



Document title	Draft HELCOM work plan for indicators
Code	8-3
Category	INF
Agenda Item	8 – Future work, including work on indicator developments for holistic assessments
Submission date	3.5.2018
Submitted by	Secretariat
Reference	STATE & CONSERVATION 7-2017 (Document 3J-9 and Outcome paragraphs 3J.42-3J.49), GEAR 18-2018 (document 3-6 Rev.2 of GEAR 18-2018 and Outcome paragraphs 3.36-3.43)

Background

The continued development of the HELCOM indicators was discussed at State and Conservation 7-2017 ([Document 3J-9](#) and [Outcome paragraphs 3J.42-3J.49](#)), with the Meeting recognising the importance to develop a plan and deciding to return to the topic at the next State and Conservation meeting after further intersessional work had been carried out. A related discussion in GEAR 17-2017 ([document 3-3](#) and [Outcome paragraph 3.26](#)) resulted in a request for the Secretariat to develop a more directed questionnaire on the subject so that resources related to strategic and planning issues could be discussed.

The Secretariat received four responses to the questionnaire (provided in [Annex 1 of GEAR 18-2018, document 3-10](#)) and the responses were compiled by the Secretariat in the form of an action plan for future work on the HELCOM indicators, taking into account aspects highlighted in [document 3-6 Rev.2 of GEAR 18-2018](#). The plan for future work on HELCOM indicators was discussed at GEAR 18-2018 ([Outcome paragraphs 3.36-3.43](#)) and the Meeting in principle supported the approach presented.

This document contains a draft HELCOM plan for future indicator work, developed based on input by Contracting Parties, including GEAR considerations with regard to technical follow up of the Commission Decision (EU) 2017/848. The plan is intended to incorporate the ideas and needs expressed by Contracting Parties into a viable time line that will enable a full review of the current indicators to be carried out, a careful policy discussion to take place, and the specific planning of future work to meet policy requirements and technical capacity when the work plan is initiated.

The draft plan has been shared with State and Conservation, responsible for scientific and technical aspects of the indicator work, with the aim to engage the group into the planning process. The document has also been shared intersessionally with PRESSURE contacts with the request that any comments are provided through their national State and Conservation representative. Following STATE & CONSERVATION 8-2018, GEAR contacts will be informed of the discussion and details documented in the outcome of STATE & CONSERVATION 8-2018, and if required, an online GEAR meeting will be held on 23 May (12.00 CET) to finalize the proposal. The final draft plan is to be submitted to HELCOM HOD 54-2018 on 24 May (GEAR 18-2018 [Outcome paragraph 3.43](#)).

The same draft plan, as included in this document, is now also shared with the 8th meeting of the HELCOM Fish group.

Action requested

The Meeting is invited to take note of the planned work on indicators in HELCOM.

The Meeting may wish to reflect on their possible contribution to the future indicator development.

Draft plan for future work on HELCOM indicators (2018-2022)

Introduction

The overall aim of this document is to present a clear plan for future work on HELCOM indicators, defining a process by which: the current situation is reviewed, gaps are identified, and a process for future work is outlined. This document builds on a number of processes carried out by the Secretariat and HELCOM Contracting Parties, including: at State and Conservation 7-2017 ([Document 3J-9](#) and [Outcome paragraphs 3J.42-3J.49](#)), at GEAR 17-2017 ([document 3-3](#) and [Outcome paragraph 3.26](#)), a GEAR questionnaire ([GEAR 18-2018, document 3-10](#)), and a Contracting Parties draft policy needs proposal ([document 3-6 Rev.2 of GEAR 18-2018](#)). The plan is intended to incorporate the ideas and needs expressed by Contracting Parties provided to date.

Previous indicator work has focused greatly on the needs of the HOLAS II process and the State of the Baltic Sea report, however with the update of the Baltic Sea Action Plan (BSAP), the introduction of the UN Sustainable Development Goals (SDGs), and the new EU Commission Decision on the Marine Strategy Framework Directive (MSFD) implementation, there is a clearly defined need to ensure the indicators, and future work on indicators, meet the commitments of Contracting Parties.

