

F4.1 Wet heath

Summary

This habitat of heath dominated by *Erica tetralix* and other sub-shrubs occurs on moist to wet, nutrient-poor acidic soils and shallow peats in sandy landscapes of the northwest-European plain and the warmer Atlantic regions of France and northern Iberia, becoming rare eastwards with some scattered localities in the Baltic States. It is not necessarily species-rich but includes a range of distinctive regional types characterised by sub-shrubs of restricted distribution. Often dependent on grazing, brush-cutting and sod-cutting to prevent shrub and tree invasion and succession to woodland, it is found as part of heath landscapes among mosaics of dry heaths and mires, or occurring on the margins of bogs where it can spread with drainage. It is widely threatened by cessation of traditional agriculture, changes to the hydrology, tree-planting and fire. Though widely protected, maintenance of low intensity management is usually necessary for sustaining its quality.

Synthesis

Although there have been very large historical losses in extent and widespread declines in quality, stability or lower trends in countries where the extent is large average the European trend to a threat category of Vulnerable (VU), based on negative trends in quality (criterion C/D1). However, data are partly incomplete and uncertain (especially for the UK, Ireland and Spain) and further investigations are needed for a more certain assessment.

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Vulnerable	C/D1	Vulnerable	C/D1

Sub-habitat types that may require further examination

Distinctive sub-types of wet heath occur in different parts of its range and these may be subject to varying types and intensities of threat, so deserving separate assessment.

Habitat Type

Code and name

F4.1 Wet heath



Wet heath dominated by *Ulex gallii*, *Erica ciliaris*, *Molinia caerulea* and *Erica tetralix*, in Yeun Elez, Massif armoricain, France (Photo: Frédéric Bioret).



Wet heath with *Erica ciliaris* near Elizondo, Navarre, northern Spain (Photo: Juan Antonio Campos).

Habitat description

Typical Atlantic to sub-Atlantic heathland, dominated by *Erica tetralix*, is found on moist to wet, nutrient-poor acidic soils and shallow peats in sandy and rocky landscapes of Southwestern Norway, the northwest-European plain and the warmer Atlantic regions of France and northern Iberia, becoming rare southwards and eastwards with some scattered localities in the Baltic States. In many cases, the habitat exists due to human activities, like grazing, sod cutting or mowing and continuation of traditional management is needed for its maintenance. In other situations it forms a natural succession stage towards woodlands.

In its heartland, *Erica tetralix* is accompanied by *Carex panicea*, *Trichophorum cespitosum*, *Juncus squarrosus*, *Drosera rotundifolia*, *Gentiana pneumonanthe*, *Lycopodiella inundata*, *Sphagnum compactum*, *S. tenellum*, *S. molle* and *Narthecium ossifragum*, typical Ericion tetralicis. Such vegetation may also be found on the margins of bogs where the peat cover thins, on drained peatlands and on the shores of oligotrophic waters and in seepage areas on the edge of brook valleys. In the last situation, Molinietales species such as *Dactylorhiza maculata* and *Pedicularis sylvatica* occur. *Molinia caerulea* is itself a common species of the habitat and may become dominant if there is some strong water table fluctuation during the year, either natural or through anthropogenic deterioration of the hydrology, or after burning. Much more rarely, *Erica tetralix*-dominated wet heath is found in fen areas in the Northwestern plain (Netherlands, Germany, Poland), where it forms a late succession stage in the development of transitional mires (alliance Oxyccoco-Ericion) when accompanying species can include *Phragmites australis*, *Sphagnum palustre*, *Drosera rotundifolia*, *Molinia caerulea* and *Aulacomnium palustre*.

In the warmer and more humid oceanic climate of south-west England, Brittany and south-west France wet heath can also include *Erica vagans*, *E. ciliaris*, *E. mackaiana* and *Ulex minor* and in the foothills of northern Iberia *Erica tetralix* is accompanied by *Genista micrantha*, *Genista anglica*, *Potentilla erecta* and *Thymelaea dendryobryum*.

