
Document title	Benthic habitats – response to input request in preparation for Second HELCOM Indicator Workshop
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Background

In preparation for the Second HELCOM Indicator Workshop a list of questions was sent out to relevant HELCOM Expert and Working Groups. The document below provides responses to the questions raised relating to benthic habitats.

Additional valuable information to support discussion at the Workshop is available at the links below.

1. Recent developments and progress on the [Cumulative impacts on benthic biotopes indicator](#) that is compatible with Marine Strategy Framework Directive D6C3 and can potentially provide input for D6C1 and D6C2.
2. An earlier version of the [Condition of Benthic Habitats indicator](#), containing test cases.
3. Work from the [ICES WKBEDPRES](#) and [WKBEDLOSS](#) workshops that are part of an ongoing process (WPBEDPRES 2 taking place September 30 – October 2), and interlinked with the EU TG Seabed process.

Action requested

The Workshop is invited to take note of this information and use it as required during the discussion.

Benthic habitats and seafloor

Response from conducting requested tasks for preparation of HELCOM indicator WS 2-2019

Answers provided by Henrik Nygård and Mats Blomqvist, co-leads on the indicator 'State of the soft bottom macrofauna community'

As input prior to the second workshop HELCOM Experts are invited to: Review the relevant Topic Summary and revised aims section

At the moment the summary is focused on requirements in MSFD Descriptor 6 (D6), whereas criteria under Descriptor 5 also require assessments of benthic communities (although secondary criteria). The assessment of D6C5 should also take into account pressures from D2, D3, D7 and D8, so the summary should also include other pressures than physical disturbance and loss. Suggested update in underlined text below:

The overall aim is an assessment of the Baltic Sea seafloor habitats and the biota inhabiting them, to quantify the impact on and loss of the seafloor due to human induced pressures, including but not restricted to physical disturbance, physical loss and eutrophication effects. Indicators need to target the integrity of physical and biological seafloor components (habitats and biotopes). This will include using information on species sensitive to the pressures and on benthic biogenic structures. This information contributes to the robustness and the informative values of the assessment. Indicators used apply reference criteria and corresponding reference values derived from those criteria, as well as appropriate threshold values. The assessment needs to consider spatial extent of loss/disturbance requiring status for specific spatial assessment areas (e.g. area of loss per habitat type), thus the assessments need to be able to use relevant ecological (spatial) scales that are compatible with those under the Baltic Sea Action Plan (BSAP), the EU Water Framework Directive (WFD), EU Marine Strategy Framework Directive (MSFD) and Habitats directive (HD).

Short term aims include that the indicators should be developed further to be fully operational, conform to the requirements of the EU Commission Decision 2017/848/EU, and include the widest spatial coverage for the next assessment period. The application of an integrated assessment, supported by the outcome of relevant processes (e.g. the EU TG Seabed), should also be carried out to provide an overview of the environmental status of the seafloor as a whole.

Review the HELCOM indicator-policy match (particularly for the BSAP and MSFD)

The indicator 'State of the soft bottom macrofauna community' is mainly complying with D5C8, but can also be used to assess soft bottom habitats under D6C5/D6C3. 'Condition of benthic habitats' can be used for D6C5/D6C3, but unsure to what extent it actually covers physical loss (D6C4). Oxygen and macrophyte indicators used in D5 could potentially also be utilized for D6C5 assessments.

Evaluate if existing/developing HELCOM indicators correctly meet the requirements of the [COMMISSION DECISION \(EU\) 2017/848](#).

If not, define the adjustments/developments required.

Regarding 'State of the soft bottom macrofauna community' MSFD requirements can be considered to be fulfilled for D5C8 and can be used to assess soft bottom habitats under D6C5/D6C3. However, the current

assessment method relates to assessment units and do not take into account the need for a spatial assessment of broad habitat types.

[Address the priority areas identified at HELCOM Indicator WS 1-2019 \(see information provided separately\).](#)

The priority to develop an assessment approach is highly relevant as the HOLAS II assessment did not consider the spatial extent of disturbed habitats. Indicators to assess currently unassessed habitats are also needed. Some of the main issues related to an overall assessment of the benthic habitat are:

- baseline map of broad habitat types. The EUSeaMap is too coarse to serve as the base for assessments.
- monitoring data do not exist for all habitat types
- current amounts of monitoring data do not support spatial assessments

[Provide a clear indication of the resource requirements to implement the work.](#)

The work to develop an assessment approach for benthic habitats will likely need a dedicated project, preferably led by EN BENTHIC to ensure coherence throughout the Baltic Sea. In addition, all indicators need further work in order to be fully operational. Work is dependent on guidance from TG Seabed to ensure coherence with other regional seas.

[Note the agreed deadlines for indicator development \(adjustment by autumn 2020 and development by autumn 2021\).](#)

Regarding the use of 'State of the soft bottom macrofauna community' under D5C8, the main obstacle is the difficulties to set threshold values in the sub-basins, especially in the southern Baltic Sea where environmental conditions are fluctuating due to variations in inflow of saline water. It remains unclear if threshold values can be set within the given timeline (depends if someone has the resources to work on this and if a solution can be found). For use of the indicator under D6C5/D6C3 thresholds for adversely affected habitats due to physical disturbance need to be developed. In addition, a methodology to provide areal estimates of habitat status needs to be developed.

[Evaluate appropriate approaches for carrying out integrated assessments and identify where clear interlinkages between different indicators \(or BSAP segments\) occur \(e.g. linkage between eutrophication and bird status\).](#)

Clear interlinkages between benthic habitats and eutrophication exist, and currently same indicators are partly used in both the eutrophication and biodiversity assessment. For assessment of D6C5 interlinkages with D2, D3, D5, D7 and D8 should also be considered. Benthic habitats – food web linkages could also be further developed.

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