

# Terms of Reference (ToR) for HELCOM Expert Network on Benthic Habitats (EN BENTHIC)

## Background:

In accordance with the Outcome of State and Conservation 1-2014 on the need to develop coordinated benthic habitat monitoring in the HELCOM area, and acknowledging that HELCOM work focuses on developing monitoring based on the requirements set out by assessment (i.e. indicators), the intersessional network on benthic habitat monitoring was founded. State and Conservation 1-2014 in addition emphasized that the development of coordinated monitoring of benthic habitats should be integrated with the activities on HELCOM indicator development.

State and Conservation 8-2018 discussed the importance of the work done by the group and further tasked the network to widen the scope of the work to include mapping, identification of natural and conservation values, integration methods and indicator development.

## Purpose:

The purpose of the group is to support and further develop the coordination of regional work on benthic habitats and biotopes, in support of the implementation of the Baltic Sea Action Plan (BSAP) and subsequent commitments. This relates in particular to the following Ecological Objectives in the BSAP, update in 2021:

- Natural distribution, occurrence and quality of habitats and associated communities;
- Viable populations of all native species;
- Functional, healthy and resilient food webs.

The Network will further provide expert input to HELCOM work related to benthic communities, habitats, and biotopes in general, and specifically on the tasks identified in these ToR's.

## Scope

The overall scope of the group is to facilitate regional cooperation, including identifying and specifying data and knowledge needs, and if possible, address these needs through projects developed with national funding or joint research applications. Further, the group is a platform for the exchange of experiences as well as harmonization of methods concerning the work on benthic habitats and biotopes. This work includes, but is not limited to: mapping, monitoring, data availability, modelling, assessment, and measures according to the needs of the BSAP and subsequent commitments.

## Benefits

The principal benefits of EN BENTHIC are to provide the opportunity:

- a) to work collaboratively with other leading partners on benthic habitats in the region, providing a valuable information exchange mechanism and a recognized authoritative voice on benthic habitats issues.
- b) to identify regional knowledge gaps and propose ways to solve them.
- c) to provide a clear mechanism for demonstrating organizational commitment to addressing issues related to benthic habitats and biotopes.
- d) to disseminate/showcase products and results between partners through EN BENTHIC.
- e) to ensure two-way transfer of knowledge and experiences with wider forums with relevance for the Baltic Sea region and the HELCOM Contracting Parties, for example within relevant initiatives carried out by ICES, OSPAR or the EU.

- f) to collaboratively consider the next important stage of work and development for the region and help frame requirements for the next stages of work.
- g) to directly address HELCOM regional needs for indicators, assessments and actions/measures for benthic habitats and biotopes.

## Objectives

- to foster exchange of information and experiences on benthic communities, habitat and biotope mapping, monitoring, and their assessment;
- to provide knowledge and scientific support to the the production of high-quality habitat maps for the Baltic Sea region;
- to develop regional understanding and harmonization of methods and processes (e.g. where relevant Monitoring and Assessment Guidelines);
- to support national level work related to benthic habitats and biotopes;
- to carry out regional assessments (e.g. indicators) of benthic habitats according to the BSAP and link to relevant European directives, especially the Marine Strategy Framework Directive, Water Framework Directive and Habitat directive;
- to identify and link national work with HELCOM work.

## Tasks

The tasks of the group cover a wide range of different aspects related to work on benthic habitats and biotopes. Subgroups might be defined in order to work more thematically, under the umbrella of the expert network, in order to facilitate intersessional work. These overall tasks provide the framework to guide the work of the network, the implementation of which depends on the availability of resources. The network may further serve as a platform to develop and apply for external funded projects in order to accomplish the listed objectives.

The group's activities link to the following tasks:

### Habitat mapping

- Identify and harmonize methods suitable for mapping different benthic biotope and habitat types, including to:
  - Share information on and summarize existing and planned national benthic habitat mapping methods and programmes.
  - Facilitate common approaches for identifying habitats in relevant classification systems (HUB; EUNIS and N2000) that exist in several/most HELCOM countries in order to prioritize future work for mapping and assessment.
  - Identify, and where feasible, further develop regionally relevant mapping methods suitable for different habitat types.
  - Develop proposals for harmonization of methods and data formats, and develop joint HELCOM guidelines for mapping strategies, building on existing work.

### Habitat maps

- Act as a platform for discussion and review of methods and possible solutions for improving and producing regional habitat maps suitable for a variety of assessment purposes. To take into account other relevant initiatives, e.g. MESH guidelines for habitat mapping, EMODnet methods for modelling seabed habitats, ICES Working Group on Marine Habitat Mapping.
  - Share information on uses of models and GIS work in map production.