In landscapes which include drier acidic soils the habitat forms mosaics with F4.2 Dry heath where *Calluna vulgaris* usually dominates but where *Erica tetralix* may remain abundant on intermediate soils and on north-facing slopes or become dominant where a thickening humus layer maintains a moister surface or where moisture collects in depressions left by sod cutting. In dunes, *Erica tetralix* vegetation may be part of B1.5a *Empetrum* heathlands or B1.8a Wet dune slacks.

Indicators of good quality

- Dominance of *Erica tetralix*
- No overwhelming encroachment of grasses (notably *Molinia caerulea*), shrubs (for example, *Myrica gale*) or trees (for example, *Betula pubescens*).
- Occurring as part of a wider heath landscape, forming mosaics with drier heath, mires and water bodies.
- Long continuation of management (grazing, mowing, sod-cutting or combinations of these).

Characteristic species:

Vascular plants: *Calluna vulgaris*, *Carex panicea*, *Drosera rotundifolia*, *Erica ciliaris*, *Erica mackaiana*, *Erica tetralix*, *Genista micrantha*, *Gentiana pneumonanthe*, *Juncus squarrosus*, *Molinia caerulea*, *Myrica gale*, *Narthecium ossifragum*, *Thymelaea dendryobryum*, *Trichophorum cespitosum* ssp. *germanicum*, *Trichophorum cespitosum* ssp. *cespitosum*, *Ulex minor*

Mosses: *Campylopus brevipilus*, *Gymnocolea inflata*, *Sphagnum compactum*, *S. molle*, *S. palustre*, *S. tenellum*

Fauna:

Reptiles: *Viverra berus* ssp. *berus*

Insects: *Maculinea alcon*

Classification

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

EUNIS:

F4.1 Wet heath

EuroVegChecklist:

Ericion tetralicis Schwickerath 1933

Oxycocco-Ericion tetralicis Nordhagen ex Tx. 1937

Genistion micrantho-anglicae Rivas-Mart. 1979

Ulicion minoris Malcuit 1929

Annex 1:

4010 Northern Atlantic wet heaths with *Erica tetralix*

4020 Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix*

Emerald:

F4.1 Wet heaths

MAES-2:

Heathland and shrub

IUCN:

Temperate shrubland

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

Yes

Regions

Atlantic

Justification

This habitat is typical of the more oceanic climate, sandy lowland landscapes and traditional agricultural history of the Atlantic region of Europe.

Geographic occurrence and trends

EU 28	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>Belgium</i>	Present	50 Km ²	Decreasing	Increasing
<i>Denmark</i>	Present	72 Km ²	Decreasing	Unknown
<i>France</i>	France mainland: Present	170 Km ²	Stable	Decreasing
<i>Germany</i>	Present	18 Km ²	Decreasing	Decreasing
<i>Ireland</i>	Present	1430 Km ²	Decreasing	Increasing
<i>Latvia</i>	Present	3.5 Km ²	Decreasing	Decreasing
<i>Netherlands</i>	Present	34 Km ²	Stable	Unknown

