

F6.8 Mediterranean halo-nitrophilous scrub

Summary

This essentially weedy habitat is typical of disturbed situations in dry to arid parts of the Mediterranean, related to severe disturbance by herders and farmers adding large amounts of nitrified compounds to the soil. Salinity often develops where the bedrock contains abundant soluble salts and there is a severe drought period. Particularly abundant in the vicinity of villages, in cropfield margins, on roadsides and in areas much influenced by herds, the vegetation is dominated by woody and bulky nitrophilous and halo-nitrophilous perennials. In ancient agrarian landscapes, the vegetation contributes diversity and is also sometimes grazed by local sheep and goat breeds. There has been some drainage of moist inland saline areas to transform them into croplands and other threats include expansion of settlements and infrastructure developments.

Synthesis

There is no concern about this habitat as it is a ruderal one, strongly linked to human activity. Only some areas in which the endorhoecic basins are being drained for several purposes (transformation into arable land, housing, etc.) report a certain decrease of the subhalophilic variant of the habitat, however with rates of extent and severity that don't meet any threat category.

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

Some attention should be paid to the halophylic variant of this habitat with *Atriplex halimus*.

Habitat Type

Code and name

F6.8 Mediterranean halo-nitrophilous scrub



Atriplex halimus forming halo-nitrophilous scrub near Zaragoza, Spain (Photo: Javier Loidi).



Peganum harmala at Nuez de Ebro, Aragón, Spain (Photo: Javier Loidi).

Habitat description

In this type we have included not only the halo-nitrophilous but also the nitrophilous (with a lower content of salt) communities dominated by perennial plants, often ligneous or hemicriptophytes with large size, frequent in ruderal environments (nearby human dwellings, borders of tracks and ways, etc.) in dry to arid regions in the Mediterranean, Irano-Turanian and North Saharo-Arabian regions. Some botanical groups

are highly represented in its flora such as *Chenopodiaceae*, *Artemisia*, *Santolina* and in many areas the grass *Lygeum spartum* is also abundant. Soluble nitrates and phosphates resulting from organic matter decomposition remain on the soil for long time, due to the scarcity of rainfall. This permits the life of long-living nitrophilous plants, such as shrubs, and thus, the development of a nitrophilous scrub. Such conditions of aridity also favor accumulation of salt in the soils, and many of these formations are adapted to a certain salt tolerance (halo-nitrophilous). Characteristic species are often archeophytes and neophytes native to other Mediterranean areas or even from tropical countries. The habitat type is present in the center and south of the Iberian Peninsula, in S- Italy, Sicily, Sardinia and the Aegean islets (Greece), as well as on the Canaries and Madeira archipelagos. Its diversity is highest in the arid and semi-arid thermo and infra Mediterranean areas of the Iberian Peninsula. In agrarian landscapes of the Mediterranean region submitted to a long historic human pressure, this habitat contributes substantially to the local biodiversity and landscape quality, being often also grazed by the local sheep and goat races.

Indicators of good quality:

In nitrophilous habitat good quality entails the degree of disturbance and of human influence necessary to maintain populations of the ruderal and nitrates depending species.

Characteristic species:

Flora, Vascular plants:

Continental Europe: *Artemisia arborescens*, *Artemisia barrelieri*, *Artemisia campestris* subsp. *glutinosa*, *Artemisia herba-alba* subsp. *herba-alba*, *Artemisia herba-alba* subsp. *valentina*, *Artemisia lucentica*, *Atriplex glauca*, *Atriplex halimus*, *Ballota hirsuta*, *Camphorosma monspeliaca*, *Capparis spinosa* var. *canescens*, *Carthamus arborescens*, *Commicarpus africanus*, *Euphorbia matritensis*, *Fagonia cretica*, *Frankenia thymifolia*, *Hammada articulata*, *Haplophyllum linifolium*, *Hohenackeria polyodon*, *Ipomoea indica*, *Ipomoea purpurea*, *Krascheninnikovia ceratoides*, *Launaea arborescens*, *Lycium barbarum*, *Lycium europaeum*, *Lycium intricatum*, *Marrubium alysson*, *Mercurialis tomentosa*, *Nicotiana glauca*, *Peganum harmala*, *Plumbago europaea*, *Ricinus communis*, *Ruta angustifolia*, *Salsola genistoides*, *Salsola oppositifolia*, *Salsola vermiculata*, *Santolina canescens*, *Santolina chamaecyparissus* subsp. *squarrosa*, *Santolina impressa*, *Santolina oblongifolia* subsp. *obtusifolia*, *Santolina pectinata*, *Santolina rosmarinifolia* subsp. *ceratophylla*, *Santolina rosmarinifolia* subsp. *rosmarinifolia*, *Santolina rosmarinifolia* subsp. *semidentata*, *Senecio malacitanus*, *Sideritis hirsuta* subsp. *danielii*, *Solanum linneanum*, *Suaeda mollis*, *Withania frutescens*, *Withania somnifera*, *Zygophyllum fabago*.

