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## Background

To support the work in MORS EG related to revising threshold values a brief introduction is provided that covers: 1) any known deadlines related to the process, 2) the steps and processes for developing and approving a threshold value, and 3) how the indicator assessment of radioactive substances was applied in the thematic and integrated assessment of hazardous substances in HOLAS III.

## Action requested

The Meeting is invited to take note of the information provided and use it as needed to support the discussion and work ahead.

## Threshold values process and relevance to hazardous substances overall assessment

This document aims to provide a brief overview of processes and deadlines that may be relevant for the work on adjusting threshold values.

### Known deadlines related to the process

Under the 'Future work on HELCOM indicators' review and prioritization process a number of key deadlines were established (as detailed in the endorsed plan in [document 4-20](#) to HOD 57-2019). To avoid overlapping indicator adjustment/development work with data collection and analyses processes in HOLAS III it was agreed that all indicator adjustment/development work must be completed by the end of 2021. All adjustments/developments not completed and approved by this deadline will not be possible to include in HOLAS III.

All adjustment and development work, inclusive of new indicators or adjusted methodologies and threshold values, must therefore be finalized at the latest in advance of the autumn meeting of the relevant HELCOM Working Group that will endorse the proposed changes. In the case of MORS EG it would therefore be by State and Conservation. State and Conservation meetings are usually in early October with a deadline for decision (DEC) documents three weeks in advance of the meeting (e.g. early September 2021). It is however good to note here that several Contracting Parties have highlighted that there are often extended national approval processes (at times up to 2 months) related to threshold values, so where possible the spring 2021 Working Groups meetings would also be good to target. Lastly, it is important to also note that once endorsed by the relevant Working Group threshold values are submitted to HOD for final approval.

### Steps and processes for developing and approving a threshold value

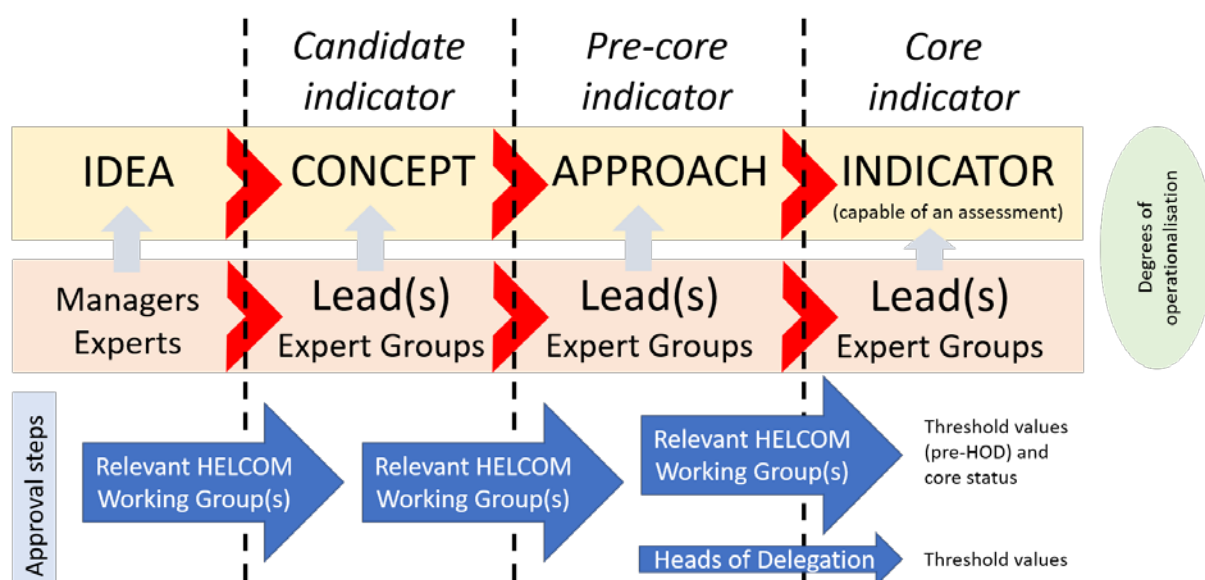
A HELCOM Indicator Manual is under development to try and document the indicator process within the broader HELCOM structure, but also to provide guidance and clear steps for how the process takes place. A first draft of the HELCOM indicator manual was provided to State and Conservation 12-2020 ([document 4J-5](#) and [Outcomes paragraphs 4J-42-44](#)). Comments received on this draft have been incorporated into a new version presented to State and Conservation 13-2020 and a typeset version with improved layout and visuals has also been prepared. The latter two documents will be available after the State and Conservation 13-2020 meeting has concluded (after 9 October – [layout completed version](#)).