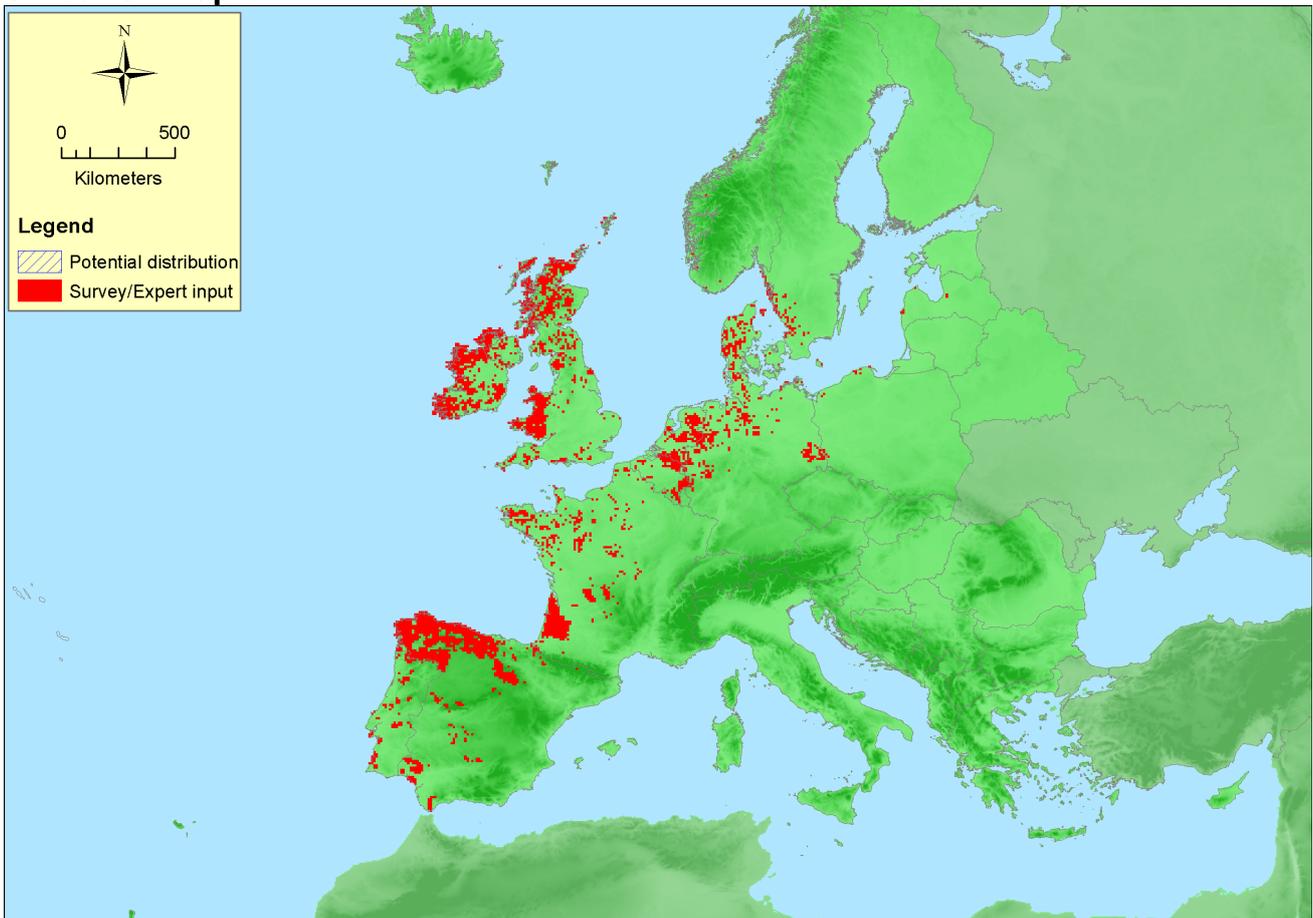
EU 28	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>Poland</i>	Present	4.7 Km ²	Decreasing	Decreasing
<i>Portugal</i>	Portugal mainland: Present	81 Km ²	Increasing	Unknown
<i>Spain</i>	Spain mainland: Present	1839 Km ²	Stable	Stable
<i>Sweden</i>	Present	3 Km ²	Decreasing	Decreasing
<i>UK</i>	Northern Island: Present United Kingdom: Present	4680 Km ²	Stable	Decreasing

EU 28 +	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>Norway</i>	Norway Mainland: Present	231 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>	3461950 Km ²	3222	8285 Km ²	Based on existing data provided by EU member States.
<i>EU 28+</i>	3932650 Km ²	3231	8516 Km ²	Insufficient data to make a total calculation

Distribution map



The map is rather complete, except for possible data gaps in Norway. Data sources: EVA, Art17.

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

Probably more than 90%.

Trends in quantity

In the countries where the habitat is best represented, the trend in quantity is decreasing (Ireland) or stable (United Kingdom, Spain).

