

A1.45 Ephemeral green or red seaweeds (freshwater or sand-influenced) on Atlantic littoral non-mobile substrata

Summary

This habitat occurs across the intertidal zone and sometimes in the splash zone, including on cliff faces in such locations. It may also be present on upper shore hard substrata that is relatively unstable (e.g. soft rock), or which is subject to considerable freshwater runoff. A dense mat of green filamentous algae, often together with some red algae, is a characteristic feature. It is sensitive to substratum loss, abrasion, smothering, and changes in wave exposure and emergence regime for example from construction or coastal protection works and physical disturbance. Pollution incidents, in particular oil spills, can also smother and lead to the loss of associated fauna and flora.

Beneficial management measures for this habitat include the regulation, zoning and limits on coastal development and the construction of hard coastal defence structures where there is a risk of damage to the intertidal habitat. Water quality improvement programmes to reduce the risk of toxic contamination or of nutrient inputs leading to eutrophication would also benefit this habitat.

Synthesis

This habitat has a large EOO and AOO, and therefore qualifies as Least Concern under criterion B. However the habitat is assessed as Data Deficient, both at the EU 28 and EU 28+ levels because of a lack of information on any trends in quantity and quality.

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Data Deficient	-	Data Deficient	-

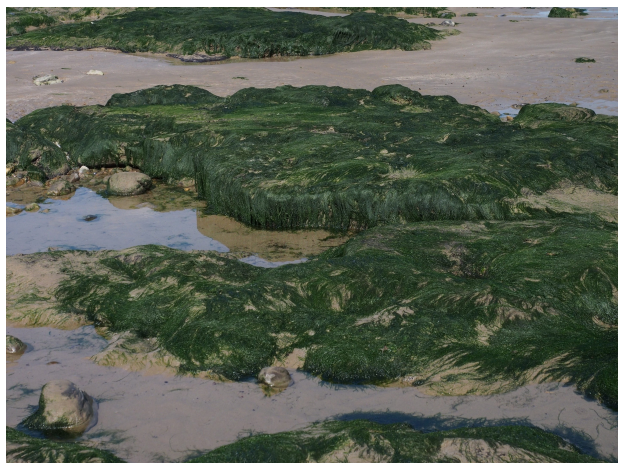
Sub-habitat types that may require further examination

None.

Habitat Type

Code and name

A1.45 Ephemeral green or red seaweeds (freshwater or sand-influenced) on Atlantic littoral non-mobile substrata



Ephemeral green seaweed in sand scoured bay near freshwater run-off. Port Eynon, Wales (© A.R.Davis).

Habitat description

This habitat type occurs across the intertidal zone and sometimes in the splash zone, including on cliff faces in such locations. It may also be present on upper shore hard substrata that is relatively unstable (e.g. soft rock), or which is subject to considerable freshwater runoff. A dense mat of green filamentous algae, often together with some red algae, is a characteristic feature.

On moderately exposed shores, the biotopes '*Enteromorpha* spp. on freshwater-influenced or unstable upper shore rock ' or '*P. purpurea* and/or *Enteromorpha* spp. on sand-scoured mid- to lower-eulittoral rock' may be present, both of which tend to support a low species diversity.

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:

Dominant green seaweeds include *Enteromorpha intestinalis*, *Ulva lactuca* and the red seaweeds *Rhodothamniella floridula* and *Porphyra purpurea*. Winkles such as *Littorina littorea* and *Littorina saxatilis*, the limpet *Patella vulgata* and the barnacles *Semibalanus balanoides* can occur, though usually in low abundance. The crab *Carcinus maenas* can be found where boulders are present, while the barnacle *Elminius modestus* is usually present on sites subject to variable salinity. The relatively high number of species in the characterising species list is due to variation in the species composition from site to site, and because of high species richness at individual sites.

Classification

EUNIS (v1405):

Level 4 of the EUNIS classification. A sub-habitat of 'Atlantic littoral rock' (A1.4).

Annex 1:

1130 Estuaries

1160 Large shallow inlets and bays

MAES:

Marine - Marine inlets and transitional waters

Marine - Coastal.

