A5.13 Pontic infralittoral mixed substrata

Summary

The habitat is present in the Black Sea on areas infralittoral mixed substrate. It is also present in the Sea of Marmara. Eutrophication is the main historic pressure on this habitat. Additional pressures include: trawling, siltation, chemical pollution, plastic pollution and disturbance from other anthropogenic activities. Conservation and management measures relevant to this habitat include: measures to maintain physical and biological integrity, improvement of water quality and raised public awareness.

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. For the purposes of Red List assessment this habitat is considered to be 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

A5.13 Pontic infralittoral mixed substrata

There are currently no photographs of this habitat available.

Habitat description

This habitat comprises mixed substrate in the infralittoral zone. The substrate is often patchy and is comprised of a mix of cobbles, pebbles, shelly gravels and silted cobbles. The effects of currents and wave action are varied, and influences the type of substrate present and whether it is overlain by any silt. These different substrates can support a diverse range of faunal communities. These include spirorbid worms, crustaceans and ascidians. Floral communities are not a diagnostic feature.

Indicators of quality:

Both biotic and abiotic indicators have been used to describe marine habitat quality. These include; 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 pressure as well as and more integrated indices which describe 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 particular parameters may have been set 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:

These include: encrusting spirorbid worms, *Amphibalanus improvisus*, *Actinia aequina*, *Mytilus*

galloprovincialis and *Pisidia longicornis*.

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 . A sub-habitat of 'Shallow sublittoral/ infralittoral mixed sediments' (A5.4)

Annex 1:

1110 Sandbanks slighlty covered all the time

1160 Large shallow inlets and bays

MAES:

Marine - Marine inlets and transitional waters

Marine - Coastal

MSFD:

Shallow sublittoral sediment (coarse, sand, mud, mixed)

EUSeaMap:

Shallow coarse or mixed sediments

IUCN:

9.3 Subtidal loose rock/ pebble/ gravel

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

Unknown

Justification

There is insufficient knowledge and information on this habitat to state whether it is an outstanding example of this biogeographic region.

