



---

<b>Document title</b>	Heavy metals (lead, cadmium, and mercury)
<b>Code</b>	3J-61
<b>Category</b>	DEC
<b>Agenda Item</b>	3J-Progress of relevant HELCOM expert groups and projects
<b>Submission date</b>	13.09.2021
<b>Submitted by</b>	Secretariat

---

### Background

The document below provides a template filled by indicator leads to provide an overview of progress to STATE & CONSERVATION 15-2021. Key aspects such as methodologies, spatial extent changes, assessment scales and threshold values are presented, identifying ongoing work and other relevant issues towards HOLAS III. This process builds on the prior review of indicator development carried out under STATE & CONSERVATION 14-2021 (summarised in [document 4J-16 Rev.1](#), and detailed within numerous documents under agenda item 4J). The focus of these development works is the completion of indicator development and adjustment work for HOLAS III by the end of 2021, as previously agreed under HOD 57-2019 ([document 4-20](#), [Outcomes paragraph 4.51](#)).

The aspect of threshold values in particular is a key issue as threshold value approval will be carried out at HOD 61-2021, with these same templates being submitted to HOD at the same stage as submission to State and Conservation 15-2021 (to allow for the longer national processes required that culminate in approval at HOD).

The document below addresses a single indicator and as well as the generic 'action requests' relating to endorsement of the proposed application in HOLAS III (and the threshold values proposals, where relevant), specific additional requests or statements are also indicated within the separate sections of the document to help guide where further input/discussion/guidance may be needed.

This template aims to report the indicator development for HOLAS III, allowing for technical guidance and endorsement by STATE & CONSERVATION 15-2021 and also simultaneously to facilitate the threshold value approval process by HOD 61-2021.

### Action requested

The Meeting is invited to:

- provide further technical guidance to the indicator leads and experts, including specific requests defined within the document;
- consider and endorse the proposed developments of the indicator for use in the HOLAS III assessment.

## Metals (lead, cadmium and mercury)

<p><b>Indicator name</b></p> <p>Metals (lead, cadmium and mercury)</p> <p>Note that this indicator will be divided into three separate indicators for HOLAS III itself (starting with the Secretariat pre-filling the templates in the first half of 2022). This process will not change any components of the indicator(s), simply present the information per metal to simplify the understanding and use of the indicators.</p>
<p><b>Scale of assessment for HOLAS III and rational</b></p> <p>The assessment scale will not change and will be at Scale 4 (cf. Annex 1), as applied in HOLAS II.</p>
<p><b>Spatial coverage of the indicator for HOLAS III</b></p> <p>The spatial coverage is anticipated to increase due to greater data availability in the HELCOM COMBINE data (hosted by ICES), due to longer time series data, due to efforts within EN-HZ to review and update reported data, and due to ongoing work in the Baltic Data Flows project (e.g. national support for Latvia to develop national database solutions and enhanced reporting to COMBINE).</p>
<p><b>Methodology to be applied for HOLAS III and rational</b></p> <p>EN-HZ concluded the review and discussions related to relevant supporting parameters and agreed to maintain AI and CORG, where relevant. The conclusion is therefore that the methodology applied will be identical to that used under HOLAS II.</p> <p>Where relevant the (i.e. where mussels are already used as a sampling matrix) then EN-HZ proposes that the zebra mussel should also be included, applying the same methodology and threshold values already established for other bivalve species.</p> <p><b>The State and Conservation meeting is requested to endorse the inclusion of the zebra mussels, as proposed by EN-HZ, for the HOLAS III assessment, where it is relevant and monitored.</b></p>
<p><b>Threshold value setting logic and rational</b></p> <p>No change to the primary threshold values in any of the indicators (i.e. Hg, Pb, Cd considered separately) is proposed, they will be identical to those used under HOLAS II.</p> <p>There are however proposals from Denmark to adjust the secondary threshold values (i.e. threshold values applied to secondary sampling matrix types) for the threshold values listed in the next section. The basis of these changes is that Denmark has carried out extensive national work to propose new threshold values based on updated scientific knowledge and included new relevant data from the Baltic Sea region to set QS and EQS values, replacing previous threshold values that were based on older methods, older data (often dominated by freshwater data), or threshold values imported from the OSPAR region. The background information and scientific justification for the proposed changes is available in documentation within the EN-HZ 15 and 16 meeting sites and will be included as reference material in all indicator documentation.</p>

<p><b>Threshold value(s)</b></p> <p>Cadmium: Secondary threshold - <b>QS derived from EQS (whole fish, secondary poisoning) of 160 µg/kg ww mussels and fish</b> to replace <u>the</u> OSPAR proxy BAC 26 µg/kg ww fish liver (previous study reservation on this old threshold value from Denmark and Estonia) and previously applied OSPAR BAC of 960 µg/kg dw mussels. Relevant for Molluscs (M edulis + M. baltica), Herring &amp; cod (open sea) Flounder, sole, eelpout &amp; Perch (coastal).</p> <p>Lead: Secondary threshold – to <u>add the new proposal of 110 ug/kg ww</u> for mussels but to maintain the existing OSPAR proxy BAC 26 µg/kg ww fish liver.</p> <p>Lead: Secondary threshold - QS from EQS dossier 120 mg/kg sediment will be maintained for HOLAS III, but Denmark will retain their study reservation on application of this value in their national waters. Denmark will propose an option at State and Conservation to facilitate this data being used in assessment of other Contracting Party's waters.</p> <p><b>The State and Conservation meeting is requested to endorse the newly proposed threshold values, as proposed by EN-HZ, for the HOLAS III assessment (where relevant and monitored).</b></p>
<p><b>Other significant issues that need to be addressed or presented to State and Conservation</b></p> <p>No specific issues are noted for the current process.</p>
<p><b>Latest indicator report or (for new indicators) initially completed indicator template</b></p> <p>The latest version of the indicator is available on the HELCOM indicator web page, <a href="#">here</a>.</p>

## Annex 1



Scale

4\_HELCOM\_assessme