



## Baltic Marine Environment Protection Commission

Roadmap for continued HELCOM work on economic and social analyses (ESA)

Updated based on comments from GEAR 21-2019

February 2020

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## Roadmap for continued HELCOM work on economic and social analyses (ESA)

### Changes in January-February 2020

- Added table of contents
- Added section on background
- Pan Baltic Scope moved under previous work
- Added scenario analysis
- Added social dimension
- Added section on timeline for ongoing and future work

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### Background

The Roadmap for continued HELCOM work on economic and social analyses (ESA) describes the aims and motivation for conducting regional ESA, presents the ongoing work as well as outlines potential further analyses. The roadmap is a living document drafted by HELCOM EN ESA and is updated as work progresses. The first version was agreed on by HOD 51-2016 ([Outcome](#), para 6.47). The updated version was considered by GEAR 21-2019 ([Outcome](#), paras 5.33-5.35) and agreed on, provisional that the revisions suggested in the meeting are taken into consideration in the document. This version of the document includes the suggested revisions by GEAR 21-2019.

### Rationale and aim of HELCOM economic and social analyses

Economic and social analyses (ESA) provide a set of tools for examining how the marine environment affects human welfare, e.g. in terms of the benefits from the use of marine waters and the costs and

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benefits of achieving a healthy marine ecosystem. They support a sustainable blue economy and use of marine resources. Economic and social analyses provide answers to questions such as the following:

- What is the Baltic Sea's input to economic growth and human well-being?
- How much does the degradation of the marine environment cost us?
- What is the value of marine ecosystem services?
- What are the minimum costs of achieving a healthy marine ecosystem?
- What are the economic benefits of achieving a healthy marine ecosystem?

Answers to these questions by comprehensive economic and social analyses are needed to fully apply ecosystem-based management of the Baltic Sea, building on understanding of the linkages between the ecosystem and the socio-economic system. The analyses can provide valuable information for marine management, maritime spatial planning, pollution mitigation, as well as for supporting information and implementation of national and regional policies.

HELCOM Ministerial Declaration from Copenhagen, 2013, recognized a gap in economic and social analyses and includes an agreement to *“initiate or intensify the work to attribute economic value to marine and coastal ecosystem services and their contribution to societal, cultural and ecological well-being, [...] with a view to starting more comprehensively embracing an ecosystem accounting approach”*. Contracting Parties also decided *“to cooperate with institutions having leading expertise on economic and social analysis of the use of the Baltic Sea and the cost of degradation of the marine environment in order to contribute to the holistic assessment’s socio-economic analysis”*.

HELCOM Ministerial Declaration from Brussels, 2018, agreed to *“further develop and carry out coordinated regional economic and social assessments, including mapping, valuation, and analysis of ecosystem services and natural capital accounting”*, as well as to *“encourage further coordinated research to support cost of degradation analyses, cost-effectiveness analyses of regional measures, and assessment of cost and benefits related to achieving GES covering the entire Baltic Sea region”*.

### Previous HELCOM work on economic and social analyses

Economic and social analyses for the second holistic assessment of ecosystem health (HELCOM HOLAS II) involved developing a framework for regional analyses of the use of marine waters and cost of degradation, as well as operationalizing this framework by collecting relevant data. The work was done in two EU-funded projects: [HELCOM TAPAS](#) in 2016 and [HELCOM SPICE](#) in 2017, and built on previous work by the BalticStern network as well as several BONUS projects.

In the use of marine waters analysis, comparable data on the economic contribution from selected marine activities (fish and shellfish harvesting, aquaculture, tourism and recreation, energy production and transport) were collected, mainly from national and regional statistics, complemented with non-market values for coastal and marine recreation. Additionally, an approach was developed for assessing the impact from activities on ecosystem services, as well as the dependence of activities on ecosystem services.

Cost of degradation analysis entailed assessing the consequences to human well-being from the degradation of the marine environment, based on the benefits forgone or damages resulting from not achieving good environmental status (GES). Cost of degradation was assessed in monetary terms for selected degradation themes/descriptors of GES (eutrophication, selected biodiversity aspects) and ecosystem services (recreation), using information from multi-country economic valuation studies on the benefits of improving the state of the Baltic Sea.

The approaches and results of the analyses were reported as part of the [HOLAS II ‘State of the Baltic Sea’ report](#) and in a [supplementary report](#) on economic and social analyses in 2018.

In addition to the use of marine waters and cost of degradation analyses for HOLAS II, the HELCOM SPICE project covered additional topics, including ecosystem services, integrated assessment of activities,

pressures, state and impact, and the principles for developing regional business-as-usual (BAU) scenarios ([reports available online](#)).

