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Background

Economic and social analyses (ESA) for HOLAS II included the use of marine waters and cost of degradation analyses. The approaches and results were reported in the [‘State of the Baltic Sea’ report](#) and a [supplementary report on ESA](#). The analyses covered the entire Baltic Sea region, but were limited to selected human activities (use of marine waters) and environmental themes/ecosystem services (cost of degradation). Furthermore, although a conceptual framework for linking the use of marine water and cost of degradation analyses was developed, they were conducted separately in HOLAS II due to lack of suitable data, approaches and resources, and the link between environmental status assessment and economic and social analyses was missing.

GEAR 20-2019 invited the Secretariat and the relevant Expert Groups to prepare more specific information on identified gaps and development needs for HOLAS III for the various work strands not covered by the indicator work, as identified in the HOLAS II process or in subsequent work ([Outcome of GEAR 20-2019](#), para. 4.5).

This document presents a proposal for the economic and social analyses in HOLAS III, in relation to the overall HOLAS III provisional plan presented in [document 5-4](#). The proposal has been discussed and developed at several EN ESA meetings in 2019 (Outcomes of EN ESA [5-2019](#), [6-2019](#) and [7-2019](#)). Actual improvements and development would be included in step 2 and 3 of the HOLAS III preparatory phase.

This document is in line with the Update of the roadmap for continued HELCOM work on ESA (document 5-2), which includes all the elements proposed for ESA in HOLAS III as general development areas for future HELCOM ESA. Thus, implementing ESA for HOLAS III as proposed here would meet some of the aims of the updated ESA roadmap.

Action requested

The Meeting is invited to consider and provide input on the proposed economic and social analyses in HOLAS III.

Economic and social analyses in HOLAS III

Introduction

An important achievement for the regional economic and social analysis (ESA) was HOLAS II¹, finalized in 2018, which included regional assessments of the use of marine waters and cost of degradation for selected activities and environmental topics². The analyses were developed as part of EU-co-funded HELCOM [TAPAS](#) and [SPICE](#) projects, and reviewed by the HELCOM expert network on economic and social analyses (EN ESA) and GEAR. The approaches and results of the HOLAS II economic and social analyses are reported in detail in [the ESA supplementary report](#).

HOLAS II shows that HELCOM is a forerunner in considering economic and social aspects in marine protection efforts (see e.g. European Marine Board's Future Science Brief on [Valuing Marine Ecosystem Services – Taking into account the value of ecosystem benefits in the Blue Economy](#)). The added value of regional economic and social analyses noted in several HELCOM EN ESA (and other) meetings is also the exchange of knowledge, data and methods.

While acknowledging the significant efforts already made in developing economic and social analyses in HOLAS II, the present document takes a critical look on the previous analyses and proposes several avenues for improvement. It highlights preconditions for meaningful ESA, where integration of the environmental assessments and ESA has a critical role, and proposes priority areas of work for the ESA in HOLAS III.

Proposal for ESA in HOLAS III

1. Integrated assessment for HOLAS III that explicitly links state of the Baltic Sea and ESA

Although the results of ESA were included in the chapters on pressures and biodiversity in the HOLAS II report, the economic and social analyses themselves were not integrated to the assessment of pressures and state. Additionally, the use of marine waters and cost of degradation analyses were conducted separately from each other. Linking ESA to the state and pressure assessments is a precondition for a meaningful evaluation of how the marine environment affects human welfare. This enables establishing explicit links and feedbacks between the economic activities using the sea and between human welfare and the state of the Baltic Sea, and ensures improved relevance of the assessment for future management. Thus, HOLAS III should aim for an integrated assessment of human activities – pressures – state – ecosystem services – human welfare. This would enable establishing a connection between the use of marine waters and cost of degradation analyses, by assessing how the use of marine waters affects pressures and state, and what are the (positive and negative) consequences on human welfare. In addition, the effect of current use of the

¹ The second holistic assessment of ecosystem health (HELCOM HOLAS II) and 'State of the Baltic Sea' report.

² The economic contribution from the *use of marine waters* was assessed for fish and shellfish harvesting, marine aquaculture, tourism and recreation, renewable energy generation, and marine transport. For most of the activities/sectors, there were statistical data on employment and (gross) value added. However, these data were lacking for renewable energy (offshore wind energy) and marine transport infrastructure. For recreation, the socio-economic indicator (consumer surplus) indicated the economic benefits obtained by citizens from taking part in this activity.

The *cost of degradation*, i.e. the loss in human well-being from not achieving GES of the marine environment, was assessed for eutrophication, recreation and selected biodiversity elements. For these topics, international valuation studies had been conducted in the Baltic Sea region. For eutrophication and recreation, valuation studies covering all coastal countries were available. For biodiversity topics, an international valuation study had been implemented in Finland, Lithuania and Sweden, and these results were transferred to the remaining coastal countries to arrive at a regional estimate.

marine environment to its future use could be assessed, for example, how current fish and shellfish harvesting affects the opportunities and economic contribution from these activities in the future. The concept of ecosystem services provides an approach for linking the economy, citizens and the marine environment and to capture the interlinkages between the marine environment and human welfare (see also point 2).

