



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

EUTROPHICATION

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 Eutrophication segment of the HELCOM Baltic Sea Action Plan (HELCOM BSAP) have served development of the many strategic and cooperative actions as well as flag ship projects of the EU Strategy for the Baltic Sea Region (EU Strategy), in its environmental (priority areas 1, and 4¹) and prosperity pillars (priority area 9). It once again proves the complexity of the eutrophication problem, as it is caused not only by land-based (sewage and agricultural runoff), but also maritime (shipping) and airborne (deposition) sources.

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 as well as prosperous 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 is carried out through multiple stakeholders' cooperation, and joint work carried out 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 eutrophication 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 possible extent) in the eutrophication 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.

1: TO REDUCE NUTRIENT INPUTS TO THE SEA TO ACCEPTABLE LEVELS

Eutrophication is a major problem in the Baltic Sea. Since the 1800s, the Baltic Sea has changed from an oligotrophic clear-water sea into a eutrophic marine environment. Excessive nitrogen and phosphorus loads coming from land-based sources are the main

¹ As for Priority Area 4 "To become a Model region for clean shipping" this is 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).

cause of the eutrophication of the Baltic Sea. About 75% of the nitrogen load and at least 95% of the phosphorus load enter the Baltic Sea via rivers or as direct waterborne discharges. About 25% of the nitrogen load comes as atmospheric deposition.

Implement actions to reduce nutrients

Poland and Finland are the lead parties for this action of the EU Strategy.

Existing activities and projects

1. Full implementation of the HELCOM requirements including the Baltic Sea Action Plan (BSAP), as well as relevant EU Directives relating to eutrophication (WFD, UWWTP, Nitrate Directive, NEC Directive, MSFD).
2. Development of a demonstration set of core eutrophication indicators by May 2010 and their publishing on the HELCOM website to enable up-to-date provision of information on the eutrophication status of the Baltic Sea

Topics requiring intensified efforts/new projects:

- assistance to review and revise by 2013 the environmental targets, maximum allowable nutrient inputs and country-wise provisional nutrient reduction targets based on the integrated thematic assessment on eutrophication, results of the HELCOM Pollution Load Compilation to be published in 2010 and EMEP data

Promotion of measures and practices to reduce nutrient losses from agriculture

Diffuse losses (mainly from agriculture, forestry and scattered dwellings) contribute 58% of the waterborne nitrogen and 49% of phosphorus inputs to the Baltic Sea.

The reduction of nutrients from agriculture can be achieved through a combination of different measures that have to be applied according to the specific characteristics of the region (i.e. soil and watershed retention).

Existing activities and projects

1. [Baltic COMPASS Project](#) (Comprehensive Policy Actions and Investments in Sustainable Solutions in Agriculture in the Baltic Sea region)
 - implementing large scale on-farm pilot investments in Baltic Sea coastal states and in Belarus, based on identified most feasible and efficient technologies and management measures (spatially and geographically)
2. [HELCOM BALTHAZAR Project](#) 2009-2011:
 - In Leningrad and Kaliningrad Regions of the Russian Federation: implementing on-farm pilot projects, taking into account environmental benefits to the Baltic Sea (re. HELCOM BSAP)
3. The [HELCOM Joint Comprehensive Environmental Action Programme \(JCP\)](#): removal of the remaining hot spots, including 11 agricultural hot spots and four transboundary hot spots which address management of coastal wetlands
4. [ACTIVE WETLANDS](#) Project (Active measures on wetlands for decreasing nutrient load in the Baltic Sea) will optimise the design of constructed wetlands according to the local conditions in order that the site will retain nutrients more efficiently and simultaneously enhance local biodiversity. Within the project also the management of constructed wetlands will be assessed to estimate their cost-efficiency in retaining nutrients originating from agriculture and new guidelines will be developed.

Topics requiring intensified efforts/new projects:

- Help in establishment of the HELCOM List of agricultural hot spots, represented by both point and diffuse sources, for optimal targeting of measures and investments to most polluting installations with biggest potential environmental benefit to the Baltic Sea (in EU Member States to complement the work being done by the BALTHAZAR project in Russia) ;
- improving the extent and quality of national agri-environment services and related information activities targeting farmers and their advisors (by promoting the proposed Baltic Deal project, initiated by the Federation of Swedish Farmers). The proposed project aims to advance and strengthen agricultural advisory services and related demonstration and information activities focusing upon improving environmental and agricultural practice at farm level;
- Further designation of Nitrate Vulnerable Zones around the Baltic Sea *i.a* based on recommendations of HELCOM assessments
- Further support to clean up transboundary JCP hot spots represented by coastal lagoons by joint activities for establishment and restoration of wetlands. The initiative could also contribute to the protection of biodiversity.

Promotion of measures and practices to reduce nutrient input from municipal wastewaters

About 10% of nitrogen and 25% of phosphorus originates from point sources (municipalities and industry). If the sewage treatment level is improved in all countries in the Baltic watershed to the level agreed in HELCOM Recommendation 28/5 on Municipal Wastewater Treatment, the overall load to the Baltic Sea can be expected to decrease by 5% for nitrogen and by 33% for phosphorus.

Another important action to reduce the load of phosphorus into the Baltic is to stop using phosphorus-containing detergents, which would allow total reduction of up to 24% (9000 tonnes) of phosphorus inputs to the Baltic Sea.

The cumulative effect of these two measures applied in combination will provide 41% reduction of phosphorus and 5% reduction of nitrogen inputs to the Baltic Sea which is approximately 34,300 tonnes of nitrogen and 15,500 tonnes of phosphorus.

Existing activities and projects

1. Implementation of [HELCOM Recommendation 28/5](#) on Municipal Wastewater Treatment, [HELCOM Recommendation 28E/7](#) on Measures aimed at the substitution of polyphosphates (phosphorus) in detergents and [HELCOM Recommendation 28E/6](#) on On-site wastewater treatment of single family homes, small businesses and settlements up to 300 person equivalents (P.E.)
2. [PURE Project](#) (Project on Urban Reduction of Eutrophication) to promote the implementation of the stricter HELCOM requirements for Urban Waste Water Treatment Plants (UWWTPs)
3. [RUSNIP Project](#) (Project to facilitate elaboration of the national implementation programme for the eutrophication segment of the BSAP for Russia, primarily focusing on reduction of nutrient pollution from municipalities, industries and diffuse sources)
4. [MINWA Project](#) (Minimization of Wastewater Loads at Sparsely Populated Area) aims to promote educational cooperation and exchange of best practices and experience between Finland and Estonia; in addition, monitoring systems and maintenance practices of small waste water treatment plants will be developed.

Topics requiring intensified efforts/new projects:

- Elaboration of a list of priority UWWTPs not yet in compliance with the stricter HELCOM requirements on phosphorus removal to be targeted for priority funding

- Support for the development of a national implementation programme for Municipal Waste Water Treatment Plants (MWWTPs) and industries as well as diffuse sources in Belarus (the RUSNIP approach could be replicated for Belarus)
- Support for the implementation of Country programmes and measures (including a timetable to be presented and decided upon at the HELCOM Ministerial Meeting in 2010) for laundry detergents and discussion on inclusion of also dishwasher detergents

2. TO REINFORCE SUSTAINABILITY OF AGRICULTURE, FORESTRY AND FISHERIES

This activity is coordinated by Finland

Enhance the combined effects of the rural development programmes

Sustainable rural development

Establish a Forum for Inventive and Sustainable Manure Processing

Existing activities and projects

1. [Baltic COMPASS Project](#) (Comprehensive Policy Actions and Investments in Sustainable Solutions in Agriculture in the Baltic Sea region)