- Average current trend in quantity (extent)

EU 28: Stable

EU 28+: Unknown

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

No

Justification

The habitat is widespread in 8 countries of EU28 from Sweden to Spain.

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

No

Justification

The habitat has a large geographic European distribution.

Trends in quality

In most of the countries for which data are available, the quality is declining.

- Average current trend in quality

EU 28: Decreasing

EU 28+: Decreasing

Pressures and threats

The main reported threats are changes to the hydrology, atmospheric nitrogen input, lack of grazing and natural overgrowth by trees or afforestation, widespread changes on lowland heath landscapes throughout Europe.

List of pressures and threats

Agriculture

Abandonment of pastoral systems, lack of grazing

Sylviculture, forestry

Forest planting on open ground

Pollution

Air pollution, air-borne pollutants

Nitrogen-input

Natural System modifications

Human induced changes in hydraulic conditions

Conservation and management

Wet heath has traditionally been subject to light grazing by stock and wild herbivores, mowing and sod-cutting or combinations of these and abandonment of such interventions allows invasion by shrubs and trees. Site designation always needs follow up by extensive agricultural management.

List of conservation and management needs

No measures

Measures needed, but not implemented

Measures related to agriculture and open habitats

Maintaining grasslands and other open habitats

Conservation status

Annex I:

4010: ATL U2, BOR U2, CON U2, MED U1

4020: ALP U1, ATL U2, CON U2, MED U1

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

If the soil have been perturbed, resilience of the habitat is affected and restoration always needs some traditional management.

Effort required

10 years
Through intervention

Red List Assessment

Criterion A: Reduction in quantity

Criterion A	A1	A2a	A2b	A3
EU 28	-10 %	unknown %	unknown %	unknown %
EU 28+	-10 %	unknown %	unknown %	unknown %

Although there have been substantial losses (> 40%) in Germany, France, Sweden and Netherlands, stable conditions in Spain and small losses in Ireland and the United Kingdom result in just a small average European trend (-10%), resulting in an overall assessment of Least Concern (LC).

Criterion B: Restricted geographic distribution

Criterion B	B1				B2				B3
	EOO	a	b	c	AOO	a	b	c	
EU 28	>50000 Km ²	Unknown	Unknown	unknown	> 50	Unknown	Unknown	unknown	unknown
EU 28+	>50000 Km ²	Unknown	Unknown	unknown	> 50	Unknown	Unknown	unknown	unknown

The habitat is widespread across the EU28 and a little beyond with an EOO > 50000 km² and AOO > than 50 km².

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	65 %	50 %	unknown %	unknown %	unknown %	unknown %
EU 28+	65 %	50 %	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%

The decline in quality is very uneven across Europe and accurate data are incomplete. The calculation is dominated by returns from the United Kingdom where the extent is considerable but, even there, the situation is somewhat uncertain, and soem assumptions had to be made. The overall assessment is Vulnerable (VU), based on data covering about 59% of reported area. Important data gaps exist for Spain and Ireland.

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 that estimates 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	LC	DD	DD	DD	LC	LC	LC	VU	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	LC	DD	DD	DD	LC	LC	LC	VU	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
Vulnerable	C/D1	Vulnerable	C/D1

Confidence in the assessment

Medium (evenly split between quantitative data/literature and uncertain data sources and assured expert knowledge)

Assessors

F. Bioret

Contributors

Habitat definition: J. Janssen

Territorial experts: A.B.G. Averis, A.M. Averis, F. Bioret, S. De Saeger, P. Finck, A. Jacobson, J. Loidi, A. Mikolajczak, D. Paelinckx, P. Perrin, F. Philippe, U. Raths, U. Riecken, A. Ssymank, W. Van Landuyt,

Working Group Heathland & Scrub: M. Aronsson, F. Bioret, C. Bitá-Nicolae, J. Capelo, A. Čarni, P. Dimopoulos, J. Janssen, J. Loidi

Reviewers

J. Rodwell

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