

## F6.6 Supramediterranean garrigue

### Summary

This open scrub dominated by woody shrubs has been derived by degradation of *Quercus* and *Juniperus* woodlands on base-rich bedrocks across vast areas of the highlands of the western Mediterranean. It has been historically expanded by fire, a common practice of traditional sheepherding which has been the main land use for centuries and has suffered from many changes in farming practice and shifts in land-use, for example to forest plantations. Conservation demands low intensity management.

### Synthesis

There is no concern about this habitat type, due to its extension and to its current situation. However a certain traditional management (grazing) should be maintained in areas where it exists in order to prevent a future stronger decrease.

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 subtypes relevant for further assessment are recognized.

### Habitat Type

#### Code and name

F6.6 Supramediterranean garrigue



Supramediterranean garrigue of *Sideritido-Salvion*. Covarrubias, Burgos, Spain (Photo: Javier Loidi).



*Helianthemo italici-Aphyllanthion monspeliensis* in the Ardèche, France (Photo: John Janssen).

#### Habitat description

Open scrub on calcareous substrata formed by ligneous plants of Mediterranean floristic character which represent degradation seral stages in the supra levels of the Mediterranean region. They replace basically *Quercus rotundifolia*, *Quercus ilex*, *Quercus faginea* and *Juniperus thurifera* forests. This habitat type is found in the base-rich mid elevation terrains in the Baetic mountains, central Iberian high plateau (meseta), Pyrenees piedmonts, southern France and southern Alps piedmonts, Apennine. It is present also in Portugal and Greece. These garrigues have been historically expanded by fire, a common practice of traditional sheepherding which has been the main land use along centuries. This is in apparent

contradiction with the abundance of narrowly distributed species, but this is probably due to the fact that, in their primary stations, the patches of this habitat were isolated and distant from each other, favoring speciation. After the arrival of the Neolithic period (about 8 to 7000 years BP in western Mediterranean areas), humans transformed the landscape completely reversing the relative abundance of the previously existing habitats as they needed open large areas for their herds causing that the formerly restricted scrub areas became general in the landscape. Nowadays, with the abandonment of traditional sheepherding, of firewood collection and charcoal fabrication, forests and woodlands are recovering and this habitat, some decades ago extensively represented, is in clear regression, although still far from being in danger. Structural similar communities in siliceous sites of the supramediterranean zones of the mountains of Sardinia and Corse, with *Genista salzmanni* as an important species, are considered part of the oromediterranean hedgehog heaths of habitat F7.4b.

Indicators of good quality:

Optimal conditions for this type entail that the typical structure of the vegetation to be represented, i.e. scrub of low height and low cover in a matrix of open soil. The following characteristics may be considered as indicators of good quality, but these indicators differ in different regions:

- Presence of dwarf ligneous plants, particularly endemics, including threatened species
- High to medium cover of vascular plant vegetation, particularly chamaephytes
- Low cover of encroaching tall grasses and shrubs
- Absence of nitrophilic and alien species indicating heavy human influence

Characteristic species:

