

Annex VI – Grassland, heath and scrub habitat Group

Annex to the Input Document for the Second Mediterranean Natura 2000 Seminar 14 – 16 November 2017, Limassol, Cyprus

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4010 Northern Atlantic wet heaths with *Erica tetralix*

	Selected for first round of Biogeographical Seminar
X	Selected using "Low hanging fruit" approach

Habitat summary

The assessment of Portugal led to the overall conservation status in the Mediterranean region being unfavourable-inadequate. In the Mediterranean biogeographical region the habitat is distributed only in Portugal.

Increase of the habitat area by habitat restoration is needed in Portugal. Besides restoration, traditional forms of management remain a key requirement for the habitat maintenance within a wider heathland complex. These practices combine to stop succession to woodland once areas have been cleared; with balanced grazing as the main management concept, it is recommended that additional or complementary measures such as controlled burning or cutting are applied much more restrictively (Hampton, 2008).

Habitat description

North Atlantic wet heath is a natural or more commonly semi-natural habitat of humid, peaty or semi-peaty character. The habitat is dominated by dwarf shrub species and usually occurs on acidic, nutrient-poor substrates, such as shallow peats (< 0.5 m) or sandy soils with impeded drainage. Wet heath generally has a water table that is above or at ground level for at least some of the year.

The community includes mixtures of *Erica tetralix* (cross-leaved heath), *Trichophorum cespitosus* (deer grass), *Calluna vulgaris* (heather) and *Molinia caerulea* (purple moor-grass), and in some cases over an understorey of mosses, often including carpets of *Sphagnum* species (bog mosses) (Hampton, 2008).

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type occurs in the Mediterranean biogeographical region only in Portugal. The habitat is not very well represented in the Natura 2000 network - ca 24 % of its habitat area is located in Natura 2000 sites.



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage /%/	Number of sites
Portugal	2-4	16-32	3
Total	2-4	24	3

The table shows the size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographical region ('coverage') as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in the Mediterranean biogeographical region is unfavourable-inadequate. Portugal assessed Range as favourable, and the other three parameters (Area; Structure and functions; Future prospects) as unfavourable-inadequate. The overall conservation status for the region has not changed from previous reporting.

Treated data from Member States reports														
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
PT	1300	100	0	x	12.60	100	-	>12.60	U1	U1	U1	-	U1	nc

EU Biogeographical assessment and proposed corrections																
MS/EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1	
															Contrib.	Type
EU27	1300	00	0		13	00	-	>13	0	00	MTX	-	U1	nc	C	-

Legend: MS – Member State; Overall asses – Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole biogeographical region; Ref. – reference value; Struct & func. – Structure and functions; Future prosp. – Future prospects; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1 – target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV Favourable	U1 Unfavourable-inadequate	U2 Unfavourable-bad	XX Unknown
Trend	0 = stable; + = increase; - = decrease; x = unknown			
Qualifier	= stable; + positive; - negative; x unknown			
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomical review; c1 – due to different methods to measure or evaluate; c2 – due to use of different thresholds; d – no information about nature of change; e – due to less accurate or absent data; nc – no change			
Target 1 contribution	A – favourable assessments; B – improved assess.; C – deteriorated assessments; D – unfavourable and unknown assessments that did not change; E – assessments that became unknown.			

Pressures, threats and proposed measures

Portugal reported several pressures and threats, the most important being the modification of hydrographic functioning. Other important pressures include intensive grazing, trampling, overuse, burning down, water abstractions from surface waters, and water abstractions from groundwater.

Code	Pressure name	PT
A04.01	Intensive grazing	M
G05.01	Trampling, overuse	M
J01.01	Burning down	M
J02.05	Modification of hydrographic functioning, general	H
J02.06	Water abstractions from surface waters	M
J02.07	Water abstractions from groundwater	M

Legend: **L** Low intensity **M** Medium intensity **H** High intensity

Maintaining grasslands and other open habitats, and other wetland-related measures are considered important proposed measures.

Code	Measure name	PT
2.1	Maintaining grasslands and other open habitats	H
4.0	Other wetland-related measures	H

Legend: **L** Low importance **M** Medium importance **H** High importance

Reason for selection as “Low Hanging Fruit” (LHF) habitat in the Mediterranean region

Applying the methodology to identify LHF habitats in the Mediterranean region, habitat 4010 reached an LHF score of 8.91. This habitat type was classified as LHF because to achieve improvement it is sufficient to change from a declining to a stable trend in the category U1 (unfavourable-inadequate). It is normally much easier to improve a trend than to achieve a change in category. Another reason for including the habitat type as LHF is that the trend of only one parameter (Area) in one country (Portugal) needs to be improved in order to achieve overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, increase of the habitat area by habitat restoration is needed in Portugal. Besides restoration, traditional forms of management remain a key requirement for the habitat maintenance within a wider heathland complex. These practices combine to stop succession to woodland once areas have been cleared; with balanced grazing as the main management concept, it is recommended that additional or complementary measures such as controlled burning or cutting are applied much more restrictively (Hampton, 2008).

Links

Hampton M. (2008): Management of Natura 2000 habitats. 4010 Northern Atlantic wet heaths with *Erica tetralix*. - European Commission, Technical Report 2008 08/24, 26 pp.

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Heath+%26+scrub&subject=4010®ion=MED>

4030 European dry heaths

	Selected for first round of Biogeographical Seminar
X	Selected using "Low hanging fruit" approach

Habitat summary

The assessments of Spain and France led to the overall conservation status in the Mediterranean region being unfavourable-inadequate. Habitat is widespread in the Mediterranean biogeographical region in Spain; it also occurs in Portugal, France, and Italy. Around 97 % of the habitat area is located in Spain.

Improvement of the habitat structure in Spain is needed. Further improvement could be achieved by improving habitat structure and functioning in France. The main measures should include maintaining grasslands and other open habitats, legal protection of habitat, and establishment of protected sites. Grazing represents the most important measure for maintenance of this habitat type, where suitable, combined with the traditional method of fire management. These measures should be sufficient to stop the decrease in habitat area and they could be funded from the Rural Development Programme (CAP), where several instruments are applicable – agri-environmental measures, Less Favourable Areas scheme, greening measures, high nature value farming. Better information about habitat structure and functioning is needed in Spain, Italy, and Portugal.

Habitat description

Mesophile or xerophile heaths on siliceous, podsollic soils in moist Atlantic and sub-Atlantic climates of plains and low mountains of Western, Central and Northern Europe. There are five sub-types: Sub-montane *Vaccinium-Calluna* heaths, Sub-Atlantic *Calluna-Genista* heaths, Atlantic *Erica-Ulex* heaths, Ibero-Atlantic *Erica-Ulex-Cistus* heaths, and Boreo-Atlantic *Erica cinerea* heaths.

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is widespread in Spain. It also occurs in Portugal, France, and Italy. The overall fairly low representation of the habitat in Natura 2000 sites (ca 42 %) is due to area of this habitat in Natura 2000 sites in Spain (41 %). In France and Italy the entire national habitat area is located in Natura 2000 sites.



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage /%/	Number of sites
France	112	100	24
Italy	55	100	54
Portugal	0	N/A	42
Spain	2,298	41	193
Total	2,465	42	313

The table shows the size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographical region ('coverage') as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

The assessments of Spain and France led to the overall conservation status of this habitat type in the Mediterranean biogeographical region being unfavourable-inadequate. Portugal reported favourable and Italy unknown conservation status. At the biogeographical region level, two parameters (Range; Area) were assessed as favourable, Structure and functions as unknown, and Future prospects as unfavourable-inadequate. The overall conservation status for the region has changed from previous reporting from unfavourable-bad to unfavourable-inadequate. This change is not considered genuine, but is due to the use of different methods (Spain).

Treated data from Member States reports															
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.				
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.	
ES	184402	68.3	0	≈184402	5663	97.1	x	≈5663	XX	U1	U1	=	XX	c1	
FR	18100	6.7	0	≈18100	111.60	1.9	0	≈111.60	U1	U1	U1	=	U1	nc	
IT	22900	8.5	0	≈22900	55.06	0.9	0	≈55.06	XX	XX	XX		FV	d	
PT	44700	16.5	0	≈44700	N/A	N/A	0	<	XX	FV	FV		FV		

EU Biogeographical assessment and proposed corrections																
MS EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1	
															Contrib.	Type
EU27	270102	0	0	≈270102		0	x		2GD	2GD	MIX	=	U2	no	D	=

Legend: MS – Member State; Overall asses – Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole biogeographical region; Ref. – reference value; Struct & func. – Structure and functions; Future prosp. – Future prospects; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1 – target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV	Favourable	U1	Unfavourable-inadequate	U2	Unfavourable-bad	XX	Unknown
Trend	0 = stable; + = increase; - = decrease; x = unknown							
Qualifier	= stable; + positive; - negative; x unknown							
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomical review; c1 – due to different methods to measure or evaluate; c2 – due to use of different thresholds; d – no information about nature of change; e – due to less accurate or absent data; nc – no change							
Target 1 contribution	A – favourable assessments; B – improved assess.; C – deteriorated assessments; D – unfavourable and unknown assessments that did not change; E – assessments that became unknown.							

Pressures, threats and proposed measures

The Member Countries reported a broad range of pressures, the most important being fire and fire suppression, burning down, invasive non-native species, renewable abiotic energy use, abandonment of pastoral systems, and lack of grazing. Other important pressures include forest planting on open ground, artificial planting on open ground (non-native trees), grazing, and roads, paths and railroads.

Code	Pressure name	ES	FR	IT	PT
A01	Cultivation	L			
A02	Modification of cultivation practices		M		
A04	Grazing	M	L		
A04.03	Abandonment of pastoral systems, lack of grazing				H
A05	Livestock farming and animal breeding (without grazing)	M			
B01	Forest planting on open ground	M	M		
B01.02	Artificial planting on open ground (non-native trees)	L		M	
B02	Forest and Plantation management & use	M			
B02.03	Removal of forest undergrowth			M	
B03	Forest exploitation without replanting or natural regrowth	M			
B07	Forestry activities not referred to above	M			
C03	Renewable abiotic energy use		L	H	
D01	Roads, paths and railroads	M	L		M
D01.02	Roads, motorways			M	
D02	Utility and service lines	L			
D02.01	Electricity and phone lines			M	
D06	Other forms of transportation and communication		L		
E01	Urbanised areas, human habitation	L	L		M
E01.02	Discontinuous urbanisation			M	
E01.03	Dispersed habitation			L	
E02	Industrial or commercial areas	L	L		
E03	Discharges	L			
E03.03	Disposal of inert materials			M	
E04	Structures, buildings in the landscape		L		
F04	Taking / Removal of terrestrial plants, general			L	
F06	Hunting, fishing or collecting activities not referred to above	M			
G01	Outdoor sports and leisure activities, recreational activities	M	L		
G01.03	Motorised vehicles			M	
G01.03.02	Off-road motorized driving	L			
G05.01	Trampling, overuse				M
I01	Invasive non-native species				H
J01	Fire and fire suppression	M	M		H
J01.01	Burning down			M	H
K02	Biocenotic evolution, succession		M		
K02.01	Species composition change (succession)			L	M
K03	Interspecific faunal relations		L		
K04	Interspecific floral relations		L		
K05	Reduced fecundity/ genetic depression	M			
L09	Fire (natural)	M			
M01	Changes in abiotic conditions	L			

Legend: **L** Low intensity **M** Medium intensity **H** High intensity

The legal protection of habitats and species, and other spatial measures are the most important proposed measures. Other important measures are maintaining grasslands and other open habitats, and the establishment of protected areas/sites.

