



Vilnius, Lithuania, 11-13 February 2020

Document title	Future work on HELCOM Indicators
Code	4-1
Category	INF
Agenda Item	4 – Indicators and assessment
Submission date	4.2.2020
Submitted by	Secretariat

Background

A plan for future work on HELCOM indicators has been approved by HOD 54-2018. The plan incorporates ideas and needs expressed by the Contracting Parties with regards to indicator development into a viable time line that enables a review of the current indicators to be carried out, a policy discussion to take place, and the specific planning of future work to meet policy requirements and technical capacity to be initiated. HOD 57-2019 [document 4-20](#) contains an updated overview of step 5 (Execute) of the plan and provides links to the detailed indicator workplans per topic (Table 1 in the document), as approved by HOD 57 ([Outcomes paragraph 4.46-4.51](#)).

One of the main aims of the work conducted has been to identify what indicator development/consolidation is needed and feasible for HOLAS III, and to ensure that indicators to be included in the assessment are ready and operational by autumn 2021 in order to prevent overlap of development of indicators with indicator evaluation processes under HOLAS III. Any indicators not operational by the end of 2021 will not be included in the HOLAS III assessment.

The indicator work plan for fish is included in this document (Annex 1), as well as a topic summary addressing the overall aim of indicator work and assessments on fish (Annex 2).

The indicator work plans on [biodiversity-pollution](#) and [biodiversity-eutrophication](#) and [food webs](#) also contain relevant information for the coastal fish experts to take note of.

Action requested

The Meeting is invited to:

- take note of the [future work on HELCOM indicators](#) including the work plan for fish indicators as included in this document (Annex 1) and the indicator topic summary on fish (Annex 2),
- implement the work plan regarding coastal fish.

Annex 1 Fish – a Work Plan for future work on HELCOM indicators

Red text reflects additions made based on comments from the relevant Expert Groups after the Second HELCOM Indicator Workshop. These are mainly technical clarifications or reflect areas where further discussion is needed on details within the workplan.

An optimal assessment would address the Baltic Sea Action Plan (BSAP) and fulfil primary Marine Strategy Framework Directive (MSFD) criteria on bycatch, distribution, abundance, and habitat for relevant fish species. These separate components also contribute to a broader understanding and assessment of the BSAP goals of a **favourable status of Baltic Sea biodiversity**. An overview of these aspects is considered in the [Topic Summary](#).

What is the optimal assessment?

Agree on a regional species list for D1 and D3.

Community based indicator of size structure (LFI) for fish (coastal and offshore)

Coastal fish:

- Good spatial coverage, area/basin specific thresholds, assessment of perch, pike, pikeperch, whitefish, flounder, cod, cyprinids and stickleback.
- Assessment method not requiring 10-15 years of data, with sound estimation of certainty of the assessment.
- Assessment of abundance/biomass (e.g. MSFD D1C2)
- Size structure of fish targeted by the fishery should be assessed (e.g. MSFD D1C3, D3C3).
- Tentatively also fishing mortality for targeted species and stocks (e.g. MSFD D3C1).
- Additional estimates for supporting indicators related to habitats (e.g. MSFD D1C5) and distribution (e.g. MSFD D1C4). Not necessarily with thresholds, rather as surveillance indicators.

Demersal fish:

- An assessment for western cod, plaice, and sole.
- Also include species with no full analytical stock assessment as flounder, eastern cod, turbot, and brill.
- If possible assess Spawning Stock Biomass (SSB, e.g. MSFD D3C2) and Fishing Mortality (F, e.g. MSFD D3C1), otherwise trends from surveys.
- Also assess size structure/condition of the stocks/populations (e.g. MSFD D3C3).

Pelagic fish:

- An assessment of herring, sprat and stickleback.
- If possible assess Spawning Stock Biomass (SSB, e.g. MSFD D3C2) and Fishing Mortality (F, e.g. MSFD D3C1), otherwise trends from surveys.
- Also assess size structure of the stocks/populations (e.g. MSFD D3C3).