The HELCOM work in the [Pan Baltic Scope project](#) (2018-2019) involved producing recommendations for developing a framework for economic and social analyses in maritime spatial planning (MSP). The recommendations were based on previous experiences in regional work for economic and social analyses in HOLAS II, a literature review on the assessment of economic, social, cultural and ecosystem service impacts in MSP, and an expert survey on how these impacts are considered in MSP in the Baltic Sea region.

### Ongoing HELCOM work on economic and social analyses

Currently, the regional economic and social analyses are developed as part of sufficiency of measures analyses to support the update of the Baltic Sea Action Plan (BSAP), carried out by coordinated activities in the HELCOM ACTION project and ad hoc HELCOM Platform on sufficiency of measures (HELCOM SOM Platform).

The [ACTION project](#) (2019-2020) contributes to the sufficiency of measures (SOM) analysis by developing an approach for evaluating the sufficiency of existing measures to achieve GES, to construct a business-as-usual scenario and identify whether there is a gap to GES and need for new measures. In the approach, measures are linked to activities, pressures and environmental state to evaluate their effectiveness and sufficiency. Additionally, the development of main human activities and their effect on pressures and state will be considered. ACTION also develops an approach for the regional cost-effectiveness analysis of measures and conducts this analysis for new and not yet implemented measures. The analysis is built on the SOM approach and business-as usual scenario, and thus it also considers the effects of existing measures and applies the data collected for the SOM analysis.

The SOM Platform acts as an interdisciplinary platform to harmonize the approach on analysis of sufficiency of measures and ensure coherency and coordination across topics (see [Terms of Reference for SOM Platform](#)). The SOM Platform focuses its work on complementary topics to the ACTION project, i.e. hazardous substances, non-indigenous species, marine litter, underwater noise, and biodiversity aspects not covered by the ACTION project. The analysis will be implemented through a model that will be run for all topics by SYKE, Finland, based on the data and information collected under the SOM Platform, ACTION project, and expert-based evaluations. The analysis identifies where new measures are likely needed and supports identifying what kind of new measures are likely needed to reach GES.

### Proposed roadmap for further economic and social analyses

The aim of HELCOM economic and social analyses and the work of the HELCOM expert network on economic and social analyses (EN ESA) is to inform and advance the consideration of economic and social aspects in marine policies and enhance the regional cooperation on the economic and social analyses related to the Baltic Sea marine environment (see [Terms of Reference for EN ESA](#)). The active involvement of all Contracting Parties in the ESA network and project work on ESA is considered crucial. The economic and social analyses should provide region-level approaches and results, as well as support national assessments and implementation of EU directives for those Contracting Parties being member states of the EU.

The following themes are proposed as priority areas for future ESA work. All of them can support the implementation of the ecosystem-based approach, as well as the update of the BSAP, third holistic assessment of ecosystem health (HOLAS III) and maritime spatial planning in the Baltic Sea region. The themes are classified under four broad categories: i) Integration and continuity, ii) Developing methodologies, iii) Approaches and assessments for policy analysis, iv) Building information base.

## i) Integration and continuity

- 1. Integrate economic and social analyses to other HELCOM work strands** to support the implementation of the ecosystem-based approach and allow for more comprehensive assessment of the linkages between the ecological and socio-economic systems.
- 2. Secure continuation and develop institutional memory** of national and regional economic and social analyses to enable improved integration of research outcomes from the Baltic Sea region. This should entail collecting and maintaining continuous economic and social ESA data to support HELCOM work. The HELCOM EN ESA is important for this, as well as setting up a dedicated open-access HELCOM website on ESA projects and results tailored to the use and dissemination of knowledge to topic experts.

## ii) Developing methodologies

- 3. Continue developing integrated approaches for assessing the marine environment, linking the ecosystem and socio-economic system** to assess how the marine environment affects human welfare and how human activities and measures affect the marine environment. The work should build on the approaches and results developed in the HELCOM SPICE, HELCOM ACTION and previous and ongoing BONUS projects, SOM analysis for the BSAP update, BSP11 and Symphony tools, as well as other relevant work. Integrated models and approaches would enable analyses of the impacts of different policy scenarios, such as baseline (e.g. business-as-usual) and policy target (e.g. GES) scenarios.
- 4. Continue developing the ecosystem services approach for the economic and social analyses of the marine environment** (including use of marine waters and cost of degradation) to improve the consideration of ecosystem services and linkages between the marine environment and human welfare. This work would support the integration of ecosystem and socio-economic assessments and would allow covering diverse links between the marine ecosystem and human welfare, including consideration of the social dimension/aspects in the ESA.
- 5. Continue developing regional frameworks for economic and social analyses in maritime spatial planning.** The work can build on the results of the Pan Baltic Scope and other relevant MSP projects, including BONUS projects.
- 6. Develop approaches and data for marine ecosystem accounting** to describe and quantify the interactions between the economy and the marine environment, and to quantify the economic value of the Baltic Sea ecosystems. Building on the rich data, methods and expertise in the HELCOM ESA network, pilot marine accounts for the Baltic Sea can be developed. This entails working with the national statistical agencies to provide data in standard format, e.g. on the economic benefits derived from the use of marine waters.
- 7. Develop approaches for linking cost of degradation assessment to state assessment,** including adjusting the results of existing valuation studies to correspond to baseline and target environmental state.
- 8. Formulate and develop economic and social indicators** that cover relevant economic and social aspects related to the marine environment and a range of benefits and costs of using the marine environment.