Code	Measure name	ES	FR	IT	PT
1.2	Measures needed, but not implemented				NA
2.0	Other agriculture-related measures	L	M		
2.1	Maintaining grasslands and other open habitats	M	M		L
2.2	Adapting crop production	L	M		
3.0	Other forestry-related measures	L	M		
3.1	Restoring/improving forest habitats	M			

Code	Measure name	ES	FR	IT	PT
3.2	Adapt forest management	M			
4.0	Other wetland-related measures	L			
6.0	Other spatial measures	M			H
6.1	Establish protected areas/sites	M		M	
6.3	Legal protection of habitats and species	H		M	
6.4	Manage landscape features	L			
7.4	Specific single species or species group management measures	M			

Legend: **L** Low importance **M** Medium importance **H** High importance

Reason for selection as “Low Hanging Fruit” (LHF) habitat in the Mediterranean region

Applying the methodology to identify LHF habitats in the Mediterranean region, habitat 4030 reached an LHF score of 9.46. This habitat type was classified as LHF because to achieve improvement it is sufficient to change from a stable to an improving trend in the category U1 (unfavourable-inadequate). It is normally much easier to improve a trend than to achieve a change in category. Another reason for including the habitat type as LHF was that the trend of only one parameter (Structure & functions) in one country (Spain) needs to be improved in order to achieve overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, improvement of the habitat structure in Spain is needed. Further improvement could be achieved by improving habitat structure and functioning in France. The main measures should include maintaining grasslands and other open habitats, legal protection of habitat, and establishment of protected sites. Grazing represents the most important measure for maintenance of this habitat type, where suitable, combined with the traditional method of fire management. These measures should be sufficient to stop the decrease in habitat area and they could be funded from the Rural Development Programme (CAP), where several instruments are applicable – agri-environmental measures, Less Favourable Areas scheme, greening measures, high nature value farming.

Better information about habitat structure and functioning is needed in Spain, Italy, and Portugal.

Links

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Heath+%26+scrub&subject=4030®ion=MED>

5140 *Cistus palhinhae* formations on maritime wet heaths

	Selected for first round of Biogeographical Seminar
X	Selected using “Low hanging fruit” approach

Habitat summary

Portugal’s assessment led to the overall conservation status in the Mediterranean region being unfavourable-inadequate. The habitat occurs in the Mediterranean biogeographical region only in Portugal.

For the improvement of the overall conservation status in the Mediterranean biogeographical region, it is necessary to halt the decline of the area in Portugal. To achieve further improvement, improvement of the habitat structure and increase of the habitat area by restoration are needed. It is recommended to restrict access to the sites, to provide appropriate protection, and to improve connectivity between habitat patches. Other proposed measures include prohibition of land use change, control of waste disposal, establishment of a network of micro-reserves for this habitat, and scientific study of the habitat. Better information about habitat range and area is needed.

Habitat description

Low scrub and garrigue formations of the dolomitic tableland, karsts, sands and terra-rosas, rich in endemic species (*Ulicetum erinacei*, *Genisto triacanthi-Cistetum palhinhae*).

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type occurs only in Portugal. Information on Natura 2000 percentual coverage is not available.



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage /%/	Number of sites
Portugal	45	N/A	2
Total	45	N/A	2

The table shows the size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographical region ('coverage') as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

Portugal's assessment led to the overall conservation status of this habitat type in the Mediterranean biogeographical region being unfavourable-inadequate. Portugal assessed three parameters (Area; Structure and functions; Future prospects) as unfavourable-inadequate, and Range as unknown. The overall conservation status for the region has not changed from previous reporting.

Treated data from Member States reports														
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
PT	1300	100	x	x	N/A	100	-	>	U1	U1	U1	-	U1	nc

EU Biogeographical assessment and proposed corrections																
MS/EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1	
															Contrib.	Type
EU27	1300	00	x			00	-		00	00	MTX	-	U1	nc	C	-

Legend: MS – Member State; Overall asses – Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole biogeographical region; Ref. – reference value; Struct & func. – Structure and functions; Future prosp. – Future prospects; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1 – target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV	Favourable	U1	Unfavourable-inadequate	U2	Unfavourable-bad	XX	Unknown
Trend	0 = stable; + = increase; - = decrease; x = unknown							
Qualifier	= stable; + positive; - negative; x unknown							
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomical review; c1 – due to different methods to measure or evaluate; c2 – due to use of different thresholds; d – no information about nature of change; e – due to less accurate or absent data; nc – no change							
Target 1 contribution	A – favourable assessments; B – improved assess.; C – deteriorated assessments; D – unfavourable and unknown assessments that did not change; E – assessments that became unknown.							

Pressures, threats and proposed measures

Portugal reported several pressures, the most important being trampling and overuse, paths, tracks, cycling tracks, and motorised vehicles. Other important pressures include car parks and parking areas, urbanised areas, human habitation, structures, buildings in the landscape, sport and leisure structures, and landfill, land reclamation and drying out.

Code	Pressure name	PT
D01.01	Paths, tracks, cycling tracks	H
D01.02	Roads, motorways	L
D01.03	Car parks and parking areas	M
E01	Urbanised areas, human habitation	M
E04	Structures, buildings in the landscape	M
G01.03	Motorised vehicles	H
G02	Sport and leisure structures	M
G05.01	Trampling, overuse	H
H05.01	Garbage and solid waste	L
J02.01	Landfill, land reclamation and drying out, general	M

Legend: **L** Low intensity **M** Medium intensity **H** High intensity

'Other spatial measures' are the most important proposed measures. Portugal also reported that there are measures needed, but not implemented.

Code	Measure name	PT
1.2	Measures needed, but not implemented	NA
6.0	Other spatial measures	H

Legend: **L** Low importance **M** Medium importance **H** High importance

Reason for selection as “Low Hanging Fruit” (LHF) habitat in the Mediterranean region

Applying the methodology to identify LHF habitats in the Mediterranean region, habitat 5140 reached an LHF score of 6.67. This habitat type was classified as LHF because to achieve improvement it is sufficient to change from a declining to a stable trend in the category U1 (unfavourable-inadequate). It is normally much easier to improve a trend than to achieve a change in category. Another reason for including the habitat type as LHF was that the trend of only one parameter (Area) in one country (Portugal) needs to be improved in order to achieve overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, it is necessary to halt the decline of area in Portugal. To achieve further improvement, improvement of the habitat structure and increase of the habitat area by restoration are needed. It is recommended to restrict access to the sites, to provide appropriate protection, and to improve connectivity between habitat patches. Better information about habitat range and area is needed.

Portugal proposed the following measures in the Sectoral plan (ICNB):

- Prohibit changes to land use in the area of habitat occupancy.
- Prohibit the transit of people, vehicles and domestic animals in the area of occupation of the habitat.
- Reinforce inspection on the deposition of residues in the area of habitat occupancy.
- Promote the inclusion of this habitat in integrated micro-reserve networks to be created.
- Promote scientific studies on the habitat.
- Communicate the importance of the habitat for conservation.

Links

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Sclerophyllous+scrubs&subject=5140®ion=MED>

ICNB: 5140* Formações de *Cistus palhinhae* em charnecas marítimas. – Plano Sectorial da Rede Natura 2000, 5 pp. <http://www.icnf.pt/portal/pn/biodiversidade/rn2000/resource/docs/rn-plan-set/hab/hab-5140>

5220 Arborescent matorral with *Zyziphus*

	Selected for first round of Biogeographical Seminar
X	Selected using "Low hanging fruit" approach

Habitat summary

The assessments of Spain and Italy led to the overall conservation status in the Mediterranean region being unfavourable-bad. The habitat occurs in the Mediterranean biogeographical region in Spain and Italy. Almost the entire habitat area is located in Spain.

Improvement of the habitat structure in Spain is needed. Further improvement could be achieved by improving the habitat structure and functioning as well as by increasing habitat range in Italy. The main measures should address the main threats and thus adaptation of agriculture is needed: decrease fertilisation, control of water abstraction from groundwater, grazing and cultivation. Control of invasive species should include campaigns to eradicate the genus *Agave* in areas of this habitat. It is necessary to identify fragmented formations that can be interconnected to create areas with an adequate minimum extent, including degraded areas of this habitat that could be restored. Other human activities should be regulated: urbanisation, and outdoor sport and recreational activities. The habitat restoration is needed in both Spain and Italy as they reported a smaller habitat area than the reference value.

Habitat description

Pre-desert deciduous scrub of *Periploca laevigata*, *Lycium intricatum*, *Asparagus stipularis*, *A. albus*, *Withania frutescens* with tall *Zyziphus lotus*, confined to the arid Iberian south-west under a xerophytic thermo-Mediterranean bio-climate; corresponds to the mature phase or climax of climatophile and edapho-xero-psammophile vegetation series (*Periplocion angustifoliae*: *Ziziphetum loti*, *Zizipho-Maytenetum europaei*, *Mayteno-Periplocetum*).

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type occurs in Spain and Italy. Occurrence of the habitat is indicated by Cyprus as well, but there is lack of information. The overall low representation of the habitat in Natura 2000 sites (ca 10 %) is due to area of this habitat in Natura 2000 sites in Spain and the very small habitat area (0.02 km²) in Italy. In Italy a large part (78 %) of the national habitat area is located in Natura 2000 sites.



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage /%/	Number of sites
Cyprus	N/A	N/A	11
Italy	0.02	78	3
Spain	54	10	42
Total	54	10	56

The table shows the size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographical region ('coverage') as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

The assessments of Spain and Italy led to the overall conservation status of this habitat type in the Mediterranean biogeographical region being unfavourable–bad. Italy reported all parameters as unfavourable–bad. At the biogeographical region level, two parameters (Range; Area) were assessed as unfavourable–inadequate, the other two (Structure and functions; Future prospects) as unfavourable–bad. The overall conservation status for the region has changed from previous reporting from unknown to unfavourable–bad. This change is not considered genuine, but is due to different methods used by both countries.

