

## BIOTOPE INFORMATION SHEET

English name: <b>Baltic photic muddy sediment dominated by sedges (Cyperaceae)</b>		Code in HELCOM HUB: <b>AA.H1A2</b>	
Characteristic species: <i>Schoenoplectus spp</i> , <i>Bolbaschoenus maritimus</i>			
Past and Current Threats (Habitat directive article 17):  Eutrophication (H01.05), Construction (changes in the water flow J02), Alien species (I01), Tourism (G05), Oil spills (oil spills in the sea H03.01)		Future Threats (Habitat directive article 17):  Eutrophication (H01.05), Construction (changes in the water flow J02), Alien species (I01), Fishing (F02), Tourism (G05), Oil spills (oil spills in the sea H03.01)	
Red List Criteria: <b>A1</b>	Confidence of threat assessment: <b>M</b>	<b>HELCOM Red List Category:</b>	<b>NT Near Threatened</b>
Previous HELCOM Red List threat assessments			
BSEP 75 (HELCOM 1998): "3" Endangered 2.7.3.2 Hydrolittoral muddy bottoms dominated by macrophyte vegetation		BSEP 113 (HELCOM 2007): Macrophyte meadows and beds are under threat and/or in decline in: All where they occur.	
Greater concern stated by:			

### Habitat and Ecology

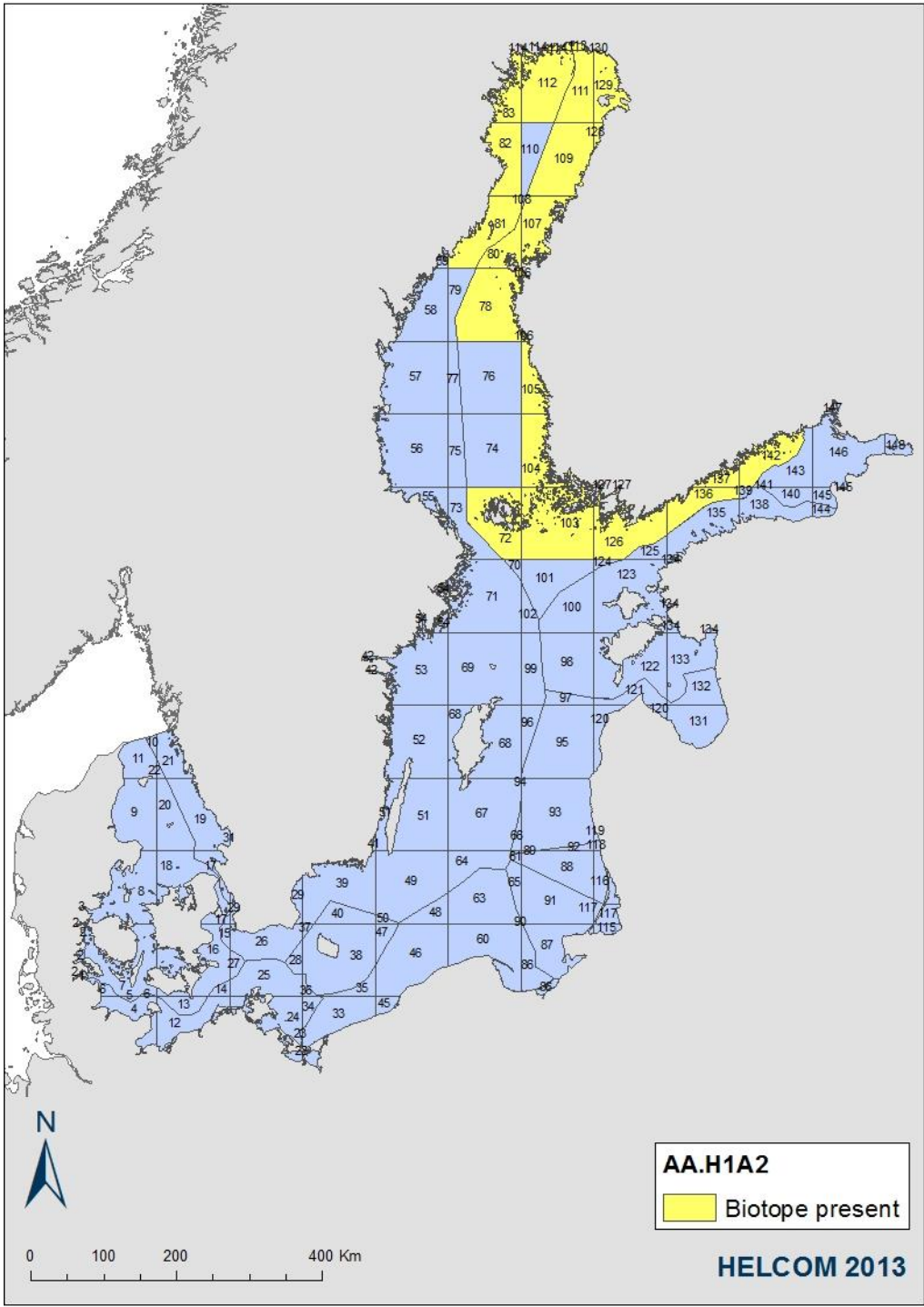
The biotope is defined by the substratum being covered >90% mud or silt with a grainsize >63 µm and emergent vegetation coverage is >10% of which sedges (Cyperacea) constitute at least 50% in biovolume. The biotope occurs in sheltered areas, in the photic zone down to about 1 meter. Sedges are large family of graminoid plants. In the Baltic Sea, sedges form large biotopes in shallow areas.

