



HELCOM Baltic Sea Action Plan Stakeholder Conference 2010
Helsinki, Finland, 3 March 2010

HAZARDOUS SUBSTANCES

Draft (1 March 2010) overview of the already initiated/accomplished projects and activities serving the implementation of the HELCOM Baltic Sea Action Plan and EU Strategy for the Baltic Sea Region, as well as suggestions for projects in areas lacking actions

HELCOM measures included in the Hazardous substances segment of the HELCOM Baltic Sea Action Plan (HELCOM BSAP) have served the development of the strategic and cooperative actions as well as flag ship projects of the EU Strategy for the Baltic Sea Region (EU Strategy), in its environmental pillar (priority area 3).¹

The EU Strategy has given additional political support and has strengthened the commitments already made by the Baltic Sea countries in the HELCOM BSAP. It has also pushed for a more coordinated approach among different authorities in the countries, local governments, NGO's and other stakeholders in implementing various activities, including those aiming at making the Baltic Sea region an environmentally sustainable place.

Many of the actions and projects to implement the HELCOM BSAP have already been initiated; some have even been accomplished or are close to being finalized. This work by the multiple stakeholders working together under the HELCOM umbrella or with HELCOM support has already substantially contributed to the implementation of the EU Strategy.

However, there are still some areas related to hazardous substances in which there has been little progress or no actions have been taken yet, and which require additional efforts to kick-off the activities in a coordinated manner and with involvement of all relevant/interested stakeholders.

This paper provides an overview of the already accomplished/ongoing HELCOM actions as well as actions by other stakeholders (to the extent possible) in the hazardous substances field as well as is an attempt to identify areas lacking actions, to be further discussed e.g. at the 5th HELCOM Stakeholder Conference, and amended accordingly. The aim is to identify a list of project areas/activities which will be endorsed by the HELCOM Ministerial Meeting on 20 May 2010.

TO REDUCE THE USE AND IMPACT OF HAZARDOUS SUBSTANCES

The information available on inputs and sources for hazardous substances is scarcer than that on nutrients.

New hazardous substances are continuously being synthesized and their discharges to and impacts on the environment are largely unknown. The material flow of the industrialized society is also gradually changing, increasing the relative importance of diffuse sources of hazardous substances. The ever increasing amount of consumer goods and materials put emphasis on the importance to study the whole life-cycle of chemicals from production and use to emissions from the consumer phase and finally to waste handling.

¹ Actions related to maritime activities and hazardous substances are dealt with in the paper on the HELCOM BSAP Maritime Segment and the EU Baltic Strategy environmental pillar (priority area 2 and 4) and safety and security pillar (priority area 13 and 14).

The most recent HELCOM data compilation on hazardous substance shows that threshold levels are exceeded by a large number of substances in the different Baltic Sea sub-basins. Substances which are mentioned for nearly all sub-basins include PCBs, DDT/DDE, cadmium, lead and TBT. Also mercury exceeds threshold levels in several of the basins. Copper exceeds threshold levels in particular in the northern sub-basins and the Belt Sea, while nonylphenol is only mentioned for the Belt Sea and Kattegat.

According to the results of this assessment, the Baltic Sea in 2001-2007 was a sea area with a high contamination level. All open sea areas of the Baltic Sea except the northwestern Kattegat were classified as being 'disturbed by hazardous substances'. Similarly, 106 of the 114 coastal assessment units were classified as being 'disturbed by hazardous substances' leaving only eight units with a status 'undisturbed by hazardous substances'.

The main basin of the Baltic Sea (Northern Baltic Proper, Western and Eastern Gotland Basins) together with the Kiel and Mecklenburg Bights were the areas with worst contamination status. In the main basin, the eight open sea areas with bad or poor status were mostly contaminated with TBT (i.e. TBT was the substance with highest contamination ratios). Other substances contributing to the significant contamination include PCBs, cadmium, DEHP and octylphenol. In the coastal sites of the Kiel and Mecklenburg Bights which had either bad or poor status, PCB compounds were clearly the substances with worst contamination ratios. Other substances were PAH metabolites, metals (Pb, Cd, Hg) and TBT. Status classifications of coastal areas were highly variable but there was a certain tendency for the waters near bigger cities (Tallinn, Rostoc, St. Petersburg, Helsinki, Gdansk and Stockholm) to be classified as having a moderate or poor chemical status. The coastal assessment unit of Stora Karlsö in the Western Gotland Basin was classified as having a bad status based on contaminants (mainly dioxins and lead) in eggs of common guillemot. The common guillemot (*Uria aalge*) feeds on fish, which is clearly seen as a bioaccumulation of contaminants to the birds and their eggs. These same data from guillemot eggs from Stora Karlsö feature a number of representative long term temporal trends and allow for setting threshold values based on known historical measurements of contaminants.

Implement actions to reduce the impact of hazardous substances

Sweden is the lead party for this action of the EU Strategy.

Existing activities and projects

1. Revision of [HELCOM Recommendation 19/5](#) on Objective with regard to hazardous substances (in order to ensure that HELCOM always has the focus on hazardous substances of most importance/ most environmental harm in the region)
2. [BALTHAZAR Project](#) 2009-2011:
 - establishment of a prioritized list of landfills and other hazardous waste sites and municipal management schemes with a high risk of hazardous waste pollution from Russia to the Baltic Sea;
 - pooling of financial resources, in cooperation with the International Financial Institutions to implement pilot projects from the above prioritized list of landfills and other hazardous waste sites and municipal management schemes in North West Russia;
 - assessing the hazardous waste management regime and regulatory framework in support of the Russian National Implementation Programme for HELCOM BSAP.
3. [COHIBA project](#) (2009-2011):
 - Identification of the most important sources of the 11 hazardous substances of special concern (and included to the HELCOM BSAP)
 - Quantification of inputs of the selected substances to the Baltic Sea,

- analyzing the pathways of the selected substances from production, processes and uses to the marine environment
- developing cost-effective management options to reduce discharges
- considering to introduce within the HELCOM framework the Whole Effluent Assessment (WEA) approach to monitoring of complex discharges

Topics requiring intensified efforts/new projects:

- Consideration to include new substances into the HELCOM list of substances of specific concern – taking into account the results of the finalised HELCOM thematic assessment on hazardous substances, and e.g its findings on pharmaceuticals.

In the course of the last decade, pharmaceuticals have become recognized as relevant environmental contaminants, as they may alter behavior of aquatic organisms at very low concentrations. Some hormone-containing pharmaceuticals were detected both in coastal waters of the Baltic as well as in biota. However, at the moment, there are no regulations for monitoring of pharmaceuticals in the aquatic environment or limit values for treated wastewaters.

- Further development of indicators and associated target levels, based on the HELCOM BSAP and on-going work at the international level, especially the EU Marine Strategy Framework Directive
- Elaboration of a list of priority landfills in all Baltic Sea countries to complement the inventory made under the BALTHAZAR project for Russia
- Further development of tools to identify the sources and pathways of hazardous substances to and their impacts in the sea (following the outcomes of the COHIBA Project)
- Facilitate the development and further broad-scale application of biological effects monitoring in the Baltic Sea region (following the outcomes of the [BEAST Project](#))
- Facilitate the development of national chemicals product register, taking into account the work under REACH
- Review the information and HELCOM reports with regard to dumped chemicals munitions and on the basis of this assess the need for further actions