

A5.26 Pontic circalittoral muddy sand

Summary

The habitat is present in the Black Sea on areas of circalittoral muddy sand substrate below 20m depth. It is also present in the Sea of Marmara. Eutrophication is the main historic pressure on this habitat. Additional pressures include: trawling, sand extraction 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, pollution event response strategies, survey and monitoring programs and raised public awareness of the habitats' ecological role and vulnerability.

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

A5.26 Pontic circalittoral muddy sand

There are currently no photographs of this habitat available.

Habitat description

Non-cohesive muddy sand (with 20% to 80% silt/clay) in the circalittoral zone. The habitat is characterised by low light and low energy conditions. Species present typically belong to the bivalve and polychaete worm groups.

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:

Mya arenaria, *Cerastoderma glaucum*, *Abra alba*, *Parvicardium exiguum*, *Spisula subtruncatra*, *Pitar rudis* and *Aricidea claudiae*.

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 'Circalittoral sand' (A5.2)

Annex 1:

1110 Sandbanks slightly covered all the time

1130 Estuaries

MAES:

Marine - Marine inlets and transitional waters

Marine - Coastal

MSFD:

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

EUSeaMap:

Shallow sands

Shallow muds

IUCN:

9.5 Subtidal sandy-mud

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.

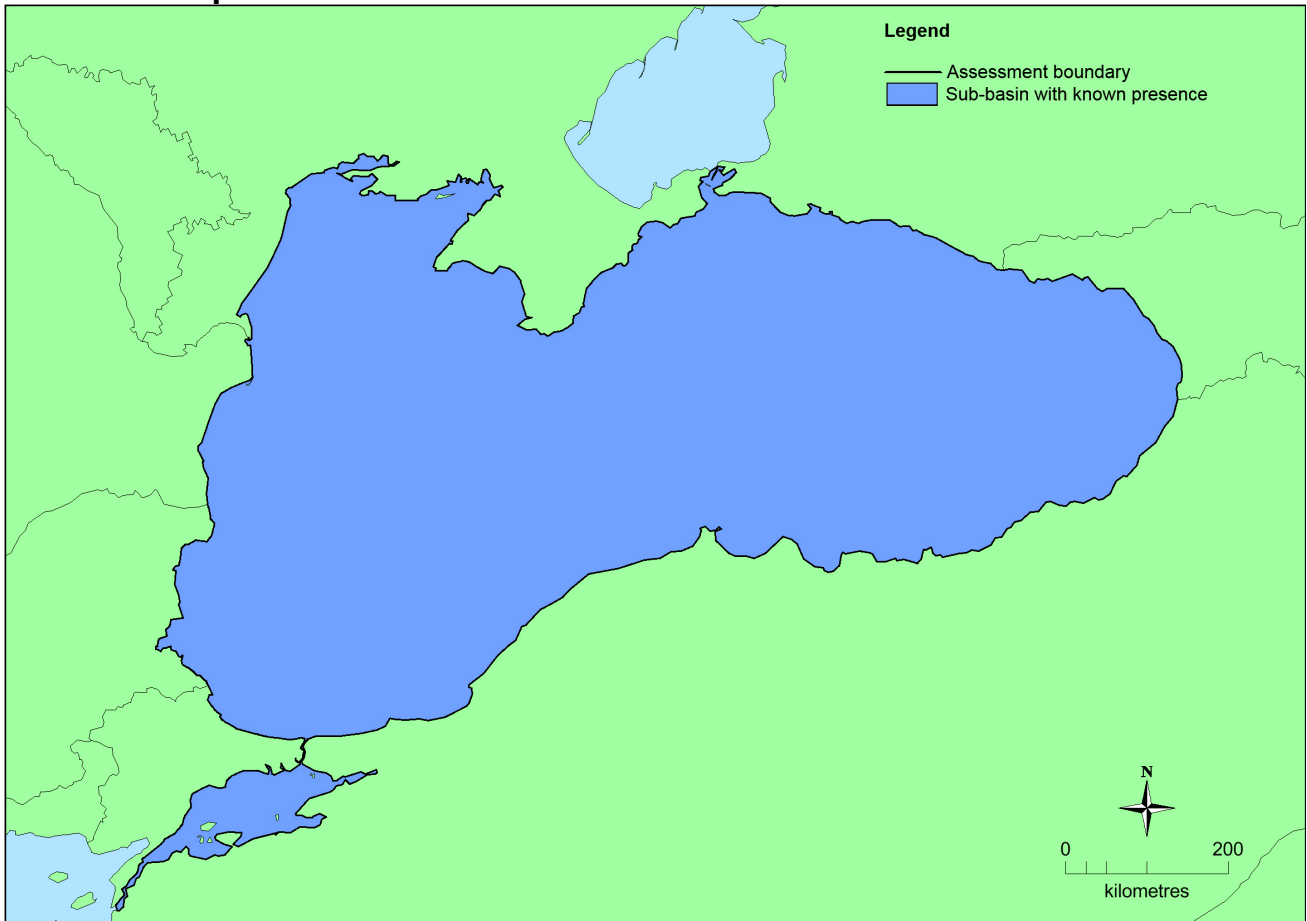
Geographic occurrence and trends

| Region | Present or Presence Uncertain | Current area of habitat | Recent trend in quantity (last 50 yrs) | Recent trend in quality (last 50 yrs) |
|------------------|---|----------------------------|---|--|
| <i>Black Sea</i> | 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. 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 is causing deterioration and habitat destruction by damaging benthic communities both directly and indirectly through effects such as smothering and altering the sediment characteristics.

Sand extraction can lead to habitat destruction. Marine sand is an important building material in the Black Sea therefore sand extraction is considered likely to increase in tandem with other development pressures in the region.

Mobile demersal dredging and trawling. This is a threat of current and future importance. This causes habitat destruction leading to in a reduction in extent and quality.

List of pressures and threats

Biological resource use other than agriculture & forestry

- Fishing and harvesting aquatic resources
 - Professional active fishing

Pollution

- Nutrient enrichment (N, P, organic matter)

Natural System modifications

- Removal of sediments (mud...)
- Extraction of sea-floor and subsoil minerals (e.g. sand, gravel, rock, oil, gas)

Conservation and management

Conservation and management measures which would benefit this habitat include implementing measures to maintain physical and biological integrity, including control and regulation of sand extraction and prohibition of bottom trawling and dredging, improvement of water quality management outside EU

member states, contingency plans to be followed in the event of a major pollution incident, survey and monitoring programmes, raised public awareness of ecological value and vulnerability.

List of conservation and management needs

Measures related to marine habitats

Other marine-related measures

Measures related to urban areas, industry, energy and transport

Other measures

Conservation status

Annex 1:

No relationship

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 % |

| 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 % |

| 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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