- Identify different approaches to the production of habitat maps, including their strengths and weaknesses.
- Review existing data availability and formats.
- Identify the needed elements, and major gaps, for producing regional habitat maps.
- Supporting the updating of the existing HELCOM habitat maps and outline a procedure for updating the layer(s) in the HELCOM data and map service on a regular basis, if possible, in cooperation with other data collection initiatives (e.g. EMODNET) and organizations (e.g. OSPAR).
- Share information on the process of identification of natural and conservation values.

#### Habitat monitoring

- Develop monitoring and survey methods suitable for different benthic biotope and habitat types, and the pressure affecting them, including to:
  - Share information on and summarize existing and planned national benthic habitat monitoring, monitoring methods and programmes.
  - Review existing methods and techniques for benthic habitat monitoring and surveys, to support the assessment of extent and quality of habitats.
  - Further develop monitoring and survey methods suitable for different habitat types and assessment needs (especially BSAP, MSFD and HD), including MPAs.
  - Develop joint HELCOM guidelines for monitoring and survey strategies, building on existing work.

#### Assessment

Act as a platform for discussion and review of HELCOM benthic indicators, as developed by Lead Countries and appointed experts, and support the HELCOM indicator work, including:

- Review methods and techniques for assessing extent and quality of habitats, including aggregation methods.
- Recommend a list of biotopes or habitats of regional interest, representing all relevant broad habitat types.
- Support the further development and review of existing indicators addressing risk assessment of condition of benthic habitats, and their component parts.
- Support the development of thresholds in order to assess the quality and extent of benthic habitats, particularly with relevance for regional coordination.
- Identify possible new indicators.
- Support Lead countries to further develop and review benthic habitat indicators, in close cooperation with other relevant HELCOM initiatives, e.g. the process to review, prioritize and further develop core indicators, and initiatives outside HELCOM, e.g. OSPAR, ICES and the EU. This includes but is not limited to:
  - Supporting the update of the core indicator reports at regular intervals, as decided in HELCOM.
  - Reviewing and commenting indicator-based assessments of benthic communities and habitats to enable a timely and quality assured delivery.

#### Reporting

The Network will report on the group's activities to the relevant HELCOM working groups. The Chair will report to State and Conservation regularly, i.e. for the information document deadline of each State and Conservation meeting. The activity report should consist of information on activities and developments which have taken place since the previous report, a list of links to the meeting sites of previous meetings or workspaces containing documents, and a list of aspects on which decisions or guidance from State and Conservation are required. A template for the reporting will be provided by the Secretariat.

### Validity of ToR's

These ToRs should be subjected to review and revision as needed and are to be presented for endorsement at the working group level and approval by Heads of Delegation. The ToRs are valid for a period of 3 years, November 2021 – November 2024.

### Organisation of work

The network will consist of experts nominated by the Contracting Parties and will be open to Observers according to HELCOM procedures. The network will report to and receive guidance from the State and Conservation Working Group.

The mode of work for the expert network will be mainly via correspondence and online meetings facilitated by the Secretariat, with a physical meeting taking place annually. Subgroups might be defined in order to work more thematically, e.g., habitat mapping & modelling; monitoring; assessment. A Chair for the network will be elected. The products will be handled at HELCOM Meeting Portal workspaces dedicated for the aim. The HELCOM Secretariat will provide administrative support to the network.

## Annex 1: Associated timeline of tasks and actions – Reviewed by EN BENTHIC 8-2021

The annotations in track changes were made by EN BENTHIC 8-2021 / the timeline was reviewed by the Meeting by changing the color code.

This work plan is valid for a three-year period (beginning November 2021) and is to be reviewed and revised by the network and approved by State and Conservation WG.

These overall tasks provide the framework to guide the work of the network, the implementation of which depends on the availability of resources. If possible, the network might be a platform to develop and apply for external funded projects in order to accomplish the listed objectives.

**Yellow** highlight indicates annual meetings, **pale blue** indicates provisional plans or work that is continuous, and **dark blue** indicates more affirmative plans.

\* Denotes tasks in the updated Baltic Sea Action Plan, with the target year of the BSAP actions denoted when available from the EN BENTHIC perspective.