The aim is to organize an inclusive HELCOM work plan for the indicators within a single process, developed in such a way that all Contracting Parties will be in a position to fulfil the requirements of applicable policies, including those Contracting Parties that are EU Member States and are required to implement Commission Decision (EU) 2017/848 in conjunction with Art. 5(2) and 6 MSFD. The starting point will be to consider the current HELCOM indicator catalogue with respect to these relevant policy documents and to develop proposals and agree on aspects such as:

- the regional or sub-regional use of criteria for assessing status, and associated adjustment of HELCOM indicators or development of new indicators
- lists of ecosystem and pressure criteria elements for the assessment
- threshold values for criteria and indicators
- methodological standards (i.e. integration rules)
- frequency of indicator assessments
- presentation of indicators.

The work will directly support the third holistic assessment of the Baltic Sea (HOLAS III), including aspects such as further developing arrangements on data collection and management in time for the next holistic assessment.

The work will continue to be supported by a dedicated indicator employee at the Secretariat in order to ensure the defined work plan is carried out within the appropriate HELCOM structures and to the levels and standards required by Contracting Parties. The indicator manager will oversee the indicator work defined in this process and the maintenance of existing indicators within the HELCOM structure.

Guiding principles and focus of the work

The plan outlined below represents a strategic approach for the development and adjustment of the HELCOM indicators, to meet the requirements of Contracting Parties, and all work will be carried out guided by four major driving principles: Planning and prioritization, Good governance, High quality and Complete transparency:

Planning and prioritization: Work needs to be well planned. This includes prioritization, i.e. decisions on what is more important and in what order the work should be carried out. As a lesson learnt from the HOLAS II process, this also includes planning that gives Contracting Parties sufficient time to comment and to check

the quality of drafted proposals. A clear work plan should be agreed at the level of Heads of Delegation which provides a common basis for taking the work forward.

Good governance: In support of future decision-making the mechanisms, processes and governance need to be well described and responsibility for tasks clearly assigned. It is important that technical work carried forward by projects or individual experts are regularly shared in detail with the established expert networks in order to enable substantive discussions on the directions the work should take and that any such work is consolidated and approved by the working groups prior to initiating any decision-making process. Regional lists of elements, threshold values and integration rules should be agreed by HELCOM Heads of Delegations. Consultation procedures and quality assurance on draft proposals as well as final approval procedures should take place within a reasonable time frame to give Contracting Parties sufficient time for comments and endorsement and to ensure that decision-making does not hamper progress on HOLAS III.

High quality: Focus should be given to quality rather than quantity. A detailed analysis is needed to assess how well existing HELCOM indicators match the requirements of policy commitments and principles for future work should be agreed before the adjustment of existing or the development of new indicators. When developing new indicators, including for example new threshold values or methodological standards, it is important that the work relies on a scientifically well documented basis and on comparable data.

Complete transparency: Transparency in methods, assumptions, data input (as example) are very important. Any method/methodological standards and differences in datasets underlying, e.g. the derivation of threshold values, should be described appropriately and assumptions should be clearly stated.

Following these principles will ensure that work will progress to meet requirements, that high quality and open access documentation and products are developed, and that technical experts, policy experts, the Secretariat and Contracting Parties work towards a common goal.

The work should further be steered by:

- considerations of streamlining indicator development to meet the needs of various policy commitments so that multiple purposes are served - namely the BSAP, MSFD (for the EU countries) and SDGs.

and specifically in relation to the Contracting Parties being EU Members States by:

- the specific requirements for criteria and criteria elements, including their presentation in Annex I of Commission Decision (EU) 2017/848
- the general requirements for use of criteria and setting of thresholds in Art. 3 and 4 the Decision
- where relevant and appropriate, draft guidance and issues for discussion provided in the test version of EU MSFD CIS Art. 8 MSFD assessment guidance.