Treated data from Member States reports															
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.				
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.	
ES	14800	95.5	0	≈14800	545.55	100	x	>545.55	U2	U2	U2	-	XX	c1	
IT	700	4.5	-	>>700	0.02	0	-	>>0.02	U2	U2	U2	-	U1	c1	

EU Biogeographical assessment and proposed corrections																
MS/EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1	
															Contrib.	Type
EU27	15500	1	0	>15500	546	1	x	>546	2XA	2XA	MTX	-	XX	no	C	-

Legend: MS – Member State; Overall asses – Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole biogeographical region; Ref. – reference value; Struct & func. – Structure and functions; Future prosp. – Future prospects; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1 – target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV	Favourable	U1	Unfavourable-inadequate	U2	Unfavourable-bad	XX	Unknown
Trend	0 = stable; + = increase; - = decrease; x = unknown							
Qualifier	= stable; + positive; - negative; x unknown							
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomical review; c1 – due to different methods to measure or evaluate; c2 – due to use of different thresholds; d – no information about nature of change; e – due to less accurate or absent data; nc – no change							
Target 1 contribution	A – favourable assessments; B – improved assess.; C – deteriorated assessments; D – unfavourable and unknown assessments that did not change; E – assessments that became unknown.							

Pressures, threats and proposed measures

Spain and Italy reported several pressures. According to both countries cultivation is a medium-intensity threat. The most important pressures are fertilisation, urbanised areas, human habitation, groundwater abstractions for agriculture, and changes in abiotic conditions. Other important pressures include grazing, livestock farming and animal breeding (without grazing), roads, paths and railroads, and outdoor sports and leisure activities, recreational activities.

Code	Pressure name	ES	IT
A01	Cultivation	M	M
A04	Grazing	M	
A05	Livestock farming and animal breeding (without grazing)	M	
A08	Fertilisation	H	
B01.02	Artificial planting on open ground (non-native trees)		L
C01	Mining and quarrying		L
D01	Roads, paths and railroads	M	
D01.02	Roads, motorways		L
E01	Urbanised areas, human habitation	H	
E01.02	Discontinuous urbanisation		M
F03	Hunting and collection of wild animals (terrestrial)	L	
G01	Outdoor sports and leisure activities, recreational activities	M	
G01.03	Motorised vehicles		L
H06.01	Noise nuisance, noise pollution		L
J01.01	Burning down		M
J02.07.01	Groundwater abstractions for agriculture	H	
M01	Changes in abiotic conditions	H	

Legend: **L** Low intensity **M** Medium intensity **H** High intensity

According to Spain, adapting crop production, other agriculture-related measures, and other spatial measures are the most important proposed measures. Other important measures are maintaining grasslands and other open habitats, and restoring/improving forest habitats. Italy stated that measures are needed, but not implemented.

Code	Measure name	ES	IT
1.2	Measures needed, but not implemented		NA
2.0	Other agriculture-related measures	H	
2.1	Maintaining grasslands and other open habitats	M	
2.2	Adapting crop production	H	
3.1	Restoring/improving forest habitats	M	
6.0	Other spatial measures	H	
6.4	Manage landscape features	L	

Legend: **L** Low importance **M** Medium importance **H** High importance

Reason for selection as “Low Hanging Fruit” (LHF) habitat in the Mediterranean region

Applying the methodology to identify LHF habitats in the Mediterranean region, habitat 5220 reached an LHF score of 90.89. This habitat type was classified as LHF because to achieve improvement it is sufficient to change from a declining to a stable trend in the category U2 (unfavourable-bad). It is normally much easier to improve a trend than to achieve a change in category. Another reason for including the habitat type as LHF was that trend of only one parameter (Structure & functions) in one country (Spain) needs to be improved in order to achieve overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, improvement of the habitat structure in Spain is needed. Further improvement could be achieved by improving the habitat structure and functioning as well as by increasing habitat range in Italy. The main measures should address the main threats and thus adaptation of agriculture is needed: decrease fertilisation, control of water abstraction from groundwater, grazing and cultivation. Control of invasive species should include campaigns to eradicate the genus *Agave* in areas of this habitat. It is necessary to identify fragmented formations that can be interconnected to create areas with an adequate minimum extent, including degraded areas of this habitat that could be restored (Tirado, 2009). Other human activities should be regulated: urbanisation, and outdoor sport and recreational activities. The habitat restoration is needed in both Spain and Italy as they reported a smaller habitat area than the reference value.

Links

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Sclerophyllous+scrubs&subject=5220®ion=MED>

Tirado, R., 2009. 5220 Matorrales arborescentes con *Ziziphus* (*). - In: VV.AA., Bases ecológicas preliminares para la conservación de los tipos de hábitat de interés comunitario en España. Ministerio de Medio Ambiente, y Medio Rural y Marino. 68 p.
http://www.jolube.es/Habitat_Espana/documentos/5220.pdf

5320 Low formation of *Euphorbia* close to cliffs

	Selected for first round of Biogeographical Seminar
X	Selected using "Low hanging fruit" approach

Habitat summary

The assessments of Spain and the United Kingdom led to the overall conservation status in the Mediterranean region being unfavourable-inadequate. France reported unfavourable-bad conservation status. The habitat is widespread in the Mediterranean biogeographical region in Italy; it also occurs in France, Spain, Portugal, and the United Kingdom (Gibraltar). Around 93 % of the habitat area is located in Italy.

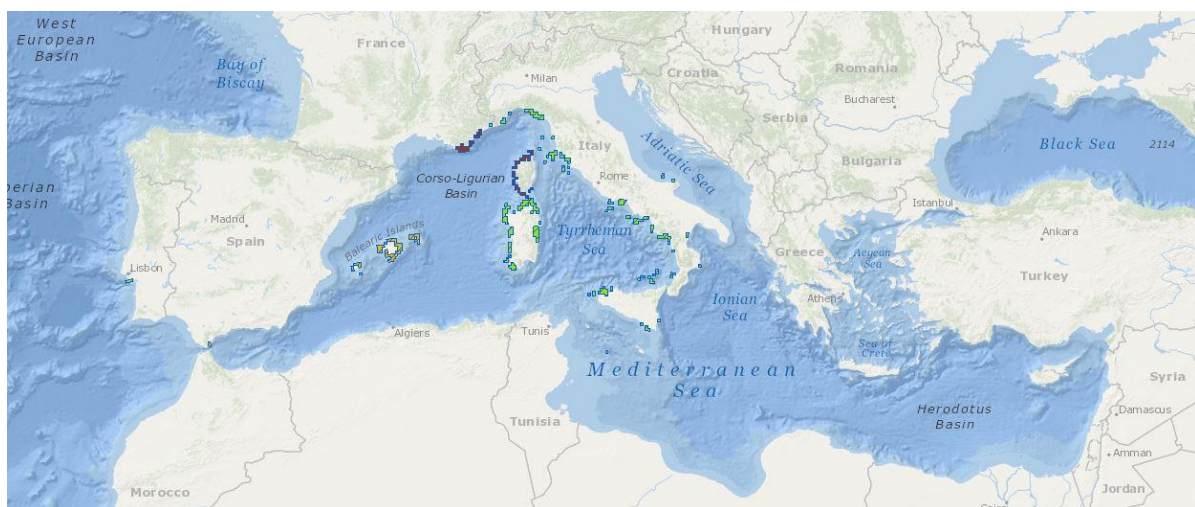
For the improvement of the overall conservation status in the Mediterranean biogeographical region, increase of the habitat area by habitat restoration in France is needed. Further improvement could be achieved by improving the habitat structure in France. The main measures should include legal protection of habitats and species, restoration of coastal areas; management of landscape features, and other spatial measures. In frequently visited areas with public access, the possibilities for rambling off-path walkers should be limited. Control of rapidly growing invasive species such as species of genus *Carpobrotus* or *Pennisetum* is also needed. Better information about habitat structure and functioning is needed in Portugal.

Habitat description

Low formations of *Helichrysum* (*H. italicum* ssp. *microphyllum*, *H. italicum* ssp. *italicum*) with spurges (*Euphorbia pithyusa*, i.a.), *Pistacia lentiscus*, *Camphorosma monspeliaca*, *Artemisia densiflora* or *Thymelaea passerina*, *T. hirsuta*, *T. tartonraira* in the immediate vicinity of sea cliffs, forming the transition between cliff vegetation or clifftop phryganas and thermo-Mediterranean scrub.

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is widespread in Italy. It also occurs in France, Spain, Portugal, and the United Kingdom (Gibraltar). The overall low representation of the habitat in Natura 2000 sites (ca 36 %) is due to the area of this habitat in Natura 2000 sites in Italy (21 %). In Portugal and the United Kingdom the entire national habitat area is located in Natura 2000 sites.



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage %/	Number of sites
France	20	N/A	15
Italy	30	21	101
Portugal	0.8	100	1
Spain	3.41	41	8
UK	0.8	100	1
Total	55	36	126

The table shows the size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographical region ('coverage') as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

The assessments of Spain and the United Kingdom led to the overall conservation status of this habitat type in the Mediterranean biogeographical region being unfavourable-inadequate. This conclusion was reached despite favourable status in Italy and Portugal. France reported unfavourable-bad conservation status of the habitat type. At the biogeographical region level, three parameters (Range; Area; Structure and functions) were assessed as favourable, and one (Future prospects) as unfavourable-inadequate. The overall conservation status for the region has not changed from previous reporting.

Treated data from Member States reports															
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.				
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.	
ES	7451	24.7	0	x	8.40	5.6	0	x	FV	U1	U1	x	U1	nc	
FR	4600	15.3	0	≈4600	N/A	N/A	-	≈>	U1	U2	U2	-	U1	b1	
IT	17800	59	0	≈17800	140.98	93.4	0	≈140.98	FV	FV	FV		FV		
PT	300	1	0	≈300	0.80	0.5	0	≈0.80	XX	FV	FV		U1	c1	
UK	1	0	0	1	0.80	0.5	0	0.80	U1	U1	U1	-	U1+	a	

EU Biogeographical assessment and proposed corrections															
MS/EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1
															Contrib. Type
EU27	30152	2GD	0		151	2GD	0		2GD	2GD	MTX	-	U1	nc	C -

Legend: MS – Member State; Overall asses – Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole biogeographical region; Ref. – reference value; Struct & func. – Structure and functions; Future prosp. – Future prospects; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1 – target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV	Favourable	U1	Unfavourable-inadequate	U2	Unfavourable-bad	XX	Unknown
Trend	0 = stable; + = increase; - = decrease; x = unknown							
Qualifier	= stable; + positive; - negative; x unknown							
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomical review; c1 – due to different methods to measure or evaluate; c2 – due to use of different thresholds; d – no information about nature of change; e – due to less accurate or absent data; nc – no change							
Target 1 contribution	A – favourable assessments; B – improved assess.; C – deteriorated assessments; D – unfavourable and unknown assessments that did not change; E – assessments that became unknown.							

Pressures, threats and proposed measures

The countries reported several pressures, the most important being invasive non-native species, urbanised areas, human habitation, and improved access to site, and outdoor sports and leisure activities, recreational activities. Other important pressures include mining and quarrying, and sport and leisure structures.

