A1.1xx Turf algae on Pontic exposed lower mediolittoral rock

Summary

The habitat is present in the Black Sea and the Sea of Marmara on areas of exposed bedrock and boulders with algal turf cover in the lower mediolittoral zone. Eutrophication was the most significant historical threat to this habitat; although pressure from this has reduced recently, it remains a potential threat in future. The habitat is also under threat from coastal development. Conservation and management measures which may benefit the habitat include: measures to maintain physical and biological integrity; improvement of water quality management in non-EU member states; development controls; contingency plans to be followed in the event of a major pollution incident; survey and monitoring programmes; and designation of MPAs.

Synthesis

Detailed information on the abundance and extent of this habitat is lacking. Information on the quantity and quality of this habitat including historical or recent trends is unknown. This habitat has therefore been assessed as Data Deficient.

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Data Deficient	-	Data Deficient	-

Sub-habitat types that may require further examination

None

Habitat Type

Code and name

A1.1xx Turf algae on Pontic exposed lower mediolittoral rock

No characteristic photograph of this habitat currently available.

Habitat description

Exposed bedrock and boulders with algal turf cover in the lower mediolittoral zone. High and constant humidity, strong wave action and strong light are the dominant environmental factors for this habitat. In the Black Sea the lower mediolittoral rock is a narrow zone located in the lower part of the swash zone and is covered by water most of the time.

Indicators of quality:

Both biotic and abiotic indicators have been used to describe marine habitat quality, including: the presence of characteristic species and those which are sensitive to the pressures the habitat may face; water quality parameters; levels of exposure to particular pressures; and indices of habitat structure and function such as trophic index or successional stages of development in habitats that have a natural cycle of change over time. There are no commonly agreed indicators of quality for this habitat, although some parameters may have been established in certain situations e.g. protected features within Natura 2000 sites, where reference values have been determined and applied on a location-specific basis.

Characteristic species:

Urospora penicilliformis, Bangia atropurpurea, Nemalion helminthoides, Cladophora laetevirens, Feldmannia irregularis, Gelidium pusillum/Gelidium crinale, Ceramiales (Ceramium-Polysiphonia), *Laurencia, Ceramium virgatum, Corallina* spp. and *Grateloupia dichotoma*.

Classification

This habitat may be equivalent to, or broader than, or narrower than the habitats or ecosystems in the following typologies.

EUNIS (v1405):

Level 4. A1.1 Pontil littoral rock.

Annex 1:

1130 Estuaries

1160 Large shallow inlets and bays

1170 Reefs

8330 Submerged or partially submerged sea caves

MAES:

Marine - Inlets and transitional waters

Marine - Coastal

MSFD:

Littoral rock and biogenic reef

EUSeaMap:

Not Mapped

IUCN:

12.1 Rocky shoreline

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

No

Justification
Turf algae on Pontic exposed lower mediolittoral rock is not an outstanding example of the typical characteristics of the Black Sea.

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)

Region	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
Black Sea	Black Sea: Present Sea of Marmara: Present	Unknown Km^2	Unknown	Unknown

Extent of Occurrence, Area of Occupancy and habitat area

	Extent of Occurrence (EOO)	Area of Occupancy (AOO)	Current estimated Total Area	Comment
EU 28	Unknown Km^2	Unknown	Unknown Km^2	The habitat is known to occur in the Black Sea but there is insufficient data to accurately calculate EOO and AOO.
EU 28+	Unknown Km^2	Unknown	Unknown Km^2	The habitat is known to occur in the Black Sea but there is insufficient data to accurately calculate EOO and AOO.