The current focus will include core and pre-core indicators and those candidate indicators incorporated into the final HOLAS II State of the Baltic Sea report (e.g. litter and noise), as well as the main pressures preventing the Baltic Sea from achieving good status. The work will be guided by the following sequence of considerations for prioritization:

- address primary criteria before secondary criteria
- address criteria requiring thresholds before criteria for which no thresholds are required
- address lists of elements before threshold values and methodological standards
- consolidate existing indicators before developing new indicators
- develop new indicators for *major* gaps relating to criteria requiring threshold values (i.e. where so far no assessment has been possible at all) before developing complementary indicators or indicators not requiring threshold values

- use opportunities for cooperation with OSPAR or other marine regions on indicators before starting parallel work (for example joint workshop proposals, [GEAR 18-2018 Outcome paragraph 3.35](#)).
- focus on work in accordance with, and complementary to, established technical standards (e.g. using EU standards and protocols where appropriate) to avoid unnecessary duplication or overlap.

Furthermore, other issues defined by Working Groups in responses to the questionnaire ([GEAR 18-2018, document 3-10](#)), such as: reviewing data solutions, and the development of a more inclusive and more visible platform for the indicators and their presentation, will be important issues to address during the active working phase on indicators.

When preparing documents to HODs implications for monitoring and assessment should be provided for approval of indicators. To guide development of measures the costs and benefits of achieving GES should be provided.

General structure through which work is to be carried out

HELCOM working groups will review and guide further the work from a technical/scientific (State and Conservation and PRESSURE, as relevant) and a strategic/policy (GEAR) point of view, as defined by the considerations and priorities outlined in this overall document. Technical work will be carried out by expert networks, guided by regular information exchange and review by the relevant technical/scientific working groups. Nominated lead country experts and any specific development projects will work in close consultation with the expert networks and the Secretariat indicator manager. Through regular reporting on the scientific state of development, presentation of options for the scientific development, and substantive discussions on the indicator development it will be possible for guidance from expert networks and technical working groups to be provided at the appropriate stage of development.

Expert networks will report on the state of play and inform on progress to relevant HELCOM working groups (e.g. State and Conservation, PRESSURE and/or GEAR, as relevant) at each main meeting (i.e. approximately every six months). Assigned policy leads (e.g. to specific themes: biodiversity/species, biodiversity/habitats, hydrographical changes, eutrophication, hazardous substances, underwater noise, marine litter) will provide an operable science-policy interface and ensure information flow on the requirements between technical and policy groups.

Where required and when the opportunity arises to optimize the technical means for cooperation (e.g. via workspaces or joint workshops) then the benefits of the new approach will be appraised and the necessary improvements made.

The proposed process outlined below follows these major steps: Review, Define, Confirm, Prepare, and Execute.

Step-wise approach for future work on HELCOM indicators

STEP 1: Review – Analyze current status by mapping to policy documents

Plan: A mapping of the HELCOM indicators to existing policy documents (BSAP, SDGs and MSFD etc.), and in light of major pressures and gaps identified by the State of the Baltic Sea report, will be carried out. This will include core and pre-core indicators and those candidate indicators incorporated into the final HOLAS II State of the Baltic Sea report (e.g. litter and noise). This will entail mapping of the indicators to relevant SDGs, to BSAP goals and objectives, and to MSFD primary and secondary criteria, and species lists and elements where possible. Nesting of the policy objectives within each other to inform of interrelated objectives will also be carried out. The same document will summarize the current hosting of the indicators (e.g. within which expert group or network).

Aim: The mapping of indicators to policy documents and in light of the State of the Baltic Sea report will identify the current status (e.g. threshold coverage, assessment coverage, gaps), provide an insight into development and resources needed, and facilitate discussion on the further work required. This will identify

needs for development (e.g. thresholds, data coverage, agreed methodologies), matches and gaps to policy documents, and common aspects between policy documents. This mapping exercise will form the background to detailed discussion at the GEAR Autumn 2018 meeting.

