



Document title	Status of eutrophication indicators
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Agenda Item	2– Eutrophication indicator development
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Reference	

Background

To support the preparatory phase of the HOLAS III assessment, STATE&CONSERVATION 14-2021 considered the status of indicators included in the eutrophication assessment (documents 4J-34–4J-42, [presentation](#)). To ensure inclusion of relevant indicators in the assessment, the meeting invited IN Eutrophication to further define the following indicators:

For the total nitrogen and phosphorus indicators, State&Conservation invited IN Eutrophication to suggest threshold values for all relevant assessment units and to submit this information in STATE&CONSERVATION 15-2021. The Meeting encouraged all relevant CPs to strive to find an acceptable solution to ensure inclusion in HOLAS III.

Regarding the Phytoplankton spring bloom intensity based on chl-a, State&Conservation noted that threshold values need to be established for the indicator through ecological model simulations and, that while potential models exist (e.g. ERGOM, BALTSEM), the models are not available via the Lead country Finland and currently no resources have been secured to bring the work on threshold values forward. The meeting invited IN Eutrophication to continue the work and encouraged all relevant CPs to strive to find an acceptable solution to ensure inclusion in HOLAS III.

For Cyanobacterial Bloom Index (CyaBI), STATE&CONSERVATION 14-2021 recalled that both Germany and Denmark have study reservations on the indicator. The meeting noted that the reasons behind the German study reservation are not clear to the indicator lead and invited Germany to provide further clarification on the open issues in writing to lead country Finland (vivi.fleming@syke.fi) and the Chair of PEG Iveta Jurgensone (iveta.jurgensone@lhei.lv) prior to the IN EUTROPHICATION 20-2021 meeting. The meeting further noted that the Danish study reservation concerns Kattegat and Danish straits and invited Denmark to prepare for further discussions in IN EUTROPHICATION 20-2021 to support finding a solution before STATE & CONSERVATION 15-2021.

STATE&CONSERVATION 14-2021 further took note that there is currently no lead for the shallow water oxygen indicator and invited CPs to consider taking lead by informing the Secretariat (owen.rowe@helcom.fi).

This document contains extract from the outcomes of STATE&CONSERVATION 14-2021 regarding indicators related to the eutrophication assessment and the associated requests to IN Eutrophication.

Action requested

The Meeting is invited to take note of the outcomes of STATE&CONSERVATION 14-2021 and to:

- discuss defining threshold values for all relevant assessment units for the Total nitrogen indicator;

- discuss defining threshold values for all assessment units for the Total phosphorous indicator;
- discuss solutions to ensure inclusion of the Phytoplankton spring bloom intensity based on chl-a indicator in HOLAS III;
- take note of further details on the study reservations on the Cyanobacterial Bloom Index indicator and consider a way forward;
- discuss options for appointing a lead for the shallow water oxygen indicator.

Introduction

This document contains extracts from the outcome of STATE&CONSERVATION 14-2021 regarding indicators used in eutrophication assessment requiring further consideration from IN Eutrophication.

Indicator: Total nitrogen

4J.185 The Meeting took note of the Total nitrogen indicator (document 4J-36-Rev.1, Presentation 6), as presented by the Secretariat.

4J.186 The Meeting took note that proposals for threshold values for this indicator already exist for the basins where the indicator was not applied in HOLAS II, however, there is political disagreement on which threshold values should be used.

4J.187 The Meeting noted the statement from Germany that as there are no agreed threshold values for the indicator in those basins shared by Germany, Denmark, Sweden and Poland yet, the indicator will not be applied in the German waters for HOLAS III. Should a threshold value be jointly agreed by the Contracting Parties sharing the area Germany may reconsider its position.

4J.188 The Meeting noted that Poland is in favor of agreeing on threshold values for the Bornholm basin prior to HOLAS III and that there is preliminary national acceptance on the proposed threshold values in Poland.

4J.189 The Meeting noted the information that the possible division of the assessment areas (as presented in document 4J-82) would affect this indicator and may facilitate the work towards finding a solution for agreeing on threshold values for the Bornholm basin.

4J.190 The Meeting invited IN EUTRO to suggest threshold values for all relevant assessment units for the Total nitrogen indicator, utilizing the upcoming IN EUTRO 20-2021 meeting, and to submit this information in STATE & CONSERVATION 15-2021. The Meeting encouraged all relevant CPs to strive to find an acceptable solution to ensure inclusion in HOLAS III and invited relevant national contacts to participate in IN EUTRO 20-2021.

