



Baltic Marine Environment Protection Commission

Working Group on the State of the Environment and Nature
Conservation

STATE & CONSERVATION
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Document title	Summary of HELCOM assessment unit changes for HOLAS III
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Rev1: This document has been revised to correctly reflect the suggested change in the boundaries of Bornholm Basin and Arkona Basin, in order to align those with the boundaries of the WFD (Document 3J-35 of STATE & CONSERVATION 15-2021).

Rev2: This document was updated with information from document 3J-100 Change to Swedish boundaries coastal and offshore.

Background

This document contains a summary of proposed changes collected for HELCOM assessment units to be applied in HOLAS III.

Once approved, the changes of HELCOM Assessment units will also be reflected by updating the [HELCOM Monitoring and Assessment Strategy](#).

Changes will be applied and new assessment unit shapefile 2021 versions will be created by the HELCOM Secretariat and made available for assessment.

Action requested

The Meeting is invited to:

- take note of the information
- if no update has been provided, confirm that current set of HELCOM Assessment units on Level 4 reflect the correct WFD water types / water bodies that should be used in HOLAS III for indicators that are assessed on level 4.

Summary of HELCOM assessment unit changes for HOLAS III

Table below outlines summary of changes to be applied to Assessment unit shapefile 2021 versions.

Table 1. Summary of changes.

Change (link to document)	How change is applied in HOLAS III	Status
1 Changes of Level 4 Open Sea assessment units applied for Eutrophication assessment (splitting of SEA-013 Gulf of Finland) (State & Conservation 14-2021 Doc 4J-90)	Eutrophication assessment Level 4 (new assessment unit set applied only for Eutrophication)	Pending thresholds (S&C 15-2021)
2 Changes of Level 4 Open Sea assessment units applied for Eutrophication assessment (splitting of SEA-007 Bornholm Basin) (State & Conservation 14-2021 Doc 4J-82-Rev.1)	Eutrophication assessment Level 4 (new assessment unit set applied only for Eutrophication)	Pending thresholds (S&C 15-2021)
3 Changes in the boundaries of Bornholm Basin and Arkona Basin, in order to align those with the boundaries of the WFD (Document 3J-35 submitted separately to State & Conservation 15-2021)	Level 2 to 4 assessment units	Pending
4 Changes in German coastal assessment units	Assessment unit level 4 across all assessments	Ready to be included
5 Changes in Estonian coastal assessment units	Assessment unit level 4 across all assessments	Ready to be included
6 Updated boundary between Swedish coastal and off shore marine areas (Document 3J-100 submitted separately to State & Conservation 15-2021)	Level 3 to 4 all assessment units	Ready to be included
7 Adjust coastline of updated coastal assessment units to all assessment units	All assessment units (coastline)	Ready to be included

1. Changes of Level 4 Open Sea assessment units applied for Eutrophication assessment (splitting of SEA-013 Gulf of Finland)

During the HOLAS II process, assessing the eutrophication status of the Gulf of Finland was found problematic due to considerable east-west gradients in environmental parameters. In the thematic assessment for eutrophication, it was noted that solutions for improving the eutrophication assessment of the basin should be identified (HELCOM 2018a). Both in the HELCOM State of the Baltic Sea report (HELCOM 2018b) and the Thematic assessment for eutrophication (HELCOM 2018a), it was noted that with the current Gulf of Finland assessment unit, the positive development in the eastern part of the gulf (Kauppila et al. 2016), achieved by reduced phosphorus loading, was masked by increased phosphorus concentrations in the western part of the assessment unit, caused by the inflow of deep saline water (Figure 1).

IN-Eutrophication 11-2018 agreed to form a team of experts for each sub-basin with assessment unit issues, such as gradients. Finland was nominated as the lead country for considering the splitting of the Gulf of Finland assessment unit. Revisiting the Gulf of Finland assessment unit was also included in the topics with highest priority in the work plan for future work on HELCOM eutrophication indicators, agreed by HOD 57-2019.

IN-Eutrophication 19-2021 took note of the proposal on splitting the Gulf of Finland, as presented by Finland, and of supporting information on the environmental conditions of the Gulf of Finland with respect to eutrophication assessment by Russia and Estonia. The Meeting discussed possible divisions of the basin with respect to the hydrographical conditions and bathymetry and decided to submit a proposal to HELCOM STATE & CONSERVATION 14-2021, after the details have been discussed and agreed upon intersessionally between participants from Contracting Parties sharing borders with the assessment unit.

