

## A2.132 Pontic mediolittoral cobbles and gravels

### Summary

The habitat is present in the Black Sea on areas of mediolittoral cobbles and gravel in high energy environments. It is also present in the Sea of Marmara. As the sediment is quite coarse it typically does not support large volumes of marine life. Eutrophication is the most significant historic pressures affecting this habitat. Additional pressures include coastal development, chemical pollution and plastic pollution. Conservation measures which will benefit the habitat include restoring the biological and physical integrity, improvements to water quality, coastal development controls and contingency plans in case of a pollution event.

### 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

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#### Code and name

A2.132 Pontic mediolittoral cobbles and gravels

No characteristic photographs of this habitat currently available.

#### Habitat description

This mediolittoral habitat is found in areas of coarse sediment (shingle, cobbles, gravels, shells etc.). These develop in areas of high energy (currents or wave action). As the sediment is quite coarse it typically does not support large volumes of marine life. There may be accumulations of shell hash, for example of *Cerastoderma*, *Mya* and other molluscs.

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; and levels of exposure to particular pressure, 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:

Few species present.

### 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 Pontic littoral coarse sediment (A2.1).

Annex 1:

1160 Large shallow inlets and bays

MAES:

Marine - Marine inlets and transitional waters

Marine - Coastal

MSFD:

Littoral sediment

EUSeaMap:

Not mapped

IUCN:

12.3 Shingles and/or pebble shoreline and/or beaches

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

Unknown

#### Justification

It is unknown whether this habitat presents an outstanding example of the typical characteristics of the Black Sea region.