Action: A drafting group with policy expertise (compiled by GEAR) will be formed to evaluate the pre-filled initial draft prepared by the Secretariat and advise on interpretation of the policy documents. The outcome of the drafting group (a pre-filled version of the draft table provided in Annex 1, cf. [GEAR 18-2018, document 3.6 Rev.2](#)) will be sent to expert groups to be completed. The drafting group would also provide detailed instructions for the expert groups on how to assess and complete the required mapping process, detailing aspects such as how to consider and act on policy interpretation. The detailed advice and instructions would be informed by the Contracting Parties based on their requirements and discussions. For example, specific considerations regarding an MSFD perspective for those Contracting Parties who are EU Member States are captured in Annex 2 (cf. [GEAR 18-2018, document 3.6 Rev.2](#)).

Expert groups (indicator leads and chairs as a minimum) will be asked to summarize the 'state of play' for each indicator, the scientific recommendation for the indicator (e.g. frequency-minimum and optimal), the resources required for full operationalization in the form of a brief plan, and any perceived obstacles (e.g. technical or data related). The expert groups will also be requested to compile relevant criteria and elements lists based on guidance by GEAR.

Timeline: Autumn 2018 – starting in August 2018, drafting group in late September 2018, completed tables by expert groups ready for submission to GEAR Autumn meeting 2018 (7-8 November). GEAR will review the outcome in step 5.

STEP 2: Define - Policy based discussion of mapped indicators

Plan: With the indicator mapping and expert group response as the basis, a detailed policy based discussion will be held to define a common vision between Contracting Parties.

Aim: Develop a comprehensive understanding to enable a harmonized approach where possible, identify and highlight gaps, identify need for adjustments of existing indicators to meet policy requirements, define indicator/policy area priority, and identify indicators for potential synergistic work with other institutions (e.g. OSPAR). Discuss effective policy implementation for future indicator work, such as the addition of a policy lead to each indicator.

Action: The mapped indicators and expert responses will provide the background for detailed discussion at the GEAR meeting from a policy perspective and specific issues such as the requirement of indicators to assess progress towards agreed targets and the application of corresponding measures, the use of indicators within the BASP update, and national approaches, actions and requirements, MSFD Article 8 and the adaptation of indicators to the new Commission decision as far as EU countries are concerned (e.g. have lists of elements or species been adopted) will be discussed. The benefits of a designated policy lead for each indicator will also be discussed and a defined option expressed.

Timeline: Define policy related priorities based on mapping and analysis stage - at GEAR 2018 autumn meeting (7-8 November). Planning with State and Conservation, for example an intersessional review or timing of the meetings, to allow documents to transfer between the meetings, would enable State and Conservation to also review the input provided by expert networks and indicator leads.

STEP 3: Confirm – Outline general working structure

Plan: Set out the process for indicator development, the role of expert networks, the stages required during development of individual indicators, including the planned approval process (e.g. threshold approval at HODs), and other relevant aspects to ensure the smooth and coherent, development, adjustment and update of indicators. Implement a policy lead approach with an assigned policy lead for each indicator.

Aim: Ensure that clarity on the process and responsibilities are defined for all expert groups and indicator leads. Clarify any newly proposed aspects (e.g. policy lead role). Create a structural overview for management of the indicator work so that clear development steps are available for experts charged with developing or adjusting indicators.

Action: Develop a clear indicator management document (agreed between GEAR and State and Conservation) that defines the indicator development structure and process. This would then form the basis for updating the terms of reference (ToR) of existing expert groups and to be supplied to all indicator leads and expert groups.

Timeline: Spring 2019 – joint action with GEAR and State and Conservation.