Distribution map
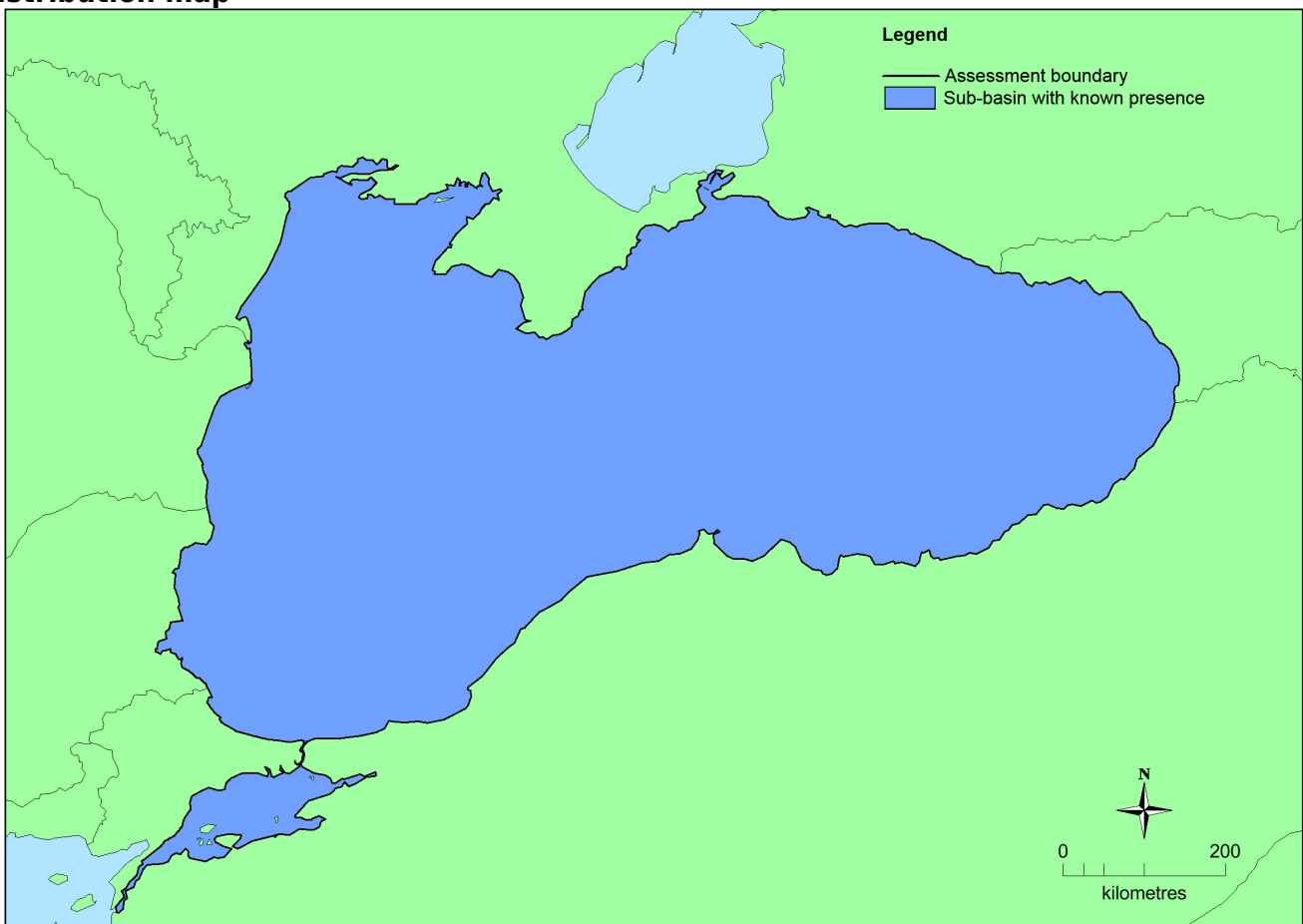
There is insufficient data to produce a map of the distribution of this habitat. However the sub-basisns of which this habitat is likely to occur in have been indicated.

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

It is unknown how much of this habitat is hosted by the EU28 in the Black Sea.

Trends in quantity

There is insufficient data to accurately assess changes in quantity of the habitat

- Average current trend in quantity (extent)
  EU 28: Unknown
  EU 28+: Unknown
- Does the habitat type have a small natural range following regression?
  Unknown
  Justification
  The habitat is known to occur in the Black Sea but there is insufficient data to accurately calculate EOO and AOO. There is insufficient data to accurately assess whether the habitat has undergone a significant decline (>25% of extent) in the last 50 years.
- Does the habitat have a small natural range by reason of its intrinsically restricted area?
  Unknown
  Justification
  There is insufficient data and knowledge on this habitat to state whether it has a small natural range by reason of an intrinsically restricted area.

Trends in quality

There is insufficient data to accurately assess changes in quality of the habitat

- Average current trend in quality
  EU 28: Unknown
  EU 28+: Unknown

Pressures and threats

Eutrophication as a result of nutrient enrichment (N, P and organic matter) was the most significant historic pressure on the habitat. Since the 1990s this pressure has reduced due to tighter controls on pollution in the catchment of the Danube and other rivers which enter the north-west Black Sea. Whilst this pressure is now reduced it remains a threat in the current and future periods, especially along the coasts of non-EU countries surrounding the Black Sea which are not bound by legislation such as the Water Framework Directive or Marine Strategy Framework Directive.

Coastal developments including the construction of marinas and slipways, sediment extraction, the widening and dredging of channels, creation of artificial beaches, road developments and sea defences. These activities may alter the hydrological regime which will in turn affect the character and viability of the habitat.

List of pressures and threats

Urbanisation, residential and commercial development

Other urbanisation, industrial and similar activities

Pollution

Nutrient enrichment (N, P, organic matter)

Conservation and management

Conservation and management measures which would benefit this habitat include measures to maintain physical and biological integrity, including pollution control and regulation; improvement of water quality management outside EU member states; development controls and contingency plans to be followed in the event of a major pollution incident; survey and monitoring programmes; enhanced legal protection for occurrences of the habitat and key species (e.g. additions to the EU Habitats Directive, establish a unified list of Black Sea species and habitats requiring conservation measures, etc.); and the designation of MPAs.

List of conservation and management needs

Measures related to marine habitats

Other marine-related measures

Measures related to spatial planning

Other spatial measures
Establish protected areas/sites
Legal protection of habitats and species

Measures related to urban areas, industry, energy and transport

Other measures

Conservation status

Annex 1:

1160: MBLS U1

1170: MBLS U1

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

There is insufficient data and knowledge of this habitat to assess its capacity to recover

Effort required

10 years
Unknown

Red List Assessment

Criterion A: Reduction in quantity

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

There is insufficient data on changes in quantity of this habitat to undertake an assessment using criterion A.

Criterion B: Restricted geographic distribution

Criterion B	B1				B2				B3
	EOO	a	b	c	AOO	a	b	c	
EU 28	unknown Km^2	Unknown	Unknown	unknown	unknown	Unknown	Unknown	unknown	unknown
EU 28+	unknown Km^2	Unknown	Unknown	unknown	unknown	Unknown	Unknown	unknown	unknown

The precise extent of the habitat is unknown. Therefore there is insufficient data to produce EOO and AOO figures.

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 %
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 consider there to be insufficient data to conduct an assessment using 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	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Data Deficient	-	Data Deficient	-

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

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