Canaries and Madeira: *Argyranthemum broussonetii*, *Argyranthemum frutescens* subsp. *frutescens*, *Argyranthemum frutescens* subsp. *succulentum*, *Artemisia ramosa*, *Artemisia thuscula*, *Atriplex glauca* subsp. *ifniensis*, *Bosea yerbamora*, *Ceballosia fruticosa*, *Calendula maderensis*, *Chenolenoides tomentosa*, *Cheirolophus canariensis*, *Convolvulus caput-medusae*, *Descurainia millefolia*, *Forsskaolea angustifolia*, *Frankenia capitata*, *Gonospermum fruticosum*, *Herniaria canariensis*, *Lavandula canariensis*, *Lavandula pinnata*, *Lavatera acerifolia*, *Lobularia canariensis* subsp. *marginata*, *Lotus glaucus*, *Lotus sessilifolius* var. *pentaphyllus*, *Nicotiana paniculata*, *Plantago arborescens*, *Rumex lunaria*, *Salsola brevifolia*, *Salsola portilloi*, *Salsola vermiculata* subsp. *frankenioides*, *Salsola tetrandra*, *Salvia canariensis*, *Schizogyne glaberrima*, *Schizogyne sericea*, *Suaeda ifniensis*, *Withania aristata*.

Classification

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

EUNIS:

F6.8 Mediterranean halo-nitrophilous scrubs

EuroVegChecklist (alliances):

Salsolo vermiculatae-Peganion harmalae Br.-Bl. et O. de Bolòs 1954

Haloxylon tamariscifolii-Atriplicion glaucae Rivas Goday et Rivas-Mart. ex Rigual 1972

Salsolo oppositifoliae-Suaedion fruticosae Rigual 1972

Lycio europaei-Ipomoeion purpureae O. de Bolòs 1988

Artemision arborescentis Géhu et al. 1986

Atriplici halimi-Suaedion verae Géhu et al. ex Bergmeier et Dimopoulos 2003

Medicagini citrinae-Lavaterion arboreae O. de Bolòs et Vigo in O. de Bolòs et al. 1984

Artemisio glutinosae-Santolinion rosmarinifoliae Costa 1975

Santolinion pectinato-canescens Peinado et Martínez-Parras 1984

Nicotiano glaucae-Ricinion communis Rivas-Mart., Fernández-González et Loidi 1999

Chenoleion tomentosae Sunding 1972

Artemisio thusculae-Rumicion lunariae Rivas-Mart. et al. 1993

Launaeo arborescentis-Schizogynion sericeae Rivas-Mart. et al. 1993

Argyranthemum succulentum-Calendulion maderensis Capelo et al. 2000

Annex 1:

1430 Halo-nitrophilous scrubs (*Pegano-Salsoletea*)

Emerald:

F6.8 Xero-halophile scrubs

MAES-2:

Heathland and shrub

IUCN:

3.8. Mediterranean-type Shrubby Vegetation

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

Yes

Regions

Mediterranean

Justification

A perennial ligneous vegetation which develops under nitrophilic (accumulation of nitrogen compounds) and salty (accumulation of salt) soil conditions in a higher or lower degree happens basically under mediterranean conditions with a long and severe summer drought which prevents such compounds from being diluted.

