



## Baltic Marine Environment Protection Commission

Working Group on the State of the Environment and Nature  
Conservation

STATE & CONSERVATION  
6-2017

Uppsala, Sweden, 15-19 May 2017

---

<b>Document title</b>	Implementation of the Baltic Sea Impact index (BSII) and assessment of loss and disturbance of benthic habitats in 'State of the Baltic Sea' report
<b>Code</b>	4J-11-Rev.1
<b>Category</b>	DEC
<b>Agenda Item</b>	4J-HELCOM indicators and assessments
<b>Submission date</b>	28.4.2017
<b>Submitted by</b>	Secretariat
<b>Reference</b>	Outcome of HOLAS II 7-2017, para 5.18

---

The revised version of this document includes corrections and updates on the status of pressure and ecosystem component layers using tracked changes.

"GIS files (and metadata fact sheet describing the dataset) used as input data for BSII are available to the HELCOM workspaces (login required):

**Aggregated pressure layers:**

<https://portal.helcom.fi/workspaces/HOLASII-DATA1-116/Aggregated%20Pressure%20Layers/Forms/AllItems.aspx> (links to fact sheets to be provided in the first week of May)

**Ecosystem components:**

<https://portal.helcom.fi/workspaces/HOLASII-DATA2-117/Final%20datasets/Forms/AllItems.aspx>

**Human activities (underlying datasets used for aggregated pressure layers):**

<https://portal.helcom.fi/workspaces/HOLASII-DATA1-116/Final%20datasets/Forms/AllItems.aspx>"

### Background

HOD 51-2017 agreed in principle on the method to calculate the Baltic Sea Impact Index (BSII) and its use in the HOLAS II project, noting that the method to assess the impacts on ecosystem components will still be tested and the results will be presented to the planned HELCOM HOLAS II workshop in March 2017 (para 6.37). The Meeting mandated the workshop to recommend which method to use and the HOLAS II project to proceed according to those recommendations and present the outcome to State and Conservation 7-2017.

State and Conservation 5-2016 endorsed the use of the BSII approach for evaluating cumulative impacts on benthic habitats, taking note of the Danish study reservation and recalling the longer term aim is to operationalize the indicator on 'Cumulative impact on benthic biotope'. The evaluation of loss and disturbance of benthic habitats is an inherent part of the BSII approach as outlined in this document.

This document contains a comprehensive description of the method to calculate the BSII and 'Loss and disturbance of benthic habitats', and of the development of underlying data layers and sensitivity scores for assessing impacts. The ecosystem components layers and aggregated pressures layers used in the assessment are included in Annex 1. The input data layers will also be made available at the HELCOM workspace (link to be provided via e-mail). The following should be noted:

- The extent of pressures causing loss and disturbance on benthic habitats was included in the document on the BSII method presented for approval at HOD 51-2016. In the current document references have been added to clarify the sources of information (Annex 2).
- The methods for aggregating and processing all pressure layers to be included in the BSII (section 4, Annex 2) were already included in the document presented for approval at HOD 51-2016.

- The majority of data sets used as basis for the pressures and ecosystem components layers have been agreed by Contracting Parties through the data approval process that has taken place from December-March 2017 while some layers are still being processed pending comments by Contracting Parties. Note that all layers have been used in the assessment of Cumulative impacts on the marine environment, Chapter 6, in the 'State of the Baltic Sea report (see separate meeting document).
- Three new pressures layers have been developed after the HELCOM SPICE BSII workshop representing input of nutrients (nitrogen and phosphorus, respectively) and input of hazardous substances (Table 2, Annex 1: layers 8-10).
- The use of sensitivity scores is clarified in this document (sections 5.1-5.3) with a proposal on how to adjust the sensitivity scores where motivated, on the basis of analyzing the score based on the expert survey that has been carried out and scores derived from a literature survey.
- HOLAS II 7-2017 requested to seek a solution for how to display the confidence in the assessment. A proposal is presented in section 5.4.

### Action requested

The Meeting is invited to

- take note of the comprehensive description of the BSII approach and the approach to use the BSII for estimating loss and disturbance of seabed habitats.
- agree on the use of the proposed pressures layers 'input of nitrogen', 'input of phosphorus' and input of hazardous substances' (Annex 1, layers 8-10).
- agree on the proposed adjustment of sensitivity scores (section 5.3)
- agree on how to present the confidence in the results in the 'State of the Baltic Sea' report
- agree to calculate the cumulative impact as a sum of the impacts on ecosystem components (sections 2 and 7).