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Working Group on the State of the Environment and Nature
Conservation

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The text related to marine mammals has been adjusted slightly. The section is shown in red text.

Background

This document provides a brief overview of progress of work on HELCOM indicators identified for development for HOLAS III under the topic specific work plans generated through the [Second HELCOM Indicator Workshop](#) ([Future work on HELCOM indicators process](#)). For most of the identified indicators the work is ongoing, with a focus to achieve the agreed deadline for development or adjustment of HELCOM indicators for HOLAS III – i.e. approval of required aspects at Working Groups by autumn 2021 and subsequent threshold value approval in HOD in December 2021. This document aims to provide a brief summary of progress and ongoing work taking place on HELCOM indicators.

Action requested

The Meeting is invited to:

- take note of progress and the current status for the various indicator development work strands.

Update on progress on HELCOM indicators

By-catch

The [work plan for by-catch](#) indicated that a full assessment of by-catch was unlikely by HOLAS III due to limitation in the required data availability. There were however a number of alternative suggestions made for how to improve the regional assessment of by-catch for HOLAS III. These included:

1. Carrying out pilot evaluations, where possible (i.e. suitable full data available), applying the recommendations of the OSPAR-HELCOM by-catch Workshop.
2. Complementing the indicator with risk maps (as under development in the HELCOM ACTION project).
3. Assess alternatives (e.g. expert knowledge or comparative area studies) where key data or components are missing and apply the precautionary principle.

Work has been initiated on this with the indicator leads currently examining the data directly available so as to identify where 'pilot evaluations' may be viable. The subsequent steps will be to initiate work on the identified 'pilot evaluations' and attempt to fill data gaps, if possible, and based on these findings develop alternatives where no such evaluation has been possible. Approaches to gather data (e.g. data calls and interaction with EN FISHDATA) will follow once a clearer picture of the currently available data is known.

The work of the HELCOM ACTION Project (WP1 on by-catch) is undergoing the final steps and will be shared with the indicator leads as soon as complete and available.

The topic of by-catch, and further improvements of the indicator assessment for HOLAS III, is also the focus of a task within the proposed MSFD 2020 project application (HELCOM BLUES). The current draft application aims to expand the risk mapping approach to a broader spatial area and also to more species than was achieved under HELCOM ACTION, as well as support the application of test cases applying the recommendations of the OSPAR-HELCOM Workshop.

Fish

The [work plan for fish](#) considered separate aspects such as commercial fish, coastal fish, demersal fish, pelagic fish and migratory fish. These separate aspects are covered by a number of different processes.

Work on coastal fish is being carried out within Fish Pro III where work is underway to improve the existing assessment by applying the Ecological Assessment from Time Series (EATS-concept – this term has been updated with a new name "Analyses of structural changes in ecological time series (ASCETS)", <https://doi.org/10.1016/j.ecolind.2020.106469>) approach and where possible replace the weaker trend-based approach. Data for areas that were less well covered in HOLAS II is also being explored to see if the trend-based approach can be applied to those areas as an initial assessment also. Work related to size structure (L90) for a suite of key species (e.g. perch, pikeperch) in some of the areas is also part of the overall target, though work on this aspect is currently secondary to the main focus of improving the indicators already used in HOLAS II (spatial coverage, data quality and methodology aspects).

Fish Pro III extensively discussed the HOLAS III timelines, deadlines related to indicator work and the details of the development work during the Fish Pro III 2-2020 meeting (see [agenda items 3 and 4 outcomes](#)) and have planned the work ahead to achieve the plans set out in the indicator work plan.

Migratory fish will be addressed with a similar assessment as that carried out in HOLAS II.

Commercial fish, a category that covers demersal and pelagic fish in the Baltic Sea will be addressed through a designated workshop. This would rely on data already available through ICES and requires a regional workshop to define how best to utilise the existing data to apply appropriate HELCOM

assessments that are ecologically and policy relevant. A proposal for this workshop is also provided to State and Conservation in a separate document and aims to address the issues highlighted in the indicator work plan for fish.

Work related to making a species list with relevance to categorization and monitoring will take place under the separate sections and be combined at a later stage.

