattegat	Kattegatt	Grazers	75%	67%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Great Belt	Belt Group	Grazers	Not evaluated	Not evaluated	Not evaluated	
bundance of waterbirds in the breeding season	2	Quantitative	The Sound	Belt Group	Grazers	Not evaluated	Not evaluated	Not evaluated	
bundance of waterbirds in the breeding season	2	Quantitative	Kiel Bay	Bornholm Group	Grazers	75%	50%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Grazers	75%	50%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Arkona Basin	Bornholm Group	Grazers	75%	50%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Bornholm Basin	Bornholm Group	Grazers	75%	50%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Gdansk Basin	Gotland Group	Grazers	75%	67%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Grazers	75%	67%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Western Gotland Basin	Gotland Group	Grazers	75%	67%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Gulf of Riga	Gotland Group	Grazers	75%	67%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Northern Baltic Proper	Åland Group	Grazers	75%	67%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Gulf of Finland	Gulf of Finland	Grazers	75%	100%	achieve	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Åland Sea	Åland Group	Grazers	75%	67%	fail	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Bothnian Sea	Bothnian Group	Grazers	75%	100%	achieve	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	The Quark	Bothnian Group	Grazers	75%	100%	achieve	Indicator report
bundance of waterbirds in the breeding season	2	Quantitative	Bothnian Bay	Bothnian Group	Grazers	75%	100%	achieve	Indicator report
bundance of waterbirds in the wintering season	2	Quantitative	Kattegat	Kattegatt	Surace feeders	Not evaluated	Not evaluated	Not evaluated	
bundance of waterbirds in the wintering season	2	Quantitative	Great Belt	Belt Group	Surace feeders	Not evaluated	Not evaluated	Not evaluated	
bundance of waterbirds in the wintering season	2	Quantitative	The Sound	Belt Group	Surace feeders	Not evaluated	Not evaluated	Not evaluated	
bundance of waterbirds in the wintering season	2	Quantitative	Kiel Bay	Bornholm Group	Surace feeders	75%	0%	fail	Indicator report
bundance of waterbirds in the wintering season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Surace feeders	75%	0%	fail	Indicator report
bundance of waterbirds in the wintering season	2	Quantitative	Arkona Basin	Bornholm Group	Surace feeders	75%	0%	fail	Indicator report
bundance of waterbirds in the wintering season	2	Quantitative	Bornholm Basin	Bornholm Group	Surace feeders	75%	0%	fail	Indicator report
bundance of waterbirds in the wintering season	2	Quantitative	Gdansk Basin	Gotland Group	Surace feeders	75%	Not evaluated	Not evaluated	

Table A2.4. Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of waterbirds for 2016-2021.

Indicator	Ass. scale 2016-2021	Type of evaluation	AU Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Abundance of waterbirds in the wintering season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Surace feeders	75%	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Western Gotland Basin	Gotland Group	Surace feeders	75%	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Riga	Gotland Group	Surace feeders	75%	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Northern Baltic Proper	Åland Group	Surace feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Finland	Gulf of Finland	Surace feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Åland Sea	Åland Group	Surace feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Sea	Bothnian Group	Surace feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	The Quark	Bothnian Group	Surace feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Bay	Bothnian Group	Surace feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Kattegat	Kattegatt	Pelagic feeders	75%	50%	fail	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Great Belt	Belt Group	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	The Sound	Belt Group	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Kiel Bay	Bornholm Group	Pelagic feeders	75%	78%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Pelagic feeders	75%	78%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Arkona Basin	Bornholm Group	Pelagic feeders	75%	78%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Bornholm Basin	Bornholm Group	Pelagic feeders	75%	78%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Gdansk Basin	Gotland Group	Pelagic feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Pelagic feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Western Gotland Basin	Gotland Group	Pelagic feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Riga	Gotland Group	Pelagic feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Northern Baltic Proper	Åland Group	Pelagic feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Finland	Gulf of Finland	Pelagic feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Åland Sea	Åland Group	Pelagic feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Sea	Bothnian Group	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	The Quark	Bothnian Group	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Bay	Bothnian Group	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Kattegat	Kattegatt	Benthic feeders	75%	25%	fail	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Great Belt	Belt Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	The Sound	Belt Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Kiel Bay	Bornholm Group	Benthic feeders	75%	75%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Benthic feeders	75%	75%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Arkona Basin	Bornholm Group	Benthic feeders	75%	75%	achieve	Indicator report











**Table A2.4.** Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of waterbirds for 2016-2021.

Indicator	Ass. scale 2016-2021	Type of evaluation	AU Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Abundance of waterbirds in the wintering season	2	Quantitative	Bornholm Basin	Bornholm Group	Benthic feeders	75%	75%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Gdansk Basin	Gotland Group	Benthic feeders	75%	57%	fail	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Benthic feeders	75%	57%	fail	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Western Gotland Basin	Gotland Group	Benthic feeders	75%	57%	fail	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Riga	Gotland Group	Benthic feeders	75%	57%	fail	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Northern Baltic Proper	Åland Group	Benthic feeders	75%	75%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Finland	Gulf of Finland	Benthic feeders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Åland Sea	Åland Group	Benthic feeders	75%	75%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Sea	Bothnian Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	The Quark	Bothnian Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Bay	Bothnian Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Kattegat	Kattegatt	Waders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Great Belt	Belt Group	Waders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	The Sound	Belt Group	Waders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Kiel Bay	Bornholm Group	Waders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Waders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Arkona Basin	Bornholm Group	Waders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Bornholm Basin	Bornholm Group	Waders	75%	100%	achieve	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Gdansk Basin	Gotland Group	Waders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Waders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Riga	Gotland Group	Waders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Northern Baltic Proper	Åland Group	Waders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Finland	Gulf of Finland	Waders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Åland Sea	Åland Group	Waders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Sea	Bothnian Group	Waders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	The Quark	Bothnian Group	Waders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Bay	Bothnian Group	Waders	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Kattegat	Kattegatt	Grazers	75%	0%	fail	Indicator report
Abundance of waterbirds in the wintering season	2	Quantitative	Great Belt	Belt Group	Grazers	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	The Sound	Belt Group	Grazers	Not evaluated	Not evaluated	Not evaluated	
Abundance of waterbirds in the wintering season	2	Quantitative	Kiel Bay	Bornholm Group	Grazers	75%	86%	achieve	Indicator report

Table A2.4. Overview of indicator evaluation results for each specific indicator and area included in the thematic assessment of waterbirds for 2016–2021.

Indicator	Ass. scale 2016-2021	Type of evaluation	AU Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Abundance of waterbirds in the wintering season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Grazers	75%	86%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	Arkona Basin	Bornholm Group	Grazers	75%	86%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	Bornholm Basin	Bornholm Group	Grazers	75%	86%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	Gdansk Basin	Gotland Group	Grazers	75%	100%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Grazers	75%	100%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	Western Gotland Basin	Gotland Group	Grazers	75%	100%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Riga	Gotland Group	Grazers	75%	100%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	Northern Baltic Proper	Åland Group	Grazers	75%	75%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Finland	Gulf of Finland	Grazers	75%	100%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	Åland Sea	Åland Group	Grazers	75%	75%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Sea	Bothnian Group	Grazers	75%	100%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	The Quark	Bothnian Group	Grazers	75%	100%	achieve	Indicator repor
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Bay	Bothnian Group	Grazers	75%	100%	achieve	Indicator repor
Breeding success of waterbirds	2	Quantitative	Kattegat	Kattegatt	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	Great Belt	Belt Group	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	The Sound	Belt Group	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	Kiel Bay	Bornholm Group	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	Bay of Mecklenburg	Bornholm Group	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	Arkona Basin	Bornholm Group	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	Bornholm Basin	Bornholm Group	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	Gdansk Basin	Gotland Group	NA	0.995	1.072	achieve	Indicator repor
Breeding success of waterbirds	2	Quantitative	Eastern Gotland Basin	Gotland Group	NA	0.995	1.072	achieve	Indicator repor
Breeding success of waterbirds	2	Quantitative	Western Gotland Basin	Gotland Group	NA	0.995	1.072	achieve	Indicator repor
Breeding success of waterbirds	2	Quantitative	Gulf of Riga	Gotland Group	NA	0.995	1.072	achieve	Indicator repor
Breeding success of waterbirds	2	Quantitative	Northern Baltic Proper	Åland Group	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	Gulf of Finland	Gulf of Finland	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	Åland Sea	Åland Group	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	Bothnian Sea	Bothnian Group	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	The Quark	Bothnian Group	NA	Not evaluated	Not evaluated	Not evaluated	
Breeding success of waterbirds	2	Quantitative	Bothnian Bay	Bothnian Group	NA	Not evaluated	Not evaluated	Not evaluated	













### A2.5 Marine mammals

**Table A2.5.1** (continued). Overview of the result and status of the indicator evaluations for marine mammals 2016-2021.

					2016-2021			Source
Population trends and abundance of seals – Grey seals	2	Quantitative	Kattegat	Baltic Sea	Not evaluated	Not evaluated	Not evaluated	
Population trends and abundance of seals – Grey seals	2	Quantitative	Great Belt	Baltic Sea	>10 000 />7 %	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	The Sound	Baltic Sea	>10 000 />7 %	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Kiel Bay	Baltic Sea	>10 000 />7 %	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Bay of Mecklenburg	Baltic Sea	>10 000 />7 %	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Arkona Basin	Baltic Sea	>10 000 />7 %	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Bornholm Basin	Baltic Sea	>10 000 />7 %	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Gdansk Basin	Baltic Sea	>10 000 />7 %	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Eastern Gotland Basin	Baltic Sea	>10000/>7%	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Western Gotland Basin	Baltic Sea	>10000/>7%	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Gulf of Riga	Baltic Sea	>10000/>7%	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Northern Baltic Proper	Baltic Sea	>10000/>7%	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Gulf of Finland	Baltic Sea	>10000/>7%	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Åland Sea	Baltic Sea	>10000/>7%	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Bothnian Sea	Baltic Sea	>10000/>7%	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	The Quark	Baltic Sea	>10000/>7%	60 000/5.1%	Fail	
Population trends and abundance of seals – Grey seals	2	Quantitative	Bothnian Bay	Baltic Sea	>10000/>7%	60 000/5.1%	Fail	
Population trends and abundance of seals – Ringed seals	2	Quantitative	Kattegat	Not applicable				
Population trends and abundance of seals – Ringed seals	2	Quantitative	Great Belt	Not applicable				
Population trends and abundance of seals – Ringed seals	2	Quantitative	The Sound	Not applicable				
Population trends and abundance of seals – Ringed seals	2	Quantitative	Kiel Bay	Not applicable				
Population trends and abundance of seals – Ringed seals	2	Quantitative	Bay of Mecklenburg	Not applicable				
Population trends and abundance of seals – Ringed seals	2	Quantitative	Arkona Basin	Not applicable				
Population trends and abundance of seals – Ringed seals	2	Quantitative	Bornholm Basin	Not applicable				
Population trends and abundance of seals – Ringed seals	2	Quantitative	Gdansk Basin	Not applicable				
Population trends and abundance of seals – Ringed seals	2	Quantitative	Eastern Gotland Basin	Not applicable				
Population trends and abundance of seals – Ringed seals	2	Quantitative	Western Gotland Basin	Not applicable				
Population trends and abundance of seals – Ringed seals	2	Quantitative	Gulf of Riga	Southern unit	>10000/>7%	1800/≥ 0.0 %	fail	
Population trends and abundance of seals – Ringed seals	2	Quantitative	Northern Baltic Proper	Not applicable				

**Table A2.5.1** (continued). Overview of the result and status of the indicator evaluations for marine mammals 2016-2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Population trends and abundance of seals – Ringed seals	2	Quantitative	Gulf of Finland	Southern unit	>10000/>7%	1800/≥0.0%	fail	
Population trends and abundance of seals – Ringed seals	2	Quantitative	Åland Sea	Southern unit	>10000/>7%	1800/≥0.0 %	fail	
Population trends and abundance of seals – Ringed seals	2	Quantitative	Bothnian Sea	Northern unit	>10000/>7%	20 000/≥ 5.0 %	fail	
Population trends and abundance of seals – Ringed seals	2	Quantitative	The Quark	Northern unit	>10000/>7%	20 000/≥ 5.0 %	Fail	
Population trends and abundance of seals – Ringed seals	2	Quantitative	Bothnian Bay	Northern unit	>10000/>7%	20 000/≥ 5.0 %	Fail	
Population trends and abundance of seals – Harbour seals	2	Quantitative	Kattegat	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail	
Population trends and abundance of seals – Harbour seals	2	Quantitative	Great Belt	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail	
Population trends and abundance of seals – Harbour seals	2	Quantitative	The Sound	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail	
Population trends and abundance of seals – Harbour seals	2	Quantitative	Kiel Bay	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail	
Population trends and abundance of seals – Harbour seals	2	Quantitative	Bay of Mecklenburg	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail	
Population trends and abundance of seals – Harbour seals	2	Quantitative	Arkona Basin	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail	
Population trends and abundance of seals – Harbour seals	2	Quantitative	Bornholm Basin	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail	
Population trends and abundance of seals – Harbour seals	2	Quantitative	Gdansk Basin	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Harbour seals	2	Quantitative	Eastern Gotland Basin		>10000/>9%	14500/≥6.1%	Fail	
Population trends and abundance of seals – Harbour seals	2	Quantitative	Western Gotland Basin	Kalmarsund unit	>10000/>9%	2000/≥8.9%	fail	
Population trends and abundance of seals – Harbour seals	2	Quantitative	Gulf of Riga	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Harbour seals	2	Quantitative	Northern Baltic Proper	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Harbour seals	2	Quantitative	Gulf of Finland	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Harbour seals	2	Quantitative	Åland Sea	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Harbour seals	2	Quantitative	Bothnian Sea	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Harbour seals	2	Quantitative	The Quark	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Harbour seals	2	Quantitative	Bothnian Bay	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – grey seals	2	Quantitative	Kattegat	Baltic Sea	Not evaluated	Not evaluated	Not evaluated	
Distribution of Baltic seals – grey seals	2	Quantitative	Great Belt	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	The Sound	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Kiel Bay	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Bay of Mecklenburg	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	









**Table A2.5.1** (continued). Overview of the result and status of the indicator evaluations for marine mammals 2016-2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Distribution of Baltic seals – grey seals	2	Quantitative	Arkona Basin	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Bornholm Basin	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Gdansk Basin	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Eastern Gotland Basin	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Western Gotland Basin	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Gulf of Riga	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Northern Baltic Proper	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Gulf of Finland	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Åland Sea	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Bothnian Sea	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	The Quark	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – grey seals	2	Quantitative	Bothnian Bay	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – ringed seals	2	Quantitative	Kattegat	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – ringed seals	2	Quantitative	Great Belt	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – ringed seals	2	Quantitative	The Sound	Not applicable	Not applicable	Not applicable	Not applicable	

**Table A2.5.1** (continued). Overview of the result and status of the indicator evaluations for marine mammals 2016-2021.

ndicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Distribution of Baltic seals – ringed seals	2	Quantitative	Kiel Bay	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – ringed seals	2	Quantitative	Bay of Mecklenburg	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – ringed seals	2	Quantitative	Arkona Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – ringed seals	2	Quantitative	Bornholm Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – ringed seals	2	Quantitative	Gdansk Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – ringed seals	2	Quantitative	Eastern Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – ringed seals	2	Quantitative	Western Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – ringed seals	2	Quantitative	Gulf of Riga	Southern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – ringed seals	2	Quantitative	Northern Baltic Proper	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – ringed seals	2	Quantitative	Gulf of Finland	Southern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – ringed seals	2	Quantitative	Åland Sea	Southern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – ringed seals	2	Quantitative	Bothnian Sea	Northern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – ringed seals	2	Quantitative	The Quark	Northern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – ringed seals	2	Quantitative	Bothnian Bay	Northern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail	
Distribution of Baltic seals – harbour seals	2	Quantitative	Kattegat	Southwesten unit	Close to pristine conditions	breeding and moulting distribution as well as area of occupancy are at pristine levels	Achieve	
Distribution of Baltic seals – harbour seals	2	Quantitative	Great Belt	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail	
Distribution of Baltic seals – harbour seals	2	Quantitative	The Sound	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail	
Distribution of Baltic seals – harbour seals	2	Quantitative	Kiel Bay	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail	
Distribution of Baltic seals – harbour seals	2	Quantitative	Bay of Mecklenburg	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail	
Distribution of Baltic seals – harbour seals	2	Quantitative	Arkona Basin	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail	











**Table A2.5.1** (continued). Overview of the result and status of the indicator evaluations for marine mammals 2016-2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Distribution of Baltic seals – harbour seals	2	Quantitative	Bornholm Basin	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail	
oistribution of Baltic seals – harbour seals	2	Nutritional status of seals+B88:E104	Gdansk Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – harbour seals	2	Quantitative	Eastern Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – harbour seals	2	Quantitative	Western Gotland Basin	Kalmarsund unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail	
Distribution of Baltic seals – harbour seals	2	Quantitative	Gulf of Riga	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – harbour seals	2	Quantitative	Northern Baltic Proper	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – harbour seals	2	Quantitative	Gulf of Finland	Not applicable	Not applicable	Not applicable	Not applicable	
oistribution of Baltic seals – harbour seals	2	Quantitative	Åland Sea	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – harbour seals	2	Quantitative	Bothnian Sea	Not applicable	Not applicable	Not applicable	Not applicable	
Distribution of Baltic seals – harbour seals	2	Quantitative	The Quark	Not applicable	Not applicable	Not applicable	Not applicable	
sistribution of Baltic seals – harbour seals	2	Quantitative	Bothnian Bay	Not applicable	Not applicable	Not applicable	Not applicable	
Iutritional status of seals	2	Quantitative	Kattegat	Not applicable	Not applicable	Not applicable	Not applicable	
Iutritional status of seals	2	Quantitative	Great Belt	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Iutritional status of seals	2	Quantitative	The Sound	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Iutritional status of seals	2	Quantitative	Kiel Bay	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Iutritional status of seals	2	Quantitative	Bay of Mecklenburg	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Nutritional status of seals	2	Quantitative	Arkona Basin	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Iutritional status of seals	2	Quantitative	Bornholm Basin	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Nutritional status of seals	2	Nutritional status of seals+B88:E104	Gdansk Basin	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Nutritional status of seals	2	Quantitative	Eastern Gotland Basin	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Nutritional status of seals	2	Quantitative	Western Gotland Basin	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
lutritional status of seals	2	Quantitative	Gulf of Riga	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Iutritional status of seals	2	Quantitative	Northern Baltic Proper	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Iutritional status of seals	2	Quantitative	Gulf of Finland	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Iutritional status of seals	2	Quantitative	Åland Sea	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Iutritional status of seals	2	Quantitative	Bothnian Sea	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Nutritional status of seals	2	Quantitative	The Quark	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	
Nutritional status of seals	2	Quantitative	Bothnian Bay	Baltic Sea	40mm/35 mm	36mm/27mm	Fail	

