



Baltic Marine Environment Protection Commission

Group for the Implementation of the Ecosystem Approach GEAR 22-2020
Online, 27-29 April 2020

Document title	Draft Terms of Reference for the Cumulative Impacts Assessment and Ecosystem Analysis in the Baltic Sea Region Workshop
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Please note that amendments made to the ToRs following the meeting of the workshop planning team on the 8 April 2020 might warrant a revised version of this document to be submitted to GEAR 22-2020.

Background

In relation to the planned GEAR workshop on Cumulative Impacts Assessment and Ecosystem Assessment, as discussed at GEAR 21-2019 (GEAR 21-2019 outcome, para. 5.18-5.27), the Secretariat has prepared a draft of the ToRs for the Workshop, attached to this mail. They are primarily based on the outcome of GEAR 21 and the discussions at the meeting, and on what information might be needed for inclusion in the relevant step for the HOLAS III preparatory phase.

The outcome of the workshop will define the work to be included in work package 1 on further development of the cumulative impacts assessment in the HELCOM Holistic Assessment Methodology Development Project (HELCOM MetDev) (first draft of the project plan is available in document 5-4 to this meeting). The MetDev project constitutes the third and last step of the preparatory work for the HOLAS III assessment and the aim of the project is to ensure that the tools and methods used are fit for purpose and operational for the HOLAS III assessment phase.

With regards to the dates of the workshop, which was originally planned for April 2020, HOD 57-2019 took a preliminary decision that the workshop be organized in early autumn this year.

The Meeting took note of the information that the proposed dates for the workshop on Cumulative Impacts Assessment and Ecosystem Analysis in the Baltic Sea Region (23-24 April 2020) overlap with the dates for PRESSURE 12-2020. The Meeting invited the Secretariat and the Gear group to consider alternative dates for the workshop, possibly back-to-back with an MSP workshop on cumulative impacts assessment currently being planned for autumn 2020).

This has naturally extended the originally planned timeline of the workshop, and the approval of the MetDev project plan, however the planning and preparation for the workshop would need to commence to meet the autumn deadline.

With regards to the possibility to arrange the workshop back to back with a MSP workshop on cumulative impact assessment the Secretariat has been in contact with the project arranging the mentioned MSP workshop. The project was approached with the suggestion to arrange the events back to back and showed positive interest. It is worth to note that based on the preliminary information received it seems the planned MSP workshop is quite technical in nature. To accommodate the various deadlines for HELCOM meetings in autumn the GEAR cumulative impacts workshop would need to take place in the second week of September at the latest. The MSP project consortium intends to take a decision on dates for their workshop by the end of April and they are aware of HELCOMs plan to arrange a workshop as well as the restrictions places on the timing by the need to report to the autumn meetings.

The ToRs were sent for review and input to GEAR on the 19 March 2020. CPs were invited to provide further comments by 2 April 2020. Comments were provided by the EU and Germany.

The first meeting of the workshop planning team (DE, DK, FI, SE and possible EE) will be convened on **8 April 2020** to consider input provided to the ToRs and commence the more concrete planning (e.g. agenda, preparing background to the policy related questions, who has tools to present, what questions do we need to ask them to prepare to answer when presenting etc.). **Please note that amendments made to the ToRs following the planning team meeting might warrant a revised version of this document to be submitted to GEAR 22-2020.** The ToR will be presented for approval at GEAR 22-2020. Possible associated documents stemming from the planning team meeting will be presented for information. Invitation, along with the approved ToRs and preliminary agenda, are proposed to be sent during the **first week of May**, to ensure participants have the possibility to reserve time for the workshop in their calendars prior to summer holiday season starting.

This document contains the draft ToRs for the Cumulative Impacts Assessment and Ecosystem Analysis in the Baltic Sea Region Workshop where input provided by the EU and Germany, and where possible further elaboration by the Secretariat, is included with track changes.

Action requested

The Meeting is invited to approve the ToRs for the workshop.