STEP 4: Prepare - Joint policy-technical-expert workshop for common focus

Plan: A one-off workshop to bring together GEAR, State and Conservation, experts responsible for development or adjustment of indicators, the Secretariat, invited policy experts if identified (e.g. MSFD or UN SDG related), and invited OSPAR representatives (e.g. relevant Secretariat individual responsible), or representatives from other institutions with whom joint working initiatives have been identified. This could be done in sections (e.g. hazardous substances, biodiversity) or focus only on those indicators that are at an early developmental stage (e.g. new proposals, candidate or joint work). This would focus on those indicators identified in previous stages of this process as priority or for development/adjustment.

Aim: Document a defined list of priority indicators for work to be carried out on (development or adjustment), detailing the specific way forward for each of the identified indicators. This would for example specify practical, policy and technical issues to be worked on, define resources required for planned work, and re-define the focus of the list of HELCOM indicators to reflect only those with active purpose or under development.

Action: Develop a common understanding between policy working groups, technical working groups and experts responsible for carrying out the planned work. Define a clear plan with milestones and stages for development and provide information that would guide the work focus of the expert networks.

Timeline: Spring 2019 (possibly March or back-to-back with spring GEAR meeting)

STEP 5: Execute – initiate work program on indicator development and adjustment

Plan: Initiate the work to develop new indicators and adjust existing indicators by activating the respective expert groups and indicator leads/co-leads. This step, as well as indicator maintenance will be led by the State and Conservation Working Group.

Aim: This will be a longer program of work that will have two natural stages. The first stream of work would be the operationalization of existing core and pre-core indicators with a target of 2020 (i.e. in advance of the update of the BSAP, 2021). The second stream of work would have a target of early 2022 so that development is completed in advance of the third holistic assessment (timetabled in 2023). This plan would ensure indicator development took place in advance of the assessment and reporting period.

Action: Initiate the program of work to develop the identified indicators based on the outcome of this overall process. The outcome of the process would be represented by the final output of the joint policy-technical workshop (once approved by HODs). Specific kick of workshops could be implemented where needed, targeted towards defined themes.

Timeline: Document to HODs in June 2019 for approval on specific program of work. Planned work initiated in autumn 2019, ongoing till 2020 (stage 1) and 2022 (stage 2).

Annex 1: Draft formulation of indicator mapping exercise, as adapted from [GEAR 18-2016 document 3.6 Rev.2](#).

This table will be further developed by the Secretariat and the drafting group, and pre-filled, prior to sending to expert networks. The following issues are currently considered for the further development of this table: the need to include potential details at the HELCOM assessment scale 4 for certain indicators, the nesting and comparability of policy documents, and the independent assessment of indicators to policy documents so that the information can be created in a database-style format that can be pivoted to assess the situation from either the species, assessment unit or the policy perspective.

The following table includes an initial assignment of HELCOM indicators to criteria of Commission Decision 2017/848/EU. Please check and, where appropriate, correct the assignment. Please complete the table using the following numbers for subbasins and colours for elements, threshold values, monitoring/data and integration. Use the row "Advice" to provide information on:

- What further work is needed?
- How can the work be taken forward?
- Describe any obstacles (e.g. resources and/or fine-tuning of procedures) to be addressed in further work?
- Proposal for the frequency of indicator assessment
- How should the indicators be presented?

For agreed application in subbasins: **1** = Kattegat, **2** = Great Belt, **3** = Kiel Bay, **4** = Bay of Mecklenburg, **5** = Arkona Basin, **6** = Bornholm Basin, **7** = Gdansk Basin, **8** = Eastern Gotland Basin, **9** = Western Gotland Basin, **10** = Gulf of Riga, **11** = Northern Baltic Proper, **12** = Gulf of Finland, **13** = Bothnian Sea, **14** = The Quark, **15** = Bothnian Bay.

For indicator (concept), elements, thresholds, monitoring/data, integration rules the following colours to express match with requirements of Com Decision (EU) 2017/848

Colour	Matching
	Agreed and full match
	Agreed but no full match. Development/adjustment needed
	Not agreed, not available, to be developed
	To be agreed at EU level as far as HELCOM EU Member States are concerned
	Criterion not relevant for assessment.