The topic of non-commercial fish is addressed in the current draft proposal for the MSFD 2020 project application (HELCOM BLUES). The current draft aims to address fish species not covered by full ICES analytical assessment and a few species that are not considered commercial (e.g. sticklebacks) and apply similar approaches to those used for coastal fish to provide an improved ecological assessment. The work outlined in that application would aim to support already existing aspects identified in the indicator work plan and ensure a stronger assessment of fish by HOLAS III.

Waterbirds

The indicator work on waterbirds is carried out by the indicator leads and in cooperation with JWGBIRD (OSPAR/HELCOM/ICES Joint Working Group on Marine Birds). Work is ongoing on several of the items identified as priority areas for HOLAS III in the indicator work plan ([waterbirds work plan](#)) with the major priority in the HELCOM region being the focus on by-catch (separate section) and abundance indicators (e.g. MSFD primary criteria).

Strong progress has been made in JWGBIRD for the approach to incorporate open sea waterbirds into the existing wintering waterbirds assessment ('Abundance of waterbirds in the wintering season' HELCOM indicator) as this was identified as a significant missing component in HOLAS II. Currently testing of the proposed approach is underway and the approach plus test evaluation will be shared with State and Conservation as soon as completed. Ongoing work to examine the baselines is also being carried out.

Other work identified in the work plan as to where progress could also be made by HOLAS III included breeding productivity and habitat. These issues were also addressed in the document provided to State and Conservation 12-2020 ([document 4J-13](#)) where greater detail was provided on the planned work. These issues are under discussion in JWGBIRD as part of the broader cooperation and aspects developed likely have validity in the HELCOM region also. Once the key issue of including open sea waterbird data has been overcome then test cases will be carried out to assess the approaches developed in JWGBIRD for breeding productivity and habitat. These will be submitted to State and Conservation once developed for review and further discussion.

Marine mammals

The clearest focus for marine mammals in the build up to HOLAS III, as documented in the topic specific [work plan for marine mammals](#), is to develop an assessment of harbor porpoise abundance and distribution. These two components were key issues identified (along with by-catch) as required for HOLAS III. The focus of ongoing work for the harbour porpoise abundance and distribution assessments will be monitoring at key sites, as well as management-unit level surveys. Progress is being made and will be presented at EG MAMA 14-2020 (22-24 September 2020), with the following items to be addressed (as noted in the [outcome of EG MAMA 13](#)):

- an update on the development of Harbour Porpoise Abundance and Distribution indicators;
- further definition of key monitoring sites;
- an update on intersessional activities, and
- a plan for determining Favourable Conservation Status on population level for both the Baltic Proper and Belt Sea population, and when possible also on national level.

The harbour porpoise is currently included in the draft application for the proposed MSFD 2020 project application (HELCOM BLUES). This project aims to directly address known knowledge gaps where regional priority has been assigned, and aims to support the work to secure a successful assessment of harbor porpoise that utilizes the best available data and assessment approaches.

An initial review of information and data available, assuming funding of HELCOM BLUES, indicates that by HOLAS III an assessment based on absolute abundance should be possible for the Baltic Proper population, and possibly on trends in abundance for the Baltic Proper and the Belt Sea populations. For distribution methods are to be tested and evaluated for the Baltic Proper and the Belt Sea populations, and if successful a trend assessment should be possible in the Belt Sea but not in the Baltic Proper population (due to a lack of data over a sufficient time period at this stage).

Work to improve the existing assessments of nutritional status and reproductive status of seals is also ongoing, in particular to improve the use and application of existing data, and progress will be presented at the upcoming EG MAMA meeting.

Pelagic habitats

The topic of pelagic habitats was discussed at the Second HELCOM indicator workshop and it was identified as a key area where improvements in the assessment for HOLAS III could be made. A work plan for the topic was made (topic specific work plan on [pelagic habitats](#)) which included the proposal to focus work on two main indicators that are well advanced but are not fully operational nor have complete regional coverage: the 'zooplankton mean size and total stock' HELCOM indicator and the 'seasonal succession of dominating phytoplankton groups' HELCOM indicator. The subsequent steps identified included resolving data issues, exploring an approach to combine the two existing indicators into a single pelagic assessment approach, and exploring the pairing approach developed in OSAPR and integration of abiotic factors if resources available.