DRAFT Terms of Reference for the Cumulative Impacts Assessment and Ecosystem Analysis in the Baltic Sea Region Workshop

[Proposed] Location: HELCOM Secretariat, Helsinki, Finland

[Proposed] Date:

Background to the workshop

The ultimate aim of assessing the state of the marine environment is to ensure that the efforts to protect, conserve and, where practicable, restore the environment it are successful, with the ultimate aim of maintaining biodiversity and providing diverse and dynamic oceans and seas which are clean, healthy and productive.

The objectives of the 2013 HELCOM Monitoring and Assessment Strategy include to support an ecosystem-based management of human activities and to provide a system that enables linking the quality of the environment to its management. The Strategy also aims to support ecosystem-based Maritime Spatial Planning (MSP) in the Baltic Sea through enabling-collecting high-quality spatial data and assessment information for MSP purposes. In order to achieve this, the Strategy seeks to deliver data among others to identify relevant activities and quantify intensities and distribution of the anthropogenic pressures affecting the marine environment and to identify and quantify their impacts on the Baltic Sea ecosystem.

Human activities in the Baltic Sea and its catchment area create a variety of potential pressures, potentially leading to negative impacts on the environment. If each of the pressures is considered individually, they may appear to be at sustainable levels that do not lead to adverse environmental effects. However, when summed together considered in a cumulative manner, their total impact may be considerable, e.g. if they take place in the same area and at the same time, in particular when acting together on the same sensitive habitats or species. In reality, at any given point multiple pressures are affecting the species and habitats of the marine environment and causing cumulative impacts. The pressures impacts affect both the biotic and abiotic parts of the marine environment, but ultimately the impacts causes affect the propagate to species in different parts of the food web. HELCOM has used the Baltic Sea Pressure Index (BSPI) and the Baltic Sea Impact Index (BSII) in its holistic assessments HOLAS I in 2012 and HOLAS II in 2018 the Baltic Sea Pressure Index (BSPI) and the Baltic Sea Impact Index (BSII) as one means in support of an integrated ecosystem-based assessment. In the future it is intended to use the "Cumulative Impact on Benthic Biotopes" index to assess the impact on the seabed under Descriptor 6 Criteria 3. The indices which have been evolving over time, bring together spatial information on the distribution and intensity of activities, the subsequent pressures and their potential (cumulative/additive) impacts on the marine environment ecosystem components.

As stated in Directive 2008/56/EC (the Marine Strategy Framework Directive, MSFD) it is evident that pressure on natural marine resources and the demand for marine ecological services are often too high and that there is a Community needs to reduce environmental its impacts on marine waters regardless of where their effects occur. For HELCOM EU Member States, MSFD Art.8(1)(b) (ii) obliges that, in respect of each marine region or subregion, Member States shall make an initial assessment of their marine waters, taking account of existing data where available and cover the main cumulative and synergetic effects of the predominant pressures and impacts, including human activity, on the environmental status. Commission Decision (EU) 2017/848 outlines that these relevant anthropogenic pressures include biological pressures (Descriptors 2 and 3), physical pressures (Descriptors 6 and 7) and substances, litter and energy (Descriptors 5, 8, 9, 10 and 11), as listed in the revised Annex III to Directive 2008/56/EC (Commission Directive (EU) 2017/845).

For the HELCOM State of the Baltic Sea 2018 report pressures from human activities were broadly categorized into inputs of substances (including for example nutrients and hazardous substances), inputs of energy (underwater sound), biological pressures (including for example extraction of fish and disturbance to

Commented [A1]: EU proposal

Commented [A2]: DE: Unclear what this means

Commented [A3R2]: Secretariat: in this instance I believe quality refers to the status of the environment.

Commented [A4]: DE proposal

Commented [A5]: DE proposal

Commented [A6]: DE proposal

Commented [A7]: EU proposal

Commented [A8]: EU: meaning of "impacts causes affect"?

Commented [A9]: DE proposal

Commented [A10]: DE proposal

Commented [A11]: EU: Does BSPI/BSII provide outputs on specific ecosystem components? My understanding is that the outputs are a more generalized spatial product.

Commented [A12R11]: Secretariat: currently BSII does not show the impact per ecosystem component (although I guess in theory this could be done if the index was run individually for each ecosystem component) but each cell shows what pressures and ecosystem components are included for that specific cell, so each cell represents a subsample of pressures and ecosystem components based on their spatial distribution.

