

## BIOTOPE INFORMATION SHEET

English name: <b>Mudflats and sandflats not covered by seawater at low tide</b>		Code in HELCOM HUB: <b>1140</b>	
Characteristic species:			
Past and Current Threats (Habitat directive article 17): Construction (dredging J02.02.02, dumping J02.11, coastal engineering J02.12.01), Eutrophication (H01.05), Contaminant pollution (H03), Water traffic (D03), Tourism (G05)		Future Threats (Habitat directive article 17): Construction (dredging J02.02.02, dumping J02.11, coastal engineering J02.12.01), Eutrophication (H01.05), Contaminant pollution (H03), Oil spills (oil spills in the sea H03.01), Water traffic (D03), Tourism (G05)	
Red List Criteria: <b>C1</b>	Confidence of threat assessment: <b>M</b>	<b>HELCOM Red List Category:</b>	<b>VU Vulnerable</b>
Previous HELCOM Red List threat assessments			
BSEP 75 (1998): –		BSEP 113 (2007): Regions where the biotope/habitat is under threat and/or in decline: Bothnian Bay, The Quarck, The Bothnian Sea, Åland Sea, The Northern Baltic Proper, Western Gotland Basin, Eastern Gotland Sea, The Southern Baltic Proper, The Gulf of Gdansk, The Bay of Mecklenburg, Kiel Bay, Great Belt, The Sound, Kattegat.	
Higher concern stated by:			

### Habitat and Ecology

The habitat is of particular importance as feeding ground for waterfowl and waders. Diverse species of invertebrates and algae occupy it. Mudflats and sandflats not covered by sea water at low tide are a widespread biotope complex on the North Atlantic coast. In the Baltic Sea the biotope complex does not cover as large areas, since the Baltic Sea is non-tidal. The changes in sea water level are wind-induced and partly depend on the varying seasonal atmospheric pressure. Along large parts of the Baltic Sea coast mud- and sandflats are even so regularly exposed when the water level drops and the ecological function they exhibit is interpreted as being comparable to mud- and sandflats exposed due to tidal effects. The interpretation of the definition of this biotope complex varies somewhat between the Baltic Sea coastal states.

Definition of the habitat according to the 'Interpretation manual of European Union Habitats' EUR27:

Sands and muds of the coasts of the oceans, their connected seas and associated lagoons, not covered by sea water at low tide, devoid of vascular plants, usually coated by blue algae and diatoms. They are of particular importance as feeding grounds for wildfowl and waders.

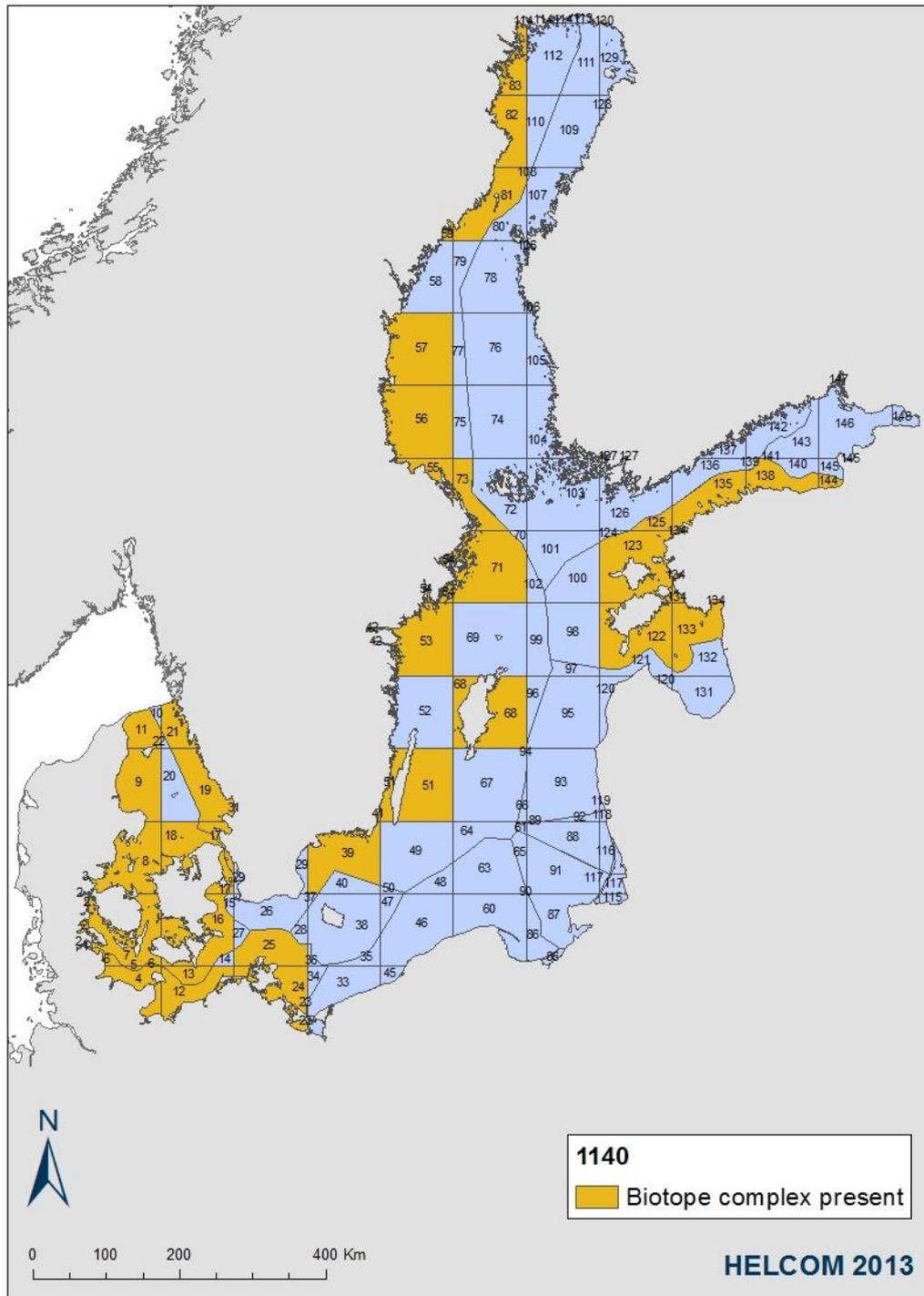
Note: Eelgrass communities (Palaeartic 11.3) are included in this habitat type.

