A3.1_PT14 Faunal communities of high energy Atlantic infralittoral rock

Summary

This habitat is present in high energy situations and is therefore likely to be resilient and capable of recovery depending on availability of larvae and successful spat falls of the characteristic species *Mytilus galloprovincialis* which can be present in abundance. Fishing activities and pollution have been listed as potential pressures in supporting literature but no further details given. No specific conservation and management measures have been identified for this habitat at the present time.

Synthesis

This habitat was proposed as a separate EUNIS habitat in 2013 consequently there is a lack of data on its range, area, extent and any trends in quantity or quality. For the purposes of Red List assessment it is therefore considered to be Data Deficient 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
Data Deficient	-	Data Deficient	-

Sub-habitat types that may require further examination

Unknown.

Habitat Type

Code and name

A3.1_PT14 Faunal communities of high energy Atlantic infralittoral rock

No characteristic photographs of this habtiat are currently available.

Habitat description

This habitat includes dense populations of *Mytilus galloprovincialis*, on high energy infralittoral rocky seabed, up to 6-8 meters depth. The specimens are strongly attached to each other by the byssus threads, which makes them extremely endurable to rough sea. Several layers of mussels can occur on the rock. Under them the rock is covered by abundant *Balanus perforatus* that can also be attached to the shells of the mussels.

Indicators of Quality:

Both biotic and abiotic indicators have been used to describe marine habitat quality. These include: the presence of characteristic species, in this case *Mytilus galloprovincialis* 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 overtime.

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.

Charactersitic species:

Where *M.galloprovincialis* communities occur the associated fauna is very diverse, with several sessile and mobile species on the rock occupying the spaces between the mussels. Attached either to the barnacle shells or directly to the rock, abundant populations of the cnidarian *Corynactys viridis* occur, as well as serpulid polychaetes *Spirobranchus* spp., and the bryozoan *Celleporina caliciformis*. The echinoderms *Ophiotrix fragilis* and *Amphipholis squamata* and the polychaetes *Lepidonotus clava* and *Platynereis dumerilii* are common species in this habitat. The flatworms *Stylochus neapolitanus* and *Emprosthopharynx pallida* and the ascidean *Diplosoma listerianum* are frequent and abundant in this habitat. Crustaceans are also abundant, namely P*ilumnus hirtellus, Tanais dulongii, Ischyromene lacazei, Elasmopus brasiliensis, Stenothoe tergestina, Podocerus variegatus* and *Parajassa pelagica.* Regarding the molluscs, the most abundant one, besides *M. galloprovincialis*, is *Patella ulyssiponensis; Hiatella arctica* and the predator *Nucella lapillus* are present but in small numbers. Among echinoderms *Paracentrotus lividus, Amphipholis squamata* and *Ophiotrix fragilis* occur in this habitat, as well as the predator *Marthasterias glacialis*, which can cause periodic destruction of the mussel populations. Algae are not abundant in this habitat, the most frequent one is *Corallina elongata,* whose biotope occurs between the eulittoral and infralittoral populations of *Mytilus galloprovincialis.*

Classification
This habitat may be equivalent to, or broader than, or narrower than the habitats or ecosystems in the following typologies.

EUNIS: (v1405)

Proposed new level 4 to accommodate new level 5 biotopes of faunal units on high energy infralittoral rock. A sub-habitat of 'Atlantic and Mediterranean high energy infralittoral rock' (A3.1).

Annex 1:

1170 Reefs

MAES:

Marine - Marine inlets and transitional waters

Marine – Coastal

MSFD:

Shallow sublittoral rock & biogenic reef

EUSeaMap:

Shallow photic 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
It is unknown whether this habitat presents an outstanding example of the typical characteristics of the North East Atlantic 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)
North-East Atlantic	Bay of Biscay and the Iberian Coast: Present Celtic Seas: Uncertain Kattegat: Uncertain Greater North Sea: Uncertain Macaronesia: Uncertain	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	Insufficient records for reliable estimate.
EU 28+	Unknown Km^2	Unknown	Unknown Km^2	Insufficient records for reliable estimate.