Examples of and stepping stones for such integration have been taken in the HELCOM SPICE, Pan Baltic Scope and HELCOM ACTION projects. HELCOM SPICE developed an approach for assessing the linkages between activities and ecosystem services (see [Deliverable 3.1](#)) and explored the possibilities of integrating ESA in the assessments of the marine environment (see [Deliverable 3.4](#)). Additional examples of useful tools and methods are being developed, e.g. in several BONUS projects that have been invited to present their findings in EN ESA meetings. One of such projects is BONUS BASMATI, which links ecosystem components to ecosystem services and further to benefits and values.

HELCOM ACTION has developed an approach for linking measures to pressures and state components in the sufficiency of measures (SOM) analyses for the HELCOM BSAP UP. The methodology for the sufficiency of measures analyses for the BSAP update, designed to pave the way for the cost-effectiveness analysis of the possible new actions in the BSAP, is a significant milestone in developing an integrated model linking measures-activities-pressures-state. Moreover, the business-as-usual (BAU) state of the marine environment that is being assessed for the BSAP update through the HELCOM ACTION project and the HELCOM SOM Platform can be used in HOLAS III to improve the cost of degradation analysis.

Although assessing the linkages between the environment and human welfare is part of ESA and lead by economists, the work is interdisciplinary in nature and requires the involvement of experts from several fields. Development of a holistic assessment calls for active dialogue and collaboration between marine scientists, economists and experts from other fields. Such dialogue is paramount for successful analysis and assessment but also for the effective communication of the assessment outcome and its impact.

The economic and social analyses would benefit significantly from early planning and starting the analyses at the same time as the other components of HOLAS III. Regular planning and working meetings between EN ESA and other experts conducting the work should be organised. Moreover, if external resources are to be secured for the work, the project plan structure should reflect the needs of interdisciplinary work and all Contracting Parties would need to be involved.

2. Ecosystem services approach

HOLAS III should aim for a better coverage of marine and coastal ecosystem services and their impact on human welfare. This would entail identifying and assessing marine and coastal ecosystem services, including how the marine ecosystem contributes to the provision of ecosystem services, and what benefits and socioeconomic values people derive from these ecosystem services.

The need and added value of considering marine ecosystem services and their values in decision making is further elaborated in the recent [EU guidance on integrating ecosystems and their services into decision-making](#).

Using the ecosystem services approach in the economic and social analyses could allow for a holistic analysis of the socio-ecological linkages between the economy, citizens and the marine environment. Both the approaches and the information base need to be developed to fully use the ecosystem services approach in the regional ESA.

3. Economic benefits arising from marine protection

A Baltic Sea region wide economic valuation study to estimate the economic benefits arising from the marine protection is necessary to provide results for a comprehensive cost of degradation analysis in HOLAS III and to enable regional cost-benefit analyses of achieving good environmental status.

Such a study should go beyond and build upon the results from HOLAS II, and should, as far as possible, be designed to deliver results for national purposes as well. It is worth noting that Finland has implemented an economic valuation study on the benefits of achieving GES, and a similar study (using the same approaches and methods) has been conducted in Sweden and is ongoing in Germany.

4. Valuation of the natural capital of the Baltic Sea

Building on the rich data, methods and expertise in the HELCOM EN ESA, HOLAS III could include marine ecosystem accounting pilot assessments to describe and quantify interactions between the economy and marine environment. Such an assessment would describe how the Baltic Sea provides benefits to people and to which extent, as well as how social and governance factors affect the status and associated benefits. Ecosystem accounting provides an additional perspective for linking the ecosystem and socio-economic system.

These aspects were discussed in the international marine ecosystem accounting workshop (on 10.10.2019) hosted by the HELCOM Secretariat and organised by the Finnish Environment Institute with the funding of Eurostat Grants project, MAIA H2020 project.

Marine ecosystem accounting methodology is under development and its testing in the regional analysis would be significant milestone in its international applications.³

5. Policy decision support tools

HOLAS III could entail further socio-economic analyses of marine environmental protection by developing regional cost-benefit analyses of policy measures.

The cost-benefit analysis compares the costs and benefits of policies to improve the state of the marine environment and allows examining the economic efficiency of such policies. Such analysis would support future development of regional action plans and programmes of measures, and could support Contracting Parties being EU members in their national analyses. It could build on the regional cost-effectiveness analyses developed in the HELCOM ACTION project for the BSAP update, which will provide estimates of the costs of measures for achieving good state of the marine environment. The approach for the cost-effectiveness analyses in the ACTION project themselves is based upon previous national and international research on the cost-effective implementation of marine action plans and programmes of measures. Estimates of the benefits of achieving the good status could build on existing and new economic valuation studies (including the study proposed under Point 3).

Regional ESA of policy measures are considerable endeavours, requiring multidisciplinary approaches and substantial resources.

³ See, for example the documents [Marine and the 25 Year Environment Plan](#) (UK Natural Capital Committee 2019) and [Technical Guidance on Ocean Accounting](#) (Ocean Accounts Partnership 2019).