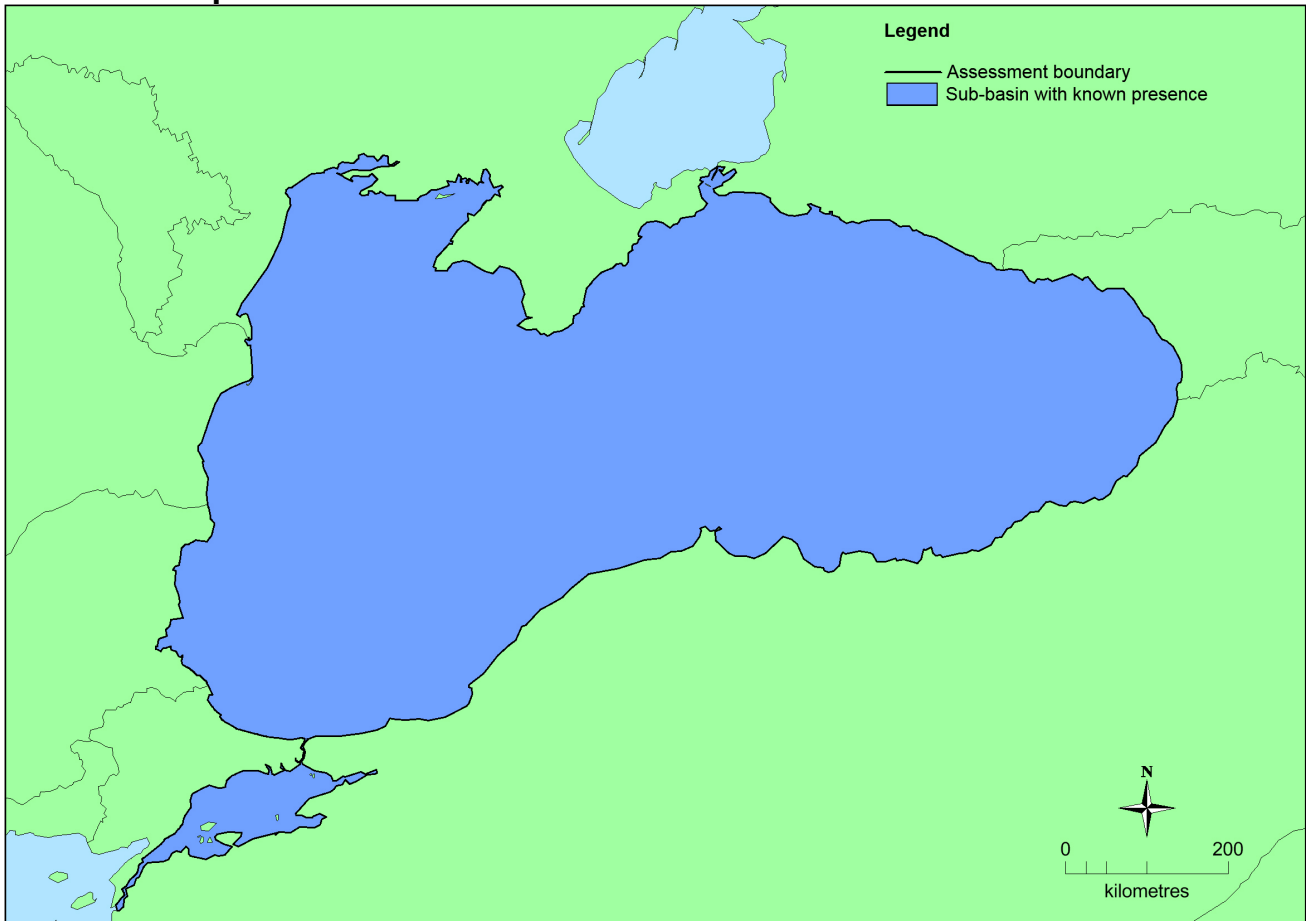
### Geographic occurrence and trends

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 <sup>2</sup>	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 <sup>2</sup>	Unknown	Unknown Km <sup>2</sup>	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 <sup>2</sup>	Unknown	Unknown Km <sup>2</sup>	The habitat is known to occur in the Black Sea but there is insufficient data to accurately calculate EOO and AOO.

### Distribution map



This habitat occurs in the Black Sea but there is insufficient data to produce a map of its distribution or calculate EOO and AOO.

### 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 EU 28 in the Black Sea, but it is known to occur in other Black Sea countries.

### Trends in quantity

The habitat is most widespread on the eastern coasts of the Black Sea but also occurs sporadically within the EU 28. 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. There is insufficient data to accurately assess whether the habitat has undergone any regression 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**

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This habitat is most at risk from coastal developments, including the construction of marinas and slipways, sediment extraction, the widening and dredging of channels, creation of artificial beaches, road building and sea defenses. These activities may alter the hydrological regime which will in turn affect the character and viability of the habitat. Other potential pressures are from pollution (chemical and plastic) and eutrophication which may affect the associated species.

## **List of pressures and threats**

### **Urbanisation, residential and commercial development**

Other urbanisation, industrial and similar activities

### **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)

## **Conservation and management**

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Protection from the direct and indirect effects of coastal development will benefit this habitat as well as pollution control and regulation, water quality management, contingency plans to be followed in the event of a major pollution incident.

## **List of conservation and management needs**

### **Measures related to wetland, freshwater and coastal habitats**

Restoring/Improving water quality

### **Measures related to marine habitats**

Other marine-related measures

## Measures related to spatial planning

Establish protected areas/sites

## Measures related to urban areas, industry, energy and transport

Other measures

## Conservation status

Annex 1 type:

1130 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. This habitat is therefore assessed as Data Deficient under criterion A.

### Criterion B: Restricted geographic distribution

Criterion B	B1				B2				B3
	EOO	a	b	c	AOO	a	b	c	
EU 28	unknown Km <sup>2</sup>	Unknown	Unknown	unknown	unknown	Unknown	Unknown	unknown	unknown
EU 28+	unknown Km <sup>2</sup>	Unknown	Unknown	unknown	unknown	Unknown	Unknown	unknown	unknown

This habitat occurs in the Black Sea but there is insufficient data to calculate EOO and AOO. This habitat has therefore been assessed as Data Deficient under criterion 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 %
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

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### Reviewers

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### Date of assessment

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### Date of review

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## References

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- Anon. 2006. *The northwestern part of the Black Sea: biology and ecology*. Kiev: Naukova Dumka. 701pp.
- Bacescu, M. C., Muller G. I., Gomoiu, M-T. 1971. . Cercetari de ecologie bentica in Marea Neagra (analiza cantitativa, calitativa si comparata a faunei bentice pontice). *Ecologie Marina* vol. IV. Editura Academiei R.S.R., Bucuresti, 357 pp..
- Bacescu M., 1977. Les biocenoses benthiques de la Mer Noire. *Biologie des eaux saumâtres de la Mer Noire, Première partie*: 128-134.
- Çulha, M., Bat, L., Türk Çulha, S. & Çelik, M.Y. 2010. Benthic mollusk composition of some facies in the upper-infralittoral zone of the southern Black Sea, Turkey. *Turkish Journal of Zoology* 34: 523-532.
- Dimitrova-Konaklieva, S. 2000. *Flora of the Marine Algae of Bulgaria (Rhodophyta, Phaeophyta, Chlorophyta)*. Pensoft, Sofia, Bulgaria.
- Gönlügür Demirci, G. 2005. Sinop Yarımadasının (Orta Karadeniz) Mollusca Faunası. *Science and mEngineering Journal of Fırat University*17(3): 565-572.
- Kalugina-Gutnik A.A. 1970. *The composition and distribution of benthic vegetation in the south-eastern part of the Black Sea*. Ecological and morphological studies of benthic organisms. Kiev: Naukova Dumka, p. 185- 202.
- Kiseleva, M. I. 1981. *Benthos of Black Sea mobile substrates*. Naukova dumka, Kiev, pp 165.
- Konsulov, A. 1998. *Black Sea Biological Diversity: Bulgaria. Volume 5 of Black Sea environmental series*. United Nations Publications, New York, USA.