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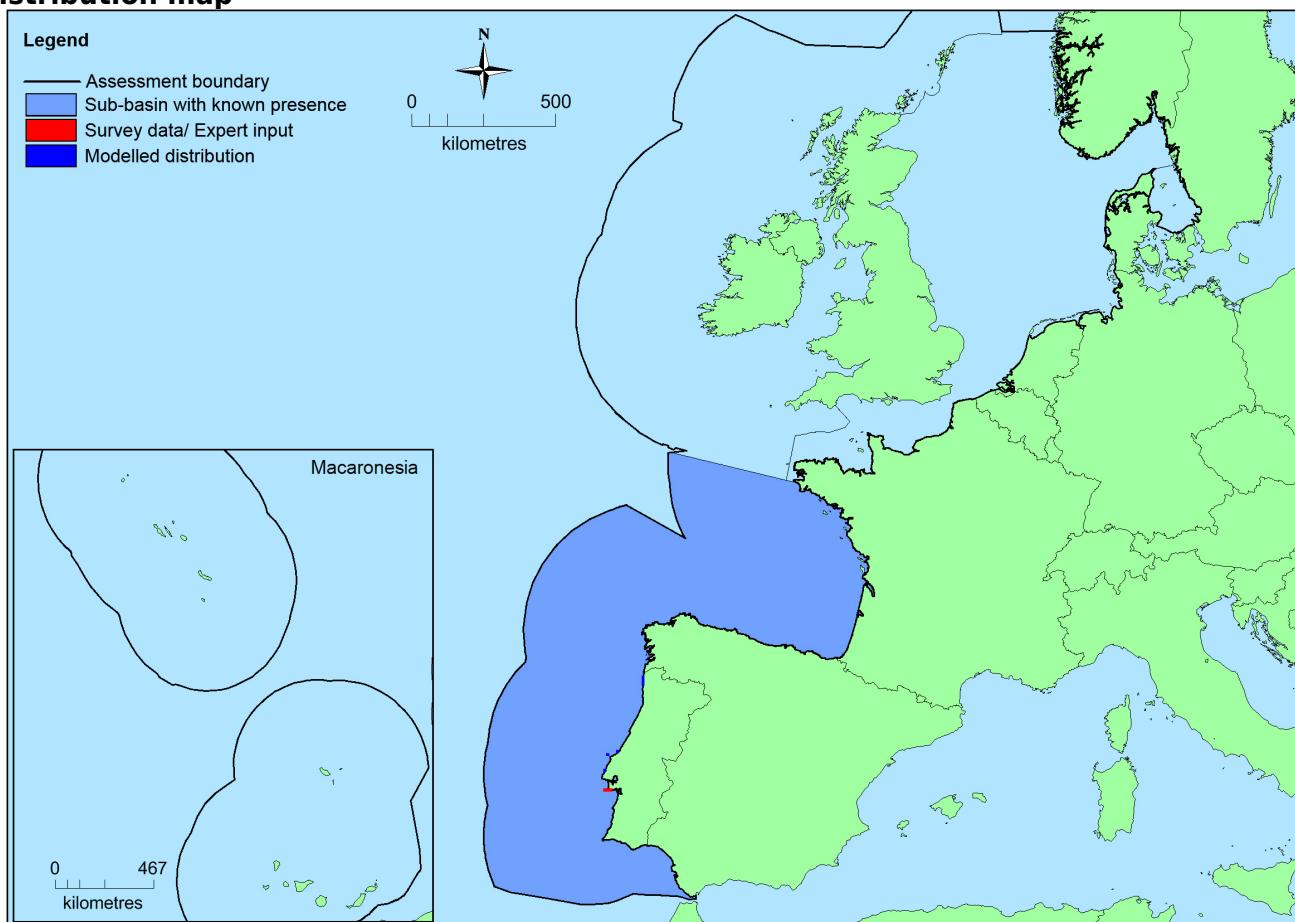
This map has been generated using EMODnet data from modelled/surveyed records for the North East Atlantic (and supplemented with expert opinion where applicable) (EMODnet 2010). There are insufficient data to provide a comprehensive and accurate map of the distribution of this habitat or for calcuation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

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

Unknown.