4J.191 The Meeting emphasized that, in the event that it is not possible to agree on threshold values for all areas, the indicator should be used in HOLAS III for those assessment units for which it is applicable and for which threshold values are already agreed.

Indicator: Total phosphorus

4J.194 The Meeting took note of the Total phosphorus indicator (document 4J-37-Rev.1, Presentation 6), as presented by the Secretariat.

4J.195 The Meeting took note that proposals for threshold values for this indicator already exist for the basins where the indicator was not applied in HOLAS II, however, there is political disagreement on which threshold values should be used.

4J.196 The Meeting noted the statement from Germany that as there are no agreed threshold values for the indicator in those basins shared by Germany, Denmark and Poland yet, the indicator will not be applied in the German waters for HOLAS III. Should a threshold value be jointly agreed by the Contracting Parties sharing the area (Germany, Denmark, Sweden, and Poland) Germany may reconsider its position.

4J.197 The Meeting noted the comment by Estonia that it would also be important to agree on threshold values for eastern Gotland basin, and encouraged discussion and progress on this at the next meeting of IN EUTRO.

4J.198 The Meeting invited IN EUTRO to suggest threshold values for all assessment units for the Total phosphorous indicator, utilizing the upcoming IN EUTRO 20-2021 meeting, and to submit this information

in STATE & CONSERVATION 15-2021. The Meeting encouraged all relevant CPs to strive to find an acceptable solution to ensure inclusion in HOLAS III and invited the CPs to ensure that the relevant national contacts participate in IN EUTRO 20-2021 and can present the national positions.

Indicator: Phytoplankton spring bloom intensity based on chl-a

4J.201 The Meeting took note of the Phytoplankton spring bloom intensity based on chl-a (document 4J-40, Presentation 6), as presented by the Secretariat.

4J.202 The Meeting welcomed the information that the indicator has been provisionally tested under the EUTRO-OPER project and performed well, however no threshold values have been set.

4J.203 The Meeting took note of the information from the Chair of IN EUTRO that the indicator has the potential to respond more quickly than the present summer-time chlorophyll-indicator to load reduction measures, as concluded in a simulation conducted in Finnish coastal areas, and therefore the indicator would be seen as an important addition to the eutrophication assessment.

4J.204 The Meeting noted that threshold values need to be established for the indicator through ecological model simulations, however, while potential models exist (e.g. ERGOM, BALTSEM), the models are not available via the Lead country Finland and currently no resources have been secured to bring the work on threshold values forward.

4J.205 The Meeting invited IN EUTRO to continue the work and agreed on prioritization of the indicator for HOLAS III. The Meeting invited CPs to consider contributing resources towards establishing threshold values for the indicator.

Indicator: Cyanobacterial Bloom Index (CyaBI)

4J.206 The Meeting took note of the Cyanobacterial Bloom Index (CyaBI) (document 4J-41, Presentation 6), as presented by the Secretariat.

4J.207 The Meeting took note that the indicator lead Finland has approached the PEG group to discuss any foreseen potential issues regarding combining in situ-based measurements with measurements stemming from remote sensing: PEG took note that the detailed nature of the study reservation made by Germany has to be investigated but did not express any additional concerns on the matter and offered assistance to the indicator lead.

4J.209 The Meeting noted that Germany has a study reservation on the indicator however that it is not clear to the lead what the open issues are which is hindering progress. The Meeting invited Germany to provide further clarification on the open issues in writing to lead country Finland (vivi.fleming@syke.fi) and the Chair of PEG Iveta Jurgensone (iveta.jurgensone@lhei.lv) prior to the IN EUTRO 20-2021 meeting.

4J.210 The Meeting noted that also Denmark has a study reservation on the indicator regarding Kattegat and Danish straits and invited Denmark to prepare for further discussions in IN EUTRO 20-2021.

4J.211 The Meeting invited the indicator lead Finland, with assistance from the PEG, to further consider how to address the concerns by Germany and Denmark and submit proposed solutions to STATE & CONSERVATION 15-2021 in the effort to resolve any remaining issues prior to HOLAS III.

Indicator: Shallow-water bottom oxygen

4J.212 The Meeting took note of the Shallow-water bottom oxygen (document 4J-42, Presentation 6), as presented by the Secretariat.

4J.213 The Meeting took note of the information that there is currently no lead for this indicator and invited CPs to consider taking lead by informing the Secretariat (owen.rowe@helcom.fi).