Geographic occurrence and trends

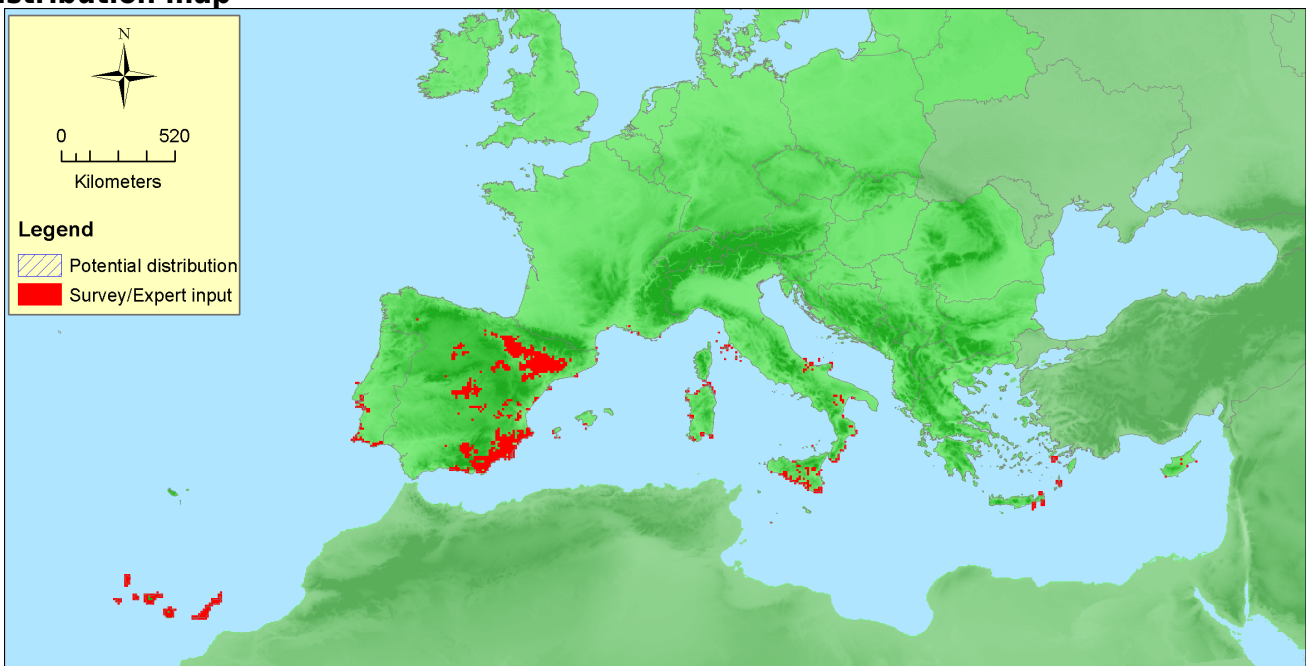
EU 28	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
Cyprus	Present	0.07 Km ²	Stable	Stable

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>France</i>	France mainland: Present	Km ²	-	-
<i>Greece</i>	Crete: Present East Aegean: Present Greece (mainland and other islands): Present	0.12 Km ²	Stable	Stable
<i>Italy</i>	Sardinia: Present Sicily: Present	11 Km ²	Decreasing	Decreasing
<i>Portugal</i>	Madeira: Present Portugal mainland: Present	Km ²	-	-
<i>Spain</i>	Balearic Islands: Present Canary Islands: Present Spain mainland: Present	1612 Km ²	Stable	Stable

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>	3802150 Km ²	1101	1624 Km ²	Widespread in arid and semi-arid Mediterranean area
<i>EU 28+</i>	3802150 Km ²	1101	1624 Km ²	Widespread in arid and semi-arid Mediterranean area

Distribution map



The map seems to provide the complete distribution of the habitat. Data sources: Art17.

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

The major part of the habitat lies outside of the EU, in North Africa and in Western Asia (Irano-Turanian and Saharo-Arabian regions); perhaps a 20% of the total extent of this habitat (as it has been defined) is found in the EU.

Trends in quantity

This habitat is promoted by the human activity with the accumulation of wastes and nitrogen-rich materials to the edges of the fields and tracks. Historically it has been maintained in good conditions, only dessication of endorrhoic basins have reduced its halophilic variant, not affecting the general trend that is 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

No regression has been reported.

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

No

Justification

This habitat is present in most of the Mediterranean countries, and is broadly represented in the Iberian Peninsula.

Trends in quality

No decrease in quality observed, only drainage of endorrhoic basins are reducing the halophilic variant.

- Average current trend in quality

EU 28: Stable

EU 28+: Stable

Pressures and threats

The transformation into arable land with dessication of endorheic basins has reduced a part of the halophilic variant of this type. Housing and construction of infrastructures has been also a noticeable factor of decrease.

List of pressures and threats

Agriculture

Cultivation

Urbanisation, residential and commercial development

Urbanised areas, human habitation

Structures, buildings in the landscape

Natural System modifications

Modification of hydrographic functioning, general

Conservation and management

Preventing from draining the inland wet saline areas (endorheic basins).

List of conservation and management needs

Measures related to wetland, freshwater and coastal habitats

Restoring/Improving the hydrological regime

Conservation status

Annex I:

1430: MED XX

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

As a ruderal one, this habitat has a high resiliency, recovering quickly after severe damage.

Effort required

10 years	20 years
Naturally	Naturally

Red List Assessment

Criterion A: Reduction in quantity

Criterion A	A1	A2a	A2b	A3
EU 28	-0.1 %	unknown %	unknown %	unknown %
EU 28+	-0.1 %	unknown %	unknown %	unknown %

No significant reduction in quantity observed, nor in the past nor expected in the future.

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	No	Unknown	unknown	>50	Unknown	Unknown	unknown	unknown

This habitat has a large distribution, both in the EU28 and in the EU28+, far higher than the thresholds for applying 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	10 %	30 %	unknown %	unknown %	unknown %	unknown %
EU 28+	10 %	30 %	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%

Quality is slightly reduced by drainage of endorheic basins, however with rates of extent and severity that don't meet the thresholds for 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 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	DD	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	LC	DD	DD	DD	LC	LC	DD	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)

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