Work related to data flows (e.g. data for pelagic habitats in COMBINE) has been initiated and will be supported by ongoing developments in the Baltic Data Flows (CEF-Telecom 2019-EU-IA-0115), co-funded by EU Innovation and Networks Agency (INEA).

The work to complete the application of the two existing indicators is underway though has not been completed by the initially proposed target, and the spring 2021 meeting of State and Conservation will be the new target.

State and Conservation 12-2020 concluded the following ([Outcomes paragraph 4J.62](#)) – 'Pelagic habitats: The Meeting suggested organizing a thematic workshop (as outlined in step 5 of the future work on indicators plan approved at HOD 57-2019) on pelagic habitat assessment. The workshop should include both the HELCOM phytoplankton and zooplankton networks, as well as include expertise on abiotic aspects relevant for a pelagic habitat assessment. The Meeting encouraged increased cooperation between the two expert groups and recognized that a platform for cooperation is needed and agreed to explore this further'. Such a workshop was endorsed by HOD 58-2020 (Outcomes paragraph 5.21, [document 5-14](#)). This process has been initiated and is the focus of a separate document submitted to this meeting.

Furthermore, the topic of pelagic habitats, and further improvements of the indicator assessment for HOLAS III, is also the focus of a task within the proposed MSFD 2020 project application (HELCOM BLUES). The current draft application aims to support the leads of the existing indicators in their work to finalize the indicators (operational and full coverage of threshold values) and also focus on the aspects related to integrating the existing indicators or improved approaches for assessing pelagic habitats as an entity (not separate species components).

NIS

For NIS a topic specific work plan was not developed as the [current indicator assessment](#) to address primary aspects (including primary MSFD criteria D2C1), as applied in HOLAS II, is considered to be applied in HOLAS III (based on the currently available data and information). A background summary in the form of a [NIS topic summary](#) was developed for the Second HELOCM indicator Workshop. In this topic summary other issues such as cooperation and further development are considered, however these require longer term perspectives than HOLAS III and relate to database and regionally agreed monitoring issues. Some of these aspects are also being touched on by the [COMPLETE project](#) and advanced made in this project will support future developments. As part of the work carried out in the COMPLETE project a draft NIS monitoring programme was submitted to State and Conservation 12-2020 and further progress on this is anticipated by State and Conservation 14.

The Outcomes of State and Conservation 12-2020 ([paragraph 4J.62](#)) concluded that – ‘NIS: The Meeting supported closer future cooperation with OSPAR on non-indigenous species, possibly through a joint group, and that for the purpose of HOLAS III focus on continued work with the experts already involved in the work on NIS indicators.’

On this current basis the work directly related to the indicator update is anticipated to be a stronger focus after autumn 2021 when the update process is in full flow.

Benthic habitats

Indicator work on benthic habitats was addressed in the topic specific work plan from the Second HELCOM indicator workshop ([benthic habitats work plan](#)), and has been addressed at subsequent meetings and designated workshops of the Expert Network on Benthic Habitats. This topic requires a step-wise process to address separate but closely linked components and build towards an overall assessment of benthic habitats. In addition it requires both regional cooperation and close cooperation with relevant EU processes (e.g. TG Seabed) to support the development of indicators suitable for addressing BSAP and MSFD factors, for those HELCOM Contracting Parties that are also EU Member States.

A major focus of the development work so far has been on the ‘cumulative Impact on benthic biotopes’ HELCOM indicator as an approach for addressing physical pressures on the seafloor/benthic habitats (e.g. MSFD D6C3). This has been addressed at [EN BENTHIC WS1-2020](#), at State and Conservation 12-2020 ([document 4J.16](#) and [outcomes paragraph 4J.23-35](#)), and most recently at [EN BENTHIC WS2-2020](#). At this most recent Workshop, that took place on 7 September 2020, and contains the latest version of the indicator report and proposals on threshold values, a number of issues were documented that require further discussion and clarification. The indicator leads are compiling a table to support these next steps and it will be shared with the EN-BENTHIC group shortly. The preparatory steps and issues to address at the November meeting of EN-BENTHIC will also be documented in the Workshop notes. These will be made available in the Workshop site ([EN BENTHIC WS2-2020](#)) at the latest on Friday 18 September.