The proposal of new assessment unit was presented at STATE & CONSERVATION 14-2021 and it was agreed to re-classify the eastern area of the assessment unit as coastal and transitional waters (as proposed in document 4J-90), pending agreement by Russia. The Meeting in principle agreed to split the remaining open-sea assessment area into two according to the division proposed in document 4J-90. This change will be applied in HOLAS III, with the caveat that if no threshold values can be established for the new areas prior to HOLAS III it will revert to using the threshold values used in HOLAS II for the purposes of the assessment. The Meeting also invited the Chair of IN EUTRO, with the help of the Secretariat, to prepare in depth documentation on the rationale for the proposed re-classification of the easternmost part of the Gulf of Finland to be submitted together with the proposed new assessment areas for HOD 61-2021.

The re-definition of the Gulf of Finland open-sea assessment unit (SEA-013) at the HELCOM assessment level 4 (HELCOM Subbasins with coastal WFD water types of water bodies 2018 as defined in the HELCOM Monitoring and Assessment Strategy), applied only to the eutrophication assessment, by adjusting the eastern border and splitting the remaining area into two smaller open-sea units, can be found on Figure 1.

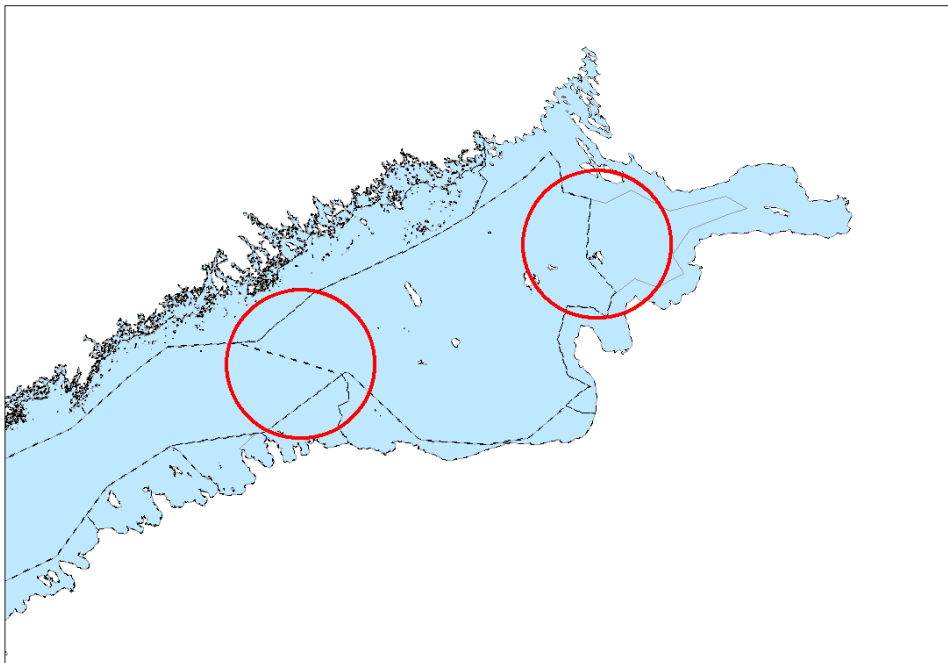


Figure 1: New assessment unit boundary for Gulf of Finland represented as black dashed area, and *HELCOM Subbasins with coastal WFD water types or water bodies 2018* represented as the light grey boundaries. Modifications highlighted in red.

2. Changes of Level 4 Open Sea assessment units applied for Eutrophication assessment (splitting of SEA-007 Bornholm Basin)

During the process of checking the data and the eutrophication assessment for HOLAS II, it was observed that Bornholm Basin was more eutrophied than the surrounding basins, which was a surprising and implausible result (IN Eutrophication 7-2017). Further investigations after the meeting found the results to be due to the influence of water from the river Odra.