Code	Pressure name	ES	FR	IT	PT	UK
B01.02	Artificial planting on open ground (non-native trees)			L		
C01	Mining and quarrying		L	M		
C01.01	Sand and gravel extraction			M		
D01	Roads, paths and railroads		L			
D01.01	Paths, tracks, cycling tracks				M	
D01.02	Roads, motorways			M		
D03	Shipping lanes, ports, marine constructions		L			
D05	Improved access to site		H		M	
E01	Urbanised areas, human habitation	H	M		L	
E01.02	Discontinuous urbanisation			M		
E01.03	Dispersed habitation			M		
E02	Industrial or commercial areas		M			
E03	Discharges		L			
E04	Structures, buildings in the landscape		M			
E05	Storage of materials		L			
G01	Outdoor sports and leisure activities, recreational activities		H			
G01.03	Motorised vehicles			M		
G02	Sport and leisure structures		M		L	
G04.01	Military manouvres					M
G05.01	Trampling, overuse				M	
I01	Invasive non-native species	H	H			
J01.01	Burning down			M		
K01.01	Erosion			M		
K02.01	Species composition change (succession)					H

Legend: **L** Low intensity **M** Medium intensity **H** High intensity

The legal protection of habitats and species is the most important proposed measure. Other important measures include restoration of coastal areas; management of landscape features, and other spatial measures. According to France, no measures are needed for the conservation of the habitat/species.

Code	Measure name	ES	FR	IT	PT	UK
1.1	No measures needed for the conservation of the habitat/species		M			
1.2	Measures needed, but not implemented	NA			NA	H
4.4	Restoring coastal areas		M	M		
6.0	Other spatial measures		M		H	
6.3	Legal protection of habitats and species			M		H
6.4	Manage landscape features		M			

Legend: **L** Low importance **M** Medium importance **H** High importance

Reason for selection as “Low Hanging Fruit” (LHF) habitat in the Mediterranean region

Applying the methodology to identify LHF habitats in the Mediterranean region, habitat 5320 reached an LHF score of 31.73. This habitat type was classified as LHF because to achieve improvement it is sufficient to change from a declining to a stable trend in the category U1 (unfavourable-inadequate). It is normally much easier to improve a trend than to achieve a change in category. Another reason for including the habitat type as LHF was that the trend of only one parameter (Area) in one country (France) needs to be improved in order to achieve overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, increase of the habitat area by habitat restoration in France is needed. Further improvement could be achieved by improving the habitat structure in France. The main measures should include legal protection of habitats and species, restoration of coastal areas, management of landscape features, and other spatial measures. In frequently visited areas with public access, the possibilities for rambling off-path walkers should be limited. Control of rapidly growing invasive species such as species of genus *Carpobrotus* or *Pennisetum* is also needed. Better information about habitat structure and functioning is needed in Portugal.

According to France, no measures are needed for the conservation of the habitat/species. However, this information is in contradiction with three measures of medium importance proposed by France and with the unfavourable-bad overall conservation status reported by France.

Links

Anonymous, 2012: Formations basses d'euphorbes près des falaises.
http://www.paca.developpement-durable.gouv.fr/IMG/pdf/1_H5320_cle2b7578.pdf

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Sclerophyllous+scrubs&subject=5320®ion=MED>

Rodríguez, J., Traveset, A., 2009. 5320 Formaciones bajas de Euphorbia pythusa próximas a acantilados. - In: VV.AA., Bases ecológicas preliminares para la conservación de los tipos de hábitat de interés comunitario en España. Madrid: Ministerio de Medio Ambiente, y Medio Rural y Marino. 56 p.

5330 Thermo-Mediterranean and pre-desert scrub

X	Selected for first round of Biogeographical Seminar
	Selected using "Low hanging fruit" approach

Habitat summary

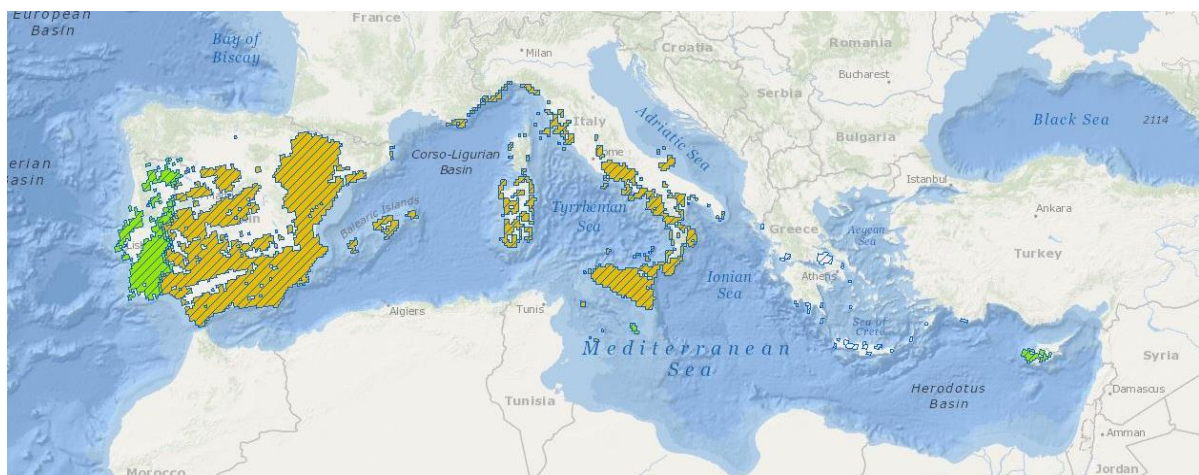
The overall conservation status in the Mediterranean region is unfavourable - inadequate due to the assessments of Greece, Spain, France, and Italy. In the Mediterranean region, the habitat is widespread in Spain, Portugal and Italy; it also occurs in France, Malta, Cyprus and Greece. Around 83% of the habitat area is located in Spain. Improvement of habitat structure in Spain, France, and Italy and increase of the habitat area by habitat restoration in Greece and Italy are needed. The main measures should include legal protection of the habitat and establishing protected sites. Other important measures are regulation of grazing, maintaining grasslands and other open habitats, adapting crop production, regulation of hunting and taking, urban and industrial waste management. Invasive competing species, such as species of *Mimosa*, *Opuntia*, *Acacia*, should be removed. In very frequently visited areas, it is important to make arrangements to channel walkers (barriers, fences, cords not cleared). The maintenance of a mosaic habitat with regeneration niches for the typical species of the habitat is recommended. It is possible to consider a brush clearing or removal of low scrub if colonisation causes the habitat regression. The changes to land use that entail the direct destruction of the habitat should be forbidden and fire hazards should be reduced.

Habitat description

Scrub formations characteristic of the thermo-Mediterranean zone. Included here are those formations, for the most part indifferent to the siliceous or calcareous nature of the substrate, that reach their greatest extension or optimal development in the thermo-Mediterranean zone. Included are numerous, strongly characterised, thermophile formations endemic to the south of the Iberian peninsula, mostly thermo-Mediterranean, but sometimes meso-Mediterranean; in their great local diversity they are a western counterpart of, the mostly eastern Mediterranean phryganas, which despite of their strong structural singularity, are listed separately. This habitat includes several sub-types: *Genista fasselata* brush, Xerophilous *Crataegus azarolus* var. *aronia* scrub, Tree-spurge formations, Diss-dominated garrigues, Palmetto brush, Mediterranean pre-desert scrub, Thermo-Mediterranean broom fields, Spiny spurge garrigues.

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is widespread in Spain, Portugal and Italy. It occurs also in France, Malta, Cyprus and Greece. The rather low representation of the habitat in Natura 2000 sites (ca 34%) is due to the low area of this habitat in Natura 2000 sites in Spain and absence of habitat area data in Article 17 reporting for Portugal. The whole national habitat area is located in Natura 2000 sites in France and Malta.



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage /%/	Number of sites
Cyprus	17	45.0	21
France	27	100.0	16
Greece	0	0.0	37
Italy	991	40.0	444
Malta	93	100.0	12
Portugal	800-1000	N/A	35
Spain	3536	26.0	508
Total	5464-5664	34	1073

The table shows size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographical region ("coverage") as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Mediterranean biogeographical region is unfavourable - inadequate due to assessment of four countries (Greece, Spain, France, and Italy). This conclusion was reached despite the favourable status in Cyprus, Malta, and Portugal. On the level of the biogeographical region, the Area was assessed as favourable, two parameters (Structure and Functions; Future prospect) were assessed as unfavourable - inadequate, the last one (Range) as unknown. The overall conservation status for the region has been changed from previous reporting from unknown to unfavourable – inadequate. This change is not considered genuine as it is due to better data and different methods to measure or evaluate.

Treated data from Member States reports															
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.				
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.	
CY	267	0.1	0	≈267	38	0.2	0	≈38	FV	FV	FV		XX	b1	
GR	63	0	x	>63	63	0.4	x	>63	FV	XX	U1	N/A	U1		
ES	323975	60.7	x	≈323975	13489.40	83.3	0	≈13489.40	U1	U1	U1	-	XX	c1	
FR	3900	0.7	0	≈3900	27.20	0.2	+	≈27.20	U1	U1	U1	=	U1	nc	
IT	124600	23.4	-	≈124600	2483.27	15.3	-	>2483.27	U1	U1	U1	-	FV	c1	
MT	93	0	0	≈93	93	0.6	0	≈93	FV	FV	FV		XX	nc	
PT	80700	15.1	0	≈80700	N/A	N/A	+	<	FV	FV	FV		FV		

EU Biogeographical assessment and proposed corrections																
MS/EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1	
															Contrib.	Type
EU27	533598	1	x	≈533598		2GD	0		2GD	2GD	MTX	-	XX	no	C	-

Legend: MS – Member State; Overall asses- Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole Biogeographical Region; Ref. – reference value; Struct & func. - structure and functions; Future prosp. – future prospect; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1: - target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV	Favourable	U1	Unfavourable - inadequate	U2	Unfavourable - bad	XX	Unknown
Trend	0 = stable; + = increase; - = decrease; x = unknown							
Qualifier	= stable; + positive; - negative; x unknown							
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomic review; c1 – due to different methods to measure or evaluate; c2 - due to different thresholds use; d - no information about nature of change; e - due to less accurate or absent data; nc - no change							
Target 1 contribution	A - favourable assessments; B - improved assess.; C - deteriorated assessments; D - unfavourable and unknown assessments that did not change; E - assessments that became unknown.							

Pressures, threats and proposed measures

The countries reported a broad range of pressures; the most important are invasive non-native species, urbanised areas, human habitation, and forest planting on open ground. Other important pressures are grazing, fire and fire suppression, mining and quarrying.