**Table A2.5.1** (continued). Overview of the result and status of the indicator evaluations for marine mammals 2016-2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Reporductive status of seals-grey seal	2	Quantitative	Kattegat	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-grey seal	2	Quantitative	Great Belt	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	The Sound	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Kiel Bay	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Bay of Mecklenburg	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Arkona Basin	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Bornholm Basin	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Nutritional status of seals+B88:E104	Gdansk Basin	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Eastern Gotland Basin	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Western Gotland Basin	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Gulf of Riga	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Northern Baltic Proper	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Gulf of Finland	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Åland Sea	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Bothnian Sea	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	The Quark	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-grey seal	2	Quantitative	Bothnian Bay	Baltic Sea	≥6years/90%	87%	Fail	
Reporductive status of seals-ringed seal	2	Quantitative	Kattegat	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-ringed seal	2	Quantitative	Great Belt	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-ringed seal	2	Quantitative	The Sound	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-ringed seal	2	Quantitative	Kiel Bay	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-ringed seal	2	Quantitative	Bay of Mecklenburg	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-ringed seal	2	Quantitative	Arkona Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-ringed seal	2	Quantitative	Bornholm Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-ringed seal	2	Quantitative	Gdansk Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-ringed seal	2	Quantitative	Eastern Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-ringed seal	2	Quantitative	Western Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-ringed seal	2	Quantitative	Gulf of Riga	Southern unit	≥6years/90%	82%	Fail	
Reporductive status of seals-ringed seal	2	Quantitative	Northern Baltic Proper	Not applicable	Not applicable	Not applicable	Not applicable	
Reporductive status of seals-ringed seal	2	Quantitative	Gulf of Finland	Southern unit	≥6years/90%	82%	Fail	
Reporductive status of seals-ringed seal	2	Quantitative	Åland Sea	Southern unit	≥6years/90%	82%	Fail	









**Table A2.5.1** (continued). Overview of the result and status of the indicator evaluations for marine mammals 2016-2021.

ndicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Reporductive status of seals-ringed seal	2	Quantitative	Bothnian Sea	Northern unit	≥6years/90%	82%	Fail	
Reporductive status of seals-ringed seal	2	Quantitative	The Quark	Northern unit	≥6years/90%	82%	Fail	
Reporductive status of seals-ringed seal	2	Quantitative	Bothnian Bay	Northern unit	≥6years/90%	82%	Fail	
Harbour porpoise abundance	2	Qualitative	Kattegat	Belt Sea population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Great Belt	Belt Sea population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	The Sound	Belt Sea population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Kiel Bay	Belt Sea population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Bay of Mecklenburg	Belt Sea population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Arkona Basin	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Bornholm Basin	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Gdansk Basin	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Eastern Gotland Basin	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Western Gotland Basin	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Gulf of Riga	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Northern Baltic Proper	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Gulf of Finland	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Åland Sea	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Bothnian Sea	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	The Quark	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise abundance	2	Qualitative	Bothnian Bay	Baltic Proper population	Not available	Not applicable	Fail	

**Table A2.5.1** (continued). Overview of the result and status of the indicator evaluations for marine mammals 2016-2021.

Indicator	Assessment scale 2016-2021	Type of evaluation	AU Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source
Harbour porpoise distribution	2	Qualitative	Kattegat	Belt Sea population	Not evaluated	Not evaluated	Not evaluated	
Harbour porpoise distribution	2	Qualitative	Great Belt	Belt Sea population	Not evaluated	Not evaluated	Not evaluated	
Harbour porpoise distribution	2	Qualitative	The Sound	Belt Sea population	Not evaluated	Not evaluated	Not evaluated	
Harbour porpoise distribution	2	Qualitative	Kiel Bay	Belt Sea population	Not evaluated	Not evaluated	Not evaluated	
Harbour porpoise distribution	2	Qualitative	Bay of Mecklenburg	Belt Sea population	Not evaluated	Not evaluated	Not evaluated	
Harbour porpoise distribution	2	Qualitative	Arkona Basin	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise distribution	2	Qualitative	Bornholm Basin	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise distribution	2	Qualitative	Gdansk Basin	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise distribution	2	Qualitative	Eastern Gotland Basin	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise distribution	2	Qualitative	Western Gotland Basin	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise distribution	2	Qualitative	Gulf of Riga	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise distribution	2	Qualitative	Northern Baltic Proper	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise distribution	2	Qualitative	Gulf of Finland	Baltic Proper population	Not available	Not applicable	Fail	
Harbour porpoise distribution	2	Qualitative	Åland Sea	Baltic Proper popu- lation	Not available	Not applicable	Fail	
Harbour porpoise distribution	2	Qualitative	Bothnian Sea	Baltic Proper popu- lation	Not available	Not applicable	Fail	
Harbour porpoise distribution	2	Qualitative	The Quark	Baltic Proper popu- lation	Not available	Not applicable	Fail	
Harbour porpoise distribution	2	Qualitative	Bothnian Bay	Baltic Proper population	Not available	Not applicable	Fail	









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# Annex 3. Assessments of changes between the 2011-2016 and 2026-2021 indicator evaluations for the biodiversity assessment



**Table A3.1.** Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for pelagic habitats across the full range of the Baltic Sea. The assessment includes the following indicators: Zooplankton mean size and total stock, Seasonal succession of dominating phytoplankton groups, Cyanobacterial bloom index, Diatom-dinoflagellate index.

Indicator	Scale	Quantitative/ qualitative evaluation	Assessment Unit Name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status in 2011-2016
Zooplankton mean size and total stock	2	Not evaluated	Kattegat	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Zooplankton mean size and total stock	2	Not evaluated	Great Belt	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Zooplankton mean size and total stock	2	Not evaluated	The Sound	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Zooplankton mean size and total stock	2	Not evaluated	Kiel Bay	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Zooplankton mean size and total stock	2	Not evaluated	Bay of Mecklenburg	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Zooplankton mean size and total stock	2	Not evaluated	Arkona Basin	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Zooplankton mean size and total stock	2	Quantitative	Bornholm Basin	14.9 / 273	13.3 / 481	Failed	Not evaluated	Not evaluated	Not evaluated
Zooplankton mean size and total stock	2	Quantitative	Gdansk Basin	10.2 / 103	16.6 / 833	Achieved	10.2 / 103		Achieve
Zooplankton mean size and total stock	2	Quantitative	Eastern Gotland Basin	14.1 / 104	9.4 / 230	Achieved	Not evaluated	Not evaluated	Not evaluated



Table A3.1. (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for pelagic habitats across the full range of the Baltic Sea. The assessment includes the following indicators: Zooplankton mean size and total stock, Seasonal succession of dominating phytoplankton groups, Cyanobacterial bloom index, Diatom-dinoflagellate index.

Indicator	Scale	Quantitative/ qualitative evaluation	Assessment Unit Name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status in 2011-2016
Zooplankton mean size and total stock	2	Quantitative	Western Gotland Basin	5.1 / 220	4.9 / 220	Failed	5.0 / 220		Fail
Zooplankton mean size and total stock	2	Quantitative	Gulf of Riga	4.7 / 253	5.5 / 569	Achieved	Not evaluated	Not evaluated	Not evaluated
Zooplankton mean size and total stock	2	Quantitative	Northern Baltic Proper	9.8 / 123	6.3 / 244	Failed	Not evaluated	Not evaluated	Not evaluated
Zooplankton mean size and total stock	2	Quantitative	Gulf of Finland	8.6 / 125	8.2 / 259	Failed	8.6 / 125		Fail
Zooplankton mean size and total stock	2	Quantitative	Åland Sea	10.3 / 55	13 / 120	Achieved	10.3 / 55		Fail
Zooplankton mean size and total stock	2	Quantitative	Bothnian Sea	8.5 / 84	39.9 / 190	Achieved	8.5 / 84		Achieve
Zooplankton mean size and total stock	2	Not evaluated	The Quark	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Zooplankton mean size and total stock	2	Quantitative	Bothnian Bay	23.7 / 161	77.2/131	Failed	23.7 / 161		Achieve
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Kattegat	0.56	0.55	Fail	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Great Belt	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	The Sound	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Kiel Bay	0.55	0.5	Fail	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Bay of Mecklenburg	0.61	0.6	Fail	0.71	0.67	Fail
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Arkona Basin	0.55	0.61	Achieve	0.7	0.63	Fail
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Bornholm Basin	0.66	0.54	Fail	0.6	0.58	Fail
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Gdansk Basin	0.61	0.67	Achieve	0.58	0.59	Achieve
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Eastern Gotland Basin	0.64	0.68	Achieve	0.74	0.68	Fail
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Western Gotland Basin	0.7	0.56	Fail	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Gulf of Riga	0.68	0.51	Fail	0.69	0.64	Fail
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Northern Baltic Proper	0.7	0.57	Achieve	0.69	0.63	Fail
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Gulf of Finland	0.7	0.62	Fail	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Åland Sea	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Bothnian Sea	0.63	0.45	Fail	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Bothnian Bay	0.61	0.65	Achieve	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Bothnian Bay Finnish coastal waters	0.56	0.47	Fail	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Bothnian Bay Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	The Quark Finnish Coastal waters	0.63	0.43	Fail	Not evaluated	Not evaluated	Not evaluated







**Table A3.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for pelagic habitats across the full range of the Baltic Sea. The assessment includes the following indicators: Zooplankton mean size and total stock, Seasonal succession of dominating phytoplankton groups, Cyanobacterial bloom index, Diatom-dinoflagellate index.

Indicator	Scale	Quantitative/ qualitative evaluation	Assessment Unit Name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status in 2011-2016
Seasonal succession of dominating phytoplankton groups	3	Quantitative	The Quark Swedish Coastal waters	0.55	0.71	Achieve	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Bothnian Sea Finnish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Bothnian Sea Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Åland Sea Finnish Coastal waters	0.74	0.71	Fail	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Åland Sea Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Northern Baltic Proper Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	0.69	0.66	Fail
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Northern Baltic Proper Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Gulf of Finland Finnish Coastal waters	0.79	0.78	Fail	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Gulf of Finland Estonian Coastal waters, western part	0.65	0.49	Fail	0.65	0.47	Fail
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Gulf of Finland Estonian Coastal waters, eastern part	0.66	0.63	Fail	0.62	0.6	Fail
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Gulf of Finland Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Gulf of Riga Estonian Coastal waters	0.68	0.61	Fail	0.67	0.59	Fail
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Gulf of Riga Latvian Coastal waters	0.66	0.68	Achieve	0.61	0.61	Fail
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Western Gotland Basin Swedish Coastal waters	0.71	0.64	Fail	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Eastern Gotland Basin Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Eastern Gotland Basin Latvian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Eastern Gotland Basin Lithuanian Coastal waters	0.66	0.62	Fail	0.64	0.65	Achieve
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Eastern Gotland Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated





**Table A3.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for pelagic habitats across the full range of the Baltic Sea. The assessment includes the following indicators: Zooplankton mean size and total stock, Seasonal succession of dominating phytoplankton groups, Cyanobacterial bloom index, Diatom-dinoflagellate index.

Indicator	Scale	Quantitative/ qualitative evaluation	Assessment Unit Name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status in 2011-2016
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Eastern Gotland Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Eastern Gotland Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Gdansk Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Gdansk Basin Polish Coastal waters	0.6	0.56	Fail	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Bornholm Basin Swedish Coastal Waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Bornholm Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Arkona Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Arkona Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Arkona Basin German Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Mecklenburg Bight German Coastal waters	0.62	0.64	Achieve	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Mecklenburg Bight Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Quantitative	Kiel Bight German Coastal waters	0.63	0.65	Achieve	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Kiel Bight Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Belts Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	The Sound Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	The Sound Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated







**Table A3.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for pelagic habitats across the full range of the Baltic Sea. The assessment includes the following indicators: Zooplankton mean size and total stock, Seasonal succession of dominating phytoplankton groups, Cyanobacterial bloom index, Diatom-dinoflagellate index.

Indicator	Scale	Quantitative/ qualitative evaluation	Assessment Unit Name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status in 2011-2016
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Kattegat Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Seasonal succession of dominating phytoplankton groups	3	Not evaluated	Kattegat Danish Coastal waters, including Limfjorden	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Cyanobacterial bloom index	2	Not applicable	Kattegat	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Cyanobacterial bloom index	2	Not applicable	Great Belt	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Cyanobacterial bloom index	2	Not applicable	The Sound	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Cyanobacterial bloom index	2	Not evaluated	Kiel Bay	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Cyanobacterial bloom index	2	Quantitative	Bay of Mecklenburg	0.89	0.49	Fail	0.92	0.72	Fail
Cyanobacterial bloom index	2	Quantitative	Arkona Basin	0.85	0.61	Fail	0.9	0.85	Fail
Cyanobacterial bloom index	2	Quantitative	Bornholm Basin	0.83	0.61	Fail	0.87	0.8	Fail
Cyanobacterial bloom index	2	Quantitative	Pomeranian Sea	0.81	0.43	Fail			
Cyanobacterial bloom index	2	Quantitative	Gdansk basin	0.77	0.45	Fail	0.98	0.83	Fail
Cyanobacterial bloom index	2	Quantitative	Eastern Gotland Basin	0.89	0.44	Fail	0.84	0.76	Fail
Cyanobacterial bloom index	2	Quantitative	Western Gotland basin	0.85	0.41	Fail	0.87	0.78	Fail
Cyanobacterial bloom index	2	Quantitative	Gulf of Riga	0.9	0.51	Fail	0.9	0.53	Fail
Cyanobacterial bloom index	2	Quantitative	Northern Baltic Proper	0.82	0.43	Fail	0.77	0.45	Fail
Cyanobacterial bloom index	2	Quantitative	Western Gulf of Finland	0.88	0.45	Fail	0.9	0.69	Fail
Cyanobacterial bloom index	2	Quantitative	Eastern Gulf of Finland	0.91	0.65	Fail			
Cyanobacterial bloom index	2	Quantitative	Åland Sea	0.91	0.35	Fail	Not evaluated	Not evaluated	Not evaluated
Cyanobacterial bloom index	2	Quantitative	Bothnian Sea	0.92	0.36	Fail	0.58	0.37	Fail
Cyanobacterial bloom index	2	Not evaluated	The Quark	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Cyanobacterial bloom index	2	Not evaluated	Bothnian Bay	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Not evaluated	Kattegat	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Not evaluated	Great Belt	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Not evaluated	The Sound	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Quantitative	Kiel Bay	0.75	0.97	Achieve	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Quantitative	Bay of Mecklenburg	0.75	0.94	Achieve	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Not evaluated	Arkona Basin	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated





**Table A3.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for pelagic habitats across the full range of the Baltic Sea. The assessment includes the following indicators: Zooplankton mean size and total stock, Seasonal succession of dominating phytoplankton groups, Cyanobacterial bloom index, Diatom-dinoflagellate index.

Indicator	Scale	Quantitative/ qualitative evaluation	Assessment Unit Name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status in 2011-2016
Diatom-dinoflagellate index	2	Not evaluated	Bornholm Basin	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Not evaluated	Gdansk Basin	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Quantitative	Eastern Gotland Basin	0.5	0.44	Fail	0.5	0.46	Fail
Diatom-dinoflagellate index	2	Not evaluated	Western Gotland Basin	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Not evaluated	Gulf of Riga	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Not evaluated	Northern Baltic Proper	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Not evaluated	Gulf of Finland	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Not evaluated	Åland Sea	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Not evaluated	Bothnian Sea	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Diatom-dinoflagellate index	2	Not evaluated	Bothnian Bay	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated







### Changes over time for Zooplankton mean size and total stock

The difference in the MSTS components between the reference conditions and the HOLAS 3 assessment period varied from -34% to +75% for the mean zooplankter size (µg ind-1) and from -42% to +42% for the total biomass (mg m-3) among the sub-basins. Notable long-term decreases in both body size and total biomass of zooplankton were observed in the Åland Sea, Gulf of Finland, Western Gotland Basin, and Bornholm Basin. By contrast, both mean size and biomass have increased in the Bothnian Sea from the reference period to the assessment period. The increase observed in the Bothnian Sea is related to an increased population size of the large-bodied copepod Limnocalanus macrurus. Similar dynamics also affected zooplankton development in the Åland Sea, where L. macrurus populations have increased in concert resulting in the improved status of zooplankton compared to the previous assessment period (figure A3.1).

### Changes over time for seasonal succession of dominating phytoplankton groups

The most important change since the last assessment is that the spatial coverage has increased substantially for this assessment. When comparing with the last assessment 2011-2016 some changes can be noted. The overall trend is that diatoms and the ciliate Mesodinium rubrum increase in many areas assessed.

The situation has improved in the Arkona basin and Gulf of Riga, Latvian coastal waters (see Table A3.1.2) going from not good statsu in the previous assessment to good status. All groups included fall better into the seasonal pattern and its natural deviation of the system giving it good status. Eastern Gotland Basin, Lithuanian coastal waters, on the other hand, has deteriorated and has gone from good to not good status since the last assessment. The Gulf of Riga Open Sea and the Gulf of Finland Estonian Coastal waters, western part, are still not in good status and the status seems to have deteriorated since the last assessment.

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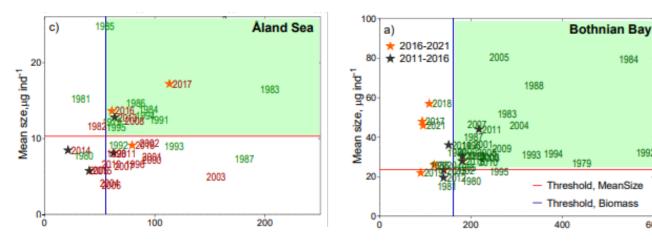


Figure A3.1. Assessment results on the performance of MSTS indicator in the Bothnan Bay, where zooplankton community has deteriorated, and Åland Sea, where the improvement was observed. The indicator integrates mean size (Y axis) and total biomass of zooplankton (x axis), and blue and red lines show threshold values for total biomass and mean size, respectively. The green-shaded quartile indicates good status. Observations in good and not in good status are shown as green and red years, respectively. Red stars denote HOLAS 3 assessment and black stars - HOLAS 2 assessment. Some years falling below the threshold values were assigned as being in good status because these values were not judged as significantly different from the threshold value according to the CuSum analysis, which is based on the cumulative summing of the persistent deviations from the reference mean.

### Changes over time for cyanobacterial Bloom Index

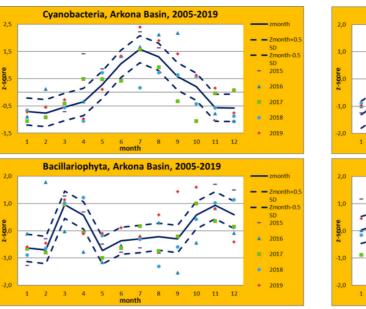
The main improvement since last assessment is that the spatial coverage has increased, even so, all assessed areas are below

### Changes over time for diatom-dinoflagellate index

The spatial coverage of the indicator has increased from one assessed area in HOLAS II (Eastern Gotland Basin) to three assessed areas in HOLAS III (Kiel Bay, Bay of Mecklenburg, and Eastern Gotland Basin). The Eastern Gotland Basin, which was assessed at both occasions has not changed in status. The two new areas, Kiel Bay and Bay of Mecklenburg, were both assessed to be in good status.