In the Baltic Sea this habitat type is part of the hydrolittoral which means that these sands and muds are episodically dry falling. Thus, they belong to the relatively small wind induced littoral zone below the mean water line. Depending on the exposition such Baltic *Mudflats* and *Sandflats* occur with and without macrophyte vegetation.

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### Distribution and status in the Baltic Sea region

Mudflats and sandflats not covered by sea water at low tide occur in all parts of the Baltic Sea area, but patterns and descriptions of their distribution are mostly missing. In the Lahemaa area (Southern Gulf of Finland) for example, they are representing 3% of all habitats and also in the German Baltic Sea region they form a very narrow strip along some the coastlines. No information is available on their historical distribution. The distribution map indicates the area in the 100 x 100 km grid where biotope is known to occur (Naturvårdverket 2011, EUNIS Database)



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### Description of Major threats

Coastal defence activities such as dyking and stabilization of sand pose a threat to the biotope complex. Water traffic in shallow areas close to the coast can damage the biotope complex through coastal erosion. Deepening of boating routes through dredging can also pose a threat to the biotope complex. In some areas recreational use of the shore is intense threatening the integrity of the biotope complex. Eutrophication due to nutrient run-off from the catchment area also threatens the quality of the biotope complex. Run-off from urban areas can introduce various hazardous substances to the biotope complex, and various pollutants can accumulate in the soft sediments. Oil spills at sea that are washed ashore on mudflats or sandflats pose a serious threat, as oil is very difficult to remove from this type of soft sediment.

### Assessment justification

C1

The biotope complex is threatened in almost every sub-region of the Baltic Sea area. Mudflats are assumed to have experienced severe quality decline in over half of the original occurrences during the past 50 years. Coastal exploitation is the main reason for the biotope complex experiencing quality decline.

### Recommendations for actions to conserve the biotope

Particularly natural and unaffected shorelines need to become strictly protected by law. Additionally, programs and measures are needed to restore natural conditions where the habitat type is degraded (BSAP). Further protective measures could be: restriction of new constructions (HELCOM Rec. 15/1), prevention of an unregulated growth of tourism and harmful recreational activities. Furthermore, according to the HELCOM Rec. 16/3, natural processes along the coast have to be preserved. As for all natural habitat types an inventory and a monitoring and assessment programme (also for human activities) is obligatory for EU Member States. They are also obliged to take all appropriate steps to avoid further deterioration. This includes the obligation to protect this natural habitat type within the Natura 2000 network, and thus to designate as many SACs as necessary to guarantee its favourable conservation status. Member States have to follow Article 6 (3) of the Habitats Directive: Plans and projects which are not directly connected with or necessary to the management of a Natura 2000 site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications.

### Common names

Denmark: Mudder og sandflader, der er blottet ved ebbe, Estonia: -, Finland: Muta- ja hiekkamatalikot, joita merivesi ei peitä laskuveden aikana, Germany: Vegetationsfreies Schlick-, Sand- und Mischwatt, Latvia: -, Lithuania: -, Poland: -, Russia: -, Sweden: Ler-och sandbottnar som blottas vid lågvatten

### References

- European Commission. 2007. Guidelines for the establishment of the Natura 2000 network in the marine environment. Application of the Habitats and Birds Directives. Appendix 1: Marine Habitat types definitions.  
[http://ec.europa.eu/environment/nature/natura2000/marine/docs/appendix\\_1\\_habitat.pdf](http://ec.europa.eu/environment/nature/natura2000/marine/docs/appendix_1_habitat.pdf)
- HELCOM (1998). Red List of marine and coastal biotopes and biotopes complexes of the Baltic Sea, Belt Sea and Kattegat. Baltic Sea Environmental Proceedings No. 75. Helsinki Commission, Helsinki. 115pp. Available at: <http://www.helcom.fi/stc/files/Publications/Proceedings/bsep75.pdf>
- Naturvårdsverket (2011) Vägledning för svenska naturtyper i habitatdirektivets bilaga 1, Blottade sand- och lerbottnar. Available at: <http://www.naturvardsverket.se/upload/stod-i-miljoarbetet/vagledning/natura-2000/naturtyper/kust-och->



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[hav/vl\\_1140\\_Blottadsandlerbotten.pdf](#). (Viewed July 19 2013)

EUNIS Database. <http://eunis.eea.europa.eu/habitats.jsp> (Viewed July 19 2013)