Other work on the topic of indicators and the assessment of benthic habitats was discussed at the first workshop and several additional topics were identified for further discussion at EN BENTHIC 4-2020 (11-13 November). These items are documented in [Annex 2 of the Workshop notes](#).

Hazardous substances

Improvements to the hazardous substances assessment and indicators for HOLAS III were discussed at the Second HELCOM indicator Workshop and a topic specific work plan developed ([hazardous substances work plan](#)). The workplan identified some key priority issues to address for HOLAS III, including: supporting parameters and normalisation in sediments (TOC and Li/Al), threshold values (including the ‘TBT and imposex’ HELOCM indicator), an assessment of copper, and the adjustment of MIME and CHASE tool in

automated system to adapt to developments. In addition issues such as the oil spills HELOCM indicator, biological effects indicators, screening approaches and sediment core data were also addressed.

Work is underway within the HELCOM Expert Network on Hazardous Substances (EN-HZ) on the majority of these issues, as noted in the [outcomes](#) of [EN-HZ 12-2020](#), which was also held as a back-to-back online event for a first workshop on Biological Effects indicators and assessments ([outcomes of workshop](#)). The next meeting of EN-HZ ([EN-HZ 13 and the second biological effects workshop](#), both online) will take place on 22-23 September 2020. The agendas cover a number of the issues above, including: supporting parameters for sediments, a copper indicator, the adjustment of the CHASE integrated assessment tool, and wide scope screening (also the focus of a separate document submitted to this meeting of State and Conservation).

In addition the Secretariat and several members of the EN-HZ group have been involved in the work (and sub-groups) of the MSFD Expert Network on Contaminants, including discussion on priority substances and issues related oil spills.

Progress on some of these issues will also be supported by the Baltic Data Flows project (CEF-Telecom 2019-EU-IA-0115), co-funded by EU Innovation and Networks Agency (INEA) where data gaps identified in the HOLAS II assessment will be addressed to increase the availability of the data and transparency of the assessment, and to support the improvements required in the CHASE tool.

The HELCOM MORS Group also discussed the threshold values applied in the current 'radioactive substances' HELCOM indicator and took note of deadlines for adjustment/development related to the indicators (MORS 10-2020 [Outcomes agenda item 6](#)). The issue will be revisited in a specific meeting of the MORS group that is currently planned for October 2020.

Litter

The topic specific [work plan for marine litter](#), developed at the Second HELOCM indicator workshop, addressed several areas of indicator work.

Progress regarding the database and scales of assessment are addressed under a separate document to this meeting and form a significant step towards a harmonized and improved assessment of beach litter by HOLAS III. A [monitoring guideline for beach litter](#) has also been finalized.

Approaches to work on historical data, suitable litter item categorization, and work in a coordinated way towards threshold values are also under way. This was discussed at the online meeting of the HELCOM Marine Litter Expert Network (27 August, 2020) and a plan set out for further discussion. Previous work on the issue was also presented to State and Conservation 12-2020, [document 4J-11](#), and the meeting supported scenario C outlined in the document ([Outcomes paragraph 4J.13](#)).

Work related to indicator development associated with seafloor litter and microlitter and also maintained in the EN Marine Litter. Initial progress on microlitter was presented to State and Conservation 12-2020 ([document 4J.18](#), outcomes [paragraph 4J.18-22](#)).

All the topics are addressed in the current draft proposal for the MSFD 2020 project application (HELCOM BLUES) to support further development of these issues and already identified gaps or priority areas for the HELCOM region and improve the assessment by HOLAS III.

