

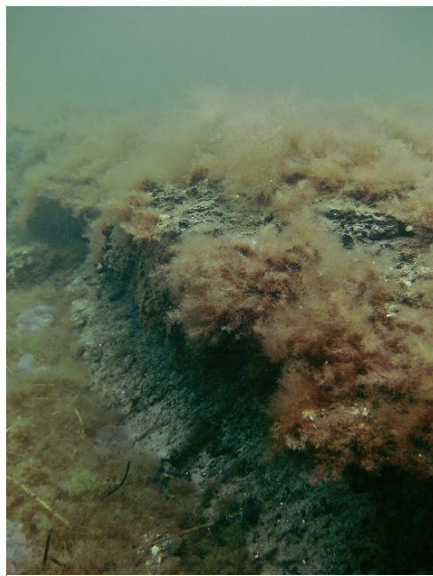
BIOTOPE INFORMATION SHEET

English name: Baltic photic peat bottom		Code in HELCOM HUB: AA.G	
Characteristic species: <i>Barnea candida</i> , <i>Zirfaea crispata</i> , macrophytes may occur			
Past and Current Threats (Habitat directive article 17): Construction (D03.03, dredging J02.02.02, coastal defence J02.12.01), Eutrophication (H01.05), Contaminant pollution (H03)		Future Threats (Habitat directive article 17): Construction (D03.03, dredging J02.02.02, coastal defence J02.12.01), Eutrophication (H01.05), Contaminant pollution (H03), Random threat factors (-)	
Red List Criteria: B2(b)	Confidence of threat assessment: M	HELCOM Red List Category:	VU Vulnerable
Previous HELCOM Red List threat assessments			
BSEP 75 (HELCOM 1998): "3" Endangered 2.11.1 Sublittoral peat bottoms "P" Potentially endangered 2.11.2 Hydrolittoral peat bottoms		BSEP 113 (HELCOM 2007):	
Greater concern stated by:			

Habitat and Ecology

The biotope is formed by least 90% coverage of peat bottoms in the photic zone. 8 000 years ago the water level of the Baltic Sea raised more than 20 m (*Littorina*-Transgression) resulting in flooding of large terrestrial areas between Germany and Denmark characterized by forests, mires (swamps) and sparsely human settlements (Leipe et al. 2011). In the following evolution time of the Baltic Sea those substrata were covered by marine sediments. Marine erosion processes along the German and Danish coastline have laid those subfossile substrates bare.

The natural history of this biotope determines that it exists only in Germany and Denmark at salinity ranges between 7 and 18 psu and at all exposure classes. The vertical depth distribution ranges from 0 to about 20 m.



Protruding peat bottom rim/edge at Zingst, Mecklenburg- Western Pomerania (Photo: K. Fürhaupter, MarILim GmbH)

Knowledge about this specific biotope is scarce but the surface can be covered by filamentous annual algae and single juvenile *Fucus* spp. or *Chorda* spp. specimens. But normally peat bottom lacks

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epibenthic communities and only some specialized burrowing bivalves like *Barnea candida* or *Zirfaea crispata* may penetrate into peat bottom (Stresemann et al. 1992).