The problem was discussed at STATE 6-2017 and it was decided to show the assessment results for Bornholm Basin as they were, but to add a comment (see HOLAS II report: „Generally, indicators for nutrient levels were furthest away from good status, and thus had highest influence on the integrated assessment results. This was especially evident for Bornholm Basin where shallow stations located in the Pomeranian Bay had significant impact on nutrient level results.“). It was further decided to look for a better solution for future assessments and suggested to create a separate assessment unit for eutrophication assessment which considers the impact of the Odra plume. This suggestion was made in the understanding that the MAI/NIC target values and assessments will remain as they are and be untouched by a new assessment unit for eutrophication. IN Eutrophication was given the task of working further on this issue and developing a proposal.

The resulting proposal was presented at IN Eutrophication-18 followed by a commenting round. No further comments were received. IN Eutrophication-19 recalled the proposal and discussed the potential need of defining new threshold values for the new assessment units. The meeting took note that in case of the establishment of the two new assessment units, new threshold values would be needed primarily for the Pomeranian Bay, but also for Bornholm Basin. The meeting agreed that in case threshold values cannot be re-evaluated in time to be approved for HOLAS III, the present threshold values will be used for both basins. IN Eutrophication-19 supported the proposal of splitting the Bornholm Basin, acknowledging that the threshold values will need to be evaluated, and supported submitting the proposal by IN-Eutrophication to STATE & CONSERVATION 14-2021 as a category 4 assessment unit for the eutrophication assessment.

The proposal of new assessment unit was presented at STATE & CONSERVATION 14-2021 and it was agreed to include a new assessment unit titled “Pomeranian Bay”, to be used in the HEAT eutrophication assessment as a category 4 assessment unit, with the caveat that if no threshold values can be established for the new areas prior to HOLAS III it will revert to using the current threshold values of the Bornholm Basin for the purposes of the assessment. The representation of the new boundary of the Opensea Pomeranian-Bay assessment unit (SEA-007B) for the HELCOM assessment level 4 (HELCOM Subbasins with coastal WFD water types of water bodies 2018 as defined in the HELCOM Monitoring and Assessment Strategy), applied only to the eutrophication assessment, can be found on Figure 2.

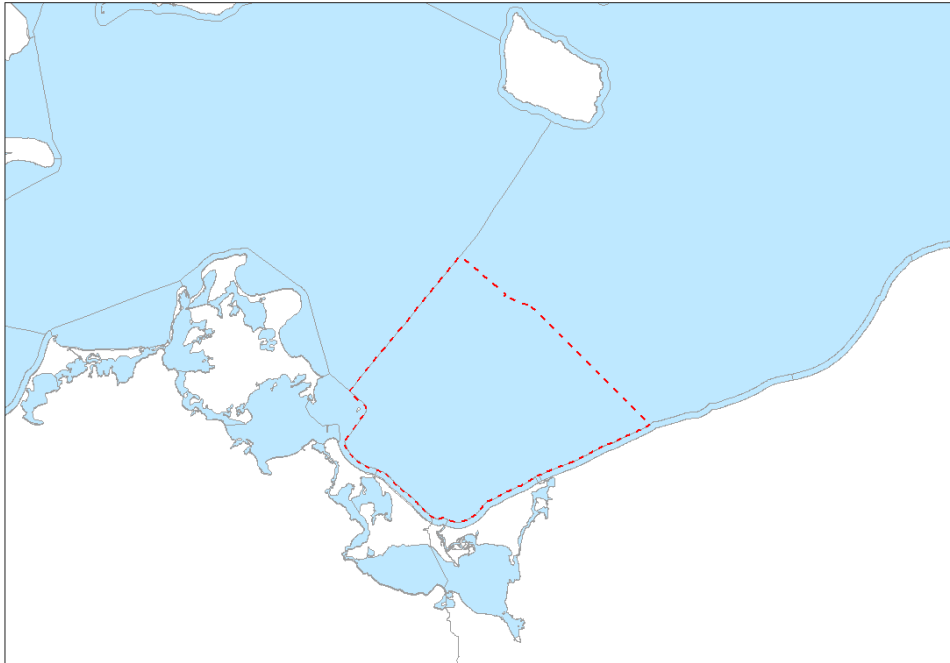


Figure 2: New assessment unit boundary for Pomeranian Bay represented in red dashed, and *HELCOM Subbasins with coastal WFD water types or water bodies 2018* represented in light grey.