Table A3.1.2. Changes from HOLAS2 to HOLAS3 in areas assessed during HOLAS2 and HOLAS3. Arrows going uppward and downwards indicate a positive and negative

Area	HOLAS2	HOLAS3	Trend
Bay of Mecklenburg - Opensea			<b>→</b>
Arkona Basin - Opensea			<b>^</b>
Bornholm Basin - Opensea			<b>→</b>
Gdansk Basin - Opensea			<b>→</b>
Eastern Gotland Basin - Opensea			→
Gulf of Riga - Opensea			4
Northern Baltic Proper - Opensea			<b>→</b>
Gulf of Finland Estonian Coastal waters western part			4
Gulf of Finland Estonian Coastal waters eastern part			→
Gulf of Riga Estonian Coastal waters			<b>→</b>
Gulf of Riga Latvian Coastal waters			<b>↑</b>
Eastern Gotland Basin - Lithuanian Coastal waters			4



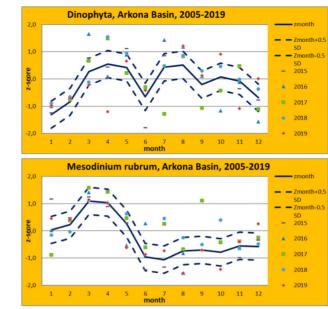


Figure 3e Example of reference growth curves with monthly averaged normalized biomass values (Zmonth) acceptable deviations (Zmonth ± 0,5) data points present assessment 2015-2019 in the Arkona Basin









# A3.2 Changes across indicator evaluations for benthic habitats

### Changes over time for soft-bottom macrofauna

Compared to the HOLAS II assessment period 2011-2016, the status classification has worsened in the Gulf of Riga and the Gulf of Finland from achieving the threshold in HOLAS II to below the threshold in the assessment period 2016-2021 (HOLAS3). In all other evaluated assessment units, the status classification remained unchanged with the indicator result achieving the threshold values for good status, apart from in the Bay of Mecklenburg where the status remain below the threshold (Table X).

Table A3.2.1. Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for benthic habitats. The assessment includes the following indicators: State of soft bottom macro-fauna.

Indicator	Assessment scale	Quantitative /qualitative evaluation	AU Name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status in 2011-2016
State of soft bottom macro-fauna	2	Not evaluated	Kattegat	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna	2	Not evaluated	Great Belt	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna	2	Not evaluated	The Sound	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna	2	Qantitative	Kiel Bay	0.5	0.53	Achieved	0.5	0.61	Achieved
State of soft bottom macro-fauna	2	Qantitative	Bay of Mecklenburg	0.5	0.44	Failed	0.5	0.41	Failed
State of soft bottom macro-fauna	2	Not evaluated	Arkona Basin	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna	2	Not evaluated	Bornholm Basin	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna	2	Not evaluated	Gdansk Basin	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
State of soft bottom macro-fauna	2	Qantitative	Eastern Gotland Basin	0.5	0.62	Achieved	0.5	0.61	Achieved
State of soft bottom macro-fauna	2	Qantitative	Western Gotland Basin	4	5.11	Achieved	4	4.99	Achieved
State of soft bottom macro-fauna	2	Qantitative	Gulf of Riga	0.5	0.47	Failed	0.5	0.55	Achieved
State of soft bottom macro-fauna	2	Qantitative	Northern Baltic Proper	4	6.14	Achieved	4	5.35	Achieved
State of soft bottom macro-fauna	2	Qantitative	Gulf of Finland	0.5	0.47	Failed	0.5	0.51	Achieved
State of soft bottom macro-fauna	2	Qantitative	Åland Sea	4	7.27	Achieved	4	6.56	Achieved
State of soft bottom macro-fauna	2	Qantitative	Bothnian Sea	4	7.82	Achieved	4	6.29	Achieved
State of soft bottom macro-fauna	2	Qantitative	The Quark	1.5	4.85	Achieved	1.5	3.13	Achieved
State of soft bottom macro-fauna	2	Qantitative	Bothnian Bay	1.5	5.43	Achieved	1.5	5.11	Achieved

### Changes over time for shallow-water oxygen

No assessment was made in HOLAS II and it is therefore not possible to compare the changes between HOLAS II and HOLAS3.

### Changes over time for oxygen debt

Table A3.2.2. Overview of status and a comparison to the prior assessment period for the oxygen debt indicator.

HELCOM Assessment unit name (and ID)	Threshold value achieved/ failed - HOLAS II	Threshold value achieved/ failed - HOLAS III	Distinct trend between current and previous assessment	Description of outcomes, if pertinent
Bornholm Basin (SEA-007A)	Failed	Failed	No trend	The current evaluation fails the threshold value and good status is not achieved.
Gdansk Basin (SEA-008)			A distinct trend towards worsening of conditions	The current evaluation fails the threshold value by a significant distance and good
Eastern Gotland Basin (SEA-009)				status is not achieved.
Western Gotland Basin (SEA-010)				
Northern Baltic Proper (SEA-012)				
Gulf of Finland Western (SEA-013A)				

## Changes over time for cumulative impact from physical pressures on benthic biotopes

For this current evaluation, the determination and analysis of trends is not possible as the HOLAS3 CumI evaluation is the first one that was done. However, before this evaluation, a number of test cases were performed and a Baltic-wide test run of the CumI with the HELCOM data from 2011–2016. These data are the ones that have been used for HOLAS II.

The Baltic-wide test run is only partly comparable to the current evaluation, especially since the underlying biotope map is a different one. For the dataset 2011–2016, the evaluation was based on the HELCOM habitats used for HOLAS II. The current evaluation (years 2016–2021) uses the EUSeaMap from 2021. Still, some similarities and trends can be identified. The most marked difference is a reduced magnitude of pressure for bottom trawling. As this is the most pronounced pressure especially in the Southern and Western Baltic Sea, a reduction in fishing intensity is immediately visible in the end result.

In a comparison of the impacts per habitat type, the "high impact" category is smaller with the recent data (2016–2021), mainly due to the decreased magnitude of the bottom trawling pressure. The mainly affected infralittoral biotope is infralittoral sand which also has the largest fraction with a very low impact. The fraction of infralittoral mud being affected seems to have increased, especially in the low impact category. The general pattern in the circalittoral biotopes are similar in both periods. The smallest fraction of impacted area is within the circalittoral mixed and mud biotopes. Circalittoral sand is the most affected biotope.







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# A3.3 Changes across indicator evaluations for coastal fish

**Table A3.3.1.** Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for coastal fish across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of coastal fish between the 2011-2016 and 2016-2021 assessments it is only possible to compare the status results between the two assessments.

Indicator	Assessment scale	Quantitative/ qualitative evaluation	Assessment unit name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Status 2011-2016
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Bothnian Bay Finnish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Bothnian Bay Swedish Coastal waters	0.5	0.625	achieved	achieved
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	The Quark Finnish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	The Quark Swedish Coastal waters	0.5	0.375	failed	failed
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Bothnian Sea Finnish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Bothnian Sea Swedish Coastal waters	0.5	0.625	achieved	achieved
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Åland Sea Swedish Coastal waters	0.5	0.125	failed	failed
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Åland Sea – Archipelago Sea Finnish Coastal waters	0.5	0.375	failed	failed
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Northern Baltic Proper Swedish Coastal waters	0.5	0.375	failed	failed
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Northern Baltic Proper Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Gulf of Finland Finnish Coastal waters	0.5	0.375	failed	failed
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Gulf of Finland Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Gulf of Finland Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated

**Table A3.3.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicators: Abundance of coastal fish key functional groups, Abundance of key coastal fish species and Size structure of coastal fish. Due to a change in methodology between the 2011-2016 and 2016-2021 assessments it is only possible to compare the status results between the two assessments.

Indicator	Assessment scale	Quantitative/ qualitative evaluation	Assessment unit name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Status 2011-2016
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Gulf of Riga Estonian Coastal waters	0.5	0.125	failed	failed
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Gulf of Riga Latvian Coastal waters	0.5	0.375	failed	failed
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Western Gotland Basin Swedish Coastal waters	0.5	0.375	failed	achieved
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Eastern Gotland Basin Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Eastern Gotland Basin Latvian Coastal waters	0.5	0.125	failed	failed
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Eastern Gotland Basin Lithuanian Coastal waters	0.5	0.375	failed	achieved
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Eastern Gotland Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Eastern Gotland Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Eastern Gotland Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Gdansk Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Gdansk Basin Polish Coastal waters	0.5	0.625	achieved	NA
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Quantitative	Bornholm Basin Swedish Coastal waters	0.5		achieved	achieved
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Bornholm Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated







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**Table A3.3.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for coastal fish across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of coastal fish key functional groups, Abundance of key coastal fish species and Size structure of coastal fish. Due to a change in methodology between the 2011-2016 and 2016-2021 assessments it is only possible to compare the status results between the two assessments.

Indicator	Assessment scale	Quantitative/ qualitative evaluation	Assessment unit name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Status 2011-2016
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Arkona Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Arkona Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Arkona Basin German Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Mecklenburg Bight German Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Mecklenburg Bight Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Kiel Bight German Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Kiel Bight Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Belts Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	The Sound Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	The Sound Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Kattegat Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of coastal fish key functional groups (Coastal fish key groups)	3	Not evaluated	Kattegat Danish Coastal waters, including Limfjorden	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Bothnian Bay Finnish Coastal waters	0.	5 0.8	75 achieved	achieved
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Bothnian Bay Swedish Coastal waters	0.	5 0.6	25 achieved	achieved
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	The Quark Finnish Coastal waters	0.	5 0.8	75 failed	achieved

**Table A3.3.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for coastal fish across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of coastal fish key functional groups, Abundance of key coastal fish species and Size structure of coastal fish. Due to a change in methodology between the 2011-2016 and 2016-2021 assessments it is only possible to compare the status results between the two assessments.

Indicator	Assessment scale	Quantitative/ qualitative evaluation	Assessment unit name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Status 2011-2016
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	The Quark Swedish Coastal waters	0.5	0.375	failed	failed
Abundance of key coastal fish species (Coastal fish key species)	3	3 Quantitative	Bothnian Sea Finnish Coastal waters	0.5	0.625	achieved	achieved
Abundance of key coastal fish species (Coastal fish key species)	3	3 Quantitative	Bothnian Sea Swedish Coastal waters	0.5	0.125	failed	achieved
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Åland Sea Swedish Coastal waters	0.5	0.125	failed	achieved
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Åland Sea – Archipelago Sea Finnish Coastal waters	0.5	0.125	failed	achieved
Abundance of key coastal fish species (Coastal fish key species)	3	3 Quantitative	Northern Baltic Proper Swedish Coastal waters	0.5	0.125	failed	achieved
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Northern Baltic Proper Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	3 Quantitative	Gulf of Finland Finnish Coastal waters	0.5	0.375	failed	achieved
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Gulf of Finland Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Gulf of Finland Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	3 Quantitative	Gulf of Riga Estonian Coastal waters	0.5	0.625	achieved	failed
Abundance of key coastal fish species (Coastal fish key species)	3	3 Quantitative	Gulf of Riga Latvian Coastal waters	0.5	0.625	achieved	achieved
Abundance of key coastal fish species (Coastal fish key species)	3	3 Quantitative	Western Gotland Basin Swedish Coastal waters	0.5	0.125	failed	failed
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Eastern Gotland Basin Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	3 Quantitative	Eastern Gotland Basin Latvian Coastal waters	0.5	0.625	achieved	achieved







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**Table A3.3.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for coastal fish across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of coastal fish key functional groups, Abundance of key coastal fish species and Size structure of coastal fish. Due to a change in methodology between the 2011-2016 and 2016-2021 assessments it is only possible to compare the status results between the two assessments.

Indicator	Assessment scale	Quantitative/ qualitative evaluation	Assessment unit name	Threshold value 2016-2021		Results 2016-2021	Status 2016-2021	Status 2011-2016
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Eastern Gotland Basin Lithuanian Coastal waters		0.5	0.3	75 failed	decrease
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Eastern Gotland Basin Swedish Coastal waters	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Eastern Gotland Basin Russian Coastal waters	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Eastern Gotland Basin Polish Coastal waters	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Gdansk Basin Russian Coastal waters	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Gdansk Basin Polish Coastal waters		0.5	0.6	25 failed	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Bornholm Basin Swedish Coastal waters		0.5	0.3	75 failed	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Bornholm Basin Polish Coastal waters	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species Coastal fish key species)	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Bornholm Basin German Coastal waters	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species Coastal fish key species)	3	Not evaluated	Arkona Basin Swedish Coastal waters	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species Coastal fish key species)	3	Quantitative	Arkona Basin Danish Coastal waters		0.5	0.3	75 failed	failed
Abundance of key coastal fish species Coastal fish key species)	3	Not evaluated	Arkona Basin German Coastal waters	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species Coastal fish key species)	3	Not evaluated	Mecklenburg Bight German Coastal waters	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Abundance of key coastal fish species Coastal fish key species)	3	Quantitative	Mecklenburg Bight Danish Coastal waters		0.5	0.3	75 failed	failed

**Table A3.3.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for coastal fish across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of coastal fish key functional groups, Abundance of key coastal fish species and Size structure of coastal fish. Due to a change in methodology between the 2011-2016 and 2016-2021 assessments it is only possible to compare the status results between the two assessments.

Indicator	Assessment scale	Quantitative/ qualitative	Assessment unit name	Threshold value 2016-2021	Results 2016-20	21	Status 2016-2021	Status 2011-2016
Abundance of key coastal fish species (Coastal fish key species)	3	evaluation  Not evaluated	Kiel Bight German Coastal waters	Not evaluated	Not evaluated		Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Kiel Bight Danish Coastal waters	Not evaluated	Not evaluated		Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Belts Danish Coastal waters		0.5	0.375	failed	failed
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	The Sound Swedish Coastal waters	Not evaluated	Not evaluated		Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	The Sound Danish Coastal waters		0.5	0.375	failed	failed
Abundance of key coastal fish species (Coastal fish key species)	3	Not evaluated	Kattegat Swedish Coastal waters	Not evaluated	Not evaluated		Not evaluated	Not evaluated
Abundance of key coastal fish species (Coastal fish key species)	3	Quantitative	Kattegat Danish Coastal waters, including Limfjorden		0.5	0.125	failed	failed
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Bothnian Bay Finnish Coastal waters	Not evaluated	Not evaluated		Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Bothnian Bay Swedish Coastal waters		0.5	0.375	failed	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	The Quark Finnish Coastal waters		0.5	0.875	achieved	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	The Quark Swedish Coastal waters		0.5	0.375	failed	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Bothnian Sea Finnish Coastal waters		0.5	0.875	achieved	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Bothnian Sea Swedish Coastal waters		0.5		achieved	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Åland Sea Swedish Coastal waters		0.5	0.375	failed	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Åland Sea – Archipelago Sea Finnish Coastal waters		0.5	0.375	failed	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Northern Baltic Proper Swedish Coastal waters		0.5	0.375	failed	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Northern Baltic Proper Estonian Coastal waters	Not evaluated	Not evaluated		Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Gulf of Finland Finnish Coastal waters		0.5	0.125	failed	No evaluation







**Table A3.3.1.** (Continued). Results and status across the 2016–2021 and 2011–2016 indicator evaluations included in the assessment for coastal fish across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of coastal fish key functional groups, Abundance of key coastal fish species and Size structure of coastal fish. Due to a change in methodology between the 2011–2016 and 2016–2021 assessments it is only possible to compare the status results between the two assessments.

Indicator	Assessment scale	Quantitative/ qualitative evaluation	Assessment unit name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Status 2011-2016
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Gulf of Finland Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Gulf of Finland Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Gulf of Riga Estonian Coastal waters	0.5	0.625	achieved	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Gulf of Riga Latvian Coastal waters	0.5	0.125	failed	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Western Gotland Basin Swedish Coastal waters	0.5	0.375	failed	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Eastern Gotland Basin Estonian Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Eastern Gotland Basin Latvian Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Eastern Gotland Basin Lithuanian Coastal waters	0.5	0.375	failed	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Eastern Gotland Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Eastern Gotland Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Eastern Gotland Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Gdansk Basin Russian Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Gdansk Basin Polish Coastal waters	0.5	0.125	failed	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Quantitative	Bornholm Basin Swedish Coastal waters	0.5	0.375	failed	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Bornholm Basin Polish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Bornholm Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Arkona Basin Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Arkona Basin Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Arkona Basin German Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Mecklenburg Bight German Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation





**Table A3.3.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for coastal fish across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of coastal fish key functional groups, Abundance of key coastal fish species and Size structure of coastal fish. Due to a change in methodology between the 2011-2016 and 2016-2021 assessments it is only possible to compare the status results between the two assessments.

Indicator	Assessment scale	Quantitative/ qualitative evaluation	Assessment unit name	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Status 2011-2016
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Mecklenburg Bight Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Kiel Bight German Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Kiel Bight Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Belts Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	The Sound Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	The Sound Danish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Kattegat Swedish Coastal waters	Not evaluated	Not evaluated	Not evaluated	No evaluation
Size structure of coastal fish (Coastal fish size)	3	Not evaluated	Kattegat Danish Coastal waters, including Limfjorden	Not evaluated	Not evaluated	Not evaluated	No evaluation









## A3.4 Changes across indicator evaluations for waterbirds

**Table A3.4.1.** Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for waterbirds across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of waterbirds in the wintering season and Breeding success of waterbirds.

Indicator	Assessment scale HOLAS 3	Quantitative/ qualitative evalu- ation	Assessment Unit Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status 2011-2016
Abundance of waterbirds in the breeding season	2	Quantitative	Kattegat	Kattegatt	Surface feeders	75%	50%	fail	75%	43%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Great Belt	Belt Group	Surface feeders	75%	71%	fail	75%	88%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	The Sound	Belt Group	Surface feeders	75%	71%	fail	75%	88%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Kiel Bay	Bornholm Group	Surface feeders	75%	56%	fail	75%	44%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Surface feeders	75%	56%	fail	75%	44%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Arkona Basin	Bornholm Group	Surface feeders	75%	56%	fail	75%	44%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bornholm Basin	Bornholm Group	Surface feeders	75%	56%	fail	75%	44%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Gdansk Basin	Gotland Group	Surface feeders	75%	56%	fail	75%	63%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Surface feeders	75%	56%	fail	75%	63%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Western Gotland Basin	Gotland Group	Surface feeders	75%	56%	fail	75%	63%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Riga	Gotland Group	Surface feeders	75%	56%	fail	75%	63%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Northern Baltic Proper	Åland Group	Surface feeders	75%	75%	achieve	75%	71%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Finland	Gulf of Finland	Surface feeders	75%	43%	fail	75%	17%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Åland Sea	Åland Group	Surface feeders	75%	75%	achieve	75%	71%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Sea	Bothnian Group	Surface feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	The Quark	Bothnian Group	Surface feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Bay	Bothnian Group	Surface feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Kattegat	Kattegatt	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Great Belt	Belt Group	Pelagic feeders	75%	50%	fail	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	The Sound	Belt Group	Pelagic feeders	75%	50%	fail	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Kiel Bay	Bornholm Group	Pelagic feeders	75%	83%	achieve	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Pelagic feeders	75%	83%	achieve	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Arkona Basin	Bornholm Group	Pelagic feeders	75%	83%	achieve	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bornholm Basin	Bornholm Group	Pelagic feeders	75%	83%	achieve	75%	50%	fail

**Table A3.4.1.** (Continued). Results and status across the 2016–2021 and 2011–2016 indicator evaluations included in the assessment for waterbirds across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of waterbirds in the breeding season, Abundance of waterbirds in the wintering season and Breeding success of waterbirds.