Vascular plants: *Allium chrysonemum*, *Anthyllis vulneraria* subsp. *arundana*, *Aphyllanthes monspeliensis*, *Arenaria arcuatociliata*, *Arenaria vitoriana*, *Artemisia alba*, *Aster willkommii* subsp. *catalaunicus*, *Astragalus bourgaeanus*, *Astragalus clusianus*, *Astragalus turolensis*, *Carthamus araneosus* subsp. *macrocephalus*, *Carex halleriana*, *Carthamus araneosus* subsp. *pseudomitissimus*, *Centaurea alba* subsp. *costae*, *Centaurea alba* subsp. *maluqueri*, *Centaurea boissieri*, *Centaurea emigrantis*, *Centaurea gadorensis*, *Centaurea monticola*, *Centaurea resupinata* subsp. *prostrata*, *Cephalaria linearifolia*, *Coronilla minima*, *Crocus nevadensis* subsp. *marcetii*, *Dianthus algetanus*, *Dianthus anticarius* subsp. *subbaeticus*, *Dianthus costae*, *Echinopartum boissieri*, *Erysimum favargerii*, *Erysimum fitzii*, *Euphorbia spinosa*, *Fumana ericifolia*, *Genista cinerea*, *Genista elias-sennenii*, *Genista hispanica*, *Genista pseudopilosa*, *Genista pumila*, *Genista salzmanii*, *Genista scorpius*, *Genista lobelii*, *Genista pulchella* subsp. *villarsii*, *Genista teretifolia*, *Helianthemum appeninum*, *Helianthemum oelandicum* subsp. *italicum*, *Helianthemum rossmaessleri*, *Hippocrepis commutata*, *Hippocrepis rupestris*, *Hippocrepis scorpioides*, *Hypericum coris*, *Knautia arvensis* subsp. *collina*, *Knautia subscaposa*, *Lavandula angustifolia* subsp. *angustifolia*, *Lavandula angustifolia* subsp. *pyrenaica*, *Lavandula latifolia*, *Leucanthemum favargerii*, *Leucanthemum pallens*, *Leucanthemum vulgare* subsp. *monserratianum*, *Linum campanulatum*, *Linum suffruticosum* subsp. *differens*, *Nepeta hispanica*, *Onobrychis argentea* subsp. *hispanica*, *Onobrychis reuteri*, *Phlomis crinita* subsp. *composita*, *Plantago discolor*, *Ptilostemon hispanicus*, *Ranunculus malessanus*, *Salvia blancoana*, *Salvia lavandulifolia* subsp. *lavandulifolia*, *Salvia lavandulifolia* subsp. *pyrenaeorum*, *Salvia lavandulifolia* subsp. *vellerea*, *Salvia oxyodon*, *Salvia phlomoides* subsp. *boissieri*, *Salvia phlomoides* subsp. *phlomoides*, *Salvia pseudovellerea*, *Satureja intricata* subsp. *gracilis*, *Satureja montana*, *Scabiosa macropoda*, *Scorzonera hirsuta*, *Scorzonera reverchonii*, *Sideritis flaviflora*, *Sideritis laxespicata*, *Sideritis pungens*, *Stachys heraclea* subsp. *valentina*, *Staezelina dubia*, *Teucrium aragonense*, *Teucrium leonis*, *Teucrium lucidum*, *Teucrium luteum* subsp. *contortostylum*, *Teucrium luteum* subsp. *similatum*, *Teucrium webbium*, *Thymelaea pubescens*, *Thymus clandestinus*, *Thymus fontqueri*, *Thymus funkii* subsp. *burilloi*, *Thymus mastigophorus*, *Thymus membranaceus*, *Thymus orospedanus*, *Thymus tenuifolius*, *Thymus vulgaris*, *Veronica tenuifolia*.

## Classification

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

EUNIS:

F6.6 Supra-Mediterranean garrigues

EuroVegChecklist (alliances):

*Lavandulo latifoliae-Genistion boissieri* Rivas Goday et Rivas-Mart. 1969

*Sideritido incanae-Salvion lavandulifoliae* (Rivas Goday et Rivas-Mart. 1969) Izco et Molina 1989

*Helianthemo italici-Aphyllanthion monspeliensis* Díez et al. 1998

*Plantagini discoloris-Thymion mastigophori* Molina et Izco 1989

*Lavandulo angustifoliae-Genistion cinereae* Barbero et al. 1972

*Polygalo-Seslerion insularis* Arrigoni ex Arrigoni et Di Tommaso 1986

*Artemisio albae-Saturejion montanae* Allegrezza et al. 1997

*Genistion lobelii* Molinier 1934

Annex 1:

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Emerald:

F7 Spiny Mediterranean heaths (phrygana, hedgehog-heaths and related coastal cliff vegetation)

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

This vegetation is characteristic of the medium- and high-altitude areas of the Mediterranean region submitted to cold winters. It can also be found in some areas of the southern mountain piedmonts of the Alpine region: Cantabrian Range, Pyrenees, southern Massif Central, western Alps.