The text below is extracted from the updated version presented to State and Conservation 13-2020 and covers the sections on approval of an indicator and threshold values as the latter aspect in particular may be relevant to this meeting. *Note that this text (in italics) is from a draft document at this stage.*

### *Approval and validation of an indicator*

*The approval of an indicator from the idea or concept stage is shown in the diagram below (Figure 3). In essence the idea should be developed to provide an indication of function and potential, within the Expert Groups, leading to an approval step by a relevant HELCOM Working Group to create candidate indicator status. State indicators and pressure indicators (see below) will be handled by State and Conservation and PRESSURE, respectively (described as 'relevant Working Group' from here on). At this stage it should ideally also present the opportunity for the relevant Working Group to identify the lead and/or co-lead countries and the identified experts (indicator contacts) to further the development. A candidate indicator is then developed further by the leads/co-leads, with the support of the 'host' Expert Group, before a more developed concept is available. Once the concept has been transferred to the indicator template and all components drafted, even if aspects such as threshold values or data flows may require further work/approval, then a version can be approved as a pre-core indicator by the relevant HELCOM Working Group. To achieve core indicator status*

the indicator in question should fulfil certain criteria (see below), though data availability and approved threshold values are two critical components. Threshold values should be approved initially by the relevant HELCOM Working Group and subsequently by HELCOM HOD (or appropriate high-level sections, e.g. the HELCOM Commission meetings). The elevation of an indicator from pre-core to core itself is decided at the relevant HELCOM Working Group, with consideration given to the above. An indicator can also be converted to a core indicator by a Working Group on the understanding that HOD approval on the threshold value(s) is pending, the indicator only returning to the Expert and Working Groups as a pre-core if threshold value approval is not achieved.



**Figure 3.** Generic overview of development and approval stages for HELCOM indicators.

### Threshold values

Threshold values, or the accepted deviation from a defined reference value, are a critical component of an indicator evaluation, providing the demarcation value at which good status, indicative of a healthy Baltic Sea ecosystem, is achieved. In this way the threshold values utilise scientific knowledge (such as baselines, levels, concentrations, or historic data trends) to provide an understanding of each environmental component evaluated against a commonly agreed and scientifically founded concept that represents ecosystem health. In this way, aspects such as an ecosystem undisturbed by anthropogenic pressure are considered, with the threshold value in essence encompassing the delicate balance between a healthy Baltic Sea and the sustainable use of the marine environment. Threshold values are generally specific to the indicator in question, and therefore approaches for setting these values and defining good status will differ between indicators, topics or themes. Furthermore, threshold values (i.e. the quantitative value) may also differ spatially within a single indicator (i.e. between assessment units) to account for local and sub-regional biological, physical or hydrographical variation. In such cases the description of a clear harmonised threshold value setting approach is critical to the understanding of the indicator. There are also cases where an indicator may not be applicable in certain assessment areas or sub-regions (or remain under development) and this must also be clearly reflected in the indicator report.

Threshold values are applied within indicators to address State (i.e. status of the marine environment) or Pressure (such as targets or ceilings for inputs) components. Despite the described differences there are certain commonalities. Moreover, there is also effort made to utilise similar threshold values (where scientifically justifiable) or at least common threshold value setting approaches across broader regions, thereby facilitating comparisons across and between different sea areas. Threshold values should be developed with the following aspects in mind:

- the highest possible level of scientific justification,
- clear referencing to the relevant documentation, -
- clear and understandable explanation (for policy, public and scientific community),
- direct relevance to policy requirements,
- where possible comparability across all relevant policy requirements.

The threshold value setting approach should be defined via the relevant 'host' Expert Groups and presented to the relevant HELCOM working Group for approval at the earliest opportunity. The final approval of the threshold value takes place by HELCOM HOD, after recommendation from relevant Working Group. Within the indicator report this/these value(s) must be clearly presented, described in relevant detail, and be supported by referencing to the literature from which it was derived.

Where preliminary threshold values or trend based threshold values are applied as a temporary approach, a review to assess the possibility to apply fully quantitative threshold values should be carried out prior to the following indicator evaluation phase (or update). There may also be cases where a quantitative threshold value is not possible to apply and precautionary qualitative or semi-quantitative approaches (e.g. no decrease) are applied, an aspect that should be well defined in the relevant section within the indicator report. Furthermore, during an update of the indicators (i.e. at a defined assessment or update) threshold values should be reviewed by the indicator leads/co-leads, supported by the 'host' Expert Group, to consider if they continue to reflect the best scientific knowledge available, and maintain the ambitious and precautionary ideals of HELCOM. It must also be noted that any proposed alteration in threshold values or the setting of these must follow due process and be approved by the relevant Working Group(s) and subsequently endorsed by HOD. Any change in the approach or threshold value must also be reflected in the report with a section of text explaining how it influences the interpretation, in particular compared to any previous evaluation carried out (i.e. earlier archived versions of the indicator report).

## The radioactive substances indicator and integrated/thematic assessments of hazardous substances

In the HOLAS II assessment (i.e. the [State of the Baltic Sea report](#)) carried out in 2018 the indicator evaluation ([2018 published version](#)) was also used in the integrated assessment of hazardous substances (see [summary report](#)) and presented in the [thematic assessment of hazardous substances](#). In the integrated assessment of hazardous substances tool (CHASE) the individual hazardous substances indicators, or components of them, are combined via a standardized scale (e.g. distance to threshold value) to allow integration of all indicators and provide an overview of status based on these monitored substances (or substance groups). The CHASE tool allows for biota, water and sediment sampling matrix types to be included. The radioactive substances indicator (Cesium-137) is also included in this integrated assessment process using the values for water and biota (the two fish species monitored). A confidence evaluation of the assessment is also provided based on the number of substances that enter the integrated assessment, and selected other factors.

It is envisaged that a similar process will be applied in HOLAS III.