4. Changes in German coastal assessment units

The Boundaries of the coastal units (Level 4) for Germany will also be updated as requested by Germany. The coastal boundaries can be found on Figure 3.

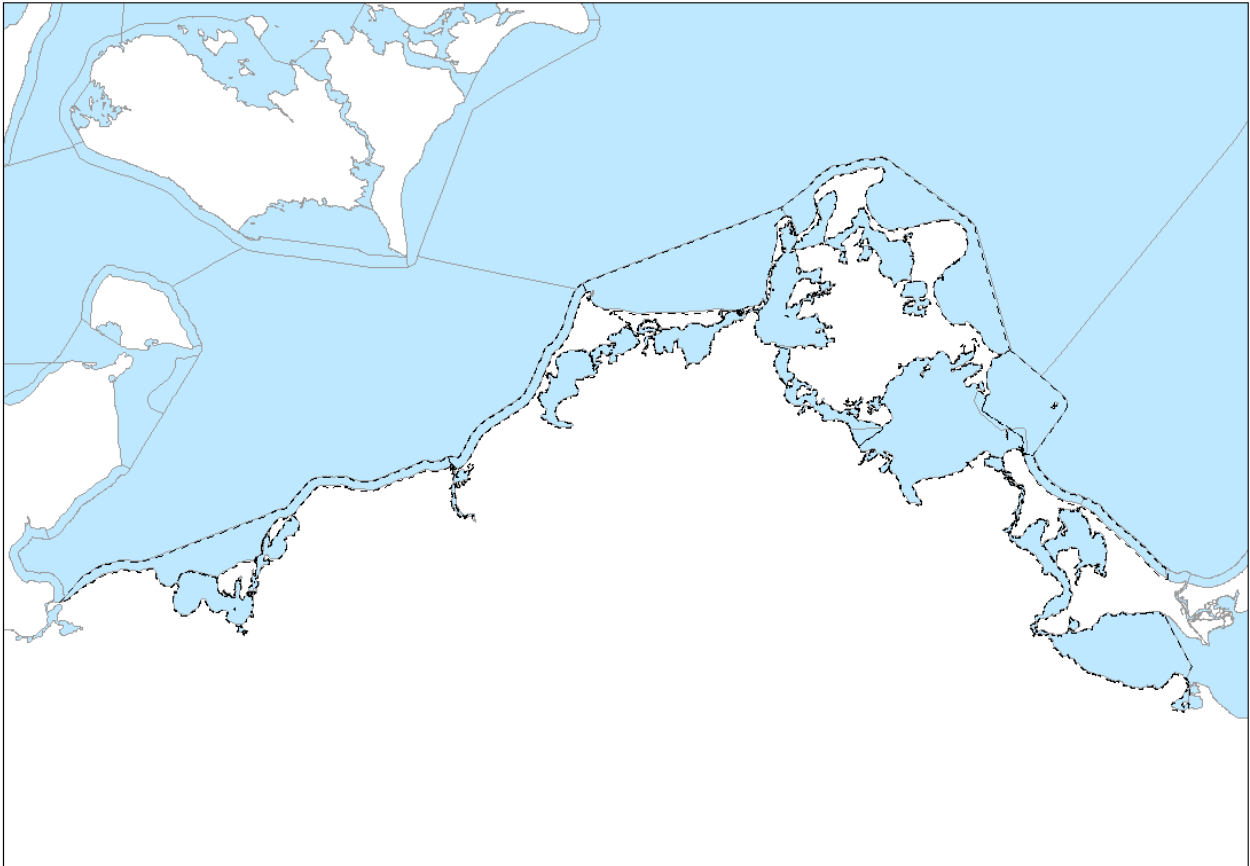


Figure 3: HELCOM assessment units at level 4 in Germany. Black dashed area is the updated Germany boundaries. The light grey borders represent the *HELCOM Subbasins with coastal WFD water types or water bodies 2018*.

5. Estonian Coastal Waters

At STATE & CONSERVATION 12-2020 (Outcome 8J.2), Estonia informed about changes in its coastal water bodies under the Water Framework Directive (WFD) in the Gulf of Finland and divided Gulf of Riga into three coastal water bodies. Hereby Estonia submitted the update of national coastal water bodies information under WFD assessments to be included in the update of HELCOM Assessment Unit Level 4.