The biotope typically occurs in estuaries and inlets in the Baltic Sea. The species diversity in the shallow areas is usually high. The biotope is utilized by a large variety and abundance of fish and birds. The benthic fauna consists mainly of soft-sediment invertebrates, such as polychaetes, crustaceans, bivalves and insect larvae. These shallow sheltered areas are of high biological productivity in a brackish environment. They form important breeding, resting, and feeding sites for water birds. The muddy substrate biotope dominated by the common reed (*Phragmites australis*) often occurs in the immediate vicinity of the biotope dominated by sedges and the two biotopes can form a mosaic.

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**Distribution and status in the Baltic Sea region**

The muddy sedge biotope can be found in very sheltered lagoons and in some estuaries around the whole Baltic Sea however the main distribution of the biotope along the coast of the Baltic Sea is in the northern parts. The distribution map indicates the area in the 100 x 100 km grid where biotope is estimated to occur.



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### Description of Major threats

Eutrophication and pollution by drainage from farming and forestry and other sources (like traffic and industry) are serious threats and deterioration factors. Other pressures and threats are mainly caused by shipping, construction or enlargement of harbours and marinas in the river mouths. Changes in the water flow due to hydro-technical constructions, such as dams, cascades and river bank control, may also have adverse effects on estuaries. Other threats can be caused by introduction of non-indigenous, invasive species, unsustainable fishery and tourism as well as oil spills and construction of breakwaters. The environmental conditions in river mouths depend highly on inflows from local point sources as well as from the whole catchment area. They are therefore closely related to human activities on land.

### Assessment justification

A1

Human activities have caused various pressures in many estuaries, which in some cases resulted in severe damages. Generally, it can be considered that the natural values of the Estuaries in the Baltic Sea region are deteriorating. Moreover, the length of pristine shores of estuaries or estuaries in a natural or near natural state is steadily decreasing.

In the case of inlets, the habitat type is threatened by physical modification due to construction of roads and bridges as well as eutrophication and pollution. Particularly eutrophication causes risks for oxygen deficiency in bottom water.

### Recommendations for actions to conserve the biotope

One of the main solutions to stop and reverse degradation of the estuaries is a general protection of this natural habitat type by law. Particularly still unregulated and natural river mouth areas need to become strictly protected sites. Further, programs and measures are needed to maintain or restore natural conditions along the whole course of the rivers, which e.g. allow natural erosion and temporary flooding of river banks. A drastic reduction of nutrient and pollution loads in the catchment area of rivers with estuaries would help to improve the environmental situation of the whole Baltic marine area. The introduction of ecologically sound fishing and farming methods is essential in order to reach a more favourable conservation status of the natural habitat type.

### Common names

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### References

HELCOM websites [http://www.helcom.fi/environment2/biodiv/endangered/Biotopes/en\\_GB/Estuaries/](http://www.helcom.fi/environment2/biodiv/endangered/Biotopes/en_GB/Estuaries/)  
[http://www.helcom.fi/environment2/biodiv/endangered/Biotopes/en\\_GB/Inlets/](http://www.helcom.fi/environment2/biodiv/endangered/Biotopes/en_GB/Inlets/)