Indicator	Assessment scale HOLAS 3	Quantitative/ qualitative evalu- ation	Assessment Unit Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status 2011-2016
Abundance of waterbirds in the breeding season	2	Quantitative	Gdansk Basin	Gotland Group	Pelagic feeders	75%	86%	achieve	75%	86%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Pelagic feeders	75%	86%	achieve	75%	86%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Western Gotland Basin	Gotland Group	Pelagic feeders	75%	86%	achieve	75%	86%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Riga	Gotland Group	Pelagic feeders	75%	86%	achieve	75%	86%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Northern Baltic Proper	Åland Group	Pelagic feeders	75%	80%	achieve	75%	80%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Finland	Gulf of Finland	Pelagic feeders	75%	71%	achieve	75%	67%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Åland Sea	Åland Group	Pelagic feeders	75%	80%	achieve	75%	80%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Sea	Bothnian Group	Pelagic feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	The Quark	Bothnian Group	Pelagic feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Bay	Bothnian Group	Pelagic feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Kattegat	Kattegatt	Benthic feeders	75%	0%	Fail	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the breeding season	2	Quantitative	Great Belt	Belt Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the breeding season	2	Quantitative	The Sound	Belt Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the breeding season	2	Quantitative	Kiel Bay	Bornholm Group	Benthic feeders	75%	50%	fail	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Benthic feeders	75%	50%	fail	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Arkona Basin	Bornholm Group	Benthic feeders	75%	50%	fail	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bornholm Basin	Bornholm Group	Benthic feeders	75%	50%	fail	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Gdansk Basin	Gotland Group	Benthic feeders	75%	50%	fail	75%	33%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Benthic feeders	75%	50%	fail	75%	33%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Western Gotland Basin	Gotland Group	Benthic feeders	75%	50%	fail	75%	33%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Riga	Gotland Group	Benthic feeders	75%	50%	fail	75%	33%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Northern Baltic Proper	Åland Group	Benthic feeders	75%	67%	fail	75%	33%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Finland	Gulf of Finland	Benthic feeders	75%	33%	fail	75%	33%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Åland Sea	Åland Group	Benthic feeders	75%	67%	fail	75%	33%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Sea	Bothnian Group	Benthic feeders	75%	33%	fail	75%	67%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	The Quark	Bothnian Group	Benthic feeders	75%	33%	fail	75%	67%	fail











**Table A3.4.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for waterbirds across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of waterbirds in the breeding season, Abundance of waterbirds in the wintering season and Breeding success of waterbirds.

Indicator	Assessment scale HOLAS 3	Quantitative/ qualitative evalu- ation	Assessment Unit Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status 2011-2016
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Bay	Bothnian Group	Benthic feeders	75%	33%	fail	75%	67%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Kattegat	Kattegatt	Waders	75%	25%	fail	75%	0%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Great Belt	Belt Group	Waders	75%	50%	fail	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	The Sound	Belt Group	Waders	75%	50%	fail	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Kiel Bay	Bornholm Group	Waders	75%	60%	fail	75%	40%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Waders	75%	60%	fail	75%	40%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Arkona Basin	Bornholm Group	Waders	75%	60%	fail	75%	40%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bornholm Basin	Bornholm Group	Waders	75%	60%	fail	75%	40%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Gdansk Basin	Gotland Group	Waders	75%	60%	fail	75%	33%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Waders	75%	60%	fail	75%	33%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Western Gotland Basin	Gotland Group	Waders	75%	60%	fail	75%	33%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Riga	Gotland Group	Waders	75%	60%	fail	75%	33%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Northern Baltic Proper	Åland Group	Waders	75%	75%	achieve	75%	80%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Finland	Gulf of Finland	Waders	75%	75%	achieve	75%	67%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Åland Sea	Åland Group	Waders	75%	75%	achieve	75%	80%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Sea	Bothnian Group	Waders	75%	67%	fail	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	The Quark	Bothnian Group	Waders	75%	67%	fail	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Bay	Bothnian Group	Waders	75%	67%	fail	75%	50%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Kattegat	Kattegatt	Grazers	75%	67%	fail	75%	Not evaluated	Not evaluated
Abundance of waterbirds in the breeding season	2	Quantitative	Great Belt	Belt Group	Grazers	Not evaluated	Not evaluated	Not evaluated	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	The Sound	Belt Group	Grazers	Not evaluated	Not evaluated	Not evaluated	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Kiel Bay	Bornholm Group	Grazers	75%	50%	fail	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Grazers	75%	50%	fail	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Arkona Basin	Bornholm Group	Grazers	75%	50%	fail	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Bornholm Basin	Bornholm Group	Grazers	75%	50%	fail	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Gdansk Basin	Gotland Group	Grazers	75%	67%	fail	75%	67%	fail

**Table A3.4.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for waterbirds across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of waterbirds in the breeding season, Abundance of waterbirds in the wintering season and Breeding success of waterbirds.

Indicator	Assessment scale HOLAS 3	Quantitative/ qualitative evalu- ation	Assessment Unit Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status 2011-2016
Abundance of waterbirds in the breeding season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Grazers	75%	67%	fail	75%	67%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Western Gotland Basin	Gotland Group	Grazers	75%	67%	fail	75%	67%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Riga	Gotland Group	Grazers	75%	67%	fail	75%	67%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Northern Baltic Proper	Åland Group	Grazers	75%	67%	fail	75%	67%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Gulf of Finland	Gulf of Finland	Grazers	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Åland Sea	Åland Group	Grazers	75%	67%	fail	75%	67%	fail
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Sea	Bothnian Group	Grazers	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	The Quark	Bothnian Group	Grazers	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the breeding season	2	Quantitative	Bothnian Bay	Bothnian Group	Grazers	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Kattegat	Kattegatt	Surface feeders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	Great Belt	Belt Group	Surface feeders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	The Sound	Belt Group	Surface feeders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	Kiel Bay	Bornholm Group	Surface feeders	75%	0%	fail	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Surface feeders	75%	0%	fail	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Arkona Basin	Bornholm Group	Surface feeders	75%	0%	fail	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bornholm Basin	Bornholm Group	Surface feeders	75%	0%	fail	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gdansk Basin	Gotland Group	Surface feeders	75%	Not evaluated	Not evaluated	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Surface feeders	75%	Not evaluated	Not evaluated	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Western Gotland Basin	Gotland Group	Surface feeders	75%	Not evaluated	Not evaluated	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Riga	Gotland Group	Surface feeders	75%	Not evaluated	Not evaluated	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Northern Baltic Proper	Åland Group	Surface feeders	75%	50%	fail	75%	33%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Finland	Gulf of Finland	Surface feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Åland Sea	Åland Group	Surface feeders	75%	50%	fail	75%	33%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Sea	Bothnian Group	Surface feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	The Quark	Bothnian Group	Surface feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Bay	Bothnian Group	Surface feeders	75%	100%	achieve	75%	100%	achieve











**Table A3.4.1.** (Continued). Results and status across the 2016–2021 and 2011–2016 indicator evaluations included in the assessment for waterbirds across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of waterbirds in the breeding season, Abundance of waterbirds in the wintering season and Breeding success of waterbirds.

Indicator	Assessment scale HOLAS 3	Quantitative/ qualitative evalu- ation	Assessment Unit Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status 2011-2016
Abundance of waterbirds in the wintering season	2	Quantitative	Kattegat	Kattegatt	Pelagic feeders	75%	50%	fail	75%	60%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	Great Belt	Belt Group	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	75%	60%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	The Sound	Belt Group	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	75%	60%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	Kiel Bay	Bornholm Group	Pelagic feeders	75%	78%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Pelagic feeders	75%	78%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Arkona Basin	Bornholm Group	Pelagic feeders	75%	78%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bornholm Basin	Bornholm Group	Pelagic feeders	75%	78%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gdansk Basin	Gotland Group	Pelagic feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Pelagic feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Western Gotland Basin	Gotland Group	Pelagic feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Riga	Gotland Group	Pelagic feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Northern Baltic Proper	Åland Group	Pelagic feeders	75%	100%	achieve	75%	50%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Finland	Gulf of Finland	Pelagic feeders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Åland Sea	Åland Group	Pelagic feeders	75%	100%	achieve	75%	50%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Sea	Bothnian Group	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	The Quark	Bothnian Group	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Bay	Bothnian Group	Pelagic feeders	Not evaluated	Not evaluated	Not evaluated	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Kattegat	Kattegatt	Benthic feeders	75%	25%	fail	75%	25%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	Great Belt	Belt Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	75%	25%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	The Sound	Belt Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	75%	25%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	Kiel Bay	Bornholm Group	Benthic feeders	75%	75%	achieve	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Benthic feeders	75%	75%	achieve	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Arkona Basin	Bornholm Group	Benthic feeders	75%	75%	achieve	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bornholm Basin	Bornholm Group	Benthic feeders	75%	75%	achieve	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gdansk Basin	Gotland Group	Benthic feeders	75%	57%	fail	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Benthic feeders	75%	57%	fail	75%	75%	achieve

**Table A3.4.1.** (Continued). Results and status across the 2016–2021 and 2011–2016 indicator evaluations included in the assessment for waterbirds across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of waterbirds in the breeding season, Abundance of waterbirds in the wintering season and Breeding success of waterbirds.

Indicator	Assessment scale HOLAS 3	Quantitative/ qualitative evalu- ation	Assessment Unit Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status 2011-2016
Abundance of waterbirds in the wintering season	2	Quantitative	Western Gotland Basin	Gotland Group	Benthic feeders	75%	57%	fail	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Riga	Gotland Group	Benthic feeders	75%	57%	fail	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Northern Baltic Proper	Åland Group	Benthic feeders	75%	75%	achieve	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Finland	Gulf of Finland	Benthic feeders	75%	100%	achieve	75%	50%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	Åland Sea	Åland Group	Benthic feeders	75%	75%	achieve	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Sea	Bothnian Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	The Quark	Bothnian Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Bay	Bothnian Group	Benthic feeders	Not evaluated	Not evaluated	Not evaluated	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Kattegat	Kattegatt	Waders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Great Belt	Belt Group	Waders	Not evaluated	Not evaluated	Not evaluated	75%	0%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	The Sound	Belt Group	Waders	Not evaluated	Not evaluated	Not evaluated	75%	0%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	Kiel Bay	Bornholm Group	Waders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Waders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Arkona Basin	Bornholm Group	Waders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bornholm Basin	Bornholm Group	Waders	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gdansk Basin	Gotland Group	Waders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Waders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	Western Gotland Basin	Gotland Group	Waders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Riga	Gotland Group	Waders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	Northern Baltic Proper	Åland Group	Waders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Finland	Gulf of Finland	Waders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	Åland Sea	Åland Group	Waders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Sea	Bothnian Group	Waders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	The Quark	Bothnian Group	Waders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Bay	Bothnian Group	Waders	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Abundance of waterbirds in the wintering season	2	Quantitative	Kattegat	Kattegatt	Grazers	75%	0%	fail	75%	33%	fail







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**Table A3.4.1.** (Continued). Results and status across the 2016–2021 and 2011–2016 indicator evaluations included in the assessment for waterbirds across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of waterbirds in the breeding season, Abundance of waterbirds in the wintering season and Breeding success of waterbirds.

Indicator	Assessment scale HOLAS 3	Quantitative/ qualitative evalu- ation	Assessment Unit Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status 2011-2016
Abundance of waterbirds in the wintering season	2	Quantitative	Great Belt	Belt Group	Grazers	Not evaluated	Not evaluated	Not evaluated	75%	80%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	The Sound	Belt Group	Grazers	Not evaluated	Not evaluated	Not evaluated	75%	80%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Kiel Bay	Bornholm Group	Grazers	75%	86%	achieve	75%	86%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bay of Mecklenburg	Bornholm Group	Grazers	75%	86%	achieve	75%	86%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Arkona Basin	Bornholm Group	Grazers	75%	86%	achieve	75%	86%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bornholm Basin	Bornholm Group	Grazers	75%	86%	achieve	75%	86%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gdansk Basin	Gotland Group	Grazers	75%	100%	achieve	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Eastern Gotland Basin	Gotland Group	Grazers	75%	100%	achieve	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Western Gotland Basin	Gotland Group	Grazers	75%	100%	achieve	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Riga	Gotland Group	Grazers	75%	100%	achieve	75%	75%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Northern Baltic Proper	Åland Group	Grazers	75%	75%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Gulf of Finland	Gulf of Finland	Grazers	75%	100%	achieve	75%	67%	fail
Abundance of waterbirds in the wintering season	2	Quantitative	Åland Sea	Åland Group	Grazers	75%	75%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Sea	Bothnian Group	Grazers	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	The Quark	Bothnian Group	Grazers	75%	100%	achieve	75%	100%	achieve
Abundance of waterbirds in the wintering season	2	Quantitative	Bothnian Bay	Bothnian Group	Grazers	75%	100%	achieve	75%	100%	achieve
Breeding success of waterbirds	2	Quantitative	Kattegat	Kattegatt	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Great Belt	Belt Group	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	The Sound	Belt Group	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Kiel Bay	Bornholm Group	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Bay of Mecklenburg	Bornholm Group	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Arkona Basin	Bornholm Group	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Bornholm Basin	Bornholm Group	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Gdansk Basin	Gotland Group	NA	0.995	1.072	achieve	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Eastern Gotland Basin	Gotland Group	NA	0.995	1.072	achieve	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Western Gotland Basin	Gotland Group	NA	0.995	1.072	achieve	Not evaluated	Not evaluated	Not evaluated

**Table A3.4.1.** (Continued). Results and status across the 2016–2021 and 2011–2016 indicator evaluations included in the assessment for waterbirds across the full range of the Baltic Sea. The assessment includes the following indicators: Abundance of waterbirds in the breeding season, Abundance of waterbirds in the wintering season and Breeding success of waterbirds.

Indicator	Assessment scale HOLAS 3	Quantitative/ qualitative evalu- ation	Assessment Unit Name	Spatial group	Functional group	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Threshold value 2011-2016	Results 2011-2016	Status 2011-2016
Breeding success of waterbirds	2	Quantitative	Gulf of Riga	Gotland Group	NA	0.995	1.072	achieve	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Northern Baltic Proper	Åland Group	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Gulf of Finland	Gulf of Finland	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Åland Sea	Åland Group	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Bothnian Sea	Bothnian Group	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	The Quark	Bothnian Group	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated
Breeding success of waterbirds	2	Quantitative	Bothnian Bay	Bothnian Group	NA	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated	Not evaluated







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## A3.5 Changes across indicator evaluations for marine mammals

Table A3.5.1. Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for marine mammals. The assessment includes the following indicators: Population trends and abundance of grey seals, Population trends and abundance of firinged seals, Population trends and abundance of harbour seals, Population trends and abundance of firinged seals, Distribution of grey seals, Distribu

Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Population trends and abundance of seals – Grey seals	2	Quantitative	Kattegat	Baltic Sea	Not evaluated	Not evaluated	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Population trends and abundance of seals – Grey seals	2	Quantitative	Great Belt	Baltic Sea	>10000/>7%	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	The Sound	Baltic Sea	>10000/>7%	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Kiel Bay	Baltic Sea	>10000/>7%	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Bay of Mecklenburg	Baltic Sea	>10000/>7%	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Arkona Basin	Baltic Sea	>10000/>7%	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Bornholm Basin	Baltic Sea	>10000/>7%	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Gdansk Basin	Baltic Sea	> 10 000 / > 7 %	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Eastern Gotland Basin	Baltic Sea	>10000/>7%	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Western Gotland Basin	Baltic Sea	> 10 000 / > 7 %	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Gulf of Riga	Baltic Sea	>10000/>7%	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Northern Baltic Proper	Baltic Sea	> 10 000 / > 7 %	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Gulf of Finland	Baltic Sea	> 10 000 / > 7 %	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Åland Sea	Baltic Sea	>10000/>7%	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Bothnian Sea	Baltic Sea	> 10 000 / > 7 %	60 000/5.1%	Fail		>10000/>7%	30 000/5.3%	achieve

**Table A3.5.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for marine mammals. The assessment includes the following indicators: Population trends and abundance of grey seals, Population trends and abundance of grey seals, Distribution of grey seals, Distribution of ringed seals, Distribution of harbour seals, Reproductive status of seals and Nutritional status of seals.

Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Population trends and abundance of seals – Grey seals	2	Quantitative	The Quark	Baltic Sea	>10000/>7%	60 000/5.1%	Fail		> 10 000 / > 7 %	30 000/5.3%	achieve
Population trends and abundance of seals – Grey seals	2	Quantitative	Bothnian Bay	Baltic Sea	>10000/>7%	60 000/5.1%	Fail		> 10 000 / > 7 %	30 000/5.3%	achieve
Population trends and abundance of seals – Ringed seals	2	Quantitative	Kattegat	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Ringed seals	2	Quantitative	Great Belt	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Ringed seals	2	Quantitative	The Sound	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Ringed seals	2	Quantitative	Kiel Bay	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Ringed seals	2	Quantitative	Bay of Mecklenburg	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Ringed seals	2	Quantitative	Arkona Basin	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Ringed seals	2	Quantitative	Bornholm Basin	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Ringed seals	2	Quantitative	Gdansk Basin	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Ringed seals	2	Quantitative	Eastern Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Ringed seals	2	Quantitative	Western Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Ringed seals	2	Quantitative	Gulf of Riga	Southern unit	>10000/>7%	1800/≥ 0.0 %	fail		> 10 000 / > 7 %	?/0%	fail
Population trends and abundance of seals – Ringed seals	2	Quantitative	Northern Baltic Proper	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Population trends and abundance of seals – Ringed seals	2	Quantitative	Gulf of Finland	Southern unit	>10000/>7%	1800/≥0.0%	fail		> 10 000 / > 7 %	?/0%	fail
Population trends and abundance of seals – Ringed seals	2	Quantitative	Åland Sea	Southern unit	>10000/>7%	1800/≥ 0.0 %	fail		> 10 000 / > 7 %	?/0%	fail







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Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Population trends and abundance of seals – Ringed seals	2	Quantitative	Bothnian Sea	Northern unit	>10000/>7%	20 000/≥ 5.0 %	fail		>10000/>7%	20 000/5.9 %	fail
Population trends and abundance of seals – Ringed seals	2	Quantitative	The Quark	Northern unit	>10000/>7%	20 000/≥ 5.0 %	Fail		>10000/>7%	20 000/5.9 %	fail
Population trends and abundance of seals – Ringed seals	2	Quantitative	Bothnian Bay	Northern unit	>10000/>7%	20 000/≥ 5.0 %	Fail		>10000/>7%	20 000/5.9 %	fail
Population trends and abundance of seals – Harbour seals	2	Quantitative	Kattegat	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail		>10000/>9%	>1100/≥5.9%	achieve
Population trends and abundance of seals – Harbour seals	2	Quantitative	Great Belt	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail		>10000/>9%	>1100/≥5.9%	fail
Population trends and abundance of seals – Harbour seals	2	Quantitative	The Sound	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail		>10000/>9%	>1100/≥5.9%	fail
Population trends and abundance of seals – Harbour seals	2	Quantitative	Kiel Bay	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail		>10000/>9%	>1100/≥5.9%	fail
Population trends and abundance of seals – Harbour seals	2	Quantitative	Bay of Mecklenburg	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail		>10000/>9%	>1100/≥5.9%	fail
Population trends and abundance of seals – Harbour seals	2	Quantitative	Arkona Basin	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail		>10000/>9%	>1100/≥5.9%	fail
Population trends and abundance of seals – Harbour seals	2	Quantitative	Bornholm Basin	Southwesten unit	>10000/>9%	14500/≥6.1%	Fail		>10000/>9%	>1100/≥5.9%	fail
Population trends and abundance of seals – Harbour seals	2	Quantitative	Gdansk Basin	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
Population trends and abundance of seals – Harbour seals	2	Quantitative	Eastern Gotland Basi	n	>10000/>9%	14500/≥6.1%	Fail		>10000/>9%	>1100/≥5.9%	fail
Population trends and abundance of seals – Harbour seals	2	Quantitative	Western Gotland Basin	Kalmarsund unit	>10000/>9%	2000/≥8.9%	fail		>10000/>9%	1000/≥6.9%	fail
Population trends and abundance of seals – Harbour seals	2	Quantitative	Gulf of Riga	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
Population trends and abundance of seals – Harbour seals	2	Quantitative	Northern Baltic Proper	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
Population trends and abundance of seals – Harbour seals	2	Quantitative	Gulf of Finland	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		

**Table A3.5.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for marine mammals. The assessment includes the following indicators: Population trends and abundance of grey seals, Population trends and abundance of grey seals, Distribution of grey seals, Distribution of ringed seals, Distribution of harbour seals, Reproductive status of seals and Nutritional status of seals.

Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Population trends and abundance of seals – Harbour seals	2	Quantitative	Åland Sea	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
Population trends and abundance of seals – Harbour seals	2	Quantitative	Bothnian Sea	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
Population trends and abundance of seals – Harbour seals	2	Quantitative	The Quark	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
Population trends and abundance of seals – Harbour seals	2	Quantitative	Bothnian Bay	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
Distribution of Baltic seals – grey seals	2	Quantitative	Kattegat	Baltic Sea	Not evaluated	Not evaluated	Not evaluated		Not evaluated	Not evaluated	Not evaluated
Distribution of Baltic seals – grey seals	2	Quantitative	Great Belt	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine	conditions	fail
Distribution of Baltic seals – grey seals	2	Quantitative	The Sound	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine	conditions	fail
Distribution of Baltic seals – grey seals	2	Quantitative	Kiel Bay	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine	conditions	fail
Distribution of Baltic seals – grey seals	2	Quantitative	Bay of Mecklenburg	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine	conditions	fail
Distribution of Baltic seals – grey seals	2	Quantitative	Arkona Basin	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine	conditions	fail
Distribution of Baltic seals – grey seals	2	Quantitative	Bornholm Basin	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine	conditions	achieve







status of seals.

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**Table A3.5.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for marine mammals. The assessment includes the following indicators: Population trends and abundance of grey seals, Population trends and abundance of grey seals, Distribution of grey seals, Distribution of ringed seals, Distribution of harbour seals, Reproductive status of seals and Nutritional

Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Distribution of Baltic seals – grey seals	2	Quantitative	Gdansk Basin	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine o	onditions	achieve
Distribution of Baltic seals – grey seals	2	Quantitative	Eastern Gotland Basin	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine o	onditions	achieve
Distribution of Baltic seals – grey seals	2	Quantitative	Western Gotland Basin	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine o	onditions	achieve
Distribution of Baltic seals – grey seals	2	Quantitative	Gulf of Riga	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine o	onditions	achieve
Distribution of Baltic seals – grey seals	2	Quantitative	Northern Baltic Proper	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine o	onditions	achieve
Distribution of Baltic seals – grey seals	2	Quantitative	Gulf of Finland	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine o	onditions	achieve
Distribution of Baltic seals – grey seals	2	Quantitative	Åland Sea	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine o	onditions	achieve
Distribution of Baltic seals – grey seals	2	Quantitative	Bothnian Sea	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine o	onditions	achieve
Distribution of Baltic seals – grey seals	2	Quantitative	The Quark	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine o	onditions	achieve





Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Distribution of Baltic seals – grey seals	2	Quantitative	Bothnian Bay	Baltic Sea	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine o	onditions	achieve
Distribution of Baltic seals – ringed seals	2	Quantitative	Kattegat	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – ringed seals	2	Quantitative	Great Belt	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – ringed seals	2	Quantitative	The Sound	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – ringed seals	2	Quantitative	Kiel Bay	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – ringed seals	2	Quantitative	Bay of Mecklenburg	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – ringed seals	2	Quantitative	Arkona Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – ringed seals	2	Quantitative	Bornholm Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – ringed seals	2	Quantitative	Gdansk Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – ringed seals	2	Quantitative	Eastern Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – ringed seals	2	Quantitative	Western Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – ringed seals	2	Quantitative	Gulf of Riga	Southern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine conditions	area of occupan- cy is restricted compared to pris- tine conditions	fail
Distribution of Baltic seals – ringed seals	2	Quantitative	Northern Baltic Proper	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – ringed seals	2	Quantitative	Gulf of Finland	Southern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine conditions	area of occupan- cy is restricted compared to pris- tine conditions	
Distribution of Baltic seals – ringed seals	2	Quantitative	Åland Sea	Southern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine conditions	area of occupan- cy is restricted compared to pris- tine conditions	fail







status of seals.

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**Table A3.5.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for marine mammals. The assessment includes the following indicators: Population trends and abundance of grey seals, Population trends and abundance of grey seals, Distribution of grey seals, Distribution of ringed seals, Population trends and abundance of grey seals and Nutritional

Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Distribution of Baltic seals – ringed seals	2	Quantitative	Bothnian Sea	Northern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine conditions	area of occupan- cy is restricted compared to pris- tine conditions	
Distribution of Baltic seals – ringed seals	2	Quantitative	The Quark	Northern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine conditions	area of occupan- cy is restricted compared to pris- tine conditions	
Distribution of Baltic seals – ringed seals	2	Quantitative	Bothnian Bay	Northern unit	Close to pristine conditions	The population achieves the threshold for the area of occupancy, but not for the breeding and moulting distributions.	Fail		Close to pristine conditions	area of occupan- cy is restricted compared to pris- tine conditions	
Distribution of Baltic seals – harbour seals	2	Quantitative	Kattegat	Southwesten unit	Close to pristine conditions	breeding and moulting distri- bution as well as area of occu- pancy are at pristine levels	Achieve		Close to pristine conditions	distribution and area of occupan- cy are at pristine levels	achieve
Distribution of Baltic seals – harbour seals	2	Quantitative	Great Belt	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail		Close to pristine conditions	distribution and area of occupan- cy are at pristine levels	achieve
Distribution of Baltic seals – harbour seals	2	Quantitative	The Sound	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail		Close to pristine conditions	area of occupan- cy are at pristine levels, some land sites are not used a	fail
Distribution of Baltic seals – harbour seals	2	Quantitative	Kiel Bay	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail		Close to pristine conditions	area of occupan- cy are at pristine levels, some land sites are not used a	fail
Distribution of Baltic seals – harbour seals	2	Quantitative	Bay of Mecklenburg	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail		Close to pristine conditions	area of occupan- cy are at pristine levels, some land sites are not used a	fail





Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Distribution of Baltic seals – harbour seals	2	Quantitative	Arkona Basin	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail		Close to pristine conditions	area of oc- cupancy are at pristine levels, some land sites are not used	fail
Distribution of Baltic seals – harbour seals	2	Quantitative	Bornholm Basin	Southwesten unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail		Close to pristine conditions	distribution and area of occupan- cy are at pristine levels	achieve
Distribution of Baltic seals – harbour seals	2	Nutritional status of seals+B88:E104	Gdansk Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – harbour seals	2	Quantitative	Eastern Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – harbour seals	2	Quantitative	Western Gotland Basin	Kalmarsund unit	Close to pristine conditions	area of occupancy is at pristine levels but not all suitable land sites are used	Fail		Close to pristine conditions	distribution at pristine levels, area of occupan- cy unknown	achieve
Distribution of Baltic seals – harbour seals	2	Quantitative	Gulf of Riga	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – harbour seals	2	Quantitative	Northern Baltic Proper	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – harbour seals	2	Quantitative	Gulf of Finland	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – harbour seals	2	Quantitative	Åland Sea	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – harbour seals	2	Quantitative	Bothnian Sea	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – harbour seals	2	Quantitative	The Quark	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Distribution of Baltic seals – harbour seals	2	Quantitative	Bothnian Bay	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Nutritional status of seals	2	Quantitative	Kattegat	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	
Nutritional status of seals	2	Quantitative	Great Belt	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	The Sound	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	Kiel Bay	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	Bay of Mecklenburg	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	Arkona Basin	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail







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Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Nutritional status of seals	2	Quantitative	Bornholm Basin	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Nutritional status of seals+B88:E104	Gdansk Basin	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	Eastern Gotland Basin	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	Western Gotland Basin	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	Gulf of Riga	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	Northern Baltic Proper	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	Gulf of Finland	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	Åland Sea	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	Bothnian Sea	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	The Quark	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Nutritional status of seals	2	Quantitative	Bothnian Bay	Baltic Sea	40mm/35 mm	36mm/27mm	Fail		40mm/35 mm	<40mm/<35mm	fail
Reporductive status of seals-grey seal	2	Quantitative	Kattegat	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-grey seal	2	Quantitative	Great Belt	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	The Sound	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	Kiel Bay	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	Bay of Mecklenburg	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	Arkona Basin	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	Bornholm Basin	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Nutritional status of seals+B88:E104	Gdansk Basin	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	Eastern Gotland Basin	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	Western Gotland Basin	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	Gulf of Riga	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail

**Table A3.5.1.** (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for marine mammals. The assessment includes the following indicators: Population trends and abundance of grey seals, Population trends and abundance of grey seals, Distribution of grey seals, Distribution of ringed seals, Distribution of harbour seals, Reproductive status of seals and Nutritional status of seals.

Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Reporductive status of seals-grey seal	2	Quantitative	Northern Baltic Proper	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	Gulf of Finland	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	Åland Sea	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	Bothnian Sea	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	The Quark	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-grey seal	2	Quantitative	Bothnian Bay	Baltic Sea	≥6years/90%	87%	Fail		≥6years/90%	83%	fail
Reporductive status of seals-ringed seal	2	Quantitative	Kattegat	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-ringed seal	2	Quantitative	Great Belt	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-ringed seal	2	Quantitative	The Sound	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-ringed seal	2	Quantitative	Kiel Bay	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-ringed seal	2	Quantitative	Bay of Mecklenburg	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-ringed seal	2	Quantitative	Arkona Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-ringed seal	2	Quantitative	Bornholm Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-ringed seal	2	Quantitative	Gdansk Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-ringed seal	2	Quantitative	Eastern Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-ringed seal	2	Quantitative	Western Gotland Basin	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-ringed seal	2	Quantitative	Gulf of Riga	Southern unit	≥6years/90%	82%	Fail		Not evaluated	Not evaluated	Not evaluated
Reporductive status of seals-ringed seal	2	Quantitative	Northern Baltic Proper	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	Not applicable	Not applicable
Reporductive status of seals-ringed seal	2	Quantitative	Gulf of Finland	Southern unit	≥6years/90%	82%	Fail		Not evaluated	Not evaluated	Not evaluated
Reporductive status of seals-ringed seal	2	Quantitative	Åland Sea	Southern unit	≥6years/90%	82%	Fail		Not evaluated	Not evaluated	Not evaluated
Reporductive status of seals-ringed seal	2	Quantitative	Bothnian Sea	Northern unit	≥6years/90%	82%	Fail		Not evaluated	Not evaluated	Not evaluated
Reporductive status of seals-ringed seal	2	Quantitative	The Quark	Northern unit	≥6years/90%	82%	Fail		Not evaluated	Not evaluated	Not evaluated
Reporductive status of seals-ringed seal	2	Quantitative	Bothnian Bay	Northern unit	≥6years/90%	82%	Fail		Not evaluated	Not evaluated	Not evaluated







State of the Baltic Sea Third HELCOM holistic assessment 2016-2021

Biodiversity
Annex 3

Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Harbour porpoise abundance	2	Qualitative	Kattegat	Belt Sea popula- tion	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Great Belt	Belt Sea popula- tion	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	The Sound	Belt Sea popula- tion	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Kiel Bay	Belt Sea popula- tion	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Bay of Mecklenburg	Belt Sea popula- tion	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Arkona Basin	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Bornholm Basin	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Gdansk Basin	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Eastern Gotland Basin	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Western Gotland Basin	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Gulf of Riga	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Northern Baltic Proper	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Gulf of Finland	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Åland Sea	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Bothnian Sea	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	The Quark	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise abundance	2	Qualitative	Bothnian Bay	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation

Table A3.5.1. (Continued). Results and status across the 2016-2021 and 2011-2016 indicator evaluations included in the assessment for marine mammals. The assessment includes the following indicators: Population trends and abundance of grey seals, Population trends and abundance of grey seals, Distribution of grey seals, Distribution of ringed seals, Distribution of harbour seals, Reproductive status of seals and Nutritional status of seals.

Indicator	Assessment scale 2016-2021	Type of evaluation	Assessment Unit Name	Management unit	Threshold value 2016-2021	Results 2016-2021	Status 2016-2021	Source	Threshold value 2011-2021	Results 2011-2021	Result 2011-2021
Harbour porpoise distribution	2	Qualitative	Kattegat	Belt Sea popula- tion	Not evaluated	Not evaluated	Not evaluated		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Great Belt	Belt Sea popula- tion	Not evaluated	Not evaluated	Not evaluated		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	The Sound	Belt Sea popula- tion	Not evaluated	Not evaluated	Not evaluated		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Kiel Bay	Belt Sea popula- tion	Not evaluated	Not evaluated	Not evaluated		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Bay of Mecklenburg	Belt Sea popula- tion	Not evaluated	Not evaluated	Not evaluated		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Arkona Basin	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Bornholm Basin	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Gdansk Basin	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Eastern Gotland Basin	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Western Gotland Basin	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Gulf of Riga	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Northern Baltic Proper	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Gulf of Finland	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Åland Sea	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Bothnian Sea	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	The Quark	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation
Harbour porpoise distribution	2	Qualitative	Bothnian Bay	Baltic Proper population	Not available	Not applicable	Fail		No evaluation	No evaluation	No evaluation









## Annex 4. Results of the integrated assessment results for benthic habitats

Table A4.1 Results of the integrated assessment of benthic habitats, presented by sub-basin and broad habitat type (BHT).

Åland Sea		Total	Achieve	Fail	Loss	Adversely affected	NA
Circalittoral coarse sediment	Area	115	0	19	0	19	96
	%		0,00	16,45	0,24	16,69	83,31
	Confidence			0,77	0,50		
Circalittoral mixed sediment	Area	6364	450	1786	9	1794	4119
	%		7,08	28,06	0,14	28,20	64,73
	Confidence		0,73	0,75	0,5		
Circalittoral mud	Area	619	15	266	1	268	337
	%		2,36	43,03	0,19	43,22	54,42
	Confidence		0,78	0,74	0,5		
ircalittoral mud or Circalittoral sand	Area	3242	117	546	4	549	2576
	%		3,61	16,83	0,11	16,94	79,45
	Confidence		0,78	0,75	0,5		
ircalittoral rock and biogenic reef	Area	1336	0	429	3	432	904
	%		0,00	32,12	0,23	32,35	67,65
	Confidence			0,77	0,5		
ircalittoral sand	Area	19	0	8	0	9	10
	%		0,30	45,40	0,21	45,61	54,09
	Confidence		0,59	0,78	0,5		
nfralittoral coarse sediment	Area	59	0	28	1	28	31
	%		0,00	46,77	0,93	47,70	52,30
	Confidence			0,77	0,5		
nfralittoral mixed sediment	Area	2077	33	731	10	741	1303
	%		1,57	35,20	0,48	35,68	62,75
	Confidence		0,71	0,75	0,5		
nfralittoral mud	Area	169	9	65	3	67	93
	%		5,21	38,32	1,49	39,81	54,98
	Confidence		0,77	0,75	0,5		
nfralittoral mud or Infralittoral sand	Area	288	7	161	3	164	117
	%		2,51	55,82	1,14	56,96	40,53
	Confidence		0,78	0,76	0,5		

Table A4.1 (Continued). Results of the integrated assessment of benthic habitats, presented by sub-basin and broad habitat type (BHT).