The updated version was enforced nationally on 24.04.2020 by the [Regulation No 19](#) of the Minister of Environment *“The list of bodies of surface water, the procedure for assessment of quality classes of bodies of surface water and territorial sea, values of quality elements of the ecological status of bodies of surface water and values of quality elements of water bodies not included to bodies of surface water”*.

The representation of the new boundaries of the Estonian Coastal water assessment units for the HELCOM assessment level 4 (HELCOM Subbasins with coastal WFD water types of water bodies 2018 as defined in the HELCOM Monitoring and Assessment Strategy), can be found on Figure 3.

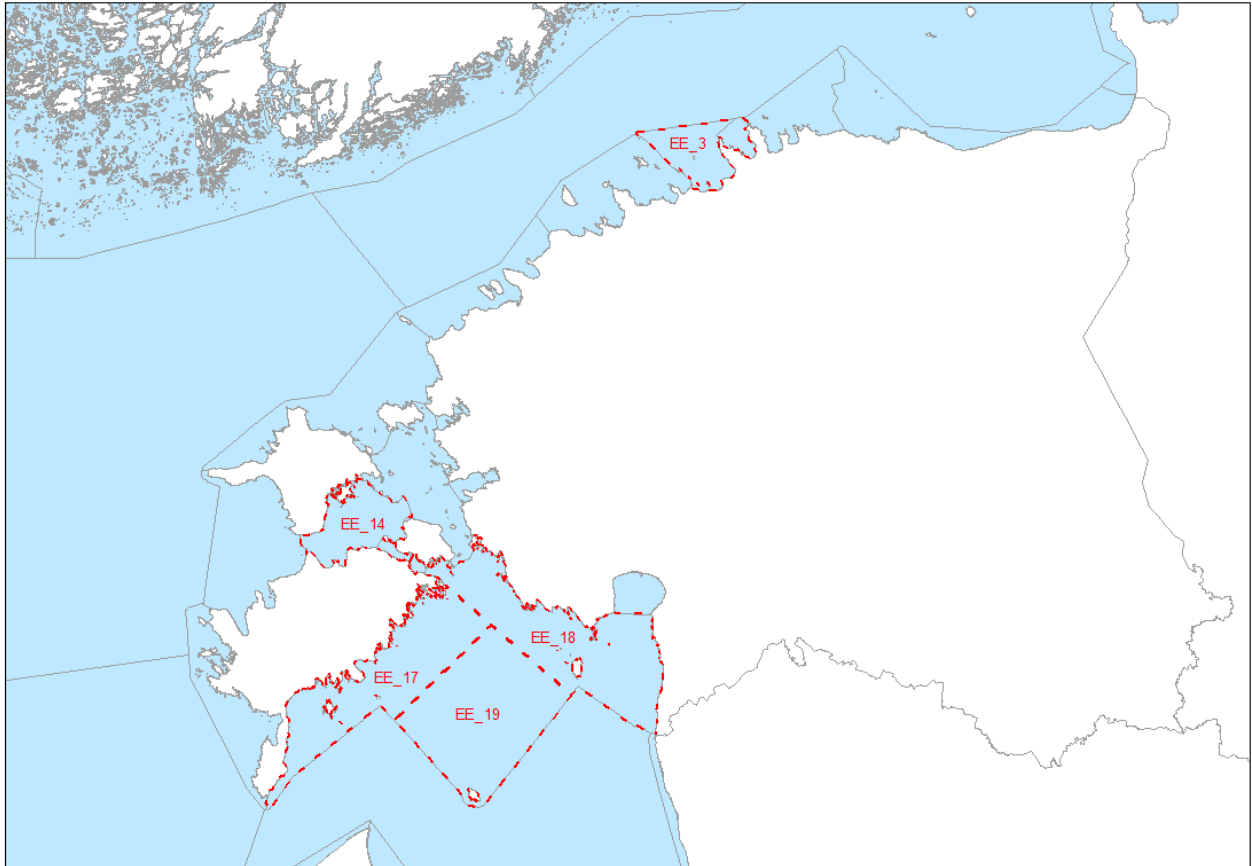


Figure 4: Updated assessment unit boundaries for Estonia represented as red dashed areas. The light grey borders represent the *HELCOM Subbasins with coastal WFD water types or water bodies 2018*. The national code of the modified coastal water bodies are labelled in the image.