Commented [A13R11]: Secretariat (JuH): Outputs for specific ecosystem components are technically possible to include, if deemed necessary.

Commented [A14]: EU proposal

Commented [A15]: EU: Whilst this is not incorrect, I wonder if it is helpful to place so much emphasis here on EU needs but rather focus on needs of BSAP and HOLAS III, and introduce MSFD aspects later. The 2017 GES Decision requires impacts for 'single pressures' (D2, 3, 5, 6, 7, 8, 9, 10 and 11) to be taken into account when assessing the state of the biodiversity under D1, 4 and 6, leading to assessments per ecosystem component (species group, broad habitat type and ecosystem), thereby reflecting the cumulative impacts upon these features. MSFD does not seek a 'super aggregation' of pressures/impacts per area (grid) or to integrate across descriptors and features into a more aggregated 'health/GES' index.

Commented [A16]: DE: All in all, this paragraph is much too detailed. I cannot see how this description serves the actual ToR of the task at hand. I suggest to shorten this paragraph considerably.

species), and physical pressures (physical loss and physical disturbance to the seabed). The data for the State of the Baltic Sea assessment represented a wide range of human activities and potential pressures of relevance to the region. In all, thirty-nine original data sets of human activities were aggregated into eighteen aggregated pressure layers representing pressure levels at sea. The layers are described in more detail in the relevant-respective Thematic assessment report of cumulative impacts on the Baltic Seas. The Baltic Sea Pressure Index (BSPI) depicts the cumulative distribution of potential pressures in the Baltic Sea, based on these aggregated pressure layers. It should be noted, however, that the intensity of the pressures in relation to the impacts on the environment that they may cause is typically not incorporated. Additionally, thirty-six ecosystem component data layers, which represent the distribution of species and habitats, were included for assessing cumulative impacts using the Baltic Sea Impact Index (BSII). The cumulative impact was estimated by combining the information on species and habitats with the information on the distribution of pressures, using estimates of the sensitivity of the different species and habitats to the different pressures. The sensitivity was estimated by sensitivity scores, which were obtained from a survey answered by over eighty selected experts representing marine research and management authorities in seven Baltic Sea countries. The results were evaluated for compatibility with a literature review study on physical loss and disturbance of benthic habitats, and assessed in relation to a self-evaluation of the experts on their confidence in their replies. The methodology has however still been subject to controversial discussion amongst experts and Member States. Also, the indicator "Cumulative Impact on Benthic Biotopes" is intended to be used for future assessments of the adverse effects of physical disturbance to the seabed, D6C3.

Early planning for the HOLAS III process, including the assessment of cumulative impacts, has been identified as important for the successful implementation of the next holistic assessment. In light of this, GEAR 20-2019 commenced the planning process through a scoping exercise where the Working Group discussed components of HOLAS III. This included aspects possibly missing, needing further development or benefitting from a different approach based on the work done under HOLAS II, as well as considering what might be needed for HOLAS III in terms of e.g. MSFD requirements and how work done under the BSAP update might be incorporated. The meeting invited the Secretariat and the relevant Expert Groups to prepare more specific information on identified gaps and development needs for the various work strands not covered by the indicator work, as identified in the HOLAS II process or in subsequent work. A document was prepared which contains initial proposals for further improvements of the Baltic Sea Pressure and Impact indices, respectively. The proposals are based on the input received during the HOLAS II process. Actual improvements and development of the indices would be included in step 2 and 3 of the HOLAS III preparatory phase (suggested to start in summer 2020 and beginning of 2021 respectively), as outlined in the preliminary plan for HOLAS III.

GEAR 21-2019 considered the proposals for further improvements of the Baltic Sea Pressure and Impact indices in HOLAS III and took note that the use of the information from the indices has varied between countries. The meeting acknowledged that, should the details of the maps be further improved, they could provide a valuable tool for MSP at a local level and noted that further development work of the indices has taken place under the PanBaltic Scope project.

