



Document title	Proposal for inclusion of size distribution of fish into HOLAS II
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Submitted by	Sweden
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Background

A proposal to assess the fish size distribution at the community level was developed by Sweden as the lead country during CORESET I (LFI core indicator report, CORESET I). The proposed indicator concept was discussed at STATE & CONSERVATION 1-2014 (para 4J.1) where it was highlighted that the indicator is limited to the pelagic habitat. At State & Conservation 2-2015 the meeting agreed to further develop the core indicator (para 4J.11), but highlighted that no agreement about a threshold value was reached.

An approach to define a threshold value for the indicator using a trend based approach was developed by Lead Country Sweden together with co-Lead Country Germany and presented by Sweden at State & Conservation 5-2016 (document 4J-14, 4J-15). This approach was not endorsed by the Meeting because not all the countries agreed on the proposal. The Contracting Parties were invited to clarify their view on the proposal by 18 November 2016. Comments were received from Estonia and Germany.

Since no agreement on the proposed threshold value could be reached before State & Conservation 5E-2017, Sweden suggested the inclusion of the LFI indicator as a qualitative description of the pelagic fish community in HOLAS II without any threshold, and also suggested further development of the indicator based on the comments provided on the trend approach presented at State & Conservation 5-2016 (document 4J-14).

Denmark could not agree to include a qualitative description of the size distribution within the pelagic based on the current LFI approach at State & Conservation 5E-2017.

This document contains an updated proposal on how to include information on fish size distribution in the 'State of the Baltic Sea' report (HOLAS II).

Action requested

The Meeting is invited to take note of the proposal and agree to use information of size distribution of the fish community in the Baltic Sea based on peer reviewed scientific publications into HOLAS II if it cannot be agreed to base a qualitative description in the HOLAS II on the current LFI proposal.

Proposal for inclusion of size distribution of fish into HOLAS II

After State & Conservation 5E-2017 it was stated that the HELCOM LFI approach needs further development, and is not in the stage to be included in the HOLAS II as an indicator-based assessment. Sweden proposes that the continued development should be started as soon as possible after HOLAS II, to be completed by 2020 at the latest, and must include both the demersal and pelagic fish community and a regionally coordinated threshold in accordance with the draft revision of the Commission decision on GES criteria (2010/477/EU).

Meanwhile, we see a substantial need to include a description of the size distribution of dominant fish species in the HOLAS II report. Without any reference to size distribution patterns of the pelagic fish community essential parts in the description of biodiversity overall and food webs in the Baltic Sea will be incomplete. We still believe that a qualitative description of the size distribution of pelagic fish should be done on community level based on the current LFI approach. Should it not be possible to reach an agreement to include a descriptive assessment on the LFI, we suggest as an alternative to include a description of the size distribution of the open sea fish community based on recent peer reviewed scientific publications, which make use of data from internationally coordinated fish monitoring.

This will have consequence for the HOLAS II as follows (revised HOLAS II structure, see Outcome of HOLAS II 6E-2017, Chapter headings in cursive):

Chapter 5.4 Fish – Trend over time in the indicator proportion of large fish in the community (LFI): If this section is not based on the current HELCOM LFI approach, information from peer reviewed scientific publication could be used to outline changes over time in the condition and size distribution as available for cod, herring and sprat separately (see for example Casini et al. 2016 and Eero et al. 2012). Hence, there would be no indicator based assessment, neither quantitative nor qualitative, but the approach would ensure that changes in fish size structure, which is a key element of ecosystem health, will not be neglected in HOLAS II.

Chapter 5.7 Summary of results from a food web perspective - Separate section (“box”) on changes in the health of Baltic Sea key organisms, showing also the current development stage of indicators on individual health and condition for different species – This box might include a description of size distribution and abundance of trophic guilds: piscivores (mainly cod) and planktivorous fish (mainly herring and sprat) based on the same information as section 5.4. This could be aligned with the draft revision of the Commission decision (2010/477/EU) criteria D4C1 (relative abundance between trophic guilds), D4C2 (total abundance between trophic guilds) and D4C3 (size distribution of individuals across trophic guilds).

References to the above mentioned publications:

Casini M et al. 2016 Hypoxic areas, density-dependence and food limitation drive the body condition of a heavily exploited marine fish predator. R. Soc. open sci. 3: 160416. (available at <http://rsos.royalsocietypublishing.org/content/3/10/160416>)

Eero M et al. 2012 Spatial management of marine resources can enhance the recovery of predators and avoid local depletion of forage fish. Conservation Letters 0 (2012) 1–7 (available at <http://onlinelibrary.wiley.com/doi/10.1111/j.1755-263X.2012.00266.x/epdf>)