Åland Sea		Total	Achieve	Fail	Loss	Adversely affected	NA
Infralittoral rock and biogenic reef	Area	1505	0	618	11	629	876
	%		0,00	41,07	0,74	41,81	58,19
	Confidence		0,78	0,75	0,5		
Infralittoral sand	Area	33	0	15	0	15	17
	%		0,06	45,29	1,26	46,56	53,38
	Confidence		0,59	0,77	0,5		
Na	Area						
	%						
	Confidence						
No_BHT	Area						
	%						
	Confidence						
Offshore circalittoral coarse sediment	Area						
	%						
	Confidence						
Offshore circalittoral mixed sediment	Area	25			0	0	25
	%		0,00	0,00	0,07	0,07	99,93
	Confidence				0,5		
Offshore circalittoral mud	Area						
	%						
	Confidence						
Offshore circalittoral mud or	Area	7				0	7
Offshore circalittoral sand	%		0,00	0,00	0,00	0,00	100,00
	Confidence				0,5		
Offshore circalittoral rock and biogenic reef	Area	3				0	3
	%		0,00	0,00	0,00	0,00	100,00
	Confidence				0,5		
Offshore circalittoral sand	Area						
	%						
	Confidence						









Arkona Basin		Total	Achieve	Fail	Loss	Adversely affected	NA
ircalittoral coarse sediment	Area	325	0	325	0	325	0
	%		0,00	99,94	0,06	100,00	0,00
	Confidence			0,58	0,50		
ircalittoral mixed sediment	Area	483	0	483	0	483	0
	%		0,00	99,95	0,04	100.00	0,00
	Confidence		0,98	0,59	0,5	325 100,00	5,55
ivealitational manual	Area	906	· · ·	892	0,5	002	0
ircalittoral mud		906	14			-	
	%		1,49	98,46	0,05	98,51	0,00
	Confidence		0,78	0,61	0,5		
calittoral mixed sediment  calittoral mud  calittoral mud or Circalittoral sand  calittoral rock and biogenic reef  calittoral sand  ralittoral coarse sediment  ralittoral mixed sediment  ralittoral mud or Infralittoral sand  ralittoral rock and biogenic reef  ralittoral sand  BHT  fshore circalittoral coarse sediment	Area						
	%						
	Confidence						
rcalittoral rock and biogenic reef	Area	29		29	0	29	0
	%		0,00	99,58	0,42	100,00	0,00
	Confidence			0,50	0,5		
ircalittoral sand	Area	2178	9	2166	2	2168	0
i cuttorut sund	%	2170					
			0,43	99,47	0,09	55,30	0,00
	Confidence		0,85	0,58	0,5		
tralittoral coarse sediment	Area	1556		1452	6		98
	%		0,00	93,32	0,38	93,70	6,30
	Confidence			0,62	0,5		
fralittoral mixed sediment	Area	1513	38	1473	3	1476	0
	%		2,48	97,34	0,17	97,51	0,01
	Confidence		0,96	0,74	0,5		
fralittoral mud	Area	294	15	271	2	273	6
fralittoral mud	%		5,09	92,06	0,67	·· <del>!</del>	2,18
	Confidence			<u> </u>		32,13	2,10
			0,86	0,69	0,5		
ralittoral mud or Infralittoral sand	Area						
	%						
	Confidence						
nfralittoral rock and biogenic reef	Area	241		239	0	239	2
	%		0,00	98,99	0,12	99,11	0,89
	Confidence			0,64	0,5		
fralittoral sand	Area	6079	595	5411	35	5447	37
	%		9,79	89,01	0,58	89 59	0,62
	Confidence		0,90	0,62	0,5	55,55	0,02
_			0,50	0,02	0,5		
a	Area	<u>:</u>					
	%						
	Confidence				0,5		
o_BHT	Area	36	27	6	4	9	
	%		75,02	15,14	9,85	24,98	0,00
alittoral mud or Circalittoral sand alittoral rock and biogenic reef alittoral sand alittoral coarse sediment alittoral mixed sediment alittoral mud or Infralittoral sand alittoral rock and biogenic reef alittoral sand  BHT  hore circalittoral coarse sediment  hore circalittoral mixed sediment	Confidence		1,00	1,00	0,5		
ffshore circalittoral coarse sediment	Area	19		19		19	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,61	0,5		-,
ffshore circulittoral mived sodiment	Area	238		237	0,5	220	0
nanore circauctorat mixeu seulment		236	0.00				
	%		0,00	99,93	0,07	100,00	0,00
	Confidence			0,60	0,5		
ffshore circalittoral mud	Area	2879		2877	2	2879	0
	%		0,00	99,93	0,07	100,00	0,00
	Confidence			0,60	0,5		
ffshore circalittoral mud or	Area						
ffshore circalittoral sand	%						
	Confidence						
ffshore circulittoral rock and biogenic roof	Area	0		0		0	
instruction at tock and progenic reel		U	0.00		0.00	-	0.00
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,61	0,5		
ffshore circalittoral sand	Area	589		588	1	589	0
	%		0,00	99,87	0,13	100,00	0,00
	70		0,00	33,01	÷	200,00	-,

Table A4.1 (Continued). Results of the integrated assessment of benthic habitats, presented by sub-basin and broad habitat types.	oe (BHT).
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Area % Confidence Area %	33 57	0 0,00	33 99,98	0,02	33 100,00	0 0,00
Confidence Area	57	0,00		<u> </u>	100,00	0,00
Area	57		0.70			
Area	57		0,78	0,50		
		9	48	0	48	
, , ,		15,73	84,26	0,01	84 27	0,00
Confidence		0,84	0,84	0,5	100,00	0,00
Area	1225	0,04	1224	1	1225	0
%	1225	•		<del>!</del>		
		0,00	99,95	0,05	100,00	0,00
		0,78	0,83	0,5		
Confidence						
Area						
%						
Confidence						
Area	399	25	374	0	374	0
%		6,26	93,67	0,06		0,00
						,
	356	5,55			356	0
	330	0.00		<u>:</u>		
	:	0,00		<u> </u>	33,32	0,08
					0-0	-
	381					0
		0,69	99,17	0,14	99,31	0,00
Confidence		0,92	0,77	0,5		
Area	184	6	177	1	177	1
%		3,03	95,94	0,34	96,28	0,69
Confidence		0,78	0,82	0,5		
Area					48 84,27  1225 100,00  374 93,74  356 99,92  378 99,31  177 96,28	
%					····· <del> </del>	
	1001	222	1500	-11	1547	
	1884					4
					82,11	0,23
Confidence		0,80	0,81	0,5		
Area						
%	<u> </u>	<u>į</u>	<u>į</u>			
Confidence						
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	% Confidence Area % Confidence	Area % Confidence Area % Confidence Area 399 % Confidence Area 356 % Confidence Area 381 % Confidence Area 184 % Confidence Area 184 % Confidence Area 1884 % Confidence Area 9 % Confidence	Area % Confidence Area % Confidence Area 399 25 % 6 6,26 Confidence 0,80 Area 356 % 6 0,00 Confidence Area 381 3 % Confidence 0,92 Area 184 6 % 3,03 Confidence 0,78 Area % Confidence Area	Area % Confidence Area 399 25 374 % 6,26 93,67 Confidence Area 399 25 374 % 6,26 93,67 Confidence 0,80 0,83 Area 356 351 % 0,00 98,71 Confidence 0,76 Area 381 3 378 % 0,69 99,17 Confidence 0,92 0,77 Area 184 6 177 % 3,03 95,94 Confidence 0,78 0,82 Area 9% Confidence Area 1884 333 1536 % 17,66 81,51 Confidence Area 9% Confidence Area 9	Area 9% Confidence Area 996 Confidence Area 399 25 374 0 9% Confidence 0,80 0,83 0,5 Area 356 351 4 9% Confidence 0,76 0,5 Area 381 3 378 1 1,20 Confidence 0,92 0,77 0,5 Area 184 6 177 1 9% 3,03 95,94 0,34 Confidence 0,78 0,82 0,5 Area 184 6 177 1 9% Confidence 0,78 0,82 0,5 Area 9% Confidence Area 9% Confidence Area 1884 333 1536 11 9% Confidence Area 1884 333 1536 11 9% Confidence Area 9% Confidence Area 9% Confidence 0,80 0,81 0,5 Area 9% Confidence Area 9%	Area 96 Confidence Area 97 Confidence Area 98 Confidence Area 399 25 374 0 374 98 6 6,26 93,67 0,06 93,74 Confidence Area 356 351 4 356 98 0,00 98,71 1,20 99,92 Confidence Area 381 3 378 1 378 98 0,09 99,17 0,14 99,31 Confidence 0,092 0,77 0,5 Area 184 6 177 1 177 98 3,03 95,94 0,24 96,28 Confidence Area 98 Confidence Area 99 Confidence Area 98 Confidence Area







ircalittoral coarse sediment	Area	937	_				
		JJ1	3	322	0	322	611
	%		0,33	34,42	0,01	34,42	65,25
	Confidence		0,61	0,78	0,50		
ircalittoral mixed sediment	Area	9909	2576	1573	7	1580	5754
	%		25,99	15,87	0,07	15,94	58,07
	Confidence		0,78	0,76	0,5		
ircalittoral mud	Area	769	145	590	1	591	34
	%		18,80	76,68	0,12	76,80	4,41
realittoral mud or Circalittoral sand realittoral mud or Circalittoral sand realittoral rock and biogenic reef realittoral sand fralittoral coarse sediment fralittoral mixed sediment fralittoral mud fralittoral mud or Infralittoral sand fralittoral rock and biogenic reef	Confidence		0,78	0,86	0,5		
ircalittoral mud or Circalittoral sand	Area	1200	451	556	0	556	194
	%		37,56	46,30	0,01	46,32	16,12
	Confidence		0,78	0,86	0,5	.0,02	10,11
ircalittoral rock and hiogenic reef	Area	38	5,10	26	0	26	12
irealitorat rock and biogenic reer	%	36	0,00	68,92	0,02	68,94	31,06
	Confidence		0,00	<u> </u>	-	00,54	31,00
······································		5000	1005	0,78	0,5	2000	1264
ircalittoral sand	Area	6099	1935	2793	7	2800	1364
	%		31,73	45,79	0,11	45,90	22,37
	Confidence		0,76	0,76	0,5		
nfralittoral coarse sediment	Area	1707	134	1313	3	1317	256
	%		7,86	76,93	0,20	77,14	15,00
	Confidence		0,65	0,75	0,5		
nfralittoral mixed sediment	Area	1421	353	706	2	708	361
	%		24,86	49,65	0,12	49,78	25,36
	Confidence		0,85	0,78	0,5		
nfralittoral mud	Area	10	3	6	1	7	0
	%		31,35	61,97	6,65	68,62	0,03
	Confidence		0,97	0,70	0,5		
nfralittoral mud or Infralittoral sand	Area	98	0	58	4	62	37
	%		0,01	58,81	3,87	62,68	37,31
	Confidence		0,78	0,67	0,5		
nfralittoral rock and biogenic reef	Area	322	5,.5	287	3	290	31
mattoratioes and biogenic reci	%	JZZ	0,00	89,22	1,05	90,27	9,73
	Confidence		0,00	0,76	0,5	30,21	3,13
of wallithous I could		6611	2014			2474	122
mrauttoratsand	Area	9911	3014	3463	11	3474	123
	%		45,59	52,38	0,17	52,55	1,86
	Confidence		0,70	0,66	0,5		
la	Area						-
	%						
	Confidence						
lo_BHT	Area	459	5	452	3	455	
	%		1,00	98,42	0,59	99,00	0,00
	Confidence		1,00	1,00	0,5		
Offshore circalittoral coarse sediment	Area	9		7		7	2
	%		0,00	76,62	0,00	76,62	23,38
	Confidence			0,80	0,5		
Offshore circalittoral mixed sediment	Area	3017	604	2359	1	2360	53
	%		20,03	78,17	0,03	78,20	1,77
	Confidence		0,78	0,89	0,5	, , , , , , , , , , , , , , , , , , , ,	,
Offshore circalittoral mud	Area	6508	33	6447	7	6454	21
concession in initial	%	0500	0,51	99,07	0,10	99,17	0,32
	Confidence		0,51	0,90	0,10	23,11	0,32
offshore sirealitteral mud ar		1270				1251	<b>CO</b>
Offshore circalittoral mud or Offshore circalittoral sand	Area	1376	56	1250	0	1251	69
	%		4,09	90,86	0,01	90,87	5,04
	Confidence		0,78	0,91	0,5		
Offshore circalittoral rock and biogenic reef	Area	0		0	0	0	0
	%		0,00	61,48	0,20	61,68	38,32
	C C . I			0,78	0,5		
	Confidence						
Offshore circalittoral sand	Area	870	127	714	1	714	28

T-LI- N/ 1 (C+:	Pocults of the integrated accomment of benthis habitate presented by sub-basin and broad habitat type (RHT)	

Bothnian Bay		Total	Achieve	Fail	Loss	Adversely affected	NA
ircalittoral coarse sediment	Area	781	57	341	2	343	381
	%		7,32	43,67	0,25	43,92	48,76
	Confidence		0,55	0,78	0,50		
ircalittoral mixed sediment	Area	12056	9580	809	8	817	1660
	%		79,46	6,71	0,07	6,77	13,77
	Confidence		0,79	0,87	0,5	343 43,92	
ircalittoral mud	Area	778	592	101	3	104	82
	%		76,15	12,94	0,40		10,51
	Confidence	-		0,87	0,5	13,34	10,51
		0770	0,75			500	co7
ircalittoral mud or Circalittoral sand	Area	8779	7552	588	2		637
	%		86,03	6,70	0,02	6,72	7,26
	Confidence		0,87	0,88	0,5		
ircalittoral rock and biogenic reef	Area	22		2	0	2	19
	%		0,00	10,80	0,00	10,80	89,20
	Confidence			0,78	0,5		
ircalittoral sand	Area	6298	4991	333	4	337	970
	%		79,25	5,29	0,06	5,35	15,41
	Confidence		0,77	0,86	0,5		
fralittoral coarse sediment	Area	112	2	59	2	61	49
	%	112	2,12	52,85	1,50	•	43,52
			·			J <del>4,</del> JU	43,32
	Confidence		0,78	0,76	0,5		
nfralittoral mixed sediment	Area	1504	156	595	15		739
	%		10,35	39,55	0,99	40,54	49,11
	Confidence		0,80	0,85	0,5		
fralittoral mud	Area	9	0	6	1	7	2
	%		4,33	61,84	15,14	4 76,98 ; 254	18,69
	Confidence		0,78	0,87	0,5		
fralittoral mud or Infralittoral sand	Area	424	19	250	4	7 76,98 254 59,94	150
	%		4,59	58,95	0,99	76,98 254 59,94	35,47
	Confidence		0,79	0,87	0,5		,
stralittoral rock and biogenic reef	Area	21	5,.5	5	0,5	5	16
nfralittoral rock and biogenic reef	%	21	0.00	1	·	· <del>!</del>	
			0,00	22,30	0,43	22,13	77,27
	Confidence			0,78	0,5		
fralittoral sand	Area	947	111	216	4		615
	%		11,73	22,87	0,46	23,32	64,95
	Confidence		0,86	0,84	0,5		
a	Area						
	%						
	Confidence						
о_ВНТ	Area	185		178	7	185	
	%		0,00	96,25	3,75		0,00
	Confidence		5,00	1,00	0,5	200,00	0,30
ffshore circalittoral coarse sediment	Area			1,00	0,0		
nisnore circauctorat toarse sediment	%						
		-					
	Confidence						
ffshore circalittoral mixed sediment	Area						
	%						
	Confidence						
ffshore circalittoral mud	Area						
	%						
	Confidence						:
ffshore circalittoral mud or	Area						
ffshore circalittoral sand	%						
	Confidence						
	Area						
ffshave sized ittered wash and bit and a							
ffshore circalittoral rock and biogenic reef							
ffshore circalittoral rock and biogenic reef	%				<u>:</u>		
=							
ffshore circalittoral rock and biogenic reef	%						









**Table A4.1** (Continued). Results of the integrated assessment of benthic habitats, presented by sub-basin and broad habitat type (BHT).

Bothnian Sea	,	Total	Achieve	Fail	Loss	Adversely affected	NA
ircalittoral coarse sediment	Area	1408	334	248	0	248	827
	%		23,69	17,61	0,00	17,61	58,70
	Confidence		0,52	0,77	0,50		
ircalittoral mixed sediment	Area	35344	31470	1216	7	1223	2651
realittoral mixed sediment realittoral mud realittoral mud or Circalittoral sand realittoral rock and biogenic reef realittoral sand realittoral coarse sediment realittoral mixed sediment	%		89,04	3,44	0,02	3,46	7,50
	Confidence		0,74	0,73	0,5		
calittoral mixed sediment calittoral mixed sediment calittoral mud calittoral mud or Circalittoral sand calittoral rock and biogenic reef calittoral coarse sediment calittoral mixed sediment calittoral mixed sediment calittoral mud calittoral mud calittoral mud calittoral mud calittoral sand calittoral sand calittoral sand calittoral rock and biogenic reef calittoral sand calittoral sand	Area	1597	1057	90	6	96	445
	%		66,16	5,62	0,36	5,99	27,86
	Confidence		0,65	0,75	0,5		,
calittoral mixed sediment  calittoral mixed sediment  calittoral mud or Circalittoral sand  calittoral rock and biogenic reef  calittoral sand  fralittoral mixed sediment  fralittoral mixed sediment  fralittoral mud or Infralittoral sand  fralittoral rock and biogenic reef  fralittoral sand  fralittoral rock and biogenic reef  fralittoral sand	Area	16362	15331	148	1	150	881
in control of the control of the	%	10302	93,70	0,91	0,01	0,91	5,38
	Confidence		0,66	0,78	0,5	0,51	3,30
· · · · · · · · · · · · · · · · · · ·		770	-			200	F22
ircalittoral rock and biogenic reef	Area	772	32	208	0	209	532
	%		4,12	26,97	0,06	27,03	68,86
	Confidence		0,55	0,77	0,5		
ircalittoral sand	Area	528	439	25	0	25	64
	%		83,20	4,71	0,00	4,71	12,09
	Confidence		0,89	0,78	0,5		
nfralittoral coarse sediment	Area	215		92	2	94	121
	%		0,00	42,82	0,77	43,58	56,42
	Confidence			0,65	0,5		
nfralittoral mixed sediment	Area	1792	144	513	17	530	1119
nfralittoral mixed sediment	%		8,02	28,61	0,94	29,54	62,44
	Confidence		0,80	0,69	0,5		
nfralittoral mud	Area	49	7	21	5	25	16
rrauttoral mud	%		14,96	42,58	9,55	52,14	32,90
	Confidence		0,76	0,75	0,5	32,17	32,30
-6		111				20	CC
ntrauttoral mud or intralittoral sand	Area	111	16	26	3	29	66
	%		14,78	23,32	2,82	26,14	59,08
	Confidence		0,78	0,72	0,5		
nfralittoral rock and biogenic reef	Area	441		156	3	159	282
	%		0,00	35,29	0,70	35,99	64,01
	Confidence			0,73	0,5		
nfralittoral sand	Area	25	6	8	0	8	11
	%		23,91	32,81	0,00	32,81	43,28
	Confidence		0,95	0,78	0,5		
la	Area						
	%						
	Confidence						
lo BHT	Area	0	0			0	
	%		100,00	0,00	0,00	0,00	0,00
	Confidence		0,75	0,00	0,5	0,00	0,00
effet our sincelitational accuracy and invent		1	0,75		0,5	٥	
visnore circalittoral coarse segiment	Area	1	2.22	0.00	0.00	0	1
	%		0,00	0,00	0,00	0,00	100,00
	Confidence				0,5		
offshore circalittoral mixed sediment	Area	47	24			0	23
	%		51,81	0,00	0,00	0,00	48,19
	Confidence		0,89		0,5		
offshore circalittoral mud	Area	1				0	1
	%		0,00	0,00	0,00	0,00	100,00
	Confidence				0,5		
offshore circalittoral mud or	Area	7	6			0	2
offshore circalittoral sand	%		76,31	0,00	0,00	0,00	23,69
	Confidence		0,85		0,5		
offshore circalittoral rock and biogenic reef	Area		-,		-,-		
	%						<u> </u>
	Confidence						
offich and almost little and a second			•			•	
Offshore circalittoral sand	Area	4	0			0	4
of ishiore circultural sand	%		2,07	0,00	0,00	0,00	97,93