The meeting concluded as follows:

- to include BSPI/BSII as part of HOLAS III, but in what capacity and format is still in need of further discussion
- the BSPI/BSII can further be used for transboundary purposes, such as MSP purposes
- there is clear need to continue discussions on regional cumulative impacts assessment for HOLAS III

The meeting agreed to organize a workshop focusing on how to tackle cumulative impacts assessment and ecosystem analysis in the Baltic Sea region. A focus should be the careful consideration of the possible use

Commented [A17]: EU proposal: "levels of each pressure at sea"

Commented [A18]: EU proposal

Commented [A19]: EU: Doesn't the BSII do the 'impact' bit and the BSPI is only about pressures?

Commented [A20R19]: Secretariat: this refers to that the BSII shows the level of impact based on the number and type of pressures in a given grid cell (from BSPI) and the relation between the underlying ecosystem components to said pressures through the use of sensitivity scores. It has however not been possible to link back from the level of impact (BSII) to the pressures (BSPI) to identify the proportion by which a given pressure is contributing to the total level of impact. If available this information could be used to better guide and target measures spatially and improve their effectiveness.

Commented [A21R19]: Secretariat (JuH): Perhaps this sentence is a bit unclear and doesn't give the same impression that one gets from the explanation above. Regarding the possibility to include: this kind of analysis is technically possible to include, if prioritized to be valuable enough regarding the amount of work it would need.

Commented [A22]: EU proposal

Commented [A23]: EU: Did the literature review not cover the species and other types of pressure?

Commented [A24]: EU: Not wishing to change whatever was in the summary record of the GEAR meeting, for me a key issue is what is the added value of BSPI/BSII to the status assessments of species, species groups and habitats which should reflect, both in theory and in practice, the cumulative effects of all pressures upon them. This is the intent of the GES Decision is getting 'impacts' from individual pressures considered when doing the D1, 4 and 6 assessments (e.g. integration of oxygen depletion zones from eutrophication assessments into the seabed habitat assessments).

Commented [A25R24]: Secretariat: To my understanding what we are lacking in the current biodiversity indicators is the link between what pressures are causing the impact, to what degree, and where (at a resolution which is practical for management), which, if available, would be useful for identifying where to target measures and what pressures to target in a given area to achieve the most benefit. It is my understanding that the status assessment is done to show the effectiveness of existing measures but should also present information which can be used to guide further measures and in that way contribute to improving the state of the environment?

Commented [A26]: DE: Shorten considerably and refocus.

Commented [A27]: EU: GEAR discussion was also about what is the use/added value of BSPI/BSII to the thematic assessments of HOLAS, and perhaps these indices now had a different purpose (e.g. more for MSP).

Commented [A28R27]: Secretariat: this is an extract of the outcome and thus cannot be changed. But this could be included in the Objectives or Task sections instead?

of BSPI/BSII and needs for its further improvement or use of other/additional tools. The Workshop could also consider available national approaches as well as OSPAR approaches to cumulative impacts assessments and possibly build on the EU workshop ~~that is expected to be take place in September 2020 held on 23 March – 1 April 2020~~ touching upon cross cutting issues. ~~Other workshop outcomes where cumulative impacts are discussed, such as the UNCLoS workshop on 28–29 January 2020 in Brussels, may also be included where cumulative impacts will be discussed.~~

Objectives

The objectives of the workshop, based on the experiences gained from the application of the BSPI/BSII in HOLAS I and II, ~~and the needs of HOLAS thematic assessments to account for multiple pressures and impacts on the different ecosystem components,~~ are to:

- a. ~~identify what is required from cumulative impacts assessment and ecosystem analysis in the Baltic Sea Region. The focus should be on how an ecosystem-based assessment should be designed for HOLAS III which that takes into account cumulative effects of pressures and multiple impacts should be designed for HOLAS III from various pressures~~
- b. identify how the experience with the BSPI/BSII can be used for HOLAS III and ecosystem-based management approaches in HELCOM
- c. ~~focus on the careful consideration of the possible use of cumulative impacts assessment BSPI/BSII as an overall tool and needs for its further improvement (data basis, expert judgement, weighing of –pressure layers etc.) or use of other/additional tools to BSPI/BSII~~
- a. —
- b. d. identify how such HELCOM assessments can be used by HELCOM EU Member States under MSFD.

