# A3.3z Pontic lower infralittoral rock, with siginificant cover of sciaphilic algae

## Summary

The habitat is present in the Black Sea on areas of shaded upper infralittoral rock. It is not present in the Sea of Marmara. Eutrophication is the main historic pressure on this habitat. Additional pressures include: chemical pollution. 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, raised public awareness, enhanced legal protection, measures to reduce global warming.

## 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

A3.3z Pontic lower infralittoral rock, with siginificant cover of sciaphilic algae

There are currrently no photographs available of the habitat.

### Habitat description

Rocky habitat in the lower infralittoral zone characterised by low light conditions. Sciaphilic algae dominate this habitat where they form significant cover on the rocks.

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:

*Phyllophora crispa*, *Apoglossum ruscifolium*, *Gelidium spinosum*, *Zanardinia typus*, *Polysiphonia elongata*, *Antithamniom cruciatum*, *Lomentaria clavellosa*, *Nereia filiformis*, *Ectocarpus spp.*, encrusting algae

(*Hildenbrandia spp.*, *Lithothamnion spp.*, *Lithophyllum spp.*) and the gastropod *Gibbula sp.*

### 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 A3.3 - wave sheltered infralittoral rock

Annex 1:

1170 Reefs

8330 Submerged or partially submerged sea caves

MAES:

Marine - Marine inlets and transitional waters

Marine - Coastal

MSFD:

Shallow sublittoral rock and biogenic reef

EUSeaMap:

Shallow photic rock or biogenic reef

Shallow aphotic rock or biogenic reef

IUCN:

9.2 Subtidal rock and rocky reefs

### 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.

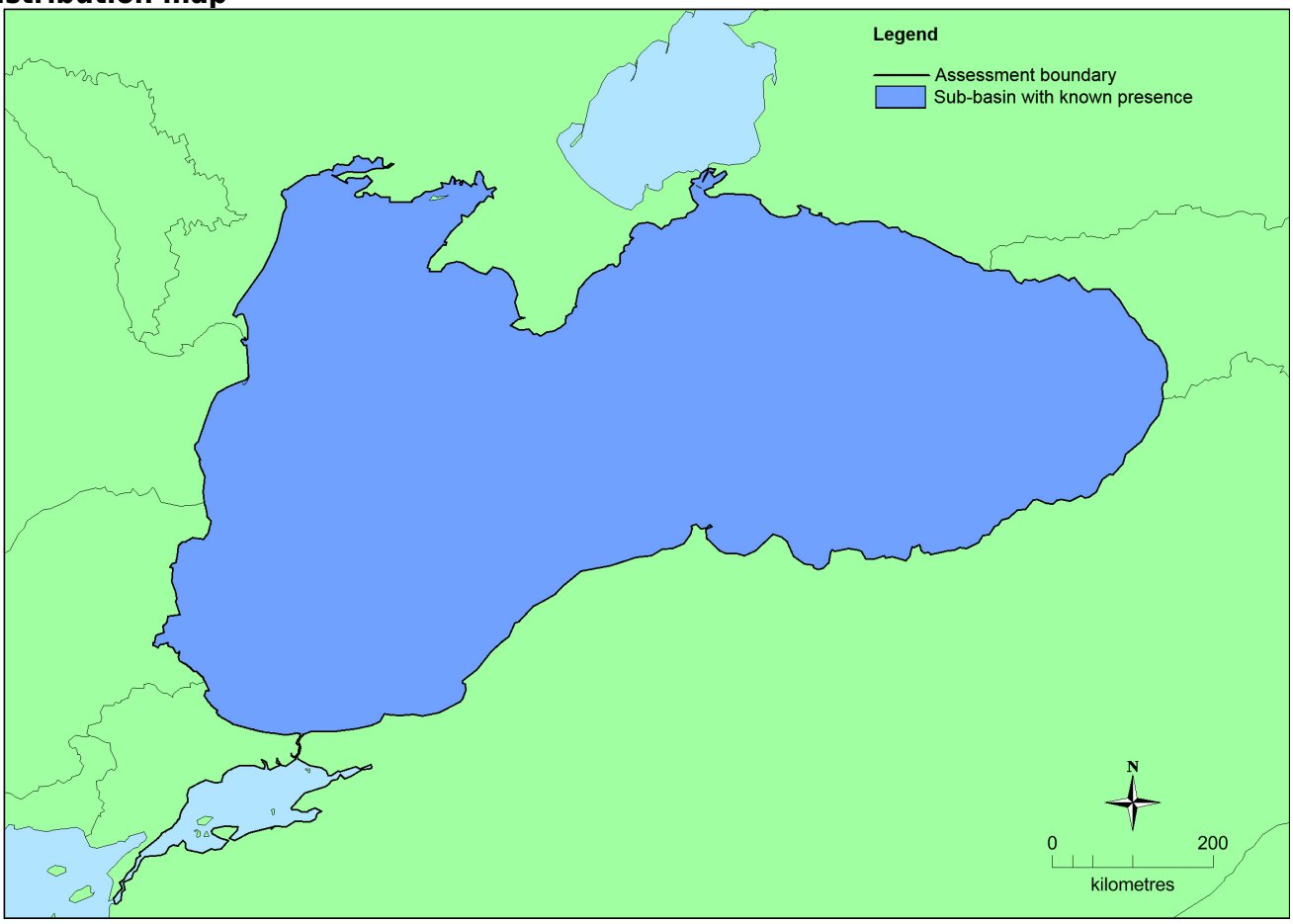
## Geographic occurrence and trends

| 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 | 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. 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 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 likely to be sensitive to:

Chemical pollution which at its most severe can result in species 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.

Turbity, which prevents sufficient light penetration for the development of the characteristic perennial algal cover. This is directly related to eutrophication.

### 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

## 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, 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 programs, 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:

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 % |

| 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 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)

### Assessors
S. Beal, G. Komakhidze, D. Micu, V. Mihneva, N. Milchakova, B. Yokes

### Contributors
S. Beal, G. Komakhidze, D. Micu, V. Mihneva, N. Milchakova, B. Yokes

### Reviewers
S. Gubbay

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