

A3.14 Encrusting algal communities on exposed Atlantic infralittoral rock

Summary

This habitat is found along rocky coastlines in areas of the infralittoral zone that are exposed or very exposed to wave action. It is characterised by a community of crustose algae. There is limited information on the pressures and threats that might affect the habitat although fisheries and pollution have been mentioned in supporting documentation. Given its occurrence in exposed situations it is likely to be a resilient habitat with few specific conservation measures required. General measures to reduce the pressures of human activity on inshore rocky areas (e.g. controls on fishing) and to prevent pollution at sea could nevertheless be beneficial.

Synthesis

There is a lack of information on the quantity and quality of this habitat in the North East Atlantic region although it is likely to be widespread. Because of the robust nature of this habitat, occurring in wave exposed conditions, it is thought unlikely to have declined over the last 50 years. For the purposes of Red List assessment this habitat is therefore considered to be of Least Concern for both the EU 28 and EU 28+.

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Least Concern	-	Least Concern	-

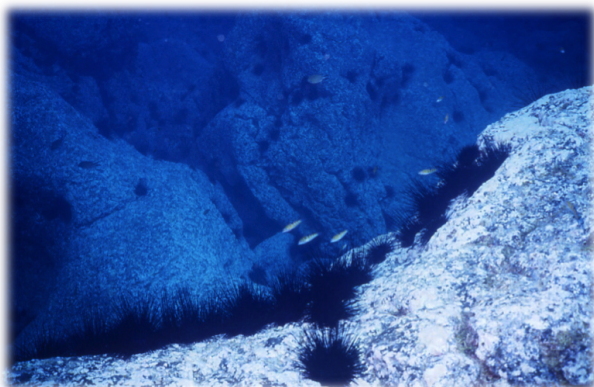
Sub-habitat types that may require further examination

None.

Habitat Type

Code and name

A3.14 Encrusting algal communities on exposed Atlantic infralittoral rock



Sublittoral rock in exposed conditions where grazing by the sea urchin *Diadima africanum* limits algal growth. Gran Canaria, Spain (© R.Haroun).

Habitat description

This habitat comprises a community of crustose algae on rocky substrates. It occurs in locations which are exposed or moderately exposed to wave action. Algal cover is extremely poor, and almost completely restricted to encrusting species. Sessile animals are typically encrusting sponges, bryozoans, barnacles,

serpulids and vermetids. Vertical surfaces may be occupied by patches of encrusting sponges and *Corynactis viridis*, while hydroids such as *Aglaophenia pulma* may be locally abundant. In deeper water the colonial coral *Madracis asperula* may be present. The herbivory of the sea-urchins is very important for the maintenance of this habitat.

Indicators of quality:

Both biotic and abiotic indicators have been used to describe marine habitat quality. These include: the presence of characteristic species as well as those which are sensitive to the pressures the habitat may face; water quality parameters; 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:

In the Azores this community of crustose algae is found in association with *Arbacia lixula* with reported characteristic species of Corallinacea, *Hildenbrandia* sp., *Cutleria* sp. aglaozonia phase, *Peyssonelia* spp., *Nemoderma tingitana*, some tiny polisyphonate Ceramiales, and in some case *Lythophilum tortuosum* amidst the turf. In sheltered notches and crevices, *Percnon gibbesi*, *Sphaerechinus granularis* and the sea-star *Marthasterias glacialis* are commonly found. Sessile associated fauna is composed of giant barnacles *Megabalanus azoricus*, limpets *Patella aspera*, the muricid predator *Stramonita haemastoma* and vermetids. Abandoned vermetid tubes are often inhabited by sedentary individuals of the hermit crab *Calcinus tubularis* while empty giant barnacle fortresses are usually occupied by sponges, serpulids and sea urchins *Paracentrotus lividus*, as well as small blennies (*Parablennius ruber*, *Parablennius incognitus*, *Ophioblennius atlanticus* and *Lipophrys trigloides*) which use them as shelters and nesting places.

Classification

EUNIS (v1405):

Level 4. A sub-habitat of 'Atlantic infralittoral rock' (A3.1) proposed to incorporate new Macaronesian habitat A3.14_PT01 at EUNIS level 5.

Annex 1:

1170 Reefs

MAES:

Marine - Marine inlets and transitional waters

Marine - Coastal

MSFD:

Shallow sublittoral rock and biogenic reef

EUSEaMap:

Shallow sublittoral rock and 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 information to comment on whether this habitat is an outstanding example of the North East Atlantic.