Code	Pressure name	CY	ES	FR	IT	MT	PT
A01	Cultivation		M		M		L
A02	modification of cultivation practices		M				
A04	grazing		M		H	L	
A04.02	non intensive grazing	L					
A04.03	abandonment of pastoral systems, lack of grazing						M
A05	livestock farming and animal breeding (without grazing)				M		
B01	forest planting on open ground		H	M			M
B01.02	artificial planting on open ground (non-native trees)				M		
B02	Forest and Plantation management & use		M				
B02.03	removal of forest undergrowth						M
B03	forest exploitation without replanting or natural regrowth				H		
C01	Mining and quarrying		M		M	M	
D01	Roads, paths and railroads			M		M	
D01.01	paths, tracks, cycling tracks						L
D01.02	roads, motorways				M		L
E01	Urbanised areas, human habitation		H	H			L
E01.02	discontinuous urbanisation				M		
E02	Industrial or commercial areas			M			
E03	Discharges		M	L	M		
E03.03	disposal of inert materials					M	
E04	Structures, buildings in the landscape			M			
E04.01	Agricultural structures, buildings in the landscape		M				
E05	Storage of materials			L			
F04	Taking / Removal of terrestrial plants, general			L			
G01	Outdoor sports and leisure activities, recreational activities		M	L			
G01.03	motorised vehicles				M		
G02	Sport and leisure structures		M	L			
G05	Other human intrusions and disturbances		M	L			
G05.01	Trampling, overuse					M	
H05	Soil pollution and solid waste (excluding discharges)		M		M		
I01	invasive non-native species		H	L	L	M	M
I02	problematic native species			L			
J01	fire and fire suppression		M	L			H
J01.01	burning down				M		
J02.01	Landfill, land reclamation and drying out, general		M				L
K01	abiotic (slow) natural processes		M				
K01.01	Erosion				M		
K02	Biocenotic evolution, succession		M	L			
K02.01	species composition change (succession)						M
K04	Interspecific floral relations			L			
L09	fire (natural)		M			M	
L10	other natural catastrophes		M				

Legend: L Low intensity M Medium intensity H High intensity

The legal protection of habitats and species and establishing protected areas and sites are the most important proposed measures. Other important measures are maintaining grasslands and other open habitats, adapting crop production, manage landscape features, other spatial measures, regulation/management of hunting and taking, urban and industrial waste management.

Code	Measure name	CY	ES	FR	IT	MT	PT
1.1	No measures needed for the conservation of the habitat/species			M			
1.2	Measures needed, but not implemented						NA
2.0	Other agriculture-related measures		M				
2.1	Maintaining grasslands and other open habitats		H		L		M
2.2	Adapting crop production		H				
3.0	Other forestry-related measures		M				
3.1	Restoring/improving forest habitats		M				M
4.4	Restoring coastal areas			M	M		
6.0	Other spatial measures		M	M			H
6.1	Establish protected areas/sites	H	H		H	H	
6.3	Legal protection of habitats and species	H	H		M	H	
6.4	Manage landscape features		L	M		H	
7.1	Regulation/ Management of hunting and taking					H	
8.1	Urban and industrial waste management	H					

Legend: L Low importance M Medium importance H High importance

Reason of selection for the first Mediterranean seminar

The habitat type was selected for the first Mediterranean seminar by agreement of Member States despite of its lower value of the Priority index. The habitat reached score 35 because of a high value for criterion A and a medium value for criterion B. The habitat occurs in 7 countries (criterion A). The unfavourable - inadequate overall conservation status reported four countries (Greece, Spain, France, and Italy). No negative trends were reported.

The Priority Index was calculated using information from the reports of Member States based on requirements of the Article 17 of the Habitats Directive for period 2001-2006. It is based on three parameters: A) Number of Member States where habitat type is present; B) Unfavourable conservation status of the habitat type (U2 – 2 points; U1 & XX – 1 point each), and C) Trend information: number of negative trends for parameters “Area of the habitat type” and qualifiers for “Structure & functions”. The index is then calculated using formula: $A*(B+C)$.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, improvement of the habitat structure in Spain, France and Italy and an increase of the habitat area by habitat restoration in Greece and Italy are needed. The main measures should include legal protection of habitats and species, establishing protected areas and sites. Other important measures are regulation of grazing, adapting crop production, maintaining grasslands and other open habitats, management of landscape features, regulation/management of hunting and taking, urban and industrial waste management, and other spatial measures.

The conservation of this habitat type should take into account its great variability both in specific composition and in structure. It is necessary to avoid its conversion to agriculturally used land, tourist facilities, urbanised or transportation areas (Cabello et al. 2009). Competing invasive species, such as species of *Mimosa*, *Opuntia* and *Acacia* should be removed. It is preferable to avoid the opening of trails within the habitat. In very frequently visited areas, it is important to make arrangements to channel walkers (barriers, fences, cords not cleared). The maintenance of a mosaic habitat with regeneration niches for the typical species of the habitat is recommended; grazing favouring opening

may be considered locally, but no reference currently exists. It is possible to consider a brush clearing or removal of low scrub when the colonization by the thickets causes the regression of the habitat (INPN). The changes to land use that entail the direct destruction of the habitat should be forbidden. This includes construction of buildings, landfills, opening or extension of communication routes, but also afforestation or agricultural expansion. The fire hazards should be reduced (e.g. through installation of water points, the surveillance network; the existence of a road network in the woods for easy access by firefighters and sappers; planting of strips of hardwoods of low flammability) (ICNB).

Links

Cabello, J., Morata D., Otto, R., Fernández Palacios, J.M., 2009: 5330 Matorrales termomediterráneos, matorrales suculentos canarios (macaronésicos) dominados por Euphorbias endémicas y nativas y tomillares semiáridos dominados por plumbagináceas y quenopodiáceas endémicas y nativas. - In: VV.AA., Bases ecológicas preliminares para la conservación de los tipos de hábitat de interés comunitario en España. Madrid: Ministerio de Medio Ambiente, y Medio Rural y Marino. 170 pp.

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Sclerophyllous+scrubs&subject=5330®ion=MED>

ICNB: 5330 Matos termomediterrânicos pré-desérticos. -

<http://www.icnf.pt/portal/pn/biodiversidade/rn2000/resource/docs/rn-plan-set/hab/hab-5530>

INPN: 5330 Fourrés thermoméditerranéens et prédésertiques. -

<https://inpn.mnhn.fr/site/natura2000/habitat/5330/cahiers-habitats>

5430 Endemic phrygas of the *Euphorbio-Verbascion*

	Selected for first round of Biogeographical Seminar
X	Selected using “Low hanging fruit” approach

Habitat summary

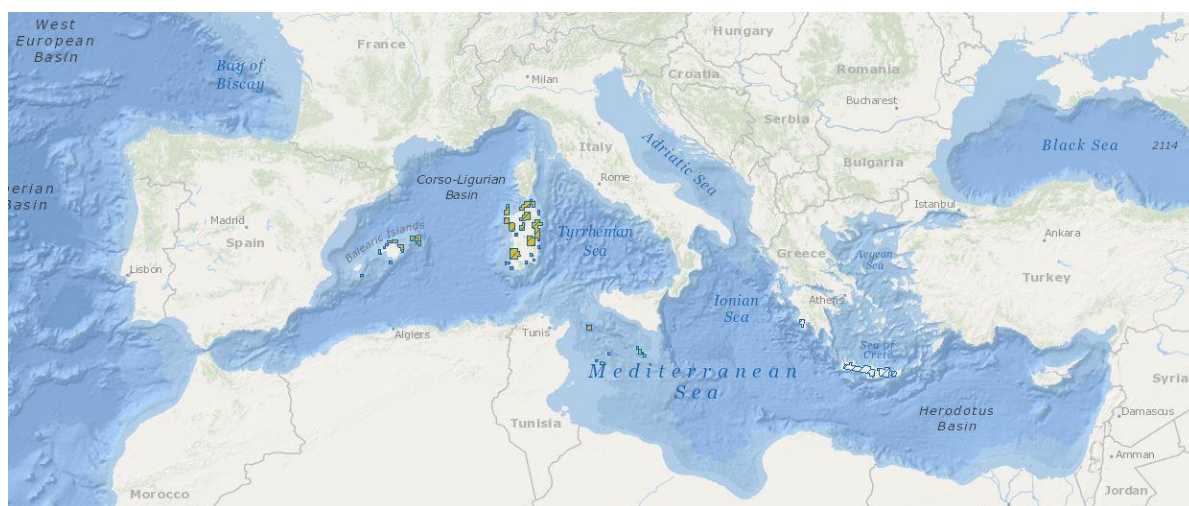
The assessments of Spain and Italy led to the overall conservation status in the Mediterranean region being unfavourable-inadequate. In the Mediterranean biogeographical region the habitat is distributed in Mediterranean islands. It is widespread in Sardinia (Italy) and Crete (Greece). It also occurs in Lampedusa, Linosa, and Pantelleria (all in Italy), Malta, and the Balearic Islands (Spain). Improvement of the habitat structure in Italy is needed. The main measures should include establishment of protected sites, legal protection of habitat, and management of landscape features. Also control of rapidly growing invasive species such as species of genus *Carpobrotus* or *Pennisetum* is needed. Better information about habitat range and area is needed in Spain.

Habitat description

Cushion-forming thermo-Mediterranean sclerophyllous formations, often thorny and summer deciduous. There are several sub-types: mid-elevation phrygas of Crete, *Hypericum* phrygas, Italian *Sarcopoterium* phrygas, Sardinian *Genista acanthoclada* phryga, Balearic clifftop phrygas, Cyrno-Sardian *Genista* phrygas, Pantelleria phryga.

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is distributed in the Mediterranean islands. It is widespread in Sardinia (Italy) and Crete (Greece). It also occurs in Lampedusa, Linosa, and Pantelleria (all in Italy), Malta, and the Balearic Islands (Spain). Almost the entire national habitat area is located in Natura 2000 sites in Italy (98 %) and Malta (97 %).



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage /%/	Number of sites
Greece	0	0	11
Italy	121	98	43
Malta	32	97	3
Spain	2.88	35	25
Total	156	37	82

The table shows the size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographical region ('coverage') as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

The assessments of Spain and Italy led to the overall conservation status of this habitat type in the Mediterranean biogeographical region being unfavourable-inadequate. This conclusion was reached despite favourable status in Greece and Malta. At the biogeographical region level, two parameters (Range; Area) were assessed as favourable; the other two (Structure and functions; Future prospects) as unfavourable-inadequate. The overall conservation status for the region has changed from previous reporting from unknown to unfavourable-inadequate. This change is not genuine, but is due to the use of different methods (Spain and Italy).

Treated data from Member States reports																
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.					
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.		
GR	254.30	0.9	0	254.30	254.30	60.8	0	254.30	FV	XX	FV		FV			
ES	3928	14.5	x	x	8.19	2	-	x	FV	U1	U1	x	XX	c1		
IT	22900	84.5	0	≈22900	122.75	29.3	0	≈122.75	U1	U1	U1	-	FV	c1		
MT	33	0.1	0	≈33	33	7.9	0	≈33	FV	FV	FV		XX	nc		

EU Biogeographical assessment and proposed corrections																
MS/EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1	
															Contrib.	Type
EU27	27115	2GD	0		418	2GD	0		2GD	2GD	MTX	-	XX	no	C	-

Legend: MS – Member State; Overall asses – Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole biogeographical region; Ref. – reference value; Struct & func. – Structure and functions; Future prosp. – Future prospects; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1 – target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV	Favourable	U1	Unfavourable - inadequate	U2	Unfavourable - bad	XX	Unknown
Trend	0 = stable; + = increase; - = decrease; x = unknown							
Qualifier	= stable; + positive; - negative; x unknown							
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomical review; c1 – due to different methods to measure or evaluate; c2 – due to use of different thresholds; d – no information about nature of change; e – due to less accurate or absent data; nc – no change							
Target 1 contribution	A – favourable assessments; B – improved assess.; C – deteriorated assessments; D – unfavourable and unknown assessments that did not change; E – assessments that became unknown.							

