



Baltic Marine Environment Protection Commission

HELCOM expert network on economic and social analyses
meeting

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Draft on Further development of the business-as-usual scenario (BAU) to support HELCOM work

Background

This document introduces the business-as-usual scenario (BAU) and the further development of BAU to be used in the future work in HELCOM with a special focus on the inclusion of BAU into the Baltic Sea Action Plan and on regional economic and social analyses (ESA). The document will be used as background information for HELCOM GEAR working group meeting that will give strategic guidance on the development of BAU to support future HELCOM work.

The document is built on the experience from the previous regional ESA work in the Baltic Sea region, the work in the HELCOM SPICE project¹, and consultations and exchange with the Baltic Sea region ESA experts and representatives from other marine regions (e.g. HELCOM ESA workshops and WG POMESA meetings).

The aim is to provide background information for HELCOM GEAR working group (Group for the Implementation of the Ecosystem Approach), which will give guidance on the development of the BAU in HELCOM future work.

This is the first draft of the document which will be developed further after consultations and information exchange within the Baltic Sea ESA network and with other marine regions.

Action requested

The meeting is invited to take note of the information as background for the discussion in the meeting, and provide comments and views on the proposed document.

¹ SPICE (Implementation and development of key components for the assessment of Status, Pressures and Impacts, and Social and Economic evaluation in the Baltic Sea marine region) is a HELCOM coordinated project implemented in 2017, co-financed by the EU. More information about the project is available at <http://www.helcom.fi/helcom-at-work/projects/spice/>.

What is a BAU and why it is needed

The business-as-usual scenario (BAU) is defined as a “a scenario that describes the anticipated evolution in the environmental, social, economic and legislative situation in the marine environment over the agreed time horizon in the absence of the policy under consideration”², i.e. if the HELCOM Baltic Sea Action Plan (BSAP) was not implemented. The BAU describes how the state of the marine environment would change over time due to the future changes in marine uses and the implementation of the existing legislative and regulatory frameworks impacting the marine environment (Figure 1).

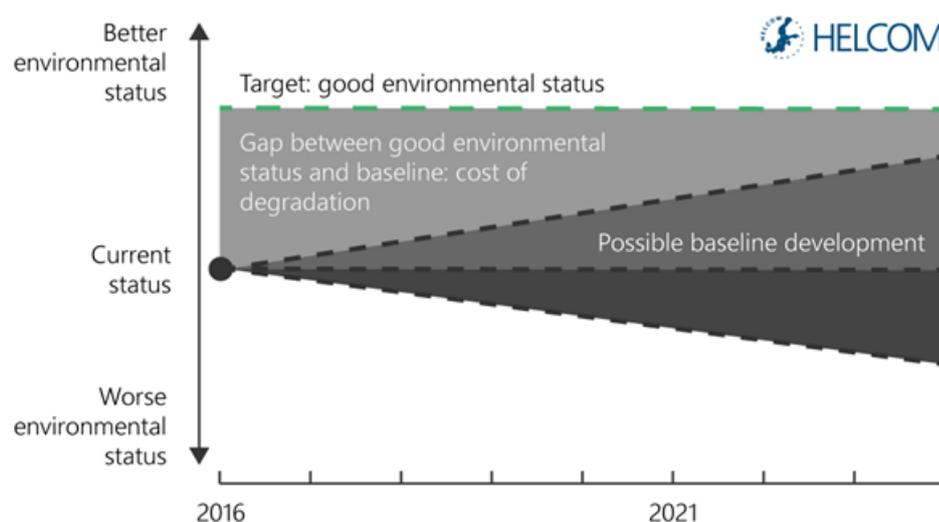


Figure 1. Illustration on the use of the BAU in the policy gap analysis, which is relevant for analysing and planning of future policy measures. Source HELCOM (2017)³.

For example, BAU is needed to assess if the target/objective of the BSAP or the good environmental status by the MSFD is reached given anticipated changes in marine uses and the implementation of the BSAP and other existing marine protection measures. If there is gap between the BAU and the target, this implies that new measures are needed or the existing ones need to be strengthened. Thus the BAU work would be helpful in assessing the need for the update of the BSAP. Moreover, similar approach would be helpful at national level to assess if the MSFD programme of measures need an update. In addition the BAU could be used to assess the cost of degradation at HELCOM work and also at a national scale. Here the difference between the BAU and the target would be the cost of degradation.