### Geographic occurrence and trends

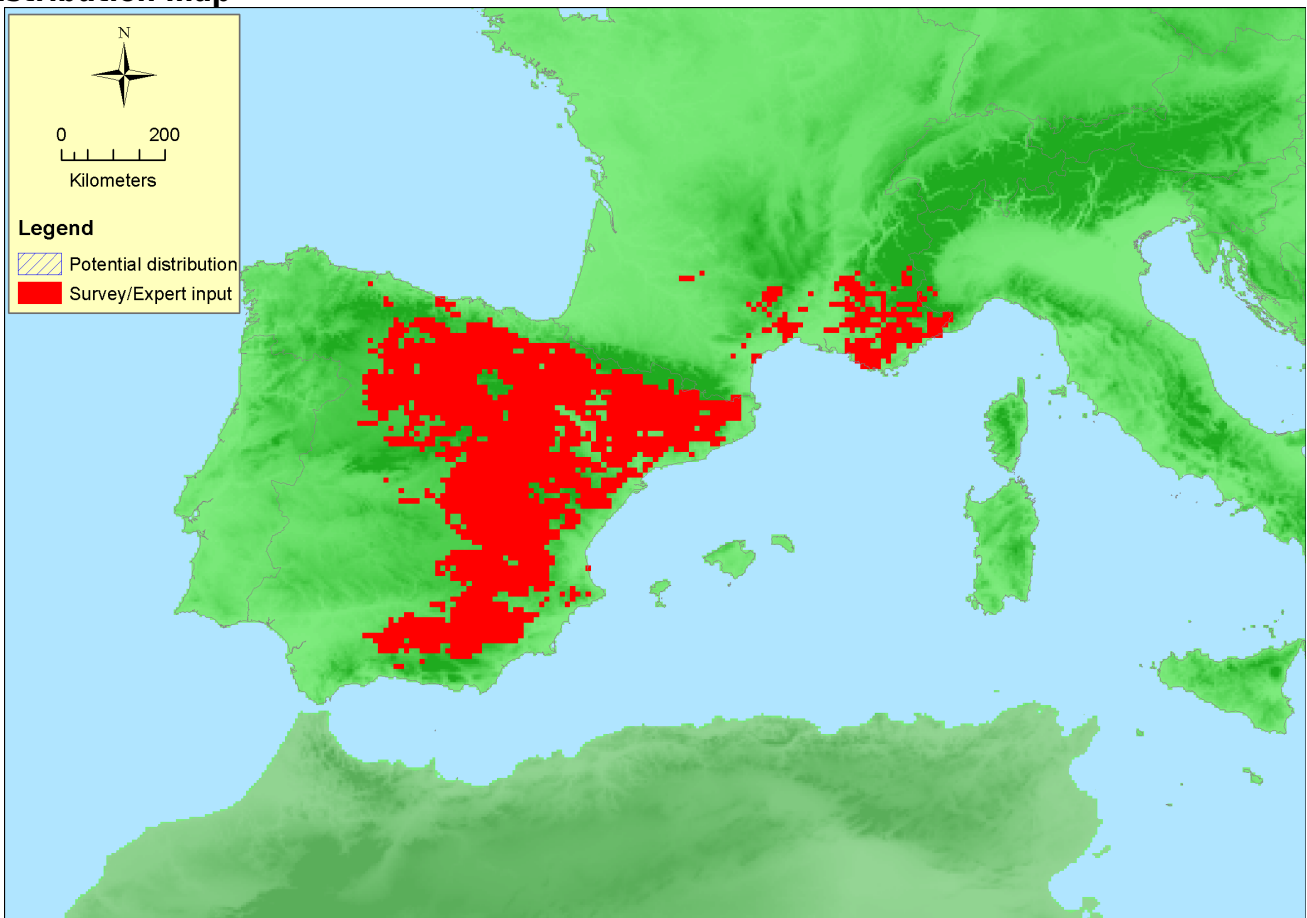
EU 28	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
France	Corsica: Present France mainland: Present	Km <sup>2</sup>	Stable	Stable