Pressures, threats and proposed measures

The countries reported several pressures. Spain stated continuous urbanisation, discontinuous urbanisation, dispersed habitation, trampling, overuse, and problematic native species as the most important. Invasive non-native species were considered as medium-intensity pressures by all three countries. Other important pressures include removal of terrestrial plants, general, cultivation, grazing, and sand and gravel extraction.

Code	Pressure name	ES	IT	MT
A01	Cultivation		M	
A04	Grazing		M	L
B01.02	Artificial planting on open ground (non-native trees)		M	
C01	Mining and quarrying			M
C01.01	Sand and gravel extraction		M	
D01	Roads, paths and railroads			M
D01.02	Roads, motorways		M	

Code	Pressure name	ES	IT	MT
E01.01	Continuous urbanisation	H		
E01.02	Discontinuous urbanisation	H		
E01.03	Dispersed habitation	H	M	
E01.04	Other patterns of habitation	M		
E03	Discharges		M	
E03.03	Disposal of inert materials			L
F04	Taking / Removal of terrestrial plants, general		M	M
G01.03	Motorised vehicles		M	
G05.01	Trampling, overuse	H		M
I01	Invasive non-native species	M	M	M
I02	Problematic native species			H
J01.01	Burning down		M	
K01.01	Erosion		M	
L09	Fire (natural)			M

Legend: **L** Low intensity **M** Medium intensity **H** High intensity

Malta proposed establishment of protected areas/sites, legal protection of habitats and species, management of landscape features, and regulation/management of hunting and taking as highly important measures to be taken. Italy reported that measures are needed, but not implemented.

Code	Measure name	ES	IT	MT
1.2	Measures needed, but not implemented		NA	
6.1	Establish protected areas/sites			H
6.3	Legal protection of habitats and species	M		H
6.4	Manage landscape features			H
7.1	Regulation/ Management of hunting and taking			H

Legend: **L** Low importance **M** Medium importance **H** High importance

Reason for selection as “Low Hanging Fruit” (LHF) habitat in the Mediterranean region

Applying the methodology to identify LHF habitats in the Mediterranean region, habitat 5430 reached an LHF score of 3.13. This habitat type was classified as LHF because to achieve improvement it is sufficient to change from a decreasing to a stable trend in the category U1 (unfavourable-inadequate). It is normally much easier to improve a trend than to achieve a change in category. Other reasons for including the habitat type as LHF are that the trend of only one parameter (Structure & functions) in one country (Italy) needs to be improved in order to achieve overall improvement, and better information from Spain would also contribute to improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, improvement of the habitat structure in Italy is needed. The main measures should include establishment of protected sites, legal protection of habitat, and management of landscape features. Also control of rapidly growing invasive species such as species of the genus *Carpobrotus* or *Pennisetum* is needed (Rodríguez Pérez and Traveset, 2009). Better information about habitat range and area is needed in Spain.

Links

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Sclerophyllous+scrubs&subject=5430®ion=MED>

Rodríguez Pérez, J., Traveset, A., 2009. 5430 Matorrales de tipo frigánico endémicos de Euphorbio-Verbascion. - In: VV.AA., Bases ecológicas preliminares para la conservación de los tipos de hábitat de interés comunitario en España. Madrid: Ministerio de Medio Ambiente, y Medio Rural y Marino. 53 p.

6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (*important orchid sites)

X	Selected for first round of Biogeographical Seminar
X	Selected using "Low hanging fruit" approach

Habitat summary

The overall conservation status in the Mediterranean region is unfavourable - inadequate due to assessments of Spain and France. In the Mediterranean biogeographic region, the habitat is widespread in Italy, France, and Spain; it also occurs in Portugal. Around 33% of the habitat area is located in Italy.

Increase of the habitat area in France is crucial, further improvement could be reached by measures focused to habitat structure and functioning in Spain and France. Ensuring a suitable intensity of agricultural management is essential. Grassland management objectives will vary from site to site and within one site different goals may be set for different areas. Active management of the habitat includes grazing, cutting or a combination of both. The advantage is that these measures could be funded from the Common Agricultural Policy. Other important measures are legal protection of habitats and species, establishing protected areas and sites, specific single species or species group, adaptation of forest management, and other spatial measures.

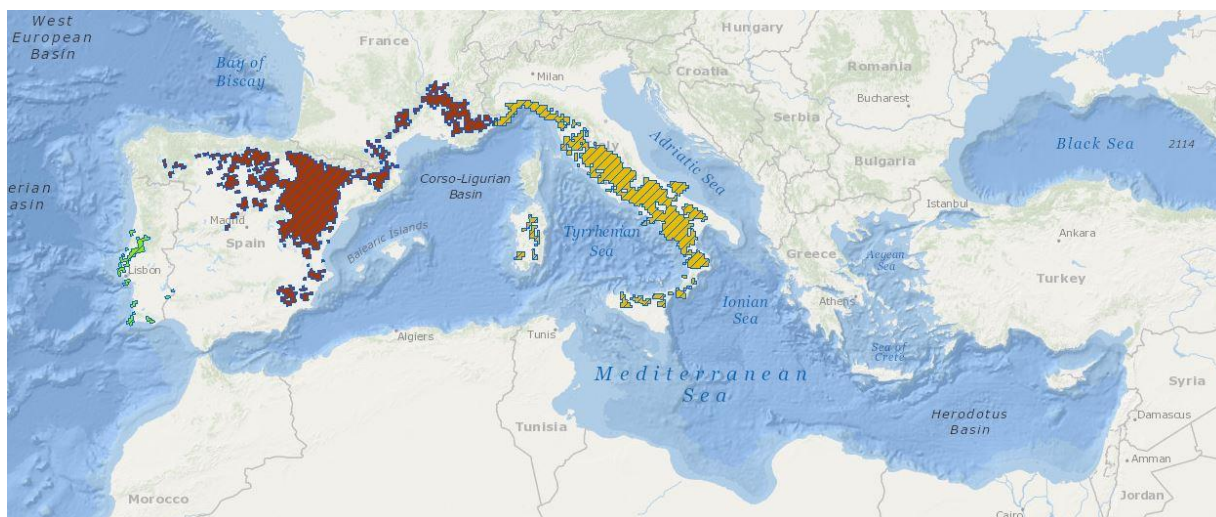
Habitat restoration is besides France also needed in Italy that reported a smaller habitat area than the reference value.

Habitat description

Dry to semi-dry calcareous grasslands of the *Festuco-Brometea*. This habitat is formed by steppic or subcontinental grasslands (*Festucetalia valesiaca*), and by the grasslands of more oceanic and sub-Mediterranean regions (*Brometalia erecti*). In the latter case, a distinction is made between primary *Xerobromion* grasslands and secondary (semi-natural) *Mesobromion* grasslands with *Bromus erectus*; the latter are characterised by their rich orchid flora. Abandonment results in thermophile scrub with an intermediate stage of thermophile fringe vegetation (*Trifolio-Geranietea*).

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is widespread in Italy, France, and Spain. It also occurs in Portugal. The overall representation of the habitat in Natura 2000 sites is quite high (ca 50%). The reality is probably higher as data for Portugal are missing. The entire national habitat area is located in Natura 2000 sites in France.



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage /%/	Number of sites
France	378	100.0	111
Greece	N/A	N/A	6
Italy	1557	39.0	397
Portugal	284	N/A	14
Spain	396	45.0	123
Total	2615	50	651

The table shows size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographic region ("coverage") as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in the Mediterranean biogeographical region is unfavourable - bad due to assessments of Spain and France. Only Portugal indicated a favourable status of this habitat type; Italy reported an unfavourable – inadequate conservation status. On the biogeographical level, three parameters (Range; Area; Structure and Functions) were assessed as unfavourable – inadequate, the remaining one (Future prospect) as unfavourable – bad. The overall conservation status for the region changed since the previous reporting from unknown to unfavourable - bad. This change is not considered genuine – it is due to a different method used. Only France indicated a genuine change from unfavourable – inadequate to unfavourable - bad.

Treated data from Member States reports															
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.				
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.	
ES	138809	44.9	0	≈138809	883.55	16.7	x	≈883.55	U1	U2	U2	x	XX	c1	
FR	30800	10	0	≈30800	378	7.2	-	>378	U1	U2	U2	-	U1	a	
IT	124500	40.3	0	>124500	4015.25	76.1	0	>4015.25	FV	U1	U1	-	FV	c1	
PT	15200	4.9	0	≈15200	N/A	N/A	0	<	FV	FV	FV	-	FV		

EU Biogeographical assessment and proposed corrections																
MS/EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1	
															Contrib.	Type
EU27	309309	1	0	>309309		2GD			2GD	2GD	MTX	-	XX	no	C	-

Legend: MS – Member State; Overall asses- Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole Biogeographical Region; Ref. – reference value; Struct & func. - structure and functions; Future prosp. – future prospect; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1: - target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV Favourable	U1 Unfavourable - inadequate	U2 Unfavourable - bad	XX Unknown
Trend	0 = stable; + = increase; - = decrease; x = unknown			
Qualifier	= stable; + positive; - negative; x unknown			
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomic review; c1 – due to different methods to measure or evaluate; c2 - due to different thresholds use; d - no information about nature of change; e - due to less accurate or absent data; nc - no change			
Target 1 contribution	A - favourable assessments; B - improved assess.; C - deteriorated assessments; D - unfavourable and unknown assessments that did not change; E - assessments that became unknown.			

Pressures, threats and proposed measures

The countries reported a broad range of pressures mainly with medium or low intensity. The most important are grazing and succession. To other important pressures belong cultivation, fertilisation, forest planting on open ground, roads, paths and railroads, outdoor sports and leisure activities and recreational activities.

Code	Pressure name	ES	FR	IT	PT
A01	Cultivation		M	M	
A02	modification of cultivation practices		M		
A04	Grazing	H	M		
A04.01	intensive grazing				L
A04.01.01	intensive cattle grazing				L
A04.02.01	non intensive cattle grazing	M			
A04.02.02	non intensive sheep grazing	M			
A04.02.03	non intensive horse grazing	M			
A04.03	abandonment of pastoral systems, lack of grazing			M	
A05	livestock farming and animal breeding (without grazing)	M			M
A08	Fertilisation	M	M		
B01	forest planting on open ground	M	M		
B01.02	artificial planting on open ground (non-native trees)			M	
C01	Mining and quarrying		L	M	
C01.01.01	sand and gravel quarries				L
C01.04	Mines	M			
C03	Renewable abiotic energy use		M		
D01	Roads, paths and railroads	L	L	M	
D01.01	paths, tracks, cycling tracks				L
D01.02	roads, motorways	L		M	
D02.01	electricity and phone lines			M	
D05	Improved access to site	M	L		
E01	Urbanised areas, human habitation	M	L		
E01.02	discontinuous urbanisation			M	
E01.03	dispersed habitation			M	L
E02	Industrial or commercial areas		L		
E03	Discharges			M	
E03.03	disposal of inert materials				M
E04	Structures, buildings in the landscape		M		
E05	Storage of materials		L		
F04	Taking / Removal of terrestrial plants, general			M	
F04.01	pillaging of floristic stations				L
G01	Outdoor sports and leisure activities, recreational activities	L	L	M	
G01.02	walking, horseriding and non-motorised vehicles			M	
G01.03	motorised vehicles			M	
G02	Sport and leisure structures	M			
G02.02	skiing complex	L			
G03	Interpretative centres	M			

Code	Pressure name	ES	FR	IT	PT
G05.01	Trampling, overuse	M		M	
J01	fire and fire suppression	M			
J01.01	burning down			M	M
J02.05	Modification of hydrographic functioning, general			M	
K01.01	Erosion	M		M	
K02	Biocenotic evolution, succession		H		
K02.01	species composition change (succession)			M	M

Legend: **L** Low intensity **M** Medium intensity **H** High intensity

All four countries consider maintaining grasslands and other open habitats to be important. Other important measures are legal protection of habitats and species, establishing protected areas and sites, specific single species or species group management measures, adaptation of forest management and other spatial measures.