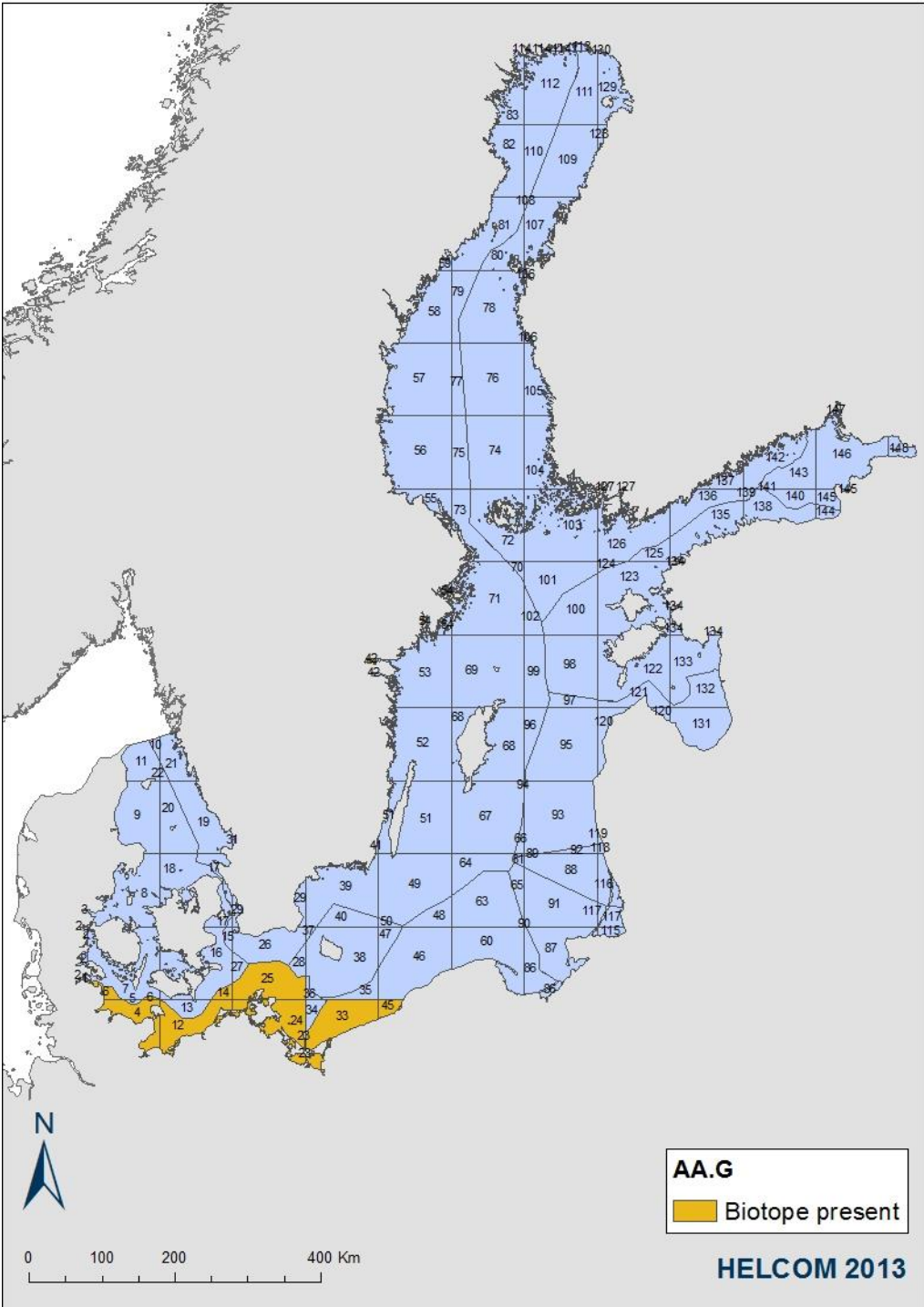


Peat bottom with enclosed wood piece and attached juvenile *Fucus* spp., *Chorda filum* and filamentous algae (Photo: Karin Fürhaupter, MariLim GmbH)

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Distribution and status in the Baltic Sea region

The peat bottom biotope is distributed mainly in the Western and Southern Baltic Sea in the Bay of Mecklenburg and to a lesser extent also in the Kiel Bay. The spatial restriction is due to natural history of the subfossile substrates. Distribution map indicates the area in the 100 x 100 km grid where biotope is known to occur.



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Description of Major threats

Information about the biotope itself and its major threats are scarce but all threats causing physical disturbance to bottom sediments (bottom trawling, construction work, sand and gravel extraction, and coastal defence) may have negative effects on the biotope.

Assessment justification

B2b

The classification of the biotope is caused by a general rarity of the substrate "peat bottom" and the spatial restriction to a specific and comparable small area of the Baltic. AOO is less than 50 as the environmental conditions (subfossile bottom morphology and currents) to enable peat bottoms, exist only within very few and spatially restricted localities.

Recommendations for actions to conserve the biotope

All actions to reduce physical disturbance of peat bottoms in the Baltic Sea are important for the conservation of this biotope.

Appointing areas where the biotope is known to occur as protected sites, where bottom trawling, construction works and exploitation of marine soil resources like sand or gravel is prohibited, would constitute an effective conservation measure.

Common names

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References

Stresemann E., Hannemann H.-J., Klausnitzer B. Senglaub K. 1992. Exkursionsfauna von Deutschland. Band 1, Wirbellose (ohne Insekten). Volk und Wissen Verlag gmbH Berlin.

Leipe, T., Moros, M, Tauber, F.(2011). Die Geschichte der Ostsee. IOW, Leibniz Institute for Baltic Sea Research, Warnemünde. Available at: <http://www.io-warnemuende.de/geschichte-der-ostsee-2489.html> (viewed 24th July)