Use of the BAU for the planning of future policy measures

The role of the BAU in developing the programme of measures for achieving good status is illustrated in Figure 2. If the gap between baseline and good status is assessed against the current state of the marine environment, it does not take into account the future changes of uses of the marine waters, which may lead to a decrease or increase in the pressures on the marine environment and the associated changes in the state. It also does not account for the ongoing and planned implementation of the measures of existing policy frameworks which can improve the state and, hence, reduce the expected gap between the baseline and good status. As a result, the gap may be under- or overestimated, which may have considerable socioeconomic implications. For example, an overestimation of the gap leads to costs of unnecessary measures, whereas an underestimation of the gap leads to insufficient measures with the result that good

² WG ESA (2010) “Economic and social analysis for the Initial Assessment of MSFD: A Guidance document.” MSFD CIS.

³ HELCOM (2017) “First version of the ‘State of the Baltic Sea’ report – June 2017 – to be updated in 2018”.

status is not achieved. Hence, there are costs to society due to degradation of the marine environment. Thus, the BAU is crucial for developing an appropriate programme of measures for achieving good status of the marine environment.

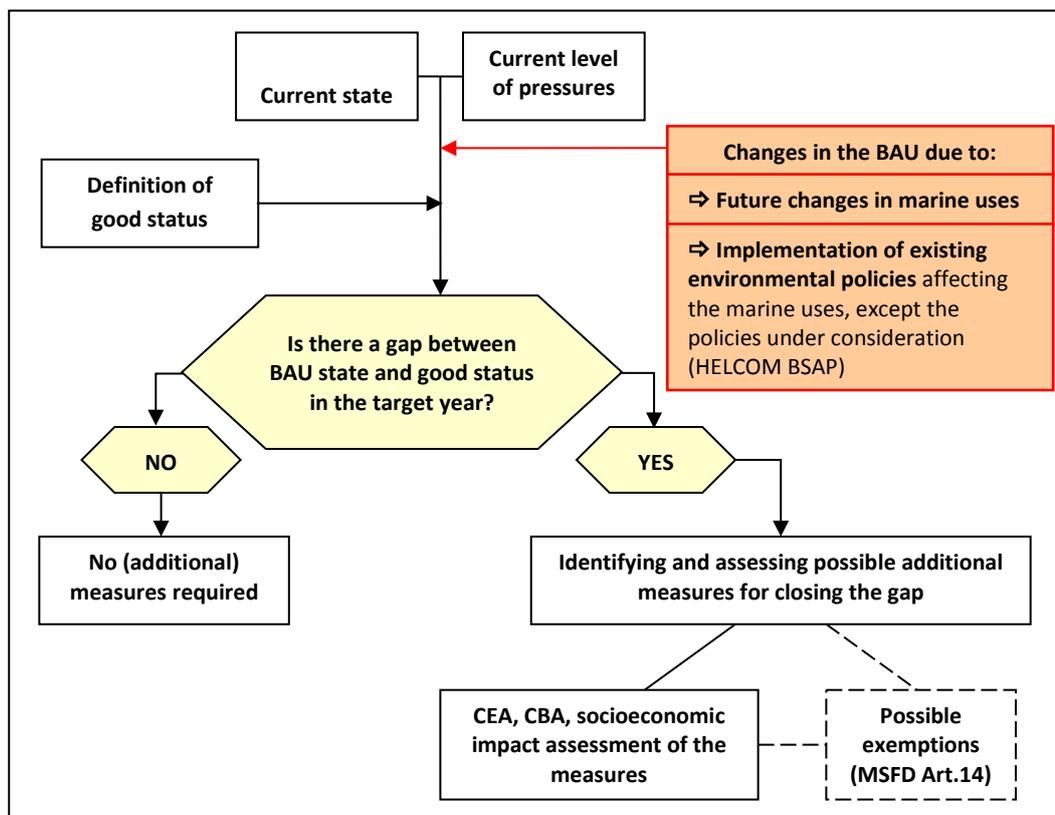


Figure 2. Role of the BAU in planning of future policy measures. Source: adapted from K. Pakalniete (2013)⁴. Abbreviations: BAU – the “business-as-usual” scenario, CBA – cost-benefit analysis, CEA – cost-effectiveness analysis.