To achieve the workshop objective, work should focus on practical aspects and ~~develop proposals should be developed~~ on which assessment method to use, ~~taking into account with the~~ different levels of data availability.

Due to time and resource limitations existing methods and tools should form the basis for ~~the cumulative impact~~ assessment for HOLAS III. To this end Contracting Parties are invited to present the national methods and tools for assessing cumulative impacts on the marine environment, with special focus on the strengths and weaknesses of each tool, as well as lessons learned leading up to 2018 MSFD Art. 8 reporting.

Preparation

In accordance with the agreement at GEAR 21-2019 a planning team for the workshop will be set up consisting of Denmark, (Estonia), Finland, Germany and Sweden. This planning team will work closely with the Secretariat to draft documents and develop further planning of the Cumulative Impacts Assessment and Ecosystem Analysis in the Baltic Sea Region Workshop.

The following information would be collated for the workshop to consider and build on:

- presentations and background information on national approaches and tools for assessing cumulative impacts, as outlined under the ‘Objectives’ section.
- presentation and background information on the current HELCOM methodology and tools available for assessing cumulative impacts and ecosystem analysis, including ~~critical appraisal and~~ developments post HOLAS II.

Commented [A29]: DE proposal

Commented [A30]: EU: Now postponed – 28-30 September for WG GES/workshop

Commented [A31R30]: Secretariat: this is too late for the outcome to feed into the Cumulative Impacts WS, but maybe some background material prepared for the meeting could be relevant and be shared with the WS?

Commented [A32]: DE proposal

Commented [A33]: EU: What is this?

Commented [A34R33]: Secretariat: this was brought forward by Estonia (if I remember correctly) at the last GEAR meeting.

Commented [A35]: DE proposal

Commented [A36]: EU proposal

Commented [A37]: DE: It is completely unclear what this thing is exactly. It needs to be clearly defined here in the background section or in the beginning of the objectives section

Commented [A38R37]: Secretariat: we can discuss this at the online meeting on the 8 April. This was discussed and added in GEAR 21-2019, but it is not fully clear to me what the term encompasses.

Commented [A39]: Secretariat: please note that the intention of the workshop is not to discuss how to do holistic assessment for HOLAS III but on cumulative impacts assessment.

Commented [A40]: DE proposal

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Commented [A41]: DE proposal

Commented [A42R41]: changed BSPI/BSII to cumulative impact assessment since one of the outcomes of the WS is to agree on what tool to use as a basis and it might not be BSPI/BSII in it's current form.

Commented [A43]: EU: There should be an objective to conclude on how BSPI/BSII or its underlying data could contribute to HOLAS III and how this should be taken forward, and on what is the added value of BSPI/BSII compared to thematic assessments of ecosystem components for HOLAS III.

Commented [A44R43]: Secretariat: does c) cover this now or would a separate point still be needed?

Commented [A45]: DE proposal

Commented [A46]: DE proposal

Commented [A47]: DE proposal

Commented [A48R47]: Secretariat: we need to consider who is doing the critical appraisal (CPs or the Secretariat) and what to focus should be (is it technical gaps or issues, is it enduser experiences, etc) so that we know what we are looking for and who should provide it.

- presentation and background information on the current OSPAR methodology and tools available for assessing cumulative impacts
- Include relevant information from the EU workshop WG GES that is expected to be held in September 2020 to be held on 23 March – 1 April 2020 touching upon cross cutting issues and the UNCLOS workshop on 28–29 January 2020 in Brussels where cumulative impacts will be/were discussed.