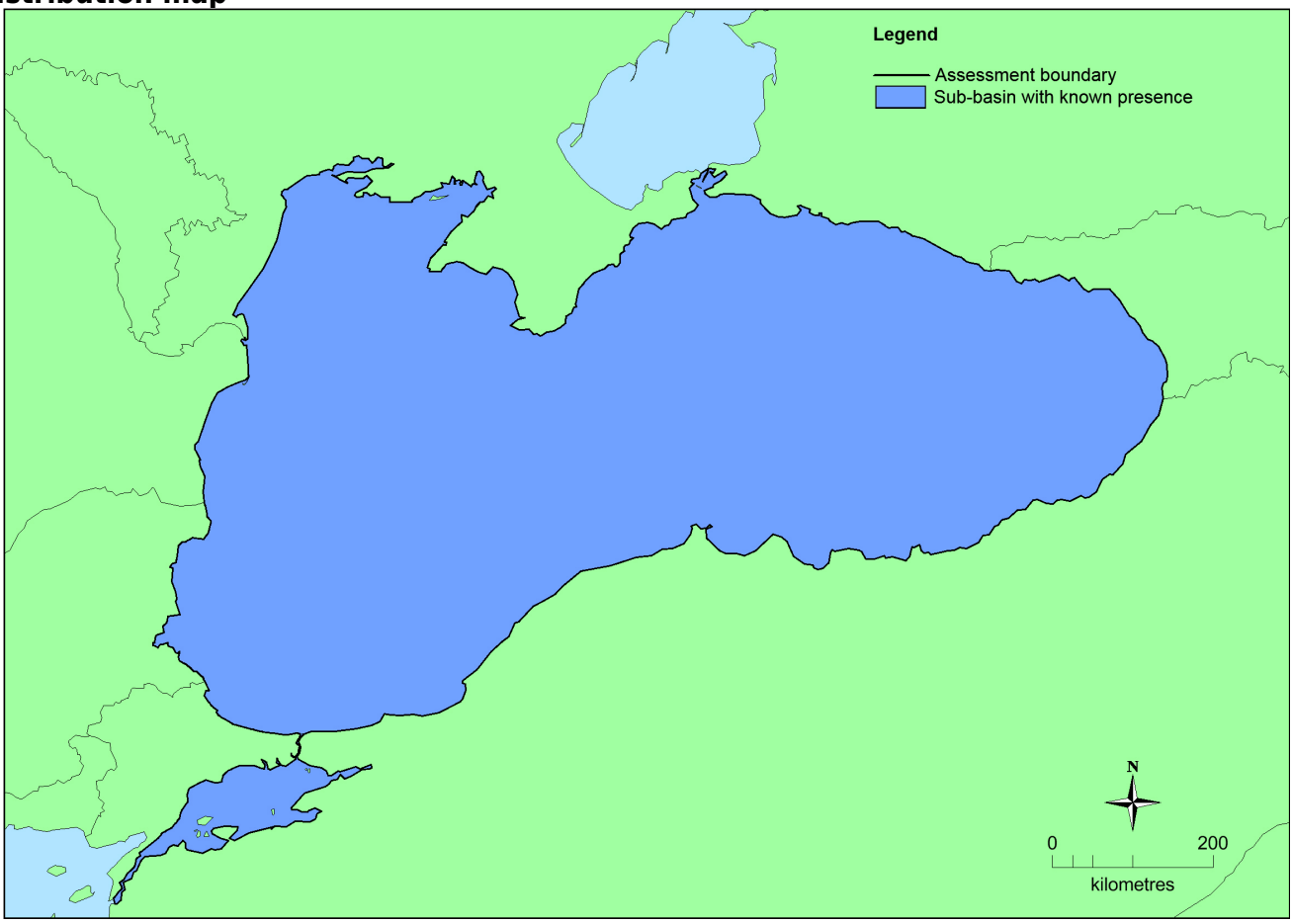
Geographic occurrence and trends

Region	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
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.

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) is the most significant historic pressure on the habitat. Anoxic and hypoxic conditions due to eutrophication caused mass mortalities in benthic communities. 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 is still a continuing threat in the current and future periods. This is especially true for non EU countries surrounding the Black Sea which are not bound by the agreements such as the Water Framework Directive (WFD).

The habitat is sensitive and vulnerable to:

Trawling causing deterioration and habitat destruction by damaging benthic communities both directly and indirectly through effects such as smothering and altering the sediment characteristics.

Siltation. This is a current and future threat to the habitat. The resettling of suspended sediment can smother filter feeding organisms as well as inhibiting the growth of some species. Siltation is typically caused by dredging, trawling and other activities which disturb bottom sediments.

Chemical pollution. This is a threat of current and future importance which at its most severe can result in species can lead to mortality. High mortality rates can lead to a reduction in extent. Lower mortality rates will result in a reduction in habitat quality. Chemical pollution may also affect the size and growth rate of some of the associated fauna.

List of pressures and threats

Pollution

Nutrient enrichment (N, P, organic matter)
Input of contaminants (synthetic substances, non-synthetic substances, radionuclides) - diffuse sources, point sources, acute events
Marine macro-pollution (i.e. plastic bags, styrofoam)

Natural System modifications

Siltation rate changes, dumping, depositing of dredged deposits

Conservation and management

Conservation and management measures which would benefit this habitat include implementing measures

to maintain physical and biological integrity, including pollution control and regulation, prohibition of all forms of benthic trawling and dredging in the EU member states and outside, improvement of water quality management outside EU member states, raised public awareness of ecological value and vulnerability.

List of conservation and management needs

Measures related to marine habitats

Other marine-related measures

Conservation status

Annex 1:

1110: MBLS U1, MMED XX

1160: MBLS U1, MMED XX

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 that estimates 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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