Legend: **P** = primary criterion, **S**= secondary criterion; **CP** = lead country, **Co** = core indicator, **Pre** = pre-core indicator, **Ca** = candidate indicator; *italics* = criteria without threshold requirement

		COM Dec (EU) 2017/848			HELCOM indicator										National indicator (CP/subbasin)
		Criteria	P	S	Indicator	CP	Co	Pre	Ca	Subbasins	Elements	Thresholds	Mon./Data	Integration	
BSAP	Biodiversity														
BIODIVERSITY	Fish	D1C1													
		D1C2			Abundance of sea trout spawners and parr										
					Abundance of key coastal fish species										
					Abundance of salmon spawners and smolt										
		D1C3													
		D1C4													
					Advice (expert group):										
BIODIVERSITY	Marine Birds	D1C1			Number of drowned mammals and waterbirds in fishing gear										
		D1C2			Abundance of waterbirds in the breeding season Abundance of waterbirds in the wintering season										
		D1C3													
		D1C4													
		D1C5													
					Advice (expert group)										
BIODIVERSITY	Marine Mammal	D1C1			Number of drowned mammals and waterbirds in fishing gear										
		D1C2			Population trends and abundance of seals										
		D1C3			Nutritional status of seals										
		D1C4			Reproductive status of seals										
		D1C5													
					Advice (expert group)										
BIODIVERSITY	Pelagic habitats	D1C6			Diatom / Dinoflagellate index										

		Advice (expert group)													
BIODIVERSITY	Benthic habitats	D1C1													
		D1C2													
		D1C3													
		D1C4													
		D1C5													
		Advice (expert group)													
BIODIVERSITY	Foodweb	D4C1													
		D4C2			Abundance of coastal fish key functional groups*										
		D4C3			Zooplankton mean size and total stock (MSTS)										
		D4C4													
				Advice (expert group)											
Pressure															
MARITIME ACTIVITIES	Non-indigenous species	D2C1			Trends in arrival of new non-indigenous species										
		D2C2													
		D2C3													
				Advice (expert group)											
BIODIVERSITY	Commercial stocks	D3C1													
		D3C2													
		D3C3													
				Advice (expert group)											
EUTROPHICATION	Eutrophication	D5C1			Total nitrogen (TN)										
					Total phosphorus (TP)										
					Nitrogen / DIN										
					Phosphorus / DIP										
		D5C2			Inputs of nutrients to the subbasins										
					Chlorophyll-a										
		D5C3			Cyanobacterial bloom index										
		D5C4			Water clarity										
		D5C5			Oxygen debt										
		D5C6													
D5C7															
D5C8			State of the soft-bottom macrofauna community												
		Advice (expert group)													

HAZARDOUS SUBSTANCES	Underwater noise	D11C 1												
		D11C 2												
		Advice (expert group)												

Annex 2: Outcome from GEAR 18-2018 (cf. [GEAR 18-2018, document 3.6 Rev.2](#)) on planning of indicator work related to technical follow-up to Commission Decision (EU) 2017/848/

Technical follow-up to Commission Decision (EU) 2017/848

Background

Commission Decision (EU) 2017/848 has revised the criteria and methodological standards for good environmental status of 2010, which the indicator work has taken into account so far. In addition to changes to criteria and methodological standards, the Commission Decision requires that EU Member States establish lists of ecosystem and pressure elements, threshold values, and methodological standards for certain criteria and descriptors through regional or subregional cooperation.

