

Sparse or no macrofaunal communities on Baltic circalittoral rock and mixed substrata (predominantly hard)

Summary

This habitat occurs in all Baltic sub-basins in the aphotic zone. It is characterized by sparse or no epibenthic macrocommunities. No specific pressures or threats have been identified nor any specific conservation or management measures.

Synthesis

The presence of this habitat type in the Baltic Sea is well known. It occurs in all the sub basins but quantitative data on the area covered is not available. Expert opinion is that habitat area and extent and habitat quality has been stable over the last 50 years.

The overall assessment for this EUNIS level 4 habitat has been based on the HELCOM (2013) assessments for the associated HELCOM HUB biotopes. Draft assessments were derived using a weighted approach whereby the HELCOM assessment outcomes were assigned a score. This was averaged across the relevant biotopes. The outcomes were reviewed by Baltic experts to reach a final conclusion. HELCOM (2013) assessed three associated biotopes AB.A2T, AB.A4U and AB.M2T as Least Concern (A1). AB.M4U was not evaluated. The extent and area of this habitat is believed to have been stable over the last 50 years and no change is expected in the near future. Current expert opinion is that this habitat be assessed as Least Concern for both the EU 28 and EU 28+.

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Least Concern	-	Least Concern	-

Sub-habitat types that may require further examination

None.

Habitat Type

Code and name

Sparse or no macrofaunal communities on Baltic circalittoral rock and mixed substrata (predominantly hard)



Description

Sparse circalittoral rock in Kvarken (Mikkelinsaaret) (© Forest & Park Service, 2014/ P. Lehtonen).

Habitat description

The Baltic Sea benthic habitat occurs in the aphotic zone with at least 90% coverage of rock, boulders or stones and mixed (predominantly hard) substrates according to the HELCOM HUB classification. It is typically found in depths of 20 meters or more. Where sessile/semi-sessile epibenthic fauna is present they covers less than 10% of the seabed and in some cases no epibenthic vegetation or macrofauna is present. Though the habitat is more uncommon in the Northern Baltic (due to the siltation and prevalence of sand and soft bottoms) it does exist also in the Bothnian Bay where the aphotic zone starts in quite shallow water (5-10 m depth), increasing the amount of rock and hard bottom in the circalittoral zone.

Four associated biotopes have been identified: Baltic aphotic rock and boulders characterized by sparse epibenthic macrocommunity (AB.A2T); Baltic aphotic mixed substrate characterized by sparse epibenthic fauna (AB.M2T); Baltic aphotic rock and boulders characterized by no macrocommunity (AB.A4U); and Baltic aphotic mixed substrate characterized by no macrocommunity (AB.M4U).

Indicators of quality:

Unknown.

Characteristic species:

For sparse epibenthic communities *Mytilus* spp. *Macoma balthica* Bryozoa, Balanidae, Bryozoa, Porifera, Hydrozoa. Where there are no macrocommunities, by meiofauna and bacteria.

Classification

EUNIS:

The closest correspondence in EUNIS (2004) level 4 is A4.4 Baltic exposed circalittoral rock, A4.5 Baltic moderately exposed circalittoral rock and A4.6 Baltic sheltered circalittoral rock

Annex 1:

The relationship between HUB biotopes and Annex 1 habitats has not yet been mapped by HELCOM,

however this habitat may occur in the following Annex 1 habitats:

1160 Large shallow inlets and bays

1650 Boreal Baltic narrow inlets

1170 Reefs

1650 Boreal Baltic narrow inlets

MAES:

Marine - Marine inlets and transitional waters

Marine - Coastal

MSFD:

Shallow sublittoral rock & biogenic reef

Shallow sublittoral mixed sediment

EUSEaMap:

Shallow aphotic rock or biogenic reef

Shallow coarse or mixed sediments

IUCN:

9.2 Subtidal rock and rocky reefs

9.3. Subtidal Loose Rock/Pebble/Gravel

Other relationships:

Level 5 of the HELCOM HUB classification (2013):

AB.A2T: Baltic aphotic rock and boulders characterized by sparse epibenthic macrocommunity

AB.M2T: Baltic aphotic mixed substrata characterized by sparse epibenthic macrocommunity

AB.A4U: Baltic aphotic rock and boulders characterized by no macrocommunity

AB.M4U–Baltic aphotic mixed substrate characterized by no macrocommunity.

Does the habitat type present an outstanding example of typical characteristics of one or more biogeographic regions?

