

E1.8 Open Iberian supramediterranean dry acid and neutral grassland

Summary

This habitat comprises short swards dominated by small tussock grasses, forbs and mat-formers on shallow skeletal soils over outcrops of siliceous and ultramafic bedrocks at moderate to high altitudes in the Iberian Peninsula. Traditionally grazed, this grassland is vulnerable to shrub encroachment but recent losses in extent and quality appear to be modest. For continued sustainability, traditional pastoral systems should be ensured and protected areas established. Once destroyed or severely damaged the recovery of the habitat type by natural processes will take a long time, more than 50 years with human intervention.

Synthesis

The habitat is assigned to the category Least Concern (LC), as it has not substantially decreased in quantity nor in quality and its distribution (AOO) and range extent (EOO) are not very restricted.

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

No sub-habitats have been distinguished for further analysis.

Habitat Type

Code and name

E1.8 Open Iberian supramediterranean dry acid and neutral grassland



Leucanthemopsis pallida in *Hieracio castellani-Plantaginion radicatae* community, Peñalara, Central Range, Spain (Photo: M. Herrera).



Dry rassland dominated by *Festuca summilusitana* in the highest parts of the Serra da Estrela, Portugal (Photo: Jan Jansen).

Habitat description

Perennial grasslands formed by hard grasses (*Festuca*) and small hemicryptophytes and chamaephytes covering shallow soils on siliceous substrata in western Iberian Peninsula, at medium to high elevations (supra-oro levels). The vegetation is closed, covering between 60 to 90 % of the surface, and the dominant species are of low height, with a dense layer of 5 to 10 cm height in which some plants loom above until 20 to 30 cm. Most of the plants present the typical set of morpho-ecological traits of the Mediterranean grasslands, with adaptations to the summer drought, which in this case combine with the nutrient poverty

stress. Substrata are varied, from mafic and ultramafic in NE Portugal (Tras os Montes), where the endemic alliance *Armerion eriophyllae* occurs, to schist in south Spain (Sierra Nevada and Filabres), where the endemic alliance *Thymion serpylloides* is found. The main alliance, *Hieracio castellani-Plantaginion radicatae* is widespread in western Iberia and develops on sandy soils derived from granite, gneiss and sandstone. Soils are dry, lacking any hydromorphic properties, and have a limited development of the edaphic layers. As they cover rocky outcrops or eroded substrata, soils can be qualified as rocky lithosols, having primary stations in outcrops and secondary ones in eroded places. Usually this habitat type is distributed forming a mosaic pattern with others, such as *Nardus* grasslands (E1.7a) or vallicares (E2.4), forming part of the seral communities complex replacing pine or oak forests. These grasslands have been traditionally grazed, mostly by sheep, in a system of a comprehensive utilization of the available resources valid in the traditional husbandry system existed so far. A large number of Iberian endemic species constitute the core of this type, with a high representation of *Plumbaginaceae* (*Armeria*), *Caryophyllaceae* and *Festuca sp. pl.*

Indicators of good quality:

These grasslands are in a good condition if they show a low height and a high cover, not necessarily of 100%, without woody plants of the more developed stages in succession such as shrubs or trees. Signals of moderate grazing are also acceptable. Artificial conifer plantations should be absent.

Characteristic species:

Vascular plants

Dominants: *Agrostis trunctula*, *Arenaria frigida*, *Armeria eriophylla*, *Armeria langei* s.l., *Armeria odorata*, *Festuca gredensis*, *Festuca rivas-martinezii*, *Festuca summilusitana*, *Hieracium castellanum*, *Leucanthemopsis pallida*, *Leucanthemopsis pulverulenta*, *Plantago radicata*.

Diagnostic species: *Arenaria armerina*, *Arenaria querioides* s.l., *Armeria caballeroi*, *Armeria ciliata*, *Armeria humilis* s.l., *Armeria merinoi*, *Armeria salmantica*, *Armeria trachyphylla*, *Armeria transmontana*, *Armeria vestita*, *Astragalus devesae*, *Avenula romero-zarcoi*, *Bufonia macropetala*, *Centaurea alba*, *Centaurea borjae*, *Centaurea toletana*, *Dianthus laricifolius* s.l., *Dianthus merinoi*, *Erodium cheilanthifolium*, *Erysimum nevadense*, *Festuca brigantina*, *Festuca longiauriculata*, *Helianthemum masguindalii*, *Herniaria scabrida*, *Hippocrepis carpetana*, *Jasione sessiliflora* s.l., *Koeleria nevadensis*, *Linaria atrofusca*, *Ornithogalum concinnum*, *Ortegia hispanica*, *Plantago acanthophylla*, *Reseda virgata*, *Sagina merinoi*, *Sesamoides purpurascens*, *Silene legionensis*, *Thymus borgiae*, *Thymus izcoi*, *Thymus serpylloides*.

Classification

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

EUNIS:

E1.5 Mediterranean-montane grassland.