Objectives

The aim is to plan future HELCOM indicator work in such a way that HELCOM EU Member States will be in a position to fulfil the requirements of Commission Decision (EU) 2017/848 in conjunction with Art. 5(2) and 6 MSFD in time for the next holistic assessment. The main objectives are to develop proposals and finally agree on:

- the regional or subregional use of criteria for assessing GES and associated adjustment of HELCOM indicators or development of new indicators
- lists of ecosystem and pressure criteria elements for the assessment
- threshold values for criteria and indicators
- methodological standards (i.e. integration rules)
- frequency of indicator assessments
- presentation of indicators

The determination of the use of criteria and lists of criteria elements will also aim to support the review and update of the monitoring programmes (due for EU reporting in 2020) and, if relevant, the development of arrangements on data collection and management in time for the next assessment.

Approach to following-up on Commission Decision (EU) 2017/848

The follow-up work is guided by the main pressures preventing the BS from achieving good status and by the following sequence of considerations for prioritization:

- address primary criteria before secondary criteria
- address criteria requiring threshold before criteria for which no thresholds are required
- address lists of elements before threshold values and methodological standards
- consolidate existing indicators before developing new indicators develop new indicators for *major* gaps relating to criteria requiring threshold values (i.e. where so far no assessment has been possible at all) before developing complementary indicators or indicators not requiring threshold values
- use opportunities for cooperation with OSPAR or other EU marine regions on indicators before starting parallel work
- focus on work in accordance with and complementary to EU technical work, using EU standards etc. where relevant to avoid unnecessary efforts and overlaps.

The work should be further guided by:

- the specific requirements for criteria and criteria elements, including their presentation in Annex I of Commission Decision (EU) 2017/848
- the general requirements for use of criteria and setting of thresholds in Art. 3 and 4 Commission Decision (EU) 2017/848

- where relevant and appropriate, draft guidance and issues for discussion provided in the test version of EU MSFD CIS Art. 8 MSFD assessment guidance
- considerations of streamlining indicator development with needs of various policy contexts so it can serve multiple purposes namely BSAP, MSFD (for the EU countries) and UN-SDGs.

and specifically in relation to the Contracting Parties being EU members states by:

- the specific requirements for criteria and criteria elements, including their presentation in Annex I of Commission Decision (EU) 2017/848
- the general requirements for use of criteria and setting of thresholds in Art. 3 and 4 the Decision
- where relevant and appropriate, draft guidance and issues for discussion provided in the test version of EU MSFD CIS Art. 8 MSFD assessment guidance

When preparing documents to HODs implications for monitoring and assessment should be provided for approval of indicators. To guide development of measures the costs and benefits of achieving GES should be provided.

The following steps are envisaged for following-up Commission Decision(EU) 2017/848, noting that indicator development is an ongoing work in HELCOM:

- a. *Analysis:*** In 2018, HELCOM groups provide information to GEAR(2) 2018 on identified further work needed, suggested ways in which the work can be taken forward and if possible an initial indication of resources and and procedures needed to address further work. The information will follow guidance and a format to be developed by GEAR (1) 2018 (Annex 3). GEAR(2) 2018 will use the information to provide further guidance and prioritization for the technical work. The information is based on an in-depth analysis, prepared by working groups, guided by GEAR, including indicator leads. The analysis:
- aims at identifying gaps or any need for indicator adjustment. This includes mismatch of indicators and Decision requirements in terms of issue addressed (conceptual), in relation to lists of elements, threshold values and methodological standards, and knock-on effects on monitoring requirements and adjustment needs. The analysis should also review the current set of indicators (including pre-core and candidate indicators) to see whether all indicators are necessary and to focus and ultimately narrow-down the list of candidate indicators
 - maps HELCOM core/pre-core/candidate indicators against the criteria of Commission Decision (EU) 2017/848
 - includes information collected from Contracting Parties on national indicators used in addition to HELCOM indicators in their latest Art. 8 MSFD assessments. It could also include information about GES in relation to other EU legislation (habitats, birds, mammals, eutrophication, contaminants)
 - The aim is to identify any cooperation needs at basin level.
 - is followed up by recommendations on how to prioritise and bring the work forward, in order to agree among HELCOM parties on what specific work should be done.
- b. *Elements:*** In 2018, HELCOM expert networks, including indicator leads, prepare an update, where needed, of the lists of criteria elements already agreed for HELCOM indicators or draft such lists where they have not yet been agreed. The lists are presented to HELCOM groups in autumn 2018 for review and presented to GEAR (2)2018. The aim is that the lists be approved at policy level, and that the work is done in time for the review and update of MSFD monitoring programmes by expert networks and HELCOM groups.
- c. *Consolidation:*** In 2019-2020 HELCOM groups, based on technical work by the expert networks including indicator leads, consolidate the existing HELCOM core/pre-core indicators, guided by the