Unknown

Justification

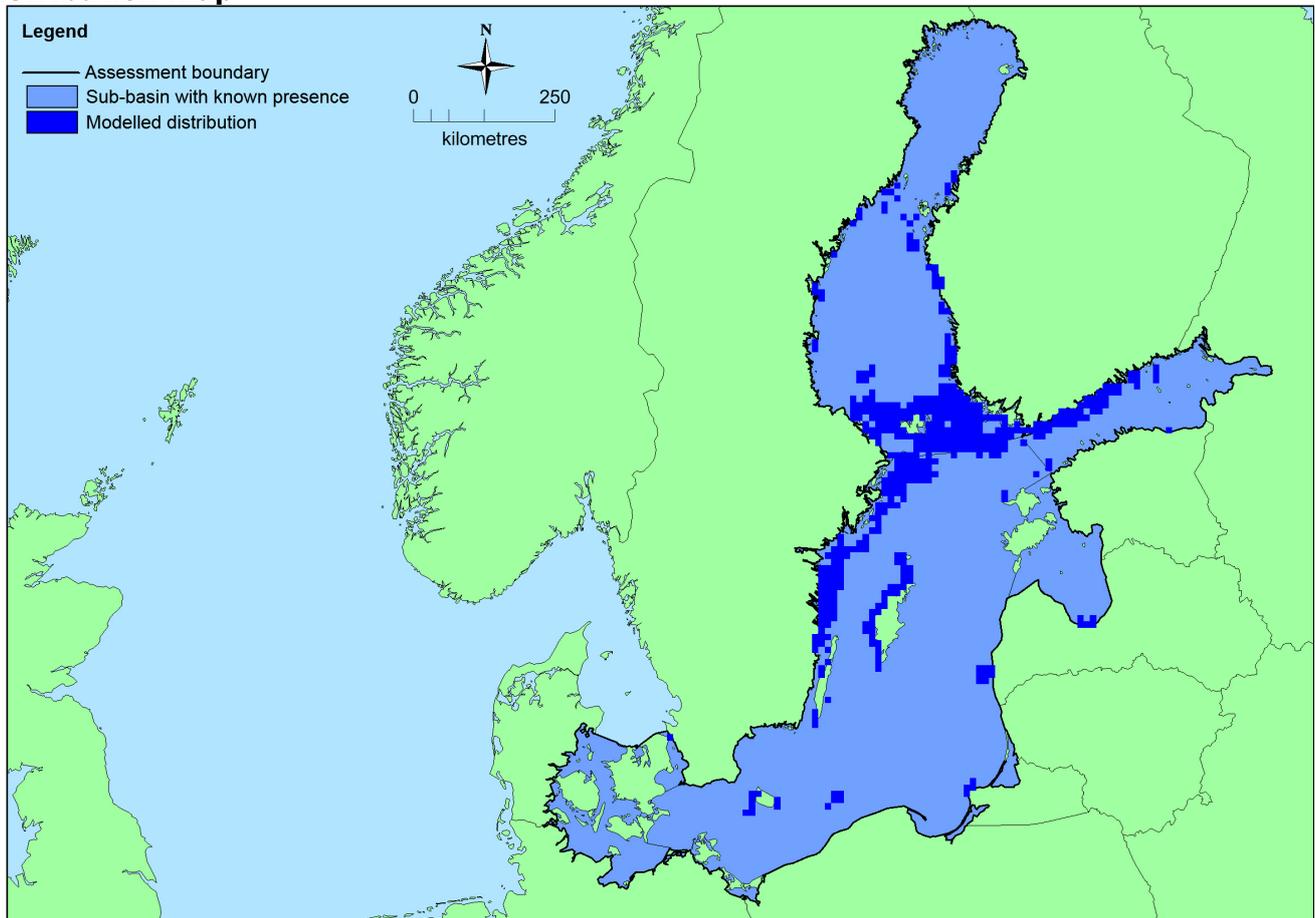
Geographic occurrence and trends

Region	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>Baltic Sea</i>	Baltic Proper: Present Belt Sea: Present Gulf of Bothnia: Present Gulf of Finland: Present Gulf of Riga: Present The Sound: Present	Unknown Km ²	Stable	-

Extent of Occurrence, Area of Occupancy and habitat area

	Extent of Occurrence (EOO)	Area of Occupancy (AOO)	Current estimated Total Area	Comment
<i>EU 28</i>	>50,000 Km ²	Unknown	Unknown Km ²	This habitat is present in all the Baltic sub-basins.
<i>EU 28+</i>	>50,000 Km ²	Unknown	Unknown Km ²	This habitat is present in all the Baltic sub-basins

Distribution map



There are insufficient data to provide a comprehensive and accurate map of the distribution of this habitat. This map has therefore been generated using the modelled data available on EMODnet for EUNIS level 3 habitats in the Baltic Sea (EMODnet, 2010). This means it indicates potential areas in which this habitat may occur, not the actual distribution of this EUNIS level 4 habitat.