[6. Updated boundary between Swedish coastal and off shore marine areas](#)

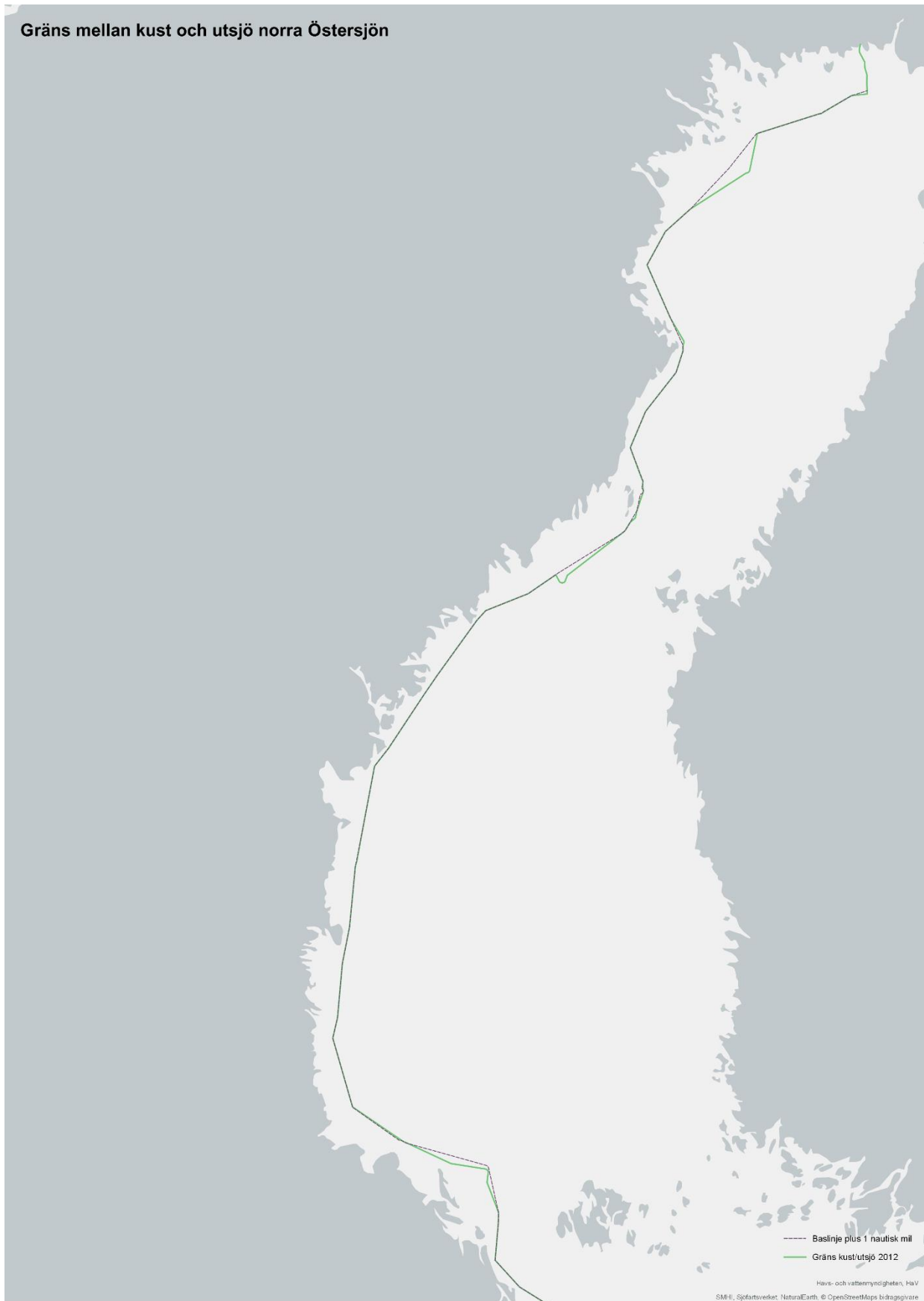


Figure 1. "Gräns mellan kust och utsjö norra Östersjön" = Border between coastal and off shore area Bothnian Sea. Green line outdated border, black dashed line, updated border.