T-LI- N/ 1 (C+:	Pocults of the integrated accomment of benthis habitate presented by sub-basin and broad habitat type (RHT)	

Eastern Gotland Basin		Total	Achieve	Fail	Loss	Adversely affected	NA
rcalittoral coarse sediment	Area	5329	105	1753	9	1763	3461
	%		1,97	32,90	0,17	33,08	64,96
	Confidence		0,75	0,79	0,50		
rcalittoral mixed sediment	Area	9959	4859	5068	1	5069	30
	%		48,79	50,89	0,01	50,90	0,30
	Confidence		0,75	0,90	0,5	30,30	0,50
		2561				1050	21
rcalittoral mud	Area	2561	1280	1250	0	1250	31
	%		49,97	48,82	0,00	48,82	1,21
	Confidence		0,75	0,92	0,5		
rcalittoral mud or Circalittoral sand	Area	8896	3500	5396	1	5396	0
	%		39,34	60,65	0,01	60,66	0,00
	Confidence		0,75	0,87	0,5		
rcalittoral rock and biogenic reef	Area	528	77	204	3	206	245
<b>3</b>	%		14,52	38,62	0,48		46,3
	Confidence		:		·	33,10	70,5
•			0,75	0,75	0,5		_
rcalittoral sand	Area	9941	7898	2031	4		8
	%		79,45	20,43	0,04	20,47	0,08
	Confidence		0,75	0,84	0,5		
fralittoral coarse sediment	Area	1708	30	1374	0	1375	304
	%		1,75	80,45	0,01	80,46	17,7
	Confidence		0,78	0,77	0,5		
fralittoral mixed sediment		2620				OOE	520
mantional mixeu seulment	Area	2628	1213	893	2		
	%		46,16	33,98	0,06	34,04	19,8
	Confidence		0,75	0,74	0,5		
fralittoral mud	Area	35	4	26		26	5
	%		12,64	74,41	0,00	74,41	12,9
	Confidence		0,75	0,76	0,5		
fralittoral mud or Infralittoral sand	Area	1254	162	18	2	20	107
	%		12,91	1,43	0,16	1375 80,46 895 34,04	85,5
							00,0
	Confidence		0,77	0,77	0,5		
fralittoral rock and biogenic reef	Area	241	38	159	0	159	44
	%		15,78	65,83	0,04	65,88	18,3
	Confidence		0,76	0,76	0,5		
fralittoral sand	Area	1790	712	372	14	387	691
	%		39,79	20,79	0,81	21,59	38,6
	Confidence		0,77	0,75	0,5		
a	Area		0,11	0,10	0,5		
•	-						
	%						
	Confidence						
o_BHT	Area	2	2		0	0	
	%		99,95	0,00	0,05	0,05	0,00
	Confidence		1,00		0,5		
ffshore circalittoral coarse sediment	Area	117		116		116	1
	%		0,00	99,52	0,00		0,48
			0,00	-		33,32	0,40
	Confidence			0,92	0,5		
ffshore circalittoral mixed sediment	Area	8089	15	8072	2	8074	0
	%		0,18	99,80	0,02	99,82	0,00
	Confidence		0,75	0,91	0,5		
ffshore circalittoral mud	Area	2747	1	2746	0	2746	0
	%		0,04	99,95	0,01	99,96	0,00
	Confidence		0,75	0,92	0,5	-3,00	5,00
Schove siveslitteral and an Off-barrely Pr		10420				10422	
ffshore circalittoral mud or Offshore circalit- ral sand	Area	18436	3	18431	1	18433	0
rut Juliu	%		0,02	99,97	0,01	99,98	0,00
	Confidence		0,75	0,91	0,5		
	Area	1		1		1	
ffshore circalittoral rock and biogenic reef		:	0,00	100,00	0,00	100,00	0,00
ffshore circalittoral rock and biogenic reef	%					,	-,50
ffshore circalittoral rock and biogenic reef				1 00	0.5		
-	Confidence	C01		1,00	0,5	C7F	
ffshore circalittoral rock and biogenic reef ffshore circalittoral sand		681	6 0,84	1,00 675 99,15	0,5 0 0,00	675 99,16	0,00







Gdansk Basin		Total	Achieve	Fail	Loss	Adversely affected	NA
ircalittoral coarse sediment	Area	21	19	1		1	1
	%		91,35	6,06	0,00	6,06	2,59
	Confidence		0,78	0,72	0,50		
ircalittoral mixed sediment	Area	3		3		3	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,91	0,5		
ircalittoral mud	Area	1184	98	1077	1	1077	10
.ircauctorat muu	%	1104	8,25	90,90	0,04	90,95	0,81
						90,95	0,01
	Confidence		0,78	0,89	0,5		
ircalittoral mud or Circalittoral sand	Area	607	18	394		394	195
	%		3,01	64,88	0,00	64,88	32,11
	Confidence		0,80	0,92	0,5		
ircalittoral rock and biogenic reef	Area	7	3			0	3
	%		50,89	0,00	0,00	0,00	49,11
	Confidence		0,78		0,5		
ircalittoral sand	Area	1534	261	892	9	901	371
	%		17,01	58,19	0,58	58,77	24,22
	Confidence		0,81	0,86	0,5		
nfralittoral coarse sediment	Area	30	17		0,5	12	า
ini auttorat toarse Seulment		30		11		12	2
	%		55,44	37,90	0,62	38,52	6,03
	Confidence		0,78	0,78	0,5		
nfralittoral mixed sediment	Area	1		1	0	1	
	%		0,00	99,20	0,80	100,00	0,00
	Confidence			0,92	0,5		
nfralittoral mud	Area	1		1		1	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,93	0,5		
nfralittoral mud or Infralittoral sand	Area	585	148	258	0	258	178
illiauttorat illuu or illirauttorat sailu		363					
	%		25,35	44,17	0,00	44,17	30,48
	Confidence		0,84	0,90	0,5		
nfralittoral rock and biogenic reef	Area	5	1	0		0	4
	%		17,96	2,49	0,00	2,49	79,54
	Confidence		0,78	0,78	0,5		
nfralittoral sand	Area	646	119	456	12	468	59
	%		18,49	70,64	1,80	72,44	9,08
	Confidence		0,84	0,89	0,5		
la	Area						
<del></del>	%						
	Confidence	2.5					
lo_BHT	Area	39	1	30	8	39	
	%		1,92	76,79	21,29	98,08	0,00
	Confidence		1,00	1,00	0,5		
Offshore circalittoral coarse sediment	Area						
	%						
	Confidence						
Offshore circalittoral mixed sediment	Area	5		5		5	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence		-,	0,91	0,5		5,00
Offehore circulitte and mond		700			0,0	700	
Offshore circalittoral mud	Area	788	2.22	788	2.25	788	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,91	0,5		
Offshore circalittoral mud or	Area	369		369		369	
Offshore circalittoral sand	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,91	0,5		
Office and a simplified and the state of the	Area						
Offshore circalittoral rock and biogenic reef							
ortsnore circalittoral rock and biogenic reef	%						
onsnore circauttoral rock and biogenic reer	% Confidence						
_	Confidence	21		21		21	
Offshore circalittoral rock and biogenic reer		21	0,00	21 100,00	0,00	21 100,00	0,00

T-LI- N/ 1 (C	d) Pocults of the integrated accomment of benthic habitate procented by su	.b. b

Great Belt		Total	Achieve	Fail	Loss	Adversely affected	NA
rcalittoral coarse sediment	Area	37	0	37	0	37	0
	%		0,00	99,96	0,04	100,00	0,00
	Confidence			0,74	0,50		
rcalittoral mixed sediment	Area	296	7	289	0	290	0
	%		2,31	97,61	0,05	97,67	0,02
	Confidence		0,73	0,77	0,5		
rcalittoral mud	Area	360	16	344	0	344	0
Canto at maa	%	300	4,35	95,64	0,01	95,65	0,00
	Confidence			·	·	33,03	0,00
rcalittoral mud or Circalittoral sand			0,96	0,88	0,5		
rcalittoral mud or Circalittoral sand	Area						
	%						
	Confidence						
rcalittoral rock and biogenic reef	Area	0		0		0	<u>:</u>
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,78	0,5		
rcalittoral sand	Area	1197	279	914	3	918	0
	%		23,33	76,39	0,26	76,65	0,02
	Confidence		0,81	0,78	0,5		
alittoral coarse sediment alittoral mixed sediment alittoral mud	Area	342		300	1	301	41
	%		0,00	87,62	0,31	87,93	12,07
	Confidence		-,	0,75	0,5		,_,
ralittoral mived sediment	Area	2399	130	2206	27	วาวง	35
ralittoral mixed sediment ralittoral mud	%	2333					
			5,42	91,98	1,13	93,11	1,48
	Confidence		0,95	0,83	0,5		
ralittoral mud	Area	705	77	623	4		0
	%		10,96	88,41	0,62	89,03	0,01
	Confidence		0,91	0,89	0,5		
ralittoral mud or Infralittoral sand	Area					918 76,65 301	
	%						
	Confidence						
fralittoral rock and biogenic reef	Area	4		4	0	4	0
fralittoral rock and biogenic reef	%		0,00	99,79	0,03	99,82	0,18
	Confidence			0,75	0,5		
fralittoral sand	Area	4859	1276	3407	57	3464	118
	%	.000	26,27	70,11	1,18		2,44
	Confidence					11,23	2,44
			0,84	0,85	0,5		
l	Area						
	%						ļ
	Confidence						
_BHT	Area	32	3	23	6	30	
	%		8,35	71,85	19,79	91,65	0,00
	Confidence		1,00	0,98	0,5		
fshore circalittoral coarse sediment	Area	3		3	0	3	
	%		0,00	99,92	0,08		0,00
	Confidence			0,76	0,5		-,
shore circalittoral mixed sediment	Area	54	2	52	0,5	52	
iono e circultoral mineu seument	%	J-1	3,13		0,00		0.00
				96,87	†····	90,01	0,00
follower discretization in the second	Confidence		0,61	0,69	0,5		-
fshore circalittoral mud	Area	196	1	195	0	•	0
	%		0,73	99,25	0,02	99,27	0,00
	Confidence		1,00	0,90	0,5		
fshore circalittoral mud or	Area						
fshore circalittoral sand	%						
	Confidence						
fshore circalittoral rock and biogenic reef	Area						
	%						
	Confidence						
fshore circalittoral sand		101	12	167	٥	167	0
isiioi e circauttorat sand	Area	181	13	167	0 0,12	167	0,00
	%		7,40	92,48		92,60	







Gulf of Finland		Total	Achieve	Fail	Loss	Adversely affected	NA
Circalittoral coarse sediment	Area	1316	423	59	4	64	829
	%		32,15	4,51	0,32	4,83	63,02
	Confidence		0,77	0,72	0,50		
Circalittoral mixed sediment	Area	4381	207	3118	24	3142	1032
	%		4,72	71,16	0,56	71,71	23,56
	Confidence		0,75	0,67	0,5		
Circalittoral mud	Area	4912	233	3139	13	3153	1526
	%		4,75	63,91	0,27	64,19	31,07
	Confidence		0,72	0,64	0,5		
Circalittoral mud or Circalittoral sand	Area	6217	624	4415	40	4456	1137
	%		10,04	71,02	0,65	71,67	18,29
	Confidence		0,75	0,67	0,5	. 2,0.	20,23
Circalittoral rock and biogenic reef	Area	1128	186	320	6	326	616
mediteorati octi dila biogenie reci	%	1120	16,47	28,41	0,51	28,91	54,62
	Confidence			0,74	-	20,71	34,02
Circalittoral sand		2034	0,76 302		0,5	1012	119
Lircauttorat Sariu	Area	2034		1604	9	1613	
	%		14,84	78,88	0,43	79,31	5,85
	Confidence		0,75	0,62	0,5	=-	
nfralittoral coarse sediment	Area	301	129	63	10	73	99
	%		42,80	21,01	3,30	24,31	32,89
ofenlittaral mivad so diment	Confidence		0,77	0,70	0,5		
nfralittoral mixed sediment	Area	837	58	378	20	397	382
	%		6,92	45,13	2,35	47,48	45,60
	Confidence		0,75	0,72	0,5		
nfralittoral mud	Area	506	202	179	22	201	102
	%		40,01	35,36	4,42	39,78	20,22
	Confidence		0,77	0,70	0,5		
nfralittoral mud or Infralittoral sand	Area	518	211	132	37	170	137
	%		40,74	25,58	7,24	32,82	26,44
	Confidence		0,77	0,74	0,5		
nfralittoral rock and biogenic reef	Area	837	269	220	16	237	332
	%		32,13	26,32	1,95	28,26	39,61
	Confidence		0,76	0,73	0,5		
nfralittoral sand	Area	657	231	137	25	162	264
	%		35,24	20,79	3,84	24,62	40,13
	Confidence		0,76	0,69	0,5		
la .	Area	143	26	112		112	5
	%		18,42	78,14	0,00	78,14	3,44
	Confidence		0,78	0,41	0,5		-,
lo_BHT	Area	8	-, -	8	-,-	8	
	%	Ŭ	0,00	100,00	0,00	100,00	0,00
	Confidence		5,00	0,69	0,5	100,00	0,00
Offshore circalittoral coarse sediment	Area	139		6	0,5	6	133
ca cantorat coarse scannent	%	100	0,00	4,18	0,00	4,18	95,82
	Confidence		0,00	4,18 0,50	-	7,10	33,02
Offshore circalittoral mixed sediment		200			0,5	242	47
DIISHOFE CIFCAUTTOFAL MIXED SEDIMENT	Area	290	0.00	241	2	243	47
	%		0,00	83,38	0,52	83,91	16,09
Maria de la companya	Confidence			0,48	0,5		
Offshore circalittoral mud	Area	3689	0	3033	1	3035	654
	%		0,01	82,22	0,04	82,26	17,73
	Confidence		0,22	0,68	0,5		
Offshore circalittoral mud or	Area	923		919	4	923	0
Offshore circalittoral sand	%		0,00	99,53	0,47	100,00	0,00
	Confidence			0,50	0,5		
Offshore circalittoral rock and biogenic reef	Area	58	1	9		9	48
	%		0,97	15,78	0,00	15,78	83,25
	Confidence		0,78	0,83	0,5		
Offshore circalittoral sand	Area	366		366	0	366	0
	%		0,00	99,99	0,01	100,00	0,00
	Confidence			0,41	0,5		

Table A4	1 (Continued)	Results of the integrated	d assessment of benthic habitats.	nrecented by sub-basin and	hroad hahitat tyne (RHT)

Gulf of Riga		Total	Achieve	Fail	Loss	Adversely affected	NA
rcalittoral coarse sediment	Area	458	0	406		406	52
	%		0,00	88,64	0,00	88,64	11,36
	Confidence			0,76	0,50		
rcalittoral mixed sediment	Area	2206	12	1737	0	1737	457
	%		0,56	78,75	0,00	78,75	20,70
	Confidence		0,78	0,72	0,5		
rcalittoral mud	Area	8475	153	6411	0	6411	1911
	%		1,80	75,64	0,00	75,65	22,55
	Confidence		0,78	0,69	0,5		
rcalittoral mud or Circalittoral sand		1050			0,5	1505	100
rcalittoral mud or Circalittoral sand	Area	1959	272	1505		1505	182
	%		13,87	76,83	0,00	76,83	9,30
	Confidence		0,75	0,66	0,5		
rcalittoral rock and biogenic reef	Area	49	0	41	0	41	9
	%		0,00	82,61	0,00	82,62	17,38
	Confidence			0,76	0,5		
rcalittoral sand	Area	1276	171	1088	0	1088	17
	%		13,43	85,27	0,00	85,27	1,30
	Confidence		0,78	0,67	0,5		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
fralittoral coarse sediment	Area	739	0,10	329	7	335	403
	%	103		-	<del> </del>		
			0,00	44,50	0,90	45,40	54,60
	Confidence .			0,62	0,5		
Infralittoral mixed sediment	Area	1353	0	671	11	682	671
	%		0,01	49,62	0,79	50,41	49,58
	Confidence		0,64	0,61	0,5		
fralittoral mud	Area	477	0	340	2	342	135
	%		0,00	71,25	0,45	71,70	28,30
	Confidence		0,78	0,64	0,5		
nfralittoral mud or Infralittoral sand	Area	824	41	428	1	429	354
mrauctorat muu or imrauctorat sanu	%		4,99	51,96	0,11	52,07	42,94
	Confidence		0,78	0,69	0,5	32,01	12,3
-6-1'm1116		45				າາ	າາ
fralittoral rock and biogenic reef	Area	46	0	23	0	23	23
	%		0,00	50,02	0,10	50,12	49,88
	Confidence			0,62	0,5		
fralittoral sand	Area	833	155	229	3	233	446
	%		18,54	27,52	0,39	27,92	53,54
	Confidence		0,76	0,64	0,5		
a	Area						
	%						
	Confidence						
о_ВНТ	Area	0		0		0	
_	%	ŭ	0,00	100,00	0,00	100,00	0,00
	Confidence		0,00	· * · · · · · · · · · · · · · · · · · ·	0,00	100,00	0,00
Cfuls are alreaditate and a second as				0,63	0,5		
ffshore circalittoral coarse sediment	Area						
	%						
	Confidence						
ffshore circalittoral mixed sediment	Area						
	%						
	Confidence						
ffshore circalittoral mud	Area						
	%						
	Confidence						
ffshore circalittoral mud or	Area						
ffshore circalittoral mud or	%						
	Confidence						
Offshore circalittoral rock and biogenic reef	Area						
issible circalittorat rock and biogenic reel	The second secon						
iisiioi e cii cauttorat rock and biogenic reei	%						
issiore circuittorat rock and biogenic reer	% Confidence						
ffshore circalittoral sand							