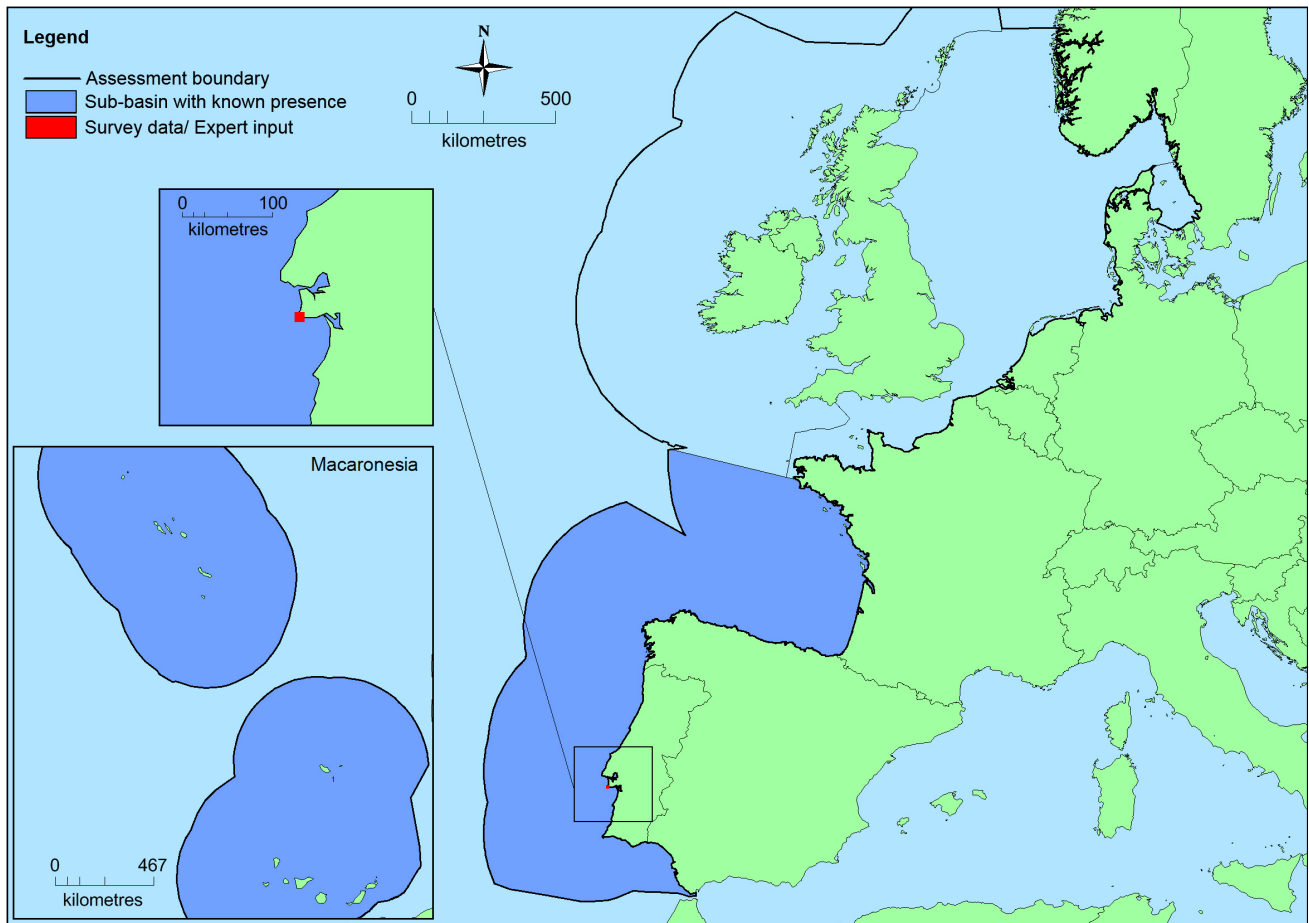
Geographic occurrence and trends

Region	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>North-East Atlantic</i>	Bay of Biscay and the Iberian Coast: Present Celtic Seas: Present Kattegat: Present Greater North Sea: Present Macaronesia: Present	Unknown Km ²	Stable	Unknown

Extent of Occurrence, Area of Occupancy and habitat area

	Extent of Occurrence (EOO)	Area of Occupancy (AOO)	Current estimated Total Area	Comment
<i>EU 28</i>	Unknown Km ²	Unknown	Unknown Km ²	There is insufficient information for accurate calculation of EOO and AOO.
<i>EU 28+</i>	Unknown Km ²	Unknown	Unknown Km ²	There is insufficient information for accurate calculation of EOO and AOO.