Code	Measure name	ES	FR	IT	PT
1.2	Measures needed, but not implemented				NA
2.0	Other agriculture-related measures	M	M		
2.1	Maintaining grasslands and other open habitats	H	M	H	L
2.2	Adapting crop production	M	M		
3.0	Other forestry-related measures	M			
3.2	Adapt forest management	H			
6.0	Other spatial measures	M		H	
6.1	Establish protected areas/sites	H		H	
6.3	Legal protection of habitats and species	H		M	
6.4	Manage landscape features	M			
7.4	Specific single species or species group management measures	M		H	
9.1	Regulating/Management exploitation of natural resources on land	H			

Legend: **L** Low importance **M** Medium importance **H** High importance

Reason of selection for the first Mediterranean seminar

The habitat type was selected for the first Mediterranean seminar by agreement of the Member States despite of its low value of the Priority index. The habitat reached score 12 because of a medium value of criterion A. The habitat occurs in 4 countries (criterion A). The unfavourable - bad overall conservation status was reported by two countries (Spain and France) and an unfavourable - inadequate status by Italy. One country (France) also reported a negative trend for habitat area.

The Priority Index was calculated using information from the reports of Member States based on requirements of the Article 17 of the Habitats Directive for period 2001-2006. It is based on three parameters: A) Number of Member States where habitat type is present; B) Unfavourable conservation status of the habitat type (U2 – 2 points; U1 & XX – 1 point each), and C) Trend information: number of negative trends for parameters “Area of the habitat type” and qualifiers for “Structure & functions”. The index is then calculated using formula: $A*(B+C)$.

Reason for selection as “Low Hanging Fruit” (LHF) habitat in the Mediterranean region

Applying the methodology to identify LHF habitats in the Mediterranean region, habitat 6210 reached the LHF score 16.67. This habitat type was classified as LHF especially because to reach improvement, the change from a declining to stable trend within the category U2 (unfavourable-bad) is sufficient. It is normally much easier to improve a trend than to reach a different category. The habitat type was included to LHF also because of the fact that the improvement of trend of only one parameter (Area) in one country (France) is needed to stop decline in Area.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, increase of the habitat area in France is crucial. Further improvement could be reached by measures focused to habitat structure and functioning in Spain and France. Ensuring of suitable intensity of agricultural management is essential. Active management of the habitat includes grazing, cutting or a combination of both. Grassland management objectives will vary from site to site and within one site different goals may be set for different areas. When planning the management for the habitat, it is important to take into account site-specific objectives and targets as well as local/regional land use and livestock husbandry traditions, practices and techniques (Calaciura et Spinelli 2008). The advantage is that these measures could be funded from the Common Agricultural Policy. Other important measures are legal protection of habitats and species, establishing protected areas and sites, specific single species or species group management measures, adaptation of forest management, and other spatial measures.

Habitat restoration is besides France also needed in Italy that reported a smaller habitat area than the reference value. Restoration includes removal of scrub and trees, followed by cutting of herbaceous vegetation and/or grazing reintroduction. In the first period after scrub removal, usually more frequent cutting or more intensive grazing is needed in order to eliminate re-sprouting of scrub, suppress tall vegetation and restore the habitat structure. After this transitional period, usually regular management is sufficient. The restoration of abandoned grasslands is usually expensive and the agricultural subsidies are not sufficient for these activities, therefore additional sources of funding should be used.

Links

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Grasslands&subject=6210®ion=MED>

Calaciura B., Spinelli O., 2008: Management of Natura 2000 habitats. 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (*important orchid sites). European Commission, Technical Report 2008 12/24, 38 pp.
http://ec.europa.eu/environment/nature/natura2000/management/habitats/pdf/6210_Seminar_dry_grasslands.pdf

6220 Pseudo-steppe with grasses and annuals of the *Thero-Brachypodietea*

X	Selected for first round of Biogeographical Seminar
	Selected using "Low hanging fruit" approach

Habitat summary

The overall conservation status in the Mediterranean region is unfavourable - inadequate due to the assessment of Spain. In the Mediterranean biogeographic region, the habitat is widespread in Spain and Italy; it also occurs in Portugal, France, Malta, Greece, and Cyprus. Around 87% of the habitat area is located in Spain.

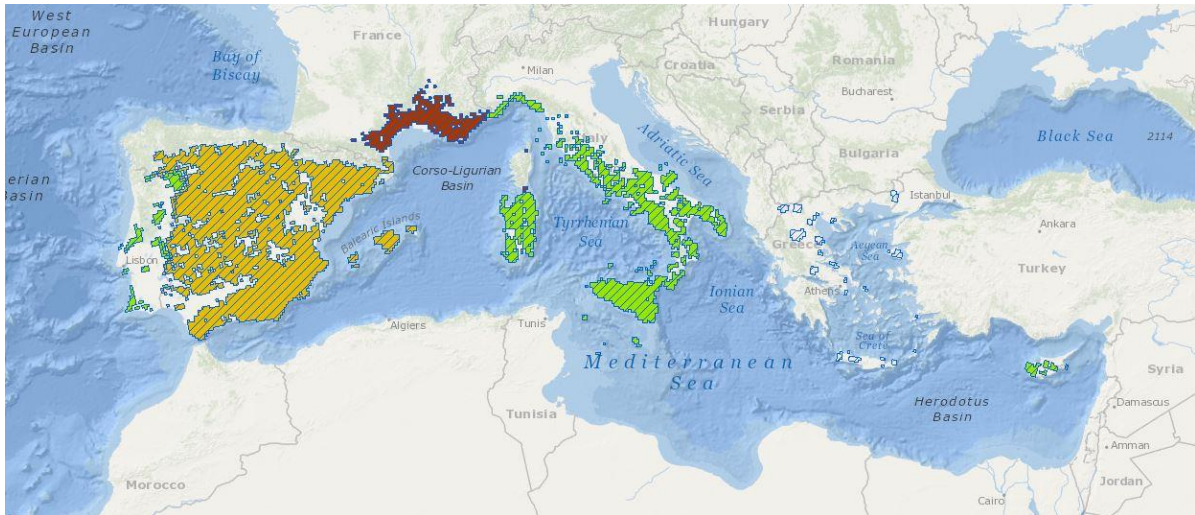
Improvement of the habitat structure in Spain and France is needed. The main measure is grazing (particularly sheep grazing). Regular scrub clearing on small to medium-size irregular plots and silvicultural treatments on related forests and coppices are advisable as complementary measures, as well as reducing or banning the use of pesticides and herbicides, protecting the habitat from urbanization processes, control of tourism activity when necessary, promoting livestock quality labels, improving living conditions for shepherds and implementing new land management strategies. Habitat restoration is needed in France as this country reported a smaller habitat area than the reference value. Better information about habitat area is needed in Spain.

Habitat description

Pseudo-steppe with grasses and annuals including a variety of xeric, thermophilic and mostly open Mediterranean perennial and annual grasslands growing on usually eutrophic, but also oligotrophic, soils. Meso- and thermo-Mediterranean xerophile, mostly open, short-grass annual grasslands rich in therophytes; therophyte communities of oligotrophic soils on base-rich, often calcareous substrates. Perennial communities - *Thero-Brachypodietea*, *Thero-Brachypodietalia*: *Thero-Brachypodion*. *Poetea bulbosae*: *Astragalo-Poion bulbosae* (basiphile), *Trifolio-Periballion* (silicolous). Annual communities - *Tuberarietea guttatae* Br.-Bl. 1952 em. Rivas-Martínez 1978, *Trachynietalia distachyae* Rivas-Martínez 1978: *Trachynion distachyae* (calciphile), *Sedo-Ctenopsion* (gypsophile), *Omphalodion commutatae* (dolomitic and silico-basiphile).

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is widespread in Spain and Italy. It also occurs in Portugal, France, Malta, Greece, and Cyprus. The overall rather low representation of the habitat in Natura 2000 sites (ca 21%) is due to the small area of this habitat in Natura 2000 sites in Spain (12%) and probably also by missing data for Portugal. The whole national habitat area is located in Natura 2000 sites in France, large part also in Malta (87%) and Cyprus (83%).



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage /%/	Number of sites
Cyprus	44	83.0	25
France	355	100.0	91
Greece	0	0.0	38
Italy	1,644	38.0	637
Malta	118	87.0	5
Portugal	1,763	N/A	35
Spain	4,052	12.0	657
Total	7,976	21	1,488

The table shows size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographic region ("coverage") as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in the Mediterranean biogeographical region is unfavourable - inadequate due to the assessment of Spain. This conclusion was reached despite a favourable status in five countries (Cyprus, Greece, Italy, Malta, and Portugal). Only France reported an unfavourable – bad conservation status. The information on habitat area is not sufficient in Spain that reported this parameter as unknown. On the biogeographical level, the Range was assessed as favourable, two parameters (Structure and Functions; Future prospect) as unfavourable - inadequate, and the Area as unknown. The overall conservation status for the region has been changed since the previous reporting from unknown to unfavourable - inadequate. This change is not considered genuine as it is due by better data and different assessment methods used.

Treated data from Member States reports														
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
CY	302	0	0	≈302	53	0.1	0	≈53	FV	FV	FV		XX	b1
GR	142.20	0	0	142.20	142.20	0.4	0	142.20	FV	XX	FV		FV	
ES	428851	64.2	0	≈428851	33299.53	86.9	x	≈33299.53	U1	U1	U1	x	XX	c1
FR	39800	6	0	≈39800	354.70	0.9	-	>354.70	U1	U2	U2	-	U1	b1
IT	168600	25.3	+	≈168600	4346.36	11.3	+	<4346.36	FV	FV	FV		FV	
MT	153	0	0	≈153	136	0.4	0	≈136	FV	FV	FV		U1	b1
PT	29800	4.5	0	≈29800	N/A	N/A	+	<	FV	FV	FV		FV	

EU Biogeographical assessment and proposed corrections																
MS/EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1	
															Contrib.	Type
EU27	667648	0	0	≈667648		2GD			2GD	2GD	MTX	x	XX	no	D	=

Legend: MS – Member State; Overall asses- Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole Biogeographical Region; Ref. – reference value; Struct & func. - structure and functions; Future prosp. – future prospect; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1: - target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV	Favourable	U1	Unfavourable - inadequate	U2	Unfavourable - bad	XX	Unknown
Trend	0 = stable; + = increase; - = decrease; x = unknown							
Qualifier	= stable; + positive; - negative; x unknown							
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomic review; c1 – due to different methods to measure or evaluate; c2 - due to different thresholds use; d - no information about nature of change; e - due to less accurate or absent data; nc - no change							
Target 1 contribution	A - favourable assessments; B - improved assess.; C - deteriorated assessments; D - unfavourable and unknown assessments that did not change; E - assessments that became unknown.							