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>Greece</i>	Crete: Present Greece (mainland and other islands): Present	Km <sup>2</sup>	-	-
<i>Italy</i>	Italy mainland: Present Sardinia: Present Sicily: Present	16,59 Km <sup>2</sup>	Decreasing	Decreasing
<i>Portugal</i>	Portugal mainland: Present	Km <sup>2</sup>	-	-
<i>Spain</i>	Balearic Islands: Present Spain mainland: Present	10009.22 Km <sup>2</sup>	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>	575050 Km <sup>2</sup>	2299	>10000 Km <sup>2</sup>	Largely distributed in central and northehrn Spain, southern France and W Italy
<i>EU 28+</i>	575050 Km <sup>2</sup>	2299	>10000 Km <sup>2</sup>	Largely distributed in central and northehrn Spain, southern France and W Italy

### Distribution map



This map is only good for Spain and southern France, but the Italian range is underestimated since the

habitat occurs not only in the Alps, but also in the Apennines and the main islands, while data from Greece and Portugal are missing. Data sources: EVA, NAT.

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

About 60%. This habitat also occurs in north Africa, particularly in the mountainous regions of Algeria and Morocco.

## Trends in quantity

As other garrigue vegetation in countries under Mediterranean climate, this habitat has been extensively increased in the past by means of the severe disturbance regime established by humans, particularly fire and grazing. With the abandonment of that management, a reversed tendency started which is now in the point of stability but shifting to reduction, which in the future will be the general tendency, but at a slow pace. Modern types of land use, especially artificial pine plantations, represent a threat for this habitat.

- 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*

This habitat is broadly represented nowadays and has not suffered substantial reduction yet.

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

No

*Justification*

This habitat is natural in vast areas in the Iberian Peninsula (central Meseta) and in the mountains of Mediterranean France, Italy and Greece.

## Trends in quality

Quality is relatively stable in this type. A slow succession towards forest types takes place nowadays due to the rural abandonment and the release of traditional land use systems and their associated disturbance regimes.

- Average current trend in quality

EU 28: Decreasing

EU 28+: Decreasing

## Pressures and threats

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The abandonment of traditional land use has led to the progression of succession towards more developed forms of vegetation. Pine plantations also constitute a relevant threat for this habitat.

### List of pressures and threats

#### Agriculture

Abandonment of pastoral systems, lack of grazing

#### Sylviculture, forestry

Artificial planting on open ground (non-native trees)

## Conservation and management

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Maintaining traditional grazing systems, prescribed fires of low frequency. Preventing from pine and other conifers plantation.

## List of conservation and management needs

### Measures related to spatial planning

Establish protected areas/sites

### Conservation status

No corresponding Annex 1 type.

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

As it is a seral stage in succession, it recovers easily after severe damage.

### Effort required

10 years	20 years	50+ years
Naturally	Naturally	Naturally

## Red List Assessment

### Criterion A: Reduction in quantity

Criterion A	A1	A2a	A2b	A3
EU 28	-5 %	-0.2 %	unknown %	unknown %
EU 28+	-5 %	-0.2 %	unknown %	unknown %

A moderate loss of area due to the natural succession towards mature stages and pine plantations has taken place.

### Criterion B: Restricted geographic distribution

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

The habitat covers a large area in Spain, Portugal, France, Italy and Greece, and the AOO and EOO are much larger than thresholds for 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	5 %	25% %	unknown %	unknown %	unknown %	unknown %
EU 28+	5 %	25% %	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 decrease in quality is due to the natural succession towards other more mature stages but this process is slowed by the hard climatic conditions: low temperatures for a long period in the year, and summer drought. Thus, the qualitative decrease is slow.

### 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)

### Assessors

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## References

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