Use of the BAU in the regional cost of degradation analysis

The cost of degradation analysis requires defining a baseline state against which the good status is compared to assess whether there is a gap and, hence, the degradation of the marine environment. If the BAU is used as a baseline for defining the gap to good status in the cost of degradation analysis, the obtained welfare estimates can be used for assessing benefits of implementing additional measures for achieving good status. For the regional cost of degradation analysis, the following approaches for defining the baseline state for the analysis with differing levels of ambition have been identified:

- 1) The current state as a baseline

The current state approach uses the current state of the marine environment as the baseline as defined in HOLAS II. The gap for the cost of degradation assessment is defined as the difference between the current state and the good status (or good environmental status (GES) in the MSFD) threshold (see Figure 1.) The future changes in the BAU can be described at least qualitatively (deteriorating, improving or no change in the state). Use of the current state as a baseline corresponds to the “thematic approach” for the cost of degradation analysis (WG ESA 2010)². However, the current state can be used as basis for the gap analysis also under the “ecosystem services approach” for the cost of degradation analysis.

⁴ Pakalniete K. (2013) “Harmonising the “business-as-usual scenario” development for the MSFD in the project’s countries: Recommendations report”. AKTiiVS Ltd. Report of the INTERREG GES-REG project.

2) The BAU as a baseline accounting for future changes

Use of the BAU as a baseline is a more advanced approach in which the change in the state of the marine environment at a future point in time is projected. The used timeframe needs to be consistent with relevant target years of the HELCOM BSAP and the MSFD. The future changes in marine uses and the impact of implementation of the existing policy frameworks, which affect the pressures, are assessed and several scenarios for the development of the marine environment are generated. Of these, most probable BAU is identified. The gap is identified as the difference between the BAU state and good status in the target year, see also the Figure 1. This corresponds to the “ecosystem service approach” for the cost of degradation analysis². The BAU can be used as a basis for the gap analysis also under the “thematic approach” for the cost of degradation analysis. The cost of degradation assessment can be utilised for the ESA of the MSFD Programme of Measures to support the cost-benefit analysis of new measures.

What is needed for BAU development

The main elements of the BAU include: (1) assessment of future changes in marine uses creating pressures on the marine environment, (2) implementation of measures of existing policy frameworks which have an impact on the marine environment, (3) expected changes in the pressures due to the changes in marine uses and existing policy frameworks, (4) expected changes in the state of the marine environment due to the changes in the pressures and exogenous environmental changes, such as climate change, and (5) an assessment of whether a gap exists between the state in BAU and good status. In the HOLAS I and HOLAS II HELCOM has already developed methods and practices needed in the development of BAU. For example, the approaches to link the human activities, pressures and impacts. However, the economic analyses have been conducted separately from these parts. Thus, although development of the regional BAU calls for substantial work, major steps forward can be taking by establishing cooperation between the HELCOM ESA network and those who develop the Baltic Sea Pressure and Impact indexes.

How BAU can be developed to support Baltic Sea Action Plan?

BAU is needed for the proper assessment of reaching good status by a target year and the need for BAU has been made more apparent by the EU MSFD process. This imposes a challenge on how to develop a regional BAU that can be used to assess our achievement towards Baltic Sea Action Plan targets. The main steps towards regional BAU are summarised as follows:

- 1) Identification of national BAU experiences and results (initially qualitative) for the HOLAS II report** via a currently ongoing data call.
- 2) Consultation with the sea region ESA and GES experts on a proposed methodology for the regional BAU.** Discuss and further refine the regional development of BAU methodology. BAU development is essentially an interdisciplinary task due to the integrated nature of BAU, as a large part of its development lies in the natural sciences (the assessment of changes in pressures and state).
- 3) Plan for a regional fit-for-purpose cost of degradation analysis and results for HOLAS III report.** Conducting such studies for selected significant activities and pressures or good status descriptors for the use of the BAU in the regional cost of degradation analysis and future MSFD Programme of Measures and/or BSAP II.
- 4) Plan for developing a regional quantitative BAU scenario for a selected significant human activity in HOLAS III report.** Developing a regional “work plan”/ roadmap for future work in the period 2018-2021 or longer to prepare a sufficient information base (e.g. input assessments, assessment methods and tools) for the regional BAU development.