EuroVegChecklist (alliances):

Hieracio castellani-Plantaginion radicatae Rivas-Mart. et Cantó 1987

Armerion eriophyllae Pinto da Silva 1970

Thymion serpylloides Rivas Goday et Rivas-Mart. in Rivas-Mart. 1965

Annex 1:

-

Emerald:

-

MAES-2

Terrestrial grasslands

IUCN:

4.4 Temperate grassland

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

Yes

Regions

Mediterranean

Justification

This habitat is only present in the Mediterranean Iberian Peninsula. It is a genuine silicolous mediterranean habitat, although it is also present in the Cantabrian Range. It occurs at middle elevations. In the highest elevations it is replaced by 1.5a.

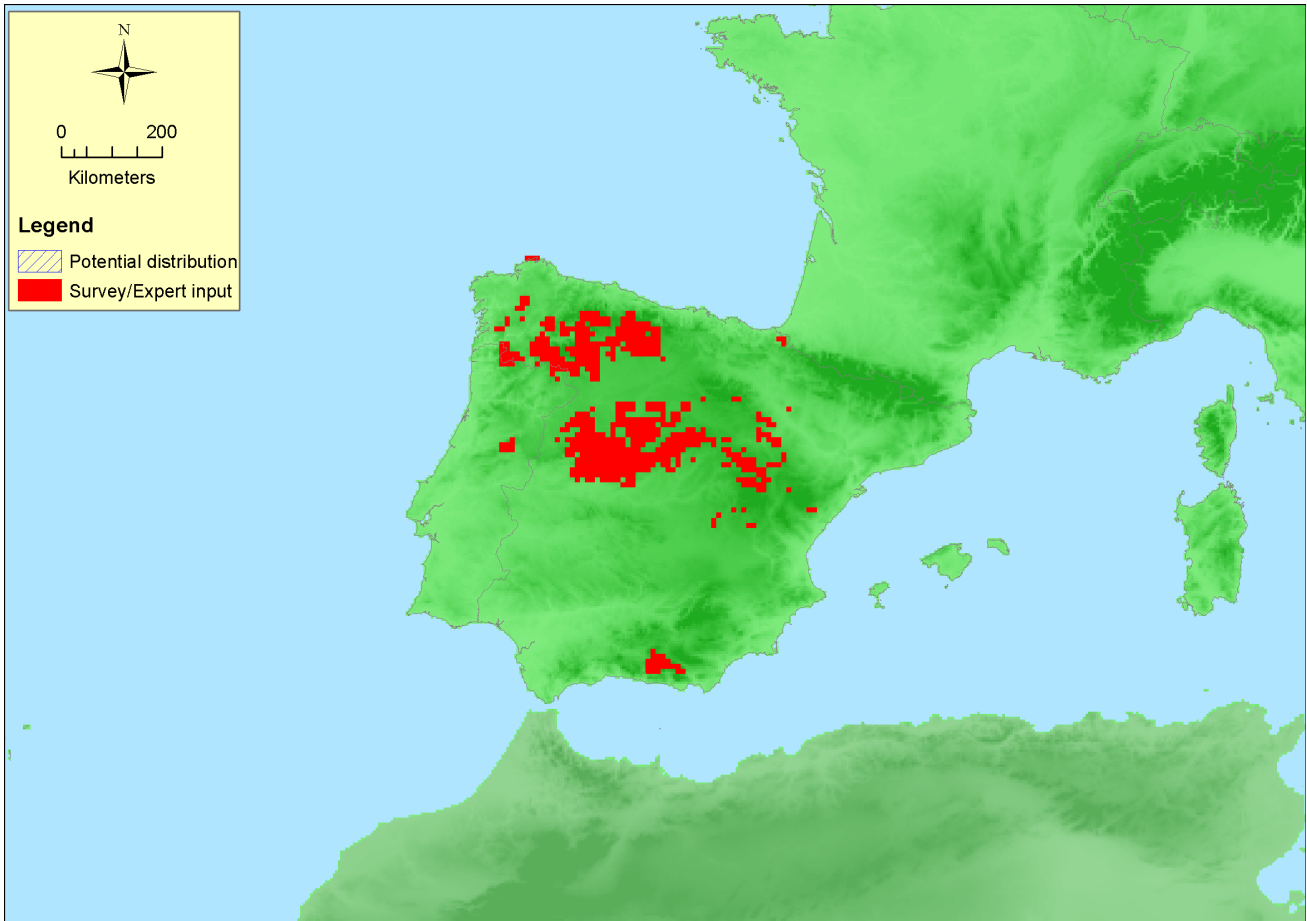
Geographic occurrence and trends

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>Portugal</i>	Portugal mainland: Present	300 Km ²	Increasing	Unknown
<i>Spain</i>	Spain mainland: Present	928 Km ²	Decreasing	Decreasing

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>	357000 Km ²	597	1228 Km ²	
<i>EU 28+</i>	357000 Km ²	597	1228 Km ²	

Distribution map



Map is good for Spain, but with gaps for Portugal. Data source: NAT.