Migrating fish:

- Include eel, trout and salmon.
- Base the status on the stock assessments of salmon and trout (e.g. MSFD D3C1 and D3C2).
- As much as possible even condition of populations/species should be included, e.g. length/weight estimates (e.g. MSFD D3C3).

Once regionally agreed lists of species have been defined the assessments of abundance, distribution, habitat, and relevant demographic parameters (e.g. MSFD D1) for those species on the list will need to be considered in light of existing assessments (e.g. those carried out under MSFD D3). This will need a defined process and relevant expert input.

What will be achieved by HOLAS III (e.g. operational indicators by autumn 2021), and how?

Coastal fish:

- Assessment of abundance/biomass (e.g. MSFD D1C2) in areas included in HOLAS II.
- Additional areas assessed using the baseline approach - Ecological Assessment from Time Series (EATS-concept) in front of trend-based approach, including a better estimation of certainty of the assessment.
- First assessment of status (trend-based approach) in additional areas (potentially: Estonia, Latvia, Swedish coast of the Sound and Kattegat, Poland, and Germany).
- Refined assessment in Denmark (additional areas and refinement of data).
- First assessment of size structure (L90) for a suite of key species (perch, pikeperch?) in some of the areas.

Demersal fish:

- ICES advice including trends from surveys for species without analytical stock assessment. Potentially also indicators related to size and/or conditions (e.g. MSFD D3C3) if financing is there and after discussions with ICES.

Pelagic fish:

- ICES advice including trends from surveys for species without analytical stock assessment. Potentially also indicators related to size and/or conditions (e.g. MSFD D3C3) if financing is there and after discussions with ICES. Also assess trends in stickleback if funding available.

Migrating fish:

- Similar assessment as carried out in HOLAS II, hopefully improved data availability and coverage available.
- Potentially also indicators related to size and/or conditions (e.g. MSFD D3C3) if financing is there and after discussions with ICES.
- Supporting information **and/or** data collation on eel and sturgeon to provide overall contextual information in HOLAS III.

What aspects of the identified work represent the highest priority?

- Agree on a regional species list.
- Develop population demographic indicator for fish, in particular focusing on pelagic, demersal and commercial fish from regionally agreed species list.
- Further development of coastal fish indicators under FISH PRO III.
- Practical solution for commercial fish assessment, **based on discussion with ICES.**
- Development and testing of other indicators (e.g. size structure).

Is the proposed assessment policy relevant and ecologically relevant?

The components of the assessment and the provisionally planned tasks contribute towards a policy and ecologically relevant assessment.

What are the resource needs (and period) to 1) carry out the work by HOLAS III (autumn 2021), and 2) for longer-term development issues (post-HOLAS III)?

- A designated meeting or workshop should be initiated to bring together relevant fish experts to form a detailed plan ahead, with a particular focus on what can be achieved by HOLAS III. The second indicator workshop was attended by relatively few fish experts and did not have sufficient expertise present to address all the diverse aspects needed for developing a work plan that addresses fish overall. **Expertise on demersal fish, pelagic fish, coastal fish, commercial fish and**

migratory fish would be needed. Initial planning could be carried out in a smaller group online in early 2020.

- Indicator leads would be needed to complete the assessment that was considered possible.
- Ongoing support for the FISH PRO III work, including national resources to facilitate experts being involved and contributing to the work.
- Potential resource implications if developing a specific cooperation with ICES for development of fish and fisheries related indicators.

What integration of the indicators (i.e. those defined in question 2) is foreseen in HOLAS III?

This requires a larger discussion that includes experts for other additional areas of expertise, however, an initial proposal could be considered to initiate discussion. Integrate first on species level (e.g. across MSFD criteria) and subsequently on the species group level. Further discussion on this overall topic should be carried out during HOLAS III and will also depend on what indicators are fully operational. A one-out-all-out approach (OOAO) may not really be feasible/appropriate. An approach considering majority and/or weighting should be considered, and an assessment of confidence/certainty should be carried out in parallel.

What cross-theme issues exist (e.g. links between biodiversity and eutrophication) and how will these be considered in future assessments?

This topic is addressed in a separate document.