Trends in quantity

This habitat was proposed as a separate EUNIS habitat in 2013. There is insufficient information to determine any trends in quantity.

- 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
  This habitat has was proposed as a separate EUNIS habitat in 2013. There is insufficient information to determine its natural range or any trends.
- Does the habitat have a small natural range by reason of its intrinsically restricted area?
  Unknown
  Justification
  This habitat has was proposed as a separate EUNIS habitat in 2013. There is insufficient information to determine its natural range or any trends.

Trends in quality

This habitat was only proposed as a separate EUNIS habitat in 2013. There is insufficient information to determine any trends in quality.

- Average current trend in quality
  EU 28: Unknown
  EU 28+: Unknown

Pressures and threats

This habitat has was proposed as a separate EUNIS habitat in 2013 therefore there is little information on presssures and threat. In general encrusting sessile epifauna are known to be vulnerable to removal and damage by towed fishing gears. Pollution has also been identified as a potential pressure in supporting documentation but no further details given at the present time.

List of pressures and threats

Biological resource use other than agriculture & forestry

    Fishing and harvesting aquatic resources

Pollution

    Pollution to surface waters (limnic, terrestrial, marine & brackish)

Conservation and management

This habitat has was proposed as a separate EUNIS habitat in 2013. No specific conservation and management measures have been identified at the present time.

List of conservation and management needs

No measures

No measure known / impossible to carry out specific measures

Conservation status

Annex 1:

1160: MATL U2, MMAC FV

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

Unknown, although because this habitat occurs in high energy situations it likely to be a robust and capable of recovery depending on availablity of larvae and successful spat falls of the characteristic species *Mytilus galloprovincialis.*

Effort required

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 information to determine any trends in quantity of this habitat at the present time. This habitat is therefore 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^2	Unknown	Unknown	unknown	unknown	Unknown	Unknown	unknownnown	unknown
EU 28+	unknown Km^2	Unknown	Unknown	unknown	unknown	Unknown	Unknown	unknown	unknown

There is insufficient information on the distribution of this habitat and any likely future trends. This habitat is therefore 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 on which to assess 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.

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
North East Atlantic Working Group: S. Gubbay, G. Saunders, H. Tyler-Walters, N. Dankers, F.Otero-Ferrer, J. Forde, K. Fürhaupter, R. Haroun Tabraue, N. Sanders.

Contributors
North East Atlantic Working Group: S. Gubbay, G. Saunders, H. Tyler-Walters, N. Dankers, F.Otero-Ferrer, J. Forde, K. Fürhaupter, R. Haroun Tabraue, N. Sanders.

Reviewers
J.Lenikki.

Date of assessment
30/10/2015

Date of review
14/01/2016

References

Environment Agency. 2010. Review of existing approaches to evaluate marine habitat vulnerability to commercial fishing activities. Report SC080016/R3.

Henriques, V., Guerra, M. T., Mendes, B., et al. 2013. *Map of seabed habitats and associated communities in the Luiz Saldanha Marine Park, Portugal according to the EUNIS classification*. PT010000. Instituto Português do Mar e da Atmosfera (IPMA), Lisboa, Portugal. Available at: www. searchMESH.net/geonetwork.

Monteiro, P., Bentes, L., Oliveira, F., et al. 2013. *Atlantic Area Eunis Habitats. Adding new habitat types from European Atlantic coast to the EUNIS Habitat Classification*. Technical Report No.3/2013 - MeshAtlantic, CCMAR-Universidade do Algarve, Faro, 72pp