Tasks to be carried out during the workshop

To achieve the workshop objective of a cumulative impacts assessment and ecosystem analysis in the Baltic Sea Region, the following tasks are to be carried out during the workshop:

- I. Map what the current and possible uses of the assessment outputs are, both in their current form and in an optimal format.
- II. The Workshop should considering the added value of cumulative impacts assessment and ecosystem analysis in the Baltic Sea Region as an overarching analysis, but also related to MSFD descriptors and cross-cutting issues between individual descriptors, both from a national and a regional perspective.
- III. Identify data needs including aspired improvements for carrying out assessments and compare these to current data availability on a regional level.
- IV. Explore how analysis and interpretation of assessment results (including how to deal with uncertainty and possibilities for validation of assessment results) should be handled in order to improve the usability of products to meet the requirements of the different scales (regional assessment and national MSFD Art. 8 reporting for those CPs who are also EU member states).
- V. Explore the need for, and possible approaches to, better link the cumulative assessment with the results of state and pressure indicator evaluations. This information may contribute to proposals on improving the current integrated assessment approaches.

Workshop participants

The workshop will be open to all Contracting Parties and observers of HELCOM. There would be a specific relevance to include the following participants:

- GEAR representatives
- representatives of other involved HELCOM Working Groups,
- Experts familiar with the various tools available, including the strengths, weaknesses, data requirements and limitations.
- OSPAR representatives with direct experience on the methodology and tools used in OSPAR for cumulative impacts assessment.

The expertise/experience required includes: familiarity with HELCOM holistic assessment, familiarity with the HOLAS II assessment, familiarity with relevant policy requirements (e.g. MSFD Status assessments, Art. 8), and/or expertise in the identified topic areas.

Outcome

The possible expected outcomes of the workshop are:

- a) a proposed common approach for a holistic ecosystem-based assessment including cumulative impact assessment and associated data needs,

- Commented [A49]:** EU: 28-30 September 2020 (tbc)
- Commented [A50R49]:** Secretariat: please see my comment above about the timing of the GES workshop and whether it might be possible to still incorporate some of the information.
- Commented [A51]:** DE proposal
- Commented [A52]:** DE: I feel that the tasks are not well-aligned to the objectives. I do not know what the original goal was, so I cannot just do the reformulation myself. It will be helpful to map the individual tasks to the objectives named above
- Commented [A53R52]:** Secretariat: I have tried to show how each task is linked to the relevant objectives in the comments below, but further discussion on how to improve this can be had at the meeting on the 8 April.
- Commented [A54]:** Secretariat: linked to objective A and B, the use should guide the requirements,
- Commented [A55]:** EU: proposal to start the sentence with "Considering..."
- Commented [A56]:** DE: what is meant by 'consider' here? We should not discuss whether there is an added value, because then the whole workshop has a completely different goal
- Commented [A57]:** Secretariat: linked to objectives c and d
- Commented [A58]:** Secretariat: linked to objective a), c) d).
- Commented [A59]:** DE: what exactly are 'products'? Indices/indicators?
- Commented [A60R59]:** Secretariat: products refers to the assessment products e.g. maps, dataset, data layers, metadata...
- Commented [A61R59]:** JK: Perhaps better term instead of products could be "output data products"
- Commented [A62]:** Secretariat: Linked to objectives c and d.
- Commented [A63]:** DE: which assessment? the cumulative assessment using BSPI/BSII et al.? The assessment from the workshop?
- Commented [A64R63]:** Secretariat: this was intended to (...)
- Commented [A65]:** DE proposals
- Commented [A66]:** DE: unclear which evaluation is (...)
- Commented [A67R66]:** Secretariat: in order to separate (...)
- Commented [A68]:** Secretariat: linked to objective a.
- Formatted:** English (United Kingdom)
- Commented [A69]:** DE: It would be contradictory to the (...)
- Commented [A70R69]:** Secretariat: further discussion d (...)
- Commented [A71]:** Secretariat: this workshop is not (...)
- Commented [A72]:** DE: It is not clear from the ToR what (...)
- Commented [A73R72]:** Secretariat: as a minimum are (...)

- b) a clear path ahead ~~will be defined~~, with identified major gaps being a subsequent focus,
- c) a clear ~~regional~~ common understanding of what can be achieved by HOLAS III,
- d) ~~to include~~ for the ~~workshop results~~ ~~outcome to be included~~ in the planned steps 2 (HELCOM DataFlow project) and 3 (HELCOM MetDev project) in the Preparatory Phase of HOLAS III.