Biodiversity Annex 3

Kattegat		Total	Achieve	Fail	Loss	Adversely affected	NA
Circalittoral coarse sediment	Area	639	0	609	0	609	29
	%		0,00	95,37	0,04	95,41	4,59
	Confidence		0,78	0,67	0,50		
Circalittoral mixed sediment	Area	1738	433	1303	2	1305	0
	%		24,90	74,96	0,14	75,10	0,01
	Confidence		0,75	0,75	0,5		
ircalittoral mud	Area	3697	352	3341	3	3344	0
an cauctor at mad	%	3031	9,53	90,39	0,08	90,47	0,00
	Confidence		0,79	0,74	0,5	30,41	0,00
Circalittoral mud or Circalittoral sand	Area		0,15	0,14	0,5		
in Cauttorat mud of Circauttorat Sand							
	%						
	Confidence				_		_
Circalittoral rock and biogenic reef	Area	30		28	0	28	3
	%		0,00	90,93	0,68	91,61	8,39
	Confidence			0,77	0,5		
Circalittoral sand	Area	3124	1331	1790	2	1792	0
	%		42,62	57,32	0,06	57,38	0,00
	Confidence		0,78	0,70	0,5		
nfralittoral coarse sediment	Area	473	0	400	2	402	71
	%		0,03	84,58	0,33	84,92	15,06
	Confidence		0,78	0,70	0,5		
nfralittoral mixed sediment	Area	1232	165	1064	3	1067	0
	%		13,42	86,36	0,21	86,57	0,01
	Confidence		0,92	0,84	0,5		
Infralittoral mud	Area	1016	227	781	7	788	2
	%		22,33	76,81	0,70	77,51	0,16
	Confidence		0,77	0,89	0,5		
Infralittoral mud or Infralittoral sand	Area		, , , ,	-,	-,-		
	%						
	Confidence						
Infralittoral rock and biogenic reef	Area	43		38	2	40	3
ill auttorat rock and biogenic reei	%	45	0,00	88,87	3,91	92,78	7,22
	Confidence		0,00		-	92,16	1,22
nfralittoral sand		F20F	2671	0,77	0,5	1000	1
ntrauttoral sand	Area	5295	3671	1609	14	1623	1
	%		69,33	30,38	0,27	30,65	0,02
	Confidence		0,84	0,85	0,5		
la	Area	0	0	0	0	0	0
	%		44,58	26,27	2,79	29,06	26,36
	Confidence		0,81	0,87	0,5		
lo_BHT	Area	405	80	283	41	324	
	%		19,82	69,95	10,23	80,18	0,00
	Confidence		1,00	0,98	0,5		
offshore circalittoral coarse sediment	Area	61		61	0	61	
	%		0,00	99,98	0,02	100,00	0,00
	Confidence			0,63	0,5		
offshore circalittoral mixed sediment	Area	427	58	369	0	369	
	%		13,48	86,52	0,00	86,52	0,00
	Confidence		0,62	0,72	0,5		
offshore circalittoral mud	Area	5373	1	5373	0	5373	0
	%		0,01	99,99	0,00	99,99	0,00
	Confidence		0,61	0,65	0,5		
ffshore circalittoral mud or	Area		-,	-,	-,-		
ffshore circalittoral sand	%						
	Confidence						
Stehane sincelitational value and his annie work		10		10	0	10	^
ffshore circalittoral rock and biogenic reef	Area	10	0.00	10	0	10	0
	%		0,00	99,56	0,04	99,60	0,40
	Confidence			0,74	0,5		
Offshore circalittoral sand	Area	361	2	358	0	358	0
	%		0,63	99,37	0,00	99,37	0,00
	Confidence		0,74	0,62	0,5		

Kiel Bay		Total	Achieve	Fail	Loss	Adversely affected	NA
ircalittoral coarse sediment	Area	45	0	45		45	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,78	0,50		
ircalittoral mixed sediment	Area	98	0	98		98	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,84	0,5		
ircalittoral mud	Area	349	3	347	0	347	0
	%		0,80	99,20	0,00	99,20	0,00
	Confidence		0,78	0,81	0,5	33,20	0,00
Circalittoral mud or Circalittoral sand	Area		0,10	0,01	0,3		
irealitional midd of Circalitional Saild	%						
	Confidence						
ircalittoral rock and biogenic reef	Area						
	%						
	Confidence						
Circalittoral sand	Area	639	29	610	0	610	0
	%		4,52	95,46	0,00	95,47	0,02
	Confidence		0,86	0,83	0,5		
Infralittoral coarse sediment	Area	376	0	375	0	376	0
	%		0,00	99,90	0,04	99,93	0,07
	Confidence			0,77	0,5		
Infralittoral mixed sediment	Area	392	1	381	1	381	10
	%		0,17	97,04	0,14	97,17	2,66
	Confidence		0,83	0,83	0,5		
Infralittoral mud	Area	95	1	94	0	94	0
	%		1,36	98,12	0,11	98,24	0,40
	Confidence		0,79	0,79	0,5		٠, .٠
Infralittoral mud or Infralittoral sand	Area		0,13	0,15	0,0		
atoratinaa or mirautto/at sanu	%						
of collisions and an all the control of	Confidence		•				
nfralittoral rock and biogenic reef	Area	1	0	1		1	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,78	0,5		
nfralittoral sand	Area	1427	112	1311	2	1313	3
	%		7,81	91,84	0,15	91,99	0,20
	Confidence		0,85	0,81	0,5		
la	Area						
	%						
	Confidence						
o_BHT	Area						
	%						
	Confidence						
Offshore circalittoral coarse sediment	Area	1	0	1		1	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,78	0,5	<del>/ -</del>	-,
offshore circalittoral mixed sediment	Area	0	0	0,76	٠,٠	0	
	%	U	0,00	100,00	0,00	100,00	0,00
	Confidence		0,00		0,00	100,00	0,00
offels are given little I J		2	0	0,84	υ,5	2	
ffshore circalittoral mud	Area	3	0	3	0.00	3	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,82	0,5		
ffshore circalittoral mud or	Area						
ffshore circalittoral sand	%						
	Confidence						
Offshore circalittoral rock and biogenic reef	Area						
	%						
	Confidence						
offshore circalittoral sand	Area	9	1	8		8	
	%		8,35	91,65	0,00	91,65	0,00
	Confidence		0,88	0,83	0,5	,	, , , , , ,
			5,55	0,00	0,0		.W





Northern Baltic Proper		Total	Achieve	Fail	Loss	Adversely affected	NA
ircalittoral coarse sediment	Area	179		29	0	29	150
	%		0,00	16,01	0,06	16,07	83,93
	Confidence			0,80	0,50		
ircalittoral mixed sediment	Area	6932	3624	2822	5	2827	481
	%		52,28	40,71	0,07	40,78	6,94
	Confidence		0,64	0,89	0,5	10,10	0,5 1
ircalittoral mud	Area	3716	1658	1367	9	1376	682
incalitional muu	%	3/10	-	-		-	
			44,62	36,79	0,25	37,04	18,35
	Confidence		0,65	0,89	0,5		
ircalittoral mud or Circalittoral sand	Area	3796	1775	1999	3	2002	19
	%		46,77	52,67	0,07	52,73	0,50
	Confidence		0,63	0,83	0,5		
ircalittoral rock and biogenic reef	Area	1438		165	0	165	1273
	%		0,00	11,47	0,01	11,48	88,52
	Confidence			0,79	0,5		
ircalittoral sand	Area	75	31	18	0	18	26
	%		41,42	23,85	0,02	23,87	34,71
	Confidence		0,64	0,87	0,5	,	,,-
nfralittoral coarse sediment	Area	62	0,01	54	0,5	55	7
imauttorat toarse seument	%	UΣ	0.00	-			
	<u> </u>		0,00	87,10	1,01	88,11	11,89
	Confidence			0,74	0,5		
nfralittoral mixed sediment	Area	1466	20	1056	7	1063	382
	%		1,39	72,05	0,49	72,54	26,07
	Confidence		0,65	0,86	0,5		
nfralittoral mud	Area	357	37	269	7	275	46
	%		10,22	75,21	1,84	77,05	12,74
	Confidence		0,71	0,89	0,5		
nfralittoral mud or Infralittoral sand	Area	1	0	0		0	0
	%		12,97	15,35	0,00	15,35	71,68
	Confidence		0,63	0,69	0,5	10,00	11,00
ufualittaval vastraval hipagoris vast		441	0,03			202	240
nfralittoral rock and biogenic reef	Area	441		201	1	202	240
	%		0,00	45,57	0,13	45,71	54,29
	Confidence			0,77	0,5		
nfralittoral sand	Area	94	1	67	0	67	26
	%		0,76	71,96	0,06	72,01	27,23
	Confidence		0,67	0,82	0,5		
la	Area						
	%						
	Confidence				0,5		
lo_BHT	Area	249	0	235	14	249	
	%	273	0,08			99,92	0,00
				94,29	5,63	23,32	0,00
Michael Control	Confidence		0,63	1,00	0,5		
Offshore circalittoral coarse sediment	Area	70		70		70	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			1,00	0,5		
Offshore circalittoral mixed sediment	Area	3084	138	2943	3	2946	0
	%		4,48	95,42	0,10	95,52	0,00
	Confidence		0,63	0,98	0,5		
Offshore circalittoral mud	Area	1346	70	1245	0	1245	30
	%		5,20	92,52	0,01	92,53	2,27
	Confidence		0,63	1,00	0,5		
Offshore circalittoral mud or	Area	9515	181	9315	19	9334	0
onsnore circalittoral mud or Offshore circalittoral sand	%	2012					
			1,91	97,90	0,20	98,09	0,00
	Confidence		0,63	0,89	0,5		
Offshore circalittoral rock and biogenic reef	Area	15		15		15	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			1,00	0,5		
Offshore circalittoral sand	Area	0		0		0	
	%		0,00	100,00	0,00	100,00	0,00

T-LI- N/ 1 (C+:	Pocults of the integrated accomment of benthis habitate presented by sub-basin and broad habitat type (RHT)	

The Quark		Total	Achieve	Fail	Loss	Adversely affected	NA
ircalittoral coarse sediment	Area	925	4	319	1	320	601
	%		0,47	34,47	0,08	34,56	64,97
	Confidence		0,51	0,72	0,50		
ircalittoral mixed sediment	Area	4385	2356	567	1	568	1461
in cauttor at mixed Scanness	%	1303	53,72	12,93	0,03	12,96	33,32
						12,50	33,32
	Confidence		0,82	0,74	0,5		400
ircalittoral mud	Area	228	104	21	1	21	103
	%		45,68	9,09	0,23	9,32	45,00
	Confidence		0,80	0,76	0,5		
ircalittoral mud or Circalittoral sand	Area	541	453	21	0	21	66
	%		83,87	3,89	0,00	3,89	12,24
	Confidence		0,82	0,78	0,5		
ircalittoral rock and biogenic reef	Area	64		19	0	19	45
-	%		0,00	29,46	0,01	29,47	70,53
	Confidence			0,78	0,5		
ircalittoral sand	Area	167	154	1	-,	1	13
	%	101	92,14	0,34	0,00	0,34	7,52
						0,34	1,52
6-P4	Confidence		0,85	0,78	0,5		
fralittoral coarse sediment	Area	173		75	3	78	95
	%		0,00	43,25	1,65	44,90	55,10
	Confidence			0,67	0,5		
Infralittoral mixed sediment	Area	1345	44	227	9	235	1066
	%		3,28	16,84	0,65	17,49	79,23
	Confidence		0,74	0,75	0,5		
Infralittoral mud	Area	8	1	0	1	1	6
	%		12,09	4,39	6,72	11,11	76,80
	Confidence		0,72	0,70	0,5		<u>.</u>
Infralittoral mud or Infralittoral sand	Area	3	0,12	0	0,0	0	3
ntrauttoral mud or intrauttoral sand	%	,	0.00		0.00		
			0,00	14,78	0,00	14,78	85,22
nfralittoral rack and biogenic roof	Confidence			0,78	0,5		
nfralittoral rock and biogenic reef	Area	53		14	0	14	39
	%		0,00	25,84	0,27	26,11	73,89
	Confidence			0,78	0,5		
nfralittoral sand	Area	6	0	0		0	6
	%		4,43	0,11	0,00	0,11	95,46
	Confidence		0,80	0,78	0,5		
la	Area						
	%						
	Confidence						
lo_BHT	Area	0	0			0	
0_5111	%	· · · · ·		0.00	0.00	0,00	0.00
			100,00	0,00	0,00	0,00	0,00
	Confidence		0,88		0,5		
offshore circalittoral coarse sediment	Area						
	%						
	Confidence						
ffshore circalittoral mixed sediment	Area						
	%						
	Confidence						
offshore circalittoral mud	Area						
	%						
	Confidence						
Offichara circulitte value and an	Area						
Offshore circalittoral mud or Offshore circalittoral sand	Area %						
	Confidence						
offshore circalittoral rock and biogenic reef	Area				<u>.</u>	:	
	%						
	Confidence						
Offshore circalittoral sand	A						
Offshore circalittoral sand	Area						
ffshore circalittoral sand	Area %						







Confidence

Western Gotland Basin		Total	Achieve	Fail	Loss	Adversely affected	NA
Circalittoral coarse sediment	Area	324		130	0	130	194
	%		0,00	40,14	0,00	40,15	59,85
	Confidence		5,55	0,88	0,50	10,20	05,00
Circalittoral mixed sediment	Area	10415	6996	2672	2	2674	744
circuittorat mixed Scanneric	%	10415					7,15
			67,18	25,65	0,02	25,68	1,13
······································	Confidence	1024	0,89	0,89	0,5	1010	100
Circalittoral mud	Area	1934	615	1215	4	1219	100
	%		31,80	62,83	0,21	63,04	5,17
	Confidence		0,92	0,93	0,5		
Circalittoral mud or Circalittoral sand	Area	2856	112	2639	0	2640	104
	%		3,91	92,43	0,00	92,43	3,66
	Confidence		0,84	0,87	0,5		
Circalittoral rock and biogenic reef	Area	2214		538	0	538	1677
	%		0,00	24,28	0,00	24,29	75,71
	Confidence			0,80	0,5		
Circalittoral sand	Area	242	184	31	0	31	27
	%		76,06	12,82	0,04	12,86	11,08
	Confidence		0,87	0,92	0,5		,,
nfralittoral coarse sediment	Area	482	0,01	273	2	274	208
infanctoral coarse seament	%	402	0,00	56,56	0,31		43,13
	% Confidence		0,00		÷	56,87	43,13
			4040	0,73	0,5		
nfralittoral mixed sediment	Area	2113	1043	505	5	511	559
	%		49,35	23,92	0,25	24,17	26,48
	Confidence		0,90	0,83	0,5		
Infralittoral mud	Area	166	9	133	5	138	18
	%		5,46	80,33	3,23	83,56	10,97
	Confidence		0,92	0,92	0,5		
nfralittoral mud or Infralittoral sand	Area	459	33	139	3	142	283
	%		7,30	30,28	0,69	30,97	61,73
	Confidence		0,77	0,76	0,5		
nfralittoral rock and biogenic reef	Area	946		466	2	469	477
	%		0,00	49,33	0,25	49,58	50,42
	Confidence		0,00	0,76	0,5	13,30	30,12
Infralittoral sand	Area	264	111	85	2	87	66
illiauttorat sand		204					
	%		42,05	32,14	0,71	32,84	25,11
	Confidence		0,86	0,84	0,5		
Na	Area						
	%						
	Confidence						
No_BHT	Area	32	32		0	0	
	%		99,21	0,00	0,79	0,79	0,00
	Confidence		1,00		0,5		
Offshore circalittoral coarse sediment	Area	373		370	0	370	3
	%		0,00	99,19	0,00	99,19	0,81
	Confidence			1,00	0,5		
Offshore circalittoral mixed sediment	Area	4238	17	4207	0	4208	13
	%		0,41	99,29	0,00	99,29	0,30
	Confidence		0,88	1,00	0,5	55,25	0,00
Offshore circalittoral mud	Area	3612		3573	0,5	3573	28
Jishore Circauctorat muq		2017	11	:		:	
	%		0,31	98,93	0,00	98,93	0,76
	Confidence		0,89	1,00	0,5		
Offshore circalittoral mud or Offshore circalittoral sand	Area	3189		3189	0	3189	
onsnore circauctoral sang	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,98	0,5		
Offshore circalittoral rock and biogenic reef	Area	127		123	0	123	4
	%		0,00	96,95	0,00	96,95	3,05
	Confidence			1,00	0,5		
Offshore circalittoral sand	Area	9		9		9	0
	%		0,00	95,11	0,00	95,11	4,89
				***************************************	***************************************	· · · · · · · · · · · · · · · · · · ·	***************************************

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Table A4 1 (Continued)	Results of the integrated	d assessment of benthic habitats	nresented by sub-basi	n and broad habitat type (RHT)

The Sound	,	Total	Achieve	Fail	Loss	Adversely affected	NA
Circalittoral coarse sediment	Area	5		5	0	5	0
	%		0,00	96,97	2,15	99,12	0,88
	Confidence			0,73	0,50		
Circalittoral mixed sediment	Area	1		1	0	1	0
	%		0,00	99,52	0,48	100,00	0,00
	Confidence			0,90	0,5		
Circalittoral mud	Area	31		31		31	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,70	0,5		
Circalittoral mud or Circalittoral sand	Area				-,-		
	%						
	Confidence						
Circalittoral rock and biogenic reef	Area	1		1	0	1	
an cultivity fock and progenic reci	%	-	0,00	72,88	27,12	100,00	0,00
	Confidence		0,00	<u> </u>	-	100,00	0,00
ircalittoral sand		16	0	0,78 15	0,5 0	10	
ırcauttorat sand	Area	16				16	0.00
	%		0,18	97,34	2,48	99,82	0,00
	Confidence		0,91	0,73	0,5		
Infralittoral coarse sediment	Area	156		123	5	128	27
	%		0,00	78,85	3,52	82,38	17,62
	Confidence			0,68	0,5		
nfralittoral mixed sediment	Area	182		179	4	182	0
	%		0,00	98,03	1,94	99,97	0,03
	Confidence			0,78	0,5		
nfralittoral mud	Area	161		160	1	161	
	%		0,00	99,48	0,52	100,00	0,00
	Confidence			0,73	0,5		
nfralittoral mud or Infralittoral sand	Area						
	%						
	Confidence						
nfralittoral rock and biogenic reef	Area	43		42	1	43	0
and an area of the	%		0,00	97,99	2,01	100,00	0,00
	Confidence			0,70	0,5		
nfralittoral sand	Area	294	13	260	21	281	0
	%		4,49	88,41	7,07	95,48	0,03
	Confidence		0,86	0,78	0,5		
la	Area		0,00	0,1.0	5,0		
••	%						
	Confidence						
lo_BHT	Area	9		3	6	9	
IV_DITI	%	9	0,00				0,00
			0,00	29,50	70,50	100,00	0,00
Offshore circalittoral coarse sediment	Confidence	2		1,00	0,5	2	^
onshore circalittoral coarse sediment	Area	3	0.00	3	0	3	0
	%		0,00	99,49	0,50	99,99	0,01
	Confidence			0,73	0,5	_	
Offshore circalittoral mixed sediment	Area	0		0		0	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,91	0,5		
Offshore circalittoral mud	Area	13		13		13	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,76	0,5		
offshore circalittoral mud or	Area						
Offshore circalittoral sand	%						
	Confidence						
Offshore circalittoral rock and biogenic reef	Area	0		0		0	
	%		0,00	100,00	0,00	100,00	0,00
	Confidence			0,78	0,5		
Offshore circalittoral sand	Area	4	0	4	0	4	
	%		3,08	96,41	0,52	96,92	0,00
	Confidence		0,91	0,73	0,5	30,32	0,00
//////////////////////////////////////	Commutative		0,51	0,13	0,5		