Figure 2. Gräns mellan kust och utsjö södra Östersjön = Border between coastal and off shore area Baltic Sea proper. Green line outdated border, black dashed line, updated border.

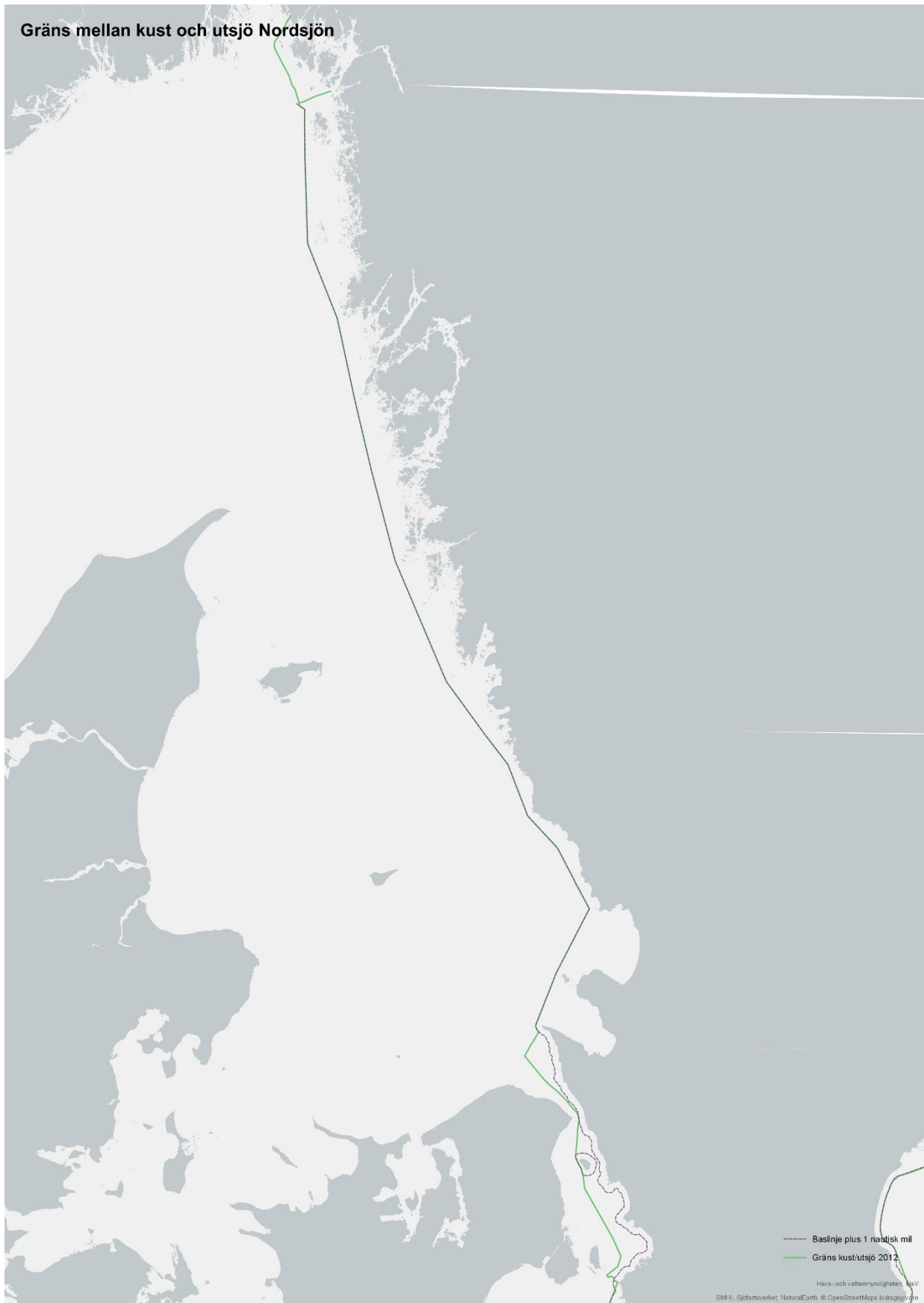


Figure 3. Gräns mellan kust och utsjö Nordsjön” = Border between coastal and off shore area Kategatt and Skagreak. Green line outdated border, black dashed line, updated border.