Underwater noise

The work identified in the Second HELCOM indicator workshop, and presented in the form of a [work plan on underwater noise](#), was updated to reflect detailed discussions taking place within the HELCOM Expert

Network on Underwater Noise (EN-Noise). This was shared with State and Conservation 12-2020 ([document 4J.10](#)) and discussed at PRESSURE 12-2020 ([document 8-2](#)). Progress on made on the aspects identified in the work plan are documented within the detailed updates provided into the work plan, as submitted to PRESSURE 12-2020 ([document 8-2](#)). The questionnaire for impulsive noise, identified as one of the steps towards an improved harmonised assessment by HOLAS III, has also been sent out (PRESSURE 12-2020, [document 8-1](#) and [Outcomes paragraph 8.6-8.8](#)) and the summary of information from this process is planned to be submitted to PRESSURE 13-2020.

The [soundscape planning tool](#) for continuous noise is also now available and will support the next steps in indicator development (PRESSURE 12-2020, [document 8-4](#)).

The topics of underwater noise is addressed in the current draft proposal for the MSFD 2020 project application (HELCOM BLUES) to support further development of these issues and already identified gaps or priority areas for the HELCOM region and improve the assessment by HOLAS III.

Eutrophication

The topic specific [work plan on eutrophication](#), developed at the second HELCOM indicator workshop, listed a number of issues where improvements could be made in the assessment for HOALS III. While work is ongoing on several of these issues progress has not currently been discussed within the group prior to State and Conservation, in part due to the postponement of IN-EUTRO 18-2020 to 2 October. The indicator work plan will be revisited at the meeting to assess progress.

One major focus of the work so far in the last meeting of IN-EUTRO has been the 'multifaceted confidence assessment' that was indicated to be a high priority for HOLAS III. The discussion and planning for this was the major focus of the last meeting, IN-EUTRO 17-2020 ([Outcomes](#)).

A key issue that would support work on a significant gap would be to have a nomination for a Lead Country on the 'Oxygen Debt' HELCOM indicator (State and Conservation 12-2020, [Outcomes paragraph 4J.38-40](#)).

Food Webs

The topic of food webs in the Baltic Sea was discussed at the Second HELCOM indicator workshop and a work plan developed (topic specific work plan on [Food Webs](#)). The general conclusions were that discussions were at a very early stage and an operational assessment would not be viable by HOLAS III, but that progress would be valuable on this important topic and that developments made in the lead up to HOLAS III would be a strong support for developing a future direction with regard to the topic.

A major suggestion made in the work plan was to consider a Correspondence Group on Food Webs, as was discussed at State and Conservation 12-2020 (Outcomes [paragraph 4J.62](#)) and where the central role of food webs in the ecosystem and the need to improve the information on the status of food webs in the next holistic assessment was noted. Establishing a Correspondence Group was endorsed by HOD 58-2020 (Outcomes paragraph 5.21, [document 5-14](#)). The preparations for this are addressed in a separate document to this meeting.

In the current draft of the proposed MSFD 2020 project application (HELCOM BLUES), the topic of food webs is addressed within a small sub-task related to developments of BEAT. This sub-task is envisaged to be a small and preliminary development aspect only, exploring if existing indicators can be used to infer something related to food webs via an adaptation of BEAT or its alignment to existing food web approaches and models. It is anticipated that any food web work in such a project will feed directly into CG Food Web.

Cross-over or horizontal issues

Cross-over or horizontal issues were discussed at the Second HELCOM indicator workshop under the themes of [pollution-biodiversity](#) linkages and [eutrophication-biodiversity](#) linkages. These discussions were somewhat preliminary and the general conclusion was that the topic(s) should be considered within the HOALS III process, possibly through specific workshops during HOLAS III, so that the interlinkages across themes could be better reflected in HOALS III and support future defined development efforts on the issue.

This topic has also been raised in EU processes, for example under the ‘MSFD Workshop on Horizontal Issues – Threshold Values’ that will be held online on 30 September. To support this process, and at the request of the organizers, the Secretariat has passed on the invitation to the workshop to relevant indicator leads and Chairs/co-Chairs of the HELCOM Expert Groups. It is understood that there is a strong participation from the HELCOM region represented in the registered participants.