MSFD:

Littoral rock and biogenic reef

EUSeaMap:

Not mapped

IUCN:

12.1 Rocky shoreline

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

Unknown

Justification

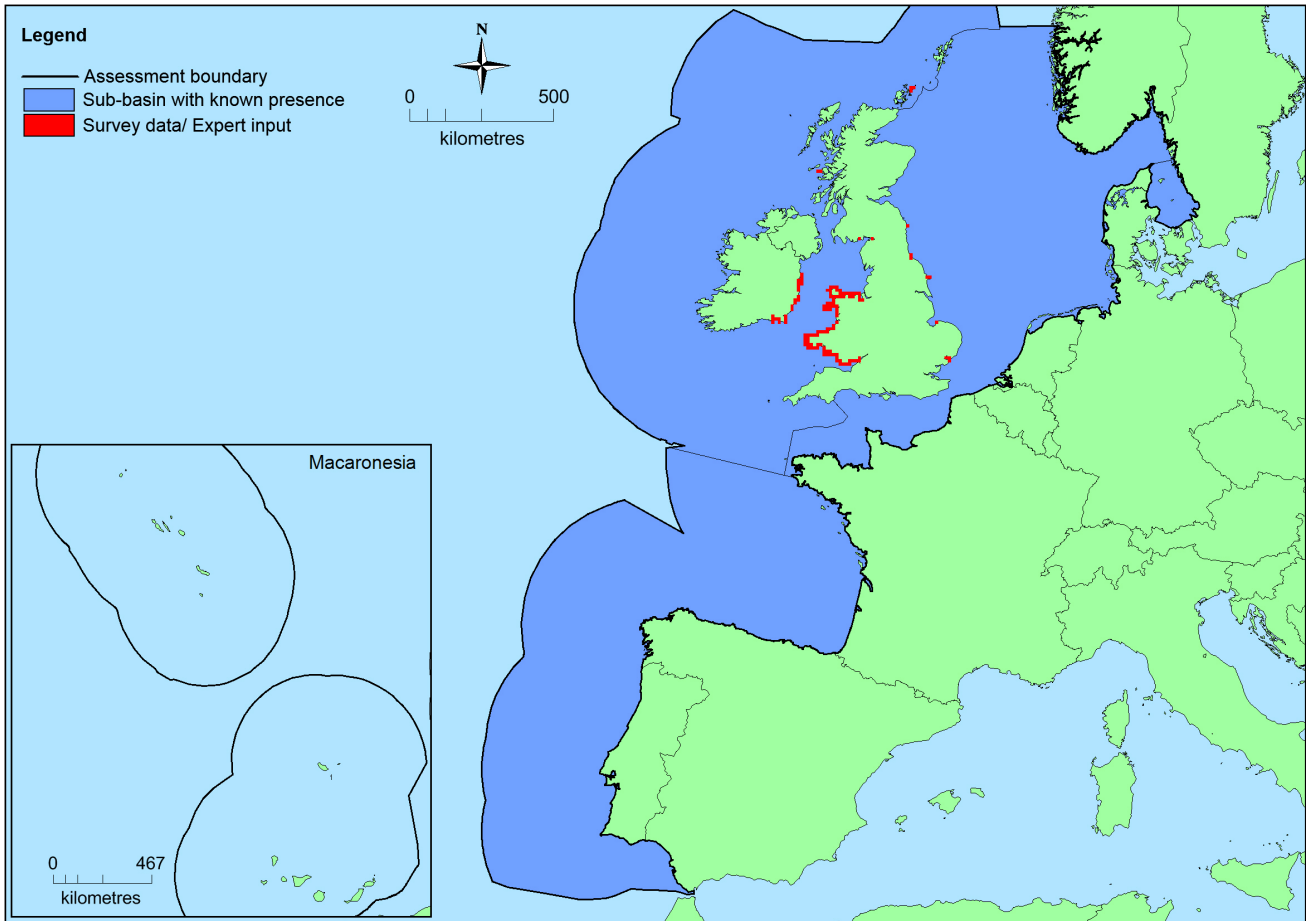
Geographic occurrence and trends

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>	Celtic Seas: Present Greater North Sea: Present Bay of Biscay and the Iberian Coast: Present Kattegat: 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
<i>EU 28</i>	319,776 Km ²	205	Unknown Km ²	EOO and AOO have been calculated on the available data. Although this data set is known to be incomplete the figures exceed the thresholds for threatened status.
<i>EU 28+</i>	>319,776 Km ²	205	Unknown Km ²	EOO and AOO have been calculated on the available data. Although this data set is known to be incomplete the figures exceed the thresholds for threatened status.