How much of the current distribution of the habitat type lies within the EU 28?

This habitat occurs in the EU 28+ (Russia). The percentage hosted by EU 28 is therefore less than 100% but there is insufficient information to establish the proportion.

Trends in quantity

This habitat can be found throughout the Baltic Sea and there are no reports of decreasing quantity. It is believed to be stable. There are no historic trend data and no estimates of future trend in quantity.

- Average current trend in quantity (extent)

EU 28: Stable

EU 28+: Stable

- Does the habitat type have a small natural range following regression?

No

Justification

This habitat occurs in all the Baltic Sea sub-basins so does not have a small natural range.

- Does the habitat have a small natural range by reason of its intrinsically restricted area?

No

Justification

This habitat occurs in all the Baltic Sea sub-basins so does not have a small natural range.

Trends in quality

There is limited information on the quality of the habitat. Current expert opinion is that it can be considered stable.

- Average current trend in quality

EU 28: Stable

EU 28+: Stable

Pressures and threats

No pressures and threats have been identified specifically for this habitat type.

List of pressures and threats

-

Conservation and management

No conservation and management measures have been identified specifically for this habitat.

List of conservation and management needs

No measures

No measures needed for the conservation of the habitat/species

Conservation status

Annex 1:

1110: MBAL U1

1130: MBAL U2

1160: MBAL U2

1170: MBAL U1

1650: MBAL U2

HELCOM (2013) assessments:

1110 VU C1

1130 CR C1

1160 VU C1

1650 VU C1

1170 VU C1

HELCOM (2013) have assessed associated biotopes AB.A2T, AB.A4U and AB.M2T as LC(A1). AB.M4U was not evaluated.

When severely damaged, does the habitat retain the capacity to recover its typical character and functionality?

Unknown

Effort required

Red List Assessment

Criterion A: Reduction in quantity

Criterion A	A1	A2a	A2b	A3
EU 28	<25 %	unknown %	unknown %	unknown %
EU 28+	<25 %	unknown %	unknown %	unknown %

Expert opinion is that habitat area and extent has been stable over the last 50 years. This habitat has therefore been assessed as Least Concern under Criteria A for both the EU 28 and EU 28+.

Criterion B: Restricted geographic distribution

Criterion B	B1				B2				B3
	EOO	a	b	c	AOO	a	b	c	
EU 28	>50,000 Km ²	Unknown							
EU 28+	>50,000 Km ²	Unknown							

This habitat is found in all the Baltic Sea sub-basins therefore EOO exceeds 50,000 km² however with no quantitative data on habitat extent or area, accurate calculation of EOO and AOO is not possible at the present time. The habitat is therefore assessed as Data Deficient under Criteria B.

Criterion C and D: Reduction in abiotic and/or biotic quality

Criteria C/D	C/D1		C/D2		C/D3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %
EU 28+	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %

Criterion C	C1		C2		C3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %

Criterion C	C1		C2		C3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28+	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %

Criterion D	D1		D2		D3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %
EU 28+	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %

Experts considered there to be insufficient data on which to assess criteria C/D.

Criterion E: Quantitative analysis to evaluate risk of habitat collapse

Criterion E	Probability of collapse
EU 28	unknown
EU 28+	unknown

There is no quantitative analysis available to estimate the probability of collapse of this habitat type.

Overall assessment "Balance sheet" for EU 28 and EU 28+

	A1	A2a	A2b	A3	B1	B2	B3	C/D1	C/D2	C/D3	C1	C2	C3	D1	D2	D3	E
EU28	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	LC	DD	DD	DD	DD	DD	DD	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD

Overall Category & Criteria			
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Red List Category	Red List Criteria	Red List Category	Red List Criteria
Least Concern	-	Least Concern	-

Confidence in the assessment

Low (mainly based on uncertain or indirect information, inferred and suspected data values, and/or limited expert knowledge)

Assessors

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Contributors

HELCOM RED LIST Biotope Expert Team 2013 and Baltic Sea Working Group for the European Red List of Habitats 2014 and 2015.

Reviewers

M. Haldin.

Date of assessment

11/07/2015

Date of review

19/01/2016

References

HELCOM, 2013. Red List of Baltic Sea underwater biotopes, habitats and biotope complexes. Baltic Sea Environmental Proceedings No. 138.