

# Holistic Action Plan – Hazardous Substances (HAPhazard)

**Baltic Marine Environment Protection Commission**

**Helsinki Commission - HELCOM**

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## Executive summary of the project

The Baltic Sea remains heavily impacted by hazardous substances, these being identified as among the most impactful pressures on the ecosystem. In reality, this pressure is not just limited to a few substances but rather driven by a very wide mixture of substances, with both individual and cumulative (mixture) effects. This produces challenges for assessment and management, as reflected in the updated Baltic Sea Action Plan (BSAP 2021). The HAPhazard project supported implementation of two key BSAP actions in this respect, HL1 and HL13 and touched on several others such as HL10 and HL28. These actions aimed in increasing the effectiveness of regional work on hazardous substances, via respectively a) adopting a holistic regional strategy and action plan for hazardous substances and b) developing biological effects assessment tools and monitoring approaches to detect multiple, complex, and diffuse impacts of contaminants on biota. Together, these outputs were expected to strengthen evidence-based measures and regional coordination towards assessing and ultimately reducing or minimizing the inputs of hazardous substances to the Baltic Sea marine environment.

The work on HL1 was carried out in two phases: the development of the strategy and its first implementation. Both phases were actively supported and reviewed by the regional HELCOM Expert Group on Hazardous Substances and the HELCOM Working Group on Source to Sea (Management of Nutrients and Hazardous Substances and Sustainable Agricultural Practices). Findings and proposals from an earlier review of the current HELCOM hazardous substances framework were used as a starting point, complemented by a review of paradigms of frameworks under other policies, and this formed the basis to set clear requirements for the new framework and to develop a high-level management scheme. It was then considered important to develop a systematic mechanism for the practical and regular implementation of that scheme. Consequently, the concrete definitions, methodologies, organisational structure, and types of data sources (building also on the products of other relevant policies) required to feed the framework were agreed upon and described as part of the draft regional strategic approach.

A primary run of the approach followed, which also included the development of several new tools to automate the process. This resulted in the two major outputs from the framework implementation:

- i. new HELCOM lists of Priority Substances, Sources of Releases, and Uncertainties to Address (adopted as HELCOM Recommendation 42-43-6 in 2025);
- ii. the first HELCOM Regional Action Plan on hazardous substances (a draft HELCOM Recommendation currently submitted to HELCOM's Heads of Delegations, pending final approval).

The Regional Action Plan outlines HELCOM's role in relation to other policy frameworks and sets out concrete regional actions that add value and operate in synergy with existing policies for addressing HELCOM's priority issues (substances, sources, uncertainties), towards improvement/protection of the Baltic marine environment and improvement of future assessments. The primary run also enabled fine-tuning and adoption of the regional strategic approach. In practice this work has contributed significantly towards the achievement of BSAP actions HL1 and HL10.

The work on BSAP action HL13 started with data calls on observed biological effects, ongoing monitoring activities by HELCOM Contracting Parties, and summarising relevant methodologies. Processing and review of the gathered information led to several outputs. The current baseline of biological effects tools used in the Baltic Sea was documented, and a pilot study was conducted on the integrated assessment of biological effects for HOLAS 3 (included in the thematic assessment of hazardous substances). The work carried out on this topic was also instrumental in including a dedicated risk element related to biological effects of hazardous substances (e.g., detected non-lethal effects on biota) in HELCOM's regional strategic approach. This led to the establishment of an operational

mechanism for incorporating biological effects evidence into management and policy processes. This mechanism was BSAP Fund 3 implemented during the primary run of the new strategic approach, utilising data gathered via one of the data calls. This work made concrete contributions to the HELCOM priority lists and draft action plan on hazardous substances, moving regional management closer to addressing mixture effects and actual manifested impacts or threats occurring in the environment. Furthermore, the work done under HL13 contributed directly to the Joint HELCOM–OSPAR Study Group (SGEFF) on reviewing and harmonising biological effects methods for monitoring and assessment.