outcome of state of the BS report and priority in relation to the main pressures preventing to achieve GES and primary criteria:

- Consolidation relates to the indicator concept, the review and, where relevant, update of existing threshold values or the development of threshold values where these are not yet available, and methodological standards, such as integration rules across criteria.
- Changes to indicators are documented in the HELCOM indicator fact sheets.
- The Secretariat maintains an indicator management document which maps the HELCOM indicators against the criteria of Commission Decision (EU) 2017/848, BSAP and SDGs and records the state of play of their development. To this end the table includes one column in which issues or request for advice raised by HELCOM groups is included. It includes another column with threshold values and an indication of (i) agreed and confirmed, (ii) updated and for approval, (iii) under review or under development. Threshold values agreed and confirmed, under review or proposed as new values should be included numerically to provide a comprehensive overview of indicators and their thresholds, and provide an instrument for reporting progress and for decision-making in HELCOM.

- d. *Development:*** In 2020-2022 HELCOM groups, based on technical work by the expert networks including indicator leads, should develop any new indicators needed to meet the requirements of Commission Decision (EU) 2017/848, as well as policy needs of BSAP and SDGs. Preparatory work for indicator development could start in 2019 (e.g. by contracting a project to support indicator work) once a decision has been taken by HOD what to develop in which sequence, so that substantive work can start straight away in 2020. The development of indicators is documented in HELCOM indicator reports and in the Secretariat indicator management document (see under “consolidation”). Lead countries and projects develop the indicator concept in close consultation with policy leads. Lead countries and projects regularly report progress to the expert networks, present scientific options where decisions need to be taken in the direction of the indicator development, and prepare substantive scientific discussions of the indicator development. Progress and substantive information on the indicator development are reported to the HELCOM groups which review the indicator development from a technical point of view. GEAR will review the indicator development from a strategic point of view, based on the Secretariat indicator management document and on advice and issues raised by HELCOM groups. The aim is that any new indicators are finalized and approved by HOD (2) 2021.
- e. *Application:*** In 2022 HELCOM groups undertake assessments of the indicators and integrated assessments as contribution to the next holistic assessment. In the first half of 2023, the work is consolidated and agreed at policy level.

Organisation of work

- Technical work is carried out by expert networks, guided by the technical/scientific working groups.
- Lead countries and any projects work in close consultation with the expert networks. They regularly report on the scientific state of development, outline options for the scientific development of indicators and prepare substantive discussions on the indicator development.
- Expert networks report state of play and information on the progress of work to HELCOM working groups) approximately every six months.
- Assign policy leads to assessment themes (e.g. biodiversity/species, biodiversity/habitats, hydrographical changes, eutrophication, hazardous substances, underwater noise, marine litter) to provide an operable science-policy interface and ensure information flow on the requirements between technical and policy groups.
- HELCOM working groups review and guide the work from a technical/scientific and a strategic (GEAR) point of view, guided by the above consideration for prioritization

- Results of the analysis (c) in 2019 and the assessments (e) in 2023 are approved by HOD based recommendations from HELCOM working groups including GEAR. In addition, HoD approves thresholds, methodological standards etc., when they are developed.
- There is opportunity to optimize the technical means for cooperation e.g. workspaces. Pros and cons and any new ideas on such means should be exchanged.