iii) Approaches and assessments for policy analysis

9. **Continue to support the assessment of sufficiency of measures** for the update of the BSAP and identification of the need for new measures by contributing to the SOM Platform work.
10. **Continue developing approaches and results for regional cost-effectiveness and cost-benefit analyses** to support policy evaluation and national work on programmes of measures for those Contracting Parties being member states of the EU.

iv) Building information base

11. **Develop approaches, data and results for spatially explicit analysis of economic and social impacts of the marine environment** to enable assessing the spatial distribution of the economic contribution from human activities, ecosystem services, and benefits from ecosystem services and environmental changes to support maritime spatial planning and other marine policies.
12. **Conduct regionally coordinated economic valuation studies of ecosystem services and/or environmental benefits** to provide comparable information on the benefits of reaching GES to support cost of degradation and cost-benefit analyses. This would enable covering additional environmental topics and ecosystem services. The studies should enable evaluating the spatial distribution of benefits to support maritime spatial planning. Finland, Sweden and Germany have or are currently implementing a similar study to value the benefits of achieving GES, using identical survey material in all countries.
13. **Engage with different BONUS and other relevant projects** to utilize valuable ESA research and resources and identify potential knowledge gaps that could be filled with a regional study.

Timeline for ongoing and future economic and social analyses

Table 1 includes the ongoing work on ESA for which resources have already been secured, together with the project, timing and linkages to development of HELCOM processes (BSAP update). Table 2 lists potential future activities proposed in this roadmap, with potential timing and main linkages to HELCOM processes (BSAP update, HOLAS III, MSP). Note that there has been some work on some of the items in Table 2 in previous and ongoing projects. The potential timing, however, considers only additional efforts to the work that has already taken place by the beginning of the year 2020.

Table 1. Timeline for ongoing work on ESA

Activity	HELCOM process	Project	Timing
Sufficiency of measures (SOM) analysis and business-as-usual (BAU) state	BSAP update	ACTION	2019-2020
Cost-effectiveness analysis of potential new measures	BSAP update	ACTION	2020

Table 2. Timeline for potential further work on ESA

Activity	HELCOM process	Project	Potential timing
1. Integrate economic and social analyses to other HELCOM work strands	BSAP update, HOLAS III, MSP	-	ongoing, continuous
2. Secure continuation and develop institutional memory	BSAP update, HOLAS III, MSP	-	ongoing, continuous
3. Continue developing integrated approaches for assessing the marine environment, linking the ecosystem and socio-economic system	BSAP update, HOLAS III, MSP	partly ACTION	2020 =>
4. Continue developing the ecosystem services approach for the economic and social analyses of the marine environment	HOLAS III, MSP	-	2021 =>
5. Continue developing regional frameworks for economic and social analyses in maritime spatial planning	MSP	-	2021 =>
6. Develop approaches and data for marine ecosystem accounting	HOLAS III	-	2021 – 2023
7. Develop approaches for linking cost of degradation assessment to state assessment	HOLAS III	-	2021 – 2023
8. Formulate and develop economic and social indicators	HOLAS III	-	2020 =>
9. Continue to support the assessment of sufficiency of measures	BSAP update	partly ACTION	2020
10. Continue developing approaches and results for regional cost-effectiveness (CEA) and cost-benefit analyses (CBA)	BSAP update	partly ACTION (CEA)	2020 =>
11. Develop approaches, data and results for spatially explicit analysis of economic and social impacts of the marine environment	HOLAS III, MSP	-	2021 =>
12. Conduct regionally coordinated economic valuation studies of ecosystem services and/or environmental benefits	HOLAS III	partly national projects/resources	2020 =>
13. Engage with different BONUS and other relevant projects	BSAP update, HOLAS III, MSP	-	ongoing, continuous

#### Resources for economic and social analyses

The work carried out thus far has been possible thanks to several individual projects (TAPAS, SPICE, ACTION, Pan Baltic Scope). The expert network on EN ESA has provided additional support and an important forum for regional collaboration also for those Contracting Parties that have not participated in the projects. Continuous funding would be needed to secure institutional memory and continued development of regional ESA to support HELCOM work and national analyses. Involvement of all Contracting Parties to the ESA work is encouraged.