Distribution map



This map has been generated using EMODnet data from modelled/surveyed records for the North East Atlantic (and supplemented with expert opinion where applicable) (EMODnet 2010). There are insufficient data to provide a comprehensive and accurate map of the distribution of this habitat or for calculation of EOO and AOO.

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

This habitat is widespread in the Azores. The percentage hosted by the EU 28 is likely to be between 85-90% but there is insufficient information to establish the exact figure.

Trends in quantity

There is a lack on information to determine any trends in quantity of this habitat however given the robust nature of this habitat, expert opinion is that it is unlikely to have suffered significant decline in the last 50 years. The current trend is therefore inferred to be stable.

- Average current trend in quantity (extent)
EU 28: Stable
EU 28+: Stable
- Does the habitat type have a small natural range following regression?
No
Justification
EOO cannot be calculated because of limited data however this habitat is unlikely to have a small natural range.
- Does the habitat have a small natural range by reason of its intrinsically restricted area?
No
Justification
EOO cannot be calculated because of limited data however this habitat is unlikely to have a small natural

range.

Trends in quality

There is insufficient information to determine any trends in quality of this habitat at the present time.

- Average current trend in quality

EU 28: Unknown

EU 28+: Unknown

Pressures and threats

There is limited information on the pressures and threats affecting this habitat but two have been identified. One of these is cascading effects generated by high fishing pressures on fish predators of sea urchins, which may generate trophic imbalances leading to increased crustose algal assemblages. Pollution is also mentioned as a threat in supporting documentation. This is likely to include oil pollution which can smother encrusting communities, but there are no details on what type of pollution and how it might affect the habitat.

List of pressures and threats

Biological resource use other than agriculture & forestry

Fishing and harvesting aquatic resources

Pollution

Marine water pollution

Conservation and management

As this habitat occurs in exposed rocky areas it is likely to be resilient with few specific conservation measures required. It could however benefit from general measures to reduce the pressures of human activity on inshore rocky areas (e.g. controls on fishing) and to prevent pollution at sea.

List of conservation and management needs

Measures related to marine habitats

Other marine-related measures

Measures related to hunting, taking and fishing and species management

Regulation/Management of fishery in marine and brackish systems

Conservation status

Annex 1:

1170: MATL U2, MMAC FV

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

Unknown, although as present in high energy situations it likely to be a resilient habitat capable of recovery.

Effort required

Red List Assessment

Criterion A: Reduction in quantity

Criterion A	A1	A2a	A2b	A3
EU 28	0 %	unknown %	unknown %	unknown %
EU 28+	0 %	unknown %	unknown %	unknown %

There is insufficient information to determine any trends in quantity of this habitat at the present time although given the robust nature of this habitat it is most likely to be stable. This habitat has therefore been assessed as Least Concern under criterion A for both the EU 28 and EU 28+.

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

This habitat is likely to have a large range in the North East Atlantic but significant shortcomings in available mapping data mean that reliable figures for EOO and AOO cannot be derived at the present time. This habitat has therefore been assessed as Data Deficient under criterion B for both the EU 28 and EU 28+.

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 on which to assess criteria C/D although it is likely that this habitat has not suffered significant decline in quality over the last 50 years.

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.

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	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD

Overall Category & Criteria			
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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

J. Leinikki.

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30/10/2015

Date of review

15/01/2016

References

Bianchi, N.C., Morri, C., Sartoni, G. & Wirtz, P. 1998. Sublittoral epibenthic communities around Funchal (Ilha da Madeira, NE Atlantic). *Biochemical Medicine and Metabolic Biology* 5: 59-80.

Tempera, F., E. Atchoi, P. Amorim, J. Gomes-Pereira and J. Gonçalves. 2013. *Atlantic Area Marine Habitats. Adding new Macaronesian habitat types from the Azores to the EUNIS Habitat Classification*. Horta: MeshAtlantic, IMAR/DOP-UAç, p.126.