### Timeline of work

Task	Action	2022	2022	2022	2022	2023	2023	2023	2023	2024	2024	2024	2024	Comments from EN BENTHIC 8-2021
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
1.1	Share information on and summarize existing and planned national benthic habitat mapping methods and programmes													
1.1.1	Workshop + report, on habitat mapping, following a WS held in Finland (timing undecided due to covid-19 travel restrictions)													<u>This Workshop was postponed many times and the aim is not currently in line with the scope of EN BENTHIC. The Meeting agreed to postpone this workshop indefinitely and to send a request STATE &amp; CONSERVATION 16-2021 for clarifications on this WS.</u>
1.2	Facilitate common approach for identifying habitats in relevant classification systems (HUB; EUNIS and N2000) that exist in several/most HELCOM countries in order to prioritize future work for mapping and assessment.													<u>The Meeting discuss and agree on levels of details of habitats to be included in assessments to have a common approach for the Baltic Sea.</u>
1.2.1	Identify a collection of habitats (HUB and N2000) that exist in several/most HELCOM countries (linked to activity 4.2.1).													

Task	Action	2022	2022	2022	2022	2023	2023	2023	2023	2024	2024	2024	2024	Comments from EN BENTHIC 8-2021
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
1.2.2	Update the HELCOM Underwater biotope and habitat (HUB) classification where gaps have been identified by 2024 *													
1.2.3	Data driven validation of translation between different habitat classification systems (HUB, Marine Strategy Framework Directive (MSFD) broad habitat types, Habitats Directive habitats and the European Nature Information System (EUNIS)), in co-operation with the European Marine Observation and Data network (EMODnet).*													<u>Unrealistic to finish this action within the schedule for HOLAS 3</u>
<del>1.3</del>	<del>Identify and where feasible, further develop regionally relevant mapping methods suitable for different habitat types</del>													<u>Outdated: the meeting agreed to remove this task. All the tasks referring to the actual mapping would be removed to the list of EN BENTHIC.</u>
<del>1.3.1</del>	<del>Matrix of methods and habitats.</del>													
<del>1.3.2</del>	<del>Identify “best practices” and possible gaps.</del>													
<del>1.4</del>	<del>Develop proposal for harmonization of methods, data formats and develop joint HELCOM guidelines for mapping strategies, building on existing work.</del>													<u>Outdated: the meeting agreed to remove this task. All the tasks referring to the actual mapping would be removed to the list of EN BENTHIC.</u>
<del>1.4.1</del>	<del>Develop a proposal for harmonization based on action 1.3.2.</del>													
<del>1.4.2</del>	<del>Guidelines, to be developed using a lead country approach, including review and agreement in annual meeting, and endorsement by State and Conservation.</del>													

Task	Action	2022	2022	2022	2022	2023	2023	2023	2023	2024	2024	2024	2024	Comments from EN BENTHIC 8-2021
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
2.1	<del>Share information on uses of models and GIS work in map production.</del>													<del>Outdated: the meeting agreed to remove this task. All the tasks referring to the actual mapping would be removed to the list of EN BENTHIC.</del>
2.1.1	<del>Suggested to be a session under the mapping workshop.</del>													
2.2.	<del>Identify different approaches to the production of habitat maps, and their strengths and weaknesses.</del>													<del>Outdated: the meeting agreed to remove this task. All the tasks referring to the actual mapping would be removed to the list of EN BENTHIC.</del>
2.2.1	<del>Suggested to be a session under the mapping workshop. Linked to previous activity 2.1.1.</del>													
2.3	<del>Review existing data availability and formats.</del>													<del>Outdated / not needed anymore</del>
2.3.1	<del>Metadata overview (template to be filled in nationally), parameters, where is the data stored, taxonomic resolution, spatial resolution, data type (aggregated, raw data...), geographical coverage. To be used for the production of harmonized habitat maps. to feed into workshop (activity 1.1.1). Lead: Germany.</del>													
2.4	<del>Identify the needed elements and major gaps in producing regional habitat maps.</del>													<del>Outdated: the meeting agreed to remove this task. All the tasks referring to the actual mapping would be removed to the list of EN BENTHIC.</del>

Task	Action	2022	2022	2022	2022	2023	2023	2023	2023	2024	2024	2024	2024	Comments from EN BENTHIC 8-2021
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
2.4.1	<del>Linked to the metadata overview and as the output of the workshop (activity 1.1.1 and 2.3.1).</del>													
	<del>Identify an address any spatial gaps in coverage for habitats and biotopes distribution information where possible (supporting the Red List Assessment)</del>													
2.5	Quality standards for habitat maps													
2.5.1	<del>Develop-Validate</del> quality standards (i.e. set of rules) for seafloor habitat mapping and derived products by 2024. *													
2.6	<del>Supporting the development and updating of the existing HELCOM habitat maps and outline a procedure for updating the layer(s) in the HELCOM data and map service on a regular basis, if possible, in cooperation with other data collection initiatives (e.g. EMODNET) and organizations (e.g. OSPAR).</del>													
2.6.1	<del>Agenda point at the annual meeting. Project is needed to develop proper habitat maps. EN to look into available funding options for such a project, Secretariat to inform State and Conservation.</del>													
2.7	Share information on the process of identification of conservation values.													
2.7.1	Agenda point at the annual meeting.													
2.8	Ecosystem services*													
2.8.1	<del>Support the work on Mapping</del> ecosystem services and the present and potential spatial distribution of key ecosystem components, including habitat forming species such as bladder wrack, eelgrass, blue mussel and stoneworts Baltic-wide (by 2025 in the updated BSAP).*													
3.1	Share information on and summarize existing and planned national benthic habitat monitoring, monitoring methods and programmes.													
3.1.1	Agenda point on annual meeting.													
3.2	Review existing methods and techniques for benthic habitat monitoring and survey to support assessment of extent and quality of habitats.													
3.2.1	Collate information on existing methods and techniques. Build on existing work and where													