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

The habitat only exists in the Iberian Peninsula, so all its current distribution lies within the EU28.

Trends in quantity

The average trend in EU28 and EU28+ is -5.4% over the last decades (since 1960-1974). The surface of this habitat has slightly decreased over the last 50 from 1298 km² to 1228 km² with a relative loss of area of 5%. However, Spain and Portugal have reported opposite trends, negative in Spain, and positive in Portugal. We have neither data on historical trends, nor on future trends.

- Average current trend in quantity (extent)

EU 28: Decreasing

EU 28+: Decreasing

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

No

Justification

Although we have no quantitative data, EOO is quite large and the habitat has not undergone an important decline during the last 50 years.

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

No

Justification

Although we have no quantitative data, EOO is quite large and the habitat is not restricted to small spots.

Trends in quality

10% of the area of the habitat in Europe has been subjected to slight to moderate degradation over the

last decades (since 1960). The trends over larger historical periods are not known, neither the future trends. Recent degradation is related mainly to abandonment of extensive sheep grazing. The calculated extent of degradation in EU28 (and EU28+) is 10% with 40% severity of degradation.

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

Pressures and threats

Grasslands included in this habitat are mainly threatened by the abandonment of traditional extensive grazing, which causes shrub encroachment during succession process. Characteristic light-demanding grasses and small scrubs disappear in this process. Artificial conifer plantations also threaten the habitat in extensive areas. These threats are similar along all EU28 and EU28+ countries.

List of pressures and threats

Agriculture

- Grazing
Abandonment of pastoral systems, lack of grazing

Sylviculture, forestry

- Forest planting on open ground
Artificial planting on open ground (non-native trees)

Urbanisation, residential and commercial development

- Urbanised areas, human habitation

Conservation and management

The maintenance of traditional silvopastoral systems has been very important for the conservation of this habitat. Extensive grazing is a basic feature, and management should be focused on this key factor. Protection areas are also important, and pine plantation and urbanization should be restricted in these areas.

List of conservation and management needs

Measures related to agriculture and open habitats

- Maintaining grasslands and other open habitats

Measures related to spatial planning

- Establish protected areas/sites
Legal protection of habitats and species
Manage landscape features

Conservation status

The habitat does not correspond to any Annex 1 type.

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

The most frequent degradation of this habitat type is due to shrub and tree encroachment. With human

intervention (fire and maintenance of sheep grazing) this damage can be rather quickly recovered. If damage is due to erosion and construction of infrastructures, the recovery will take longer, at least 50 years with human intervention.

Effort required

50+ years
Through intervention

Red List Assessment

Criterion A: Reduction in quantity

Criterion A	A1	A2a	A2b	A3
EU 28	-5.4 %	Unknown %	Unknown %	Unknown %
EU 28+	-5.4 %	Unknown %	Unknown %	Unknown %

The values for A1 were calculated from the territorial data sheets. The whole area occupied by the habitat in the world lies in Spain and Portugal, which have reported opposite trends over the last decades, positive in Portugal (12%) and negative in Spain (-10%). As the occupied area is more than three times bigger in Spain, the average trend is slightly negative. There is no information on longer historical trends neither on future trends.

Criterion B: Restricted geographic distribution

Criterion B	B1				B2				B3
	EEO	a	b	c	AOO	a	b	c	
EU 28	> 50,000 Km ²	Unknown	Unknown	Unknown	> 50	Unknown	Unknown	Unknown	Unknown
EU 28+	> 50,000 Km ²	Unknown	Unknown	Unknown	> 50	Unknown	Unknown	Unknown	Unknown

Although we do not have quantitative data, we estimate that both values (AOO and EEO) are relatively big and do not meet criterion B. Sub-criteria were not evaluated because the values for EEO and AOO are well above the thresholds.

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	10 %	40 %	Unknown %	Unknown %	Unknown %	Unknown %
EU 28+	10 %	40 %	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 overall extent and severity of degradation in the last 50 years (Criterion C/D1) are the weighted average calculated from reported data from Spain (95% of area in EU28). No information on long historical or future trends in quality could be provided, so none of the related C/D Criteria could be applied. The changes in quality are both abiotic and biotic, so C/D1 has not been split into C1 and D1.

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	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	LC	DD	DD	DD	LC	LC	LC	LC	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
Least Concern	-	Least Concern	-

Confidence in the assessment

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

Assessors

I. Biurrun

Contributors

Habitat definition: J. Loidi

Territorial experts: J. Capelo, D. Espírito-Santo, J. Loidi

Working Group Grasslands: I. Biurrun, J. Dengler, D. Gigante, Z. Molnar, D. Paternoster, J. Rodwell, J. Schaminée, R. Tzonev

Reviewers

D. Gigante

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References

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