Distribution map



There are insufficient data to provide a comprehensive and accurate map of the distribution of this habitat. 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). EOO and AOO have been calculated on the available data presented in this map however these should be treated with caution as expert opinion is that this is not the full distribution of the habitat.

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

This habitat occurs in the EU 28+ (e.g. Norway). 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

Local and/or seasonal factors often exert a substantial influence on intertidal habitats making it difficult to distinguish any long-term trend across the region. This is complicated further because differences between localities are often linked to differences in geographical latitude and, therefore, to differences in climatic traits like temperature and/or ice cover. There is insufficient data on which to make an assessment of historical, recent or future trends in quantity of this habitat at the present time.

- Average current trend in quantity (extent)

EU 28: Unknown

EU 28+: Unknown

- Does the habitat type have a small natural range following regression?

No

Justification

This habitat does not have a small natural range as its distribution includes locations on the east coast of Ireland and the Orkney Islands.

- Does the habitat have a small natural range by reason of its intrinsically restricted area?

No

Justification

This habitat does not have a small natural range as its distribution includes locations on the east coast of Ireland and the Orkney Islands.

Trends in quality

Local and/or seasonal factors often exert a substantial influence on intertidal habitats making it difficult to distinguish any long-term trend across the region. This is complicated further because differences between localities are often linked to differences in geographical latitude and, therefore, to differences in climatic traits like temperature and/or ice cover. There is insufficient data on which to make an assessment of historical, recent or future trends in quality of this habitat at the present time.

- Average current trend in quality

EU 28: Unknown

EU 28+: Unknown

Pressures and threats

This habitat is sensitive to substratum loss and smothering, for example from construction or coastal protection works. Abrasion, habitat destruction and any kind of physical disturbance, can lead to displacement of organisms and significant changes in the associated biodiversity. A decrease in wave exposure and any changes in the emergence regime, due to coastal modifications, can also have a detrimental impact on the habitat. Smothering may prevent feeding and respiratory flows through associated communities and the species may not survive burial. Pollution incidents, in particular oil spills, can smother and lead to the loss of associated fauna and flora.

List of pressures and threats

Pollution

Marine water pollution

Oil spills in the sea

Toxic chemical discharge from material dumped at sea

Natural System modifications

Human induced changes in hydraulic conditions

Modification of hydrographic functioning, general

Dykes, embankments, artificial beaches, general

Sea defense or coast protection works, tidal barrages

Conservation and management

Beneficial management measures for this habitat include the regulation, zoning and limits on coastal development and on the construction of hard coastal defence structures where there is a risk of damage to the intertidal habitat. Water quality improvement programmes to reduce the risk of toxic contamination or of nutrient inputs leading to eutrophication would also benefit this habitat.

List of conservation and management needs

Measures related to wetland, freshwater and coastal habitats

Restoring/Improving water quality

Measures related to spatial planning

Other spatial measures
Establish protected areas/sites

Conservation status

Annex 1:

1130: MATL U2,

1160: MATL U2, MMAC FV

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

Unknown, although the ephemeral nature and salinity tolerance of the characterising algal species suggests an ability to recover rapidly after damage if a suitable substrate is retained.

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. This habitat is therefore assessed as Data Deficient under criterion A for 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	>50,000 Km ²	Unknown	Unknown	No	>50	Unknown	Unknown	No	No
EU 28+	>50,000 Km ²	Unknown	Unknown	No	>50	Unknown	Unknown	No	No

This habitat has a large natural range in the North East Atlantic region. The precise extent is unknown however as EOO >50,000km² and AOO >50, this exceeds the thresholds for a threatened category on the basis of restricted geographic distribution. Trends are unknown. The distribution of the habitat is such that the identified threats are unlikely to affect all localities at once. This habitat has therefore been assessed as Least Concern under criteria B1(c) B2 (c) and B3 and Data Deficient for all other criteria.

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

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Reviewers

S.Beal.

Date of assessment

21/08/2015

Date of review

18/01/16

References

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