Task	Action	2022	2022	2022	2022	2023	2023	2023	2023	2024	2024	2024	2024	Comments from EN BENTHIC 8-2021
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
	possible feed into TG work and align its work with work on descriptor 6 at the EU level, e.g. under TG Seabed. Progress on EU level to be shared at each meeting. <a href="#">Agenda point on annual meeting.</a>													
3.3	Facilitate further development of monitoring and survey methods suitable for different habitat types and assessment needs (especially BSAP, MSFD and HD).													
3.3.1	Expand on the review (activity 3.2.1) to include aspects outside of extent and quality, covering BSAP MSFD and HD.													
3.3.2	<del>If possible identify and apply for project(s) to support the work</del> <del>Project for further development.</del>													
3.3.3	Target the gaps identified in the HELCOM monitoring programmes of biotopes, habitats, including key habitats and key habitats forming species by 2024 and operationalize continual Baltic-wide monitoring of those biotopes and habitats by 2030. * <a href="#">Contribution from EN BENTHIC related topics, for example on open-sea areas and hard substrates</a>													
	<del>Ensure-Facilitate that all-relevant</del> HELCOM monitoring programs are regionally coordinated and optimised*													
4.1	Review existing methods and techniques for assessing extent and quality of habitats and biotopes, including integration and aggregation methods.													
4.1.1	<del>Use outcome of review under activity 3.2.1.</del> Build on existing work and where possible feed into TG work and align its work with work on descriptor 6 at the EU level, e.g. under TG on Benthic Habitats. Progress on EU level to be shared with each meeting. Review to support the state of the Baltic Sea assessment process.													

Task	Action	2022	2022	2022	2022	2023	2023	2023	2023	2024	2024	2024	2024	Comments from EN BENTHIC 8-2021
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
4.2	Red List Assessment													
4.2.1	Contribute to update the HELCOM Red List Assessments by 2024, including identifying the main individual and cumulative pressures and underlying human activities affecting the red listed species.*													
	Contribute to work on ensuring that by 2030 the HELCOM marine protected area (MPA) network amongst other things provides specific protection to species and biotopes listed as regionally threatened or near threatened in the HELCOM Red Lists.													
4.3	Support the development of thresholds in order to assess quality and extent of benthic habitats, particularly with relevance for regional coordination.													
4.3.1	Build on existing work and where possible feed into TG Seabed's work and align its work with work on descriptor 6 at the EU level, e.g. under TG Seabed on Benthic Habitats. Progress on EU level to be shared with meeting.													
4.3.2	Collect national information on thresholds and approach, share with meeting and discuss strong and weak points.													
4.3.3	Share experiences on assessing the extent of adversely affected area and identifying issues, challenges and possible solutions.													
4.4	Identifying possible new indicators.													
4.4.1	Support the indicator review and update process, agenda item to be added at every meeting.													

Task	Action	2022	2022	2022	2022	2023	2023	2023	2023	2024	2024	2024	2024	Comments from EN BENTHIC 8-2021
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
4.4.2	Share information on newly proposed indicators from scientific publications, projects both inside and outside of the Baltic Sea.													
4.5	Support Lead countries to further develop and review benthic habitat indicators, in close cooperation with other relevant HELCOM initiatives and initiatives outside HELCOM, e.g. OSPAR and ICES. This includes but is not limited to:													
4.5.1	Supporting the updating the core indicator reports at regular intervals, as decided in HELCOM. Information point by the Secretariat in the agenda at the annual meeting.													
4.5.2	Reviewing and commenting indicator-based assessments of benthic communities and habitats to enable a timely and quality assured delivery.													
4.6	Defining loss and disturbance from human activities*													
	<u>With appropriate cooperation with EU TG Seabed,</u> Define a common approach to address the loss of and disturbance to seabed habitats caused by human activities (by 2026)*													
5.1	Reporting													
5.1.1	Chair to report to each State and Conservation meeting.													