Pressures, threats and proposed measures

The member countries reported a broad range of pressures. Almost all countries indicated grazing, mining and quarrying, roads, paths and railroads as important pressures. Other important pressures are artificial planting on open ground (non-native trees), cultivation, urbanised areas, human habitation, industrial or commercial areas, and invasive non-native species.

Code	Pressure name	CY	ES	FR	IT	MT	PT
A01	Cultivation		M	H	M		
A02	modification of cultivation practices			M			
A02.01	agricultural intensification						M
A03.03	abandonment / lack of mowing	M					
A04	grazing		M	L	H	L	
A04.01	intensive grazing	L					M
A04.01.04	intensive goat grazing	M					
A04.03	abandonment of pastoral systems, lack of grazing	M	H				H
A08	Fertilisation			L			
A09	Irrigation		M	L			
A10	Restructuring agricultural land holding		M				
A11	Agriculture activities not referred to above						M
B01	forest planting on open ground		M	M			
B01.02	artificial planting on open ground (non-native trees)	M	H		M		
B02	Forest and Plantation management & use		M				
B07	Forestry activities not referred to above						M
C01	Mining and quarrying		M	M	M	M	
C03	Renewable abiotic energy use			H			
D01	Roads, paths and railroads		L	H	M	M	L
D01.01	paths, tracks, cycling tracks	L			M		
D01.02	roads, motorways				M		
D02	Utility and service lines		L	M			
E01	Urbanised areas, human habitation		L	H	M		
E01.03	dispersed habitation				M		
E02	Industrial or commercial areas		M	H			
E03	Discharges		M	L	M		
E03.03	disposal of inert materials					M	
E04	Structures, buildings in the landscape			M			L
E05	Storage of materials			L			

Code	Pressure name	CY	ES	FR	IT	MT	PT
E06	Other urbanisation, industrial and similar activities		M				
F04	Taking / Removal of terrestrial plants, general					M	
F06	Hunting, fishing or collecting activities not referred to above		L				
G01	Outdoor sports and leisure activities, recreational activities			L			
G01.02	walking, horseriding and non-motorised vehicles	L					
G01.03	motorised vehicles				M		
G02	Sport and leisure structures		M	L	M		
G05.01	Trampling, overuse				M	M	
H05	Soil pollution and solid waste (excluding discharges)				M		
I01	invasive non-native species			L		M	H
I02	problematic native species					H	
J01	fire and fire suppression			L			
J01.01	burning down				H		
K01.01	Erosion				M		
K02	Biocenotic evolution, succession		M	M			
K02.01	species composition change (succession)	M					M
L09	fire (natural)		L			M	

Legend: **L** Low intensity **M** Medium intensity **H** High intensity

According to member states, establishing protected areas and sites and legal protection of habitats and species are the most important proposed measures. Other important measures are maintaining grasslands and other open habitats, management of landscape features, restoring/improving forest habitats, adaptation of forest management, urban and industrial waste management.

Code	Measure name	CY	ES	FR	IT	MT	PT
1.1	No measures needed for the conservation of the habitat/species			M			
1.2	Measures needed, but not implemented		M				NA
2.0	Other agriculture-related measures		M	M			L
2.1	Maintaining grasslands and other open habitats		H	M	L		L
2.2	Adapting crop production		M	M			
3.0	Other forestry-related measures		M				
3.1	Restoring/improving forest habitats		H				
3.2	Adapt forest management		H				
4.0	Other wetland-related measures		M				
4.2	Restoring/improving the hydrological regime		M				
4.4	Restoring coastal areas				M		
6.0	Other spatial measures		M				
6.1	Establish protected areas/sites	H	H		H	H	
6.3	Legal protection of habitats and species	H	H		M	H	
6.4	Manage landscape features		M			H	
7.1	Regulation/ Management of hunting and taking					H	
7.4	Specific single species or species group management measures		M				
8.1	Urban and industrial waste management	H					
9.1	Regulating/Management exploitation of natural resources on land		M				

Legend: **L** Low importance **M** Medium importance **H** High importance

Reason of selection for the first Mediterranean seminar

The habitat type was selected for the first Mediterranean seminar by agreement of Member States despite having a lower value on the Priority index. The habitat reached score 35 because of its high value in criterion A and medium value of criterion B. The habitat occurs in seven countries (criterion

A). Both the unfavourable - bad and unfavourable - inadequate overall conservation status were reported one country (France and Spain respectively). One country reported a negative trend.

The Priority Index was calculated using information from the reports of Member States based on requirements of the Article 17 of the Habitats Directive for period 2001-2006. It is based on three parameters: A) Number of Member States where habitat type is present; B) Unfavourable conservation status of the habitat type (U2 – 2 points; U1 & XX – 1 point each), and C) Trend information: number of negative trends for parameters “Area of the habitat type” and qualifiers for “Structure & functions”. The index is then calculated using formula: $A*(B+C)$.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, improvement of the habitat structure in Spain and France is needed. The main measure is grazing (particularly sheep grazing) that is essential for the long-term maintenance of this habitat. Regular scrub clearing on small to medium-size irregular plots and silvicultural treatments on related forests and coppices are advisable as complementary measures, as well as the conservation or restoration of traditional infrastructures (water points, hedges, stone walls) and nearby small agricultural plots. A light phosphoric fertilization is recommended for *Poetalia bulbosae* communities; however, fertilization with other nutrients or on other 6220 habitat type communities should be banned. Other relevant measures are reducing or banning the use of pesticides and herbicides, protecting the habitat from urbanization processes, control of tourism activities where necessary, promoting livestock quality labels, improving living conditions for shepherds and implementing new land management strategies (San Miguel 2008). The countries identified other important measures: establishing protected areas and sites, legal protection of habitats and species, management of landscape features, urban and industrial waste management.

Habitat restoration is needed in France as this country reported a smaller habitat area than the reference value. Restoration of the habitat from overgrown sites will require scrub clearing and intense grazing for many years (San Miguel 2008). Better information about habitat area is needed in Spain.

Links

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Grasslands&subject=6220®ion=MED>

San Miguel A. 2008. Management of Natura 2000 habitats. 6220 *Pseudo-steppe with grasses and annuals of the Thero-Brachypodietea. - European Commission (DG ENV B2), Brussels, 27 pp.

6310 Dehesas with evergreen *Quercus* spp.

X	Selected for first round of Biogeographical Seminar
X	Selected using "Low hanging fruit" approach

Habitat summary

The overall conservation status in the Mediterranean region is unfavourable - bad due to the assessment of Spain. In the Mediterranean biogeographic region, the habitat is widespread in Spain and Portugal; it occurs also in Italy and France (Corse). Around 94% of the habitat area is located in Spain.

Improvement of the habitat structure in Spain is needed. Better information about the habitat in France, and improvement of information on habitat range in Portugal is needed. The main measures should include maintenance of open habitats, regulation/management of natural resources exploitation, establishment of protected sites, legal protection of habitats and species, restoring/improving forest habitats, and adaptation of forest management. There are three management options, depending on the objectives to be achieved: 1) maintenance of traditional pastoral use; 2) spatial separation of forest use and agro-pastoral uses; 3) abandonment and conversion to forest habitat by ecological succession. In option 1, the natural regeneration should be supported, grazing organised and the economic sustainability of traditional activities linked to the forest promoted. In option 2, the forest use and agropastoral uses should be spatially separated. Option 3 (abandonment) could happen spontaneously, but may also constitute a conscious "non-management" option. It also implies an increase in forest fires and measures should be taken to prevent and reduce risk. The combination of these three options may constitute a rational planning strategy at the territorial scale and even co-exist within the same management unit (ownership). The problem of the absence of natural regeneration could be solved by cycles of abandonment or to build in rotations in farming.

Habitat description

It is a characteristic landscape of the Iberian peninsula in which crops, pasture land or Meso-Mediterranean arborescent matorral, in juxtaposition or rotation, are shaded by a fairly closed to very open canopy of native evergreen oaks (*Quercus suber*, *Q. ilex*, *Q. rotundifolia*, *Q. coccifera*). It is an important habitat of raptors, including the threatened Iberian endemic eagle (*Aquila adalberti*), of the crane (*Grus grus*), of large insects and their predators and of the endangered felid (*Lynx pardinus*).

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is widespread in Spain and Portugal. It occurs also in Italy and France (Corse). The overall lower representation of the habitat in Natura 2000 sites (ca 41%) is due to the low area of this habitat represented in Natura 2000 sites in Italy (10%), data from France and Portugal are absent.



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage %/	Number of sites
France	0	N/A	4
Italy	109	10.0	22
Portugal	1,714	N/A	35
Spain	5,545	33.0	259
Total	7,368	41	320

The table shows size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographic region ("coverage") as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in the Mediterranean biogeographical region is unfavourable - bad due to the assessment of Spain. Two countries (Italy and Portugal) reported an unfavourable – inadequate conservation status. The knowledge about the habitat is not sufficient in France that assessed all parameters as unknown. On the biogeographical level, Range was assessed as favourable, Area as unfavourable - inadequate and the last two parameters (Structure and Functions; Future prospect) were assessed as unfavourable - bad. The overall conservation status for the region has been changed compared to the previous reporting from unknown to unfavourable – bad. This change is considered not genuine, as it is due to different methods used.

Treated data from Member States reports															
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.				
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.	
ES	211877	70.9	x	≈211877	16986.37	93.7	x	≈16986.37	U2	U2	U2	-	XX	c1	
FR	0	0	x	x	N/A	N/A	x	x	XX	XX	XX	-	XX	nc	
IT	28100	9.4	-	≈28100	1140.44	6.3	-	≈1140.44	U1	U1	U1	-	FV	c1	
PT	58900	19.7	x	x	N/A	N/A	0	<	U1	XX	U1	=	U1	nc	

EU Biogeographical assessment and proposed corrections															
MS/EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1
															Contrib. Type
EU27	298877	2GD				2GD			2GD	2GD	MTX	-	XX	no	C -

Legend: MS – Member State; Overall asses- Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole Biogeographical Region; Ref. – reference value; Struct & func. - structure and functions; Future prosp. – future prospect; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1: - target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV	Favourable	U1	Unfavourable - inadequate	U2	Unfavourable - bad	XX	Unknown
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Trend	0 = stable; + = increase; - = decrease; x = unknown
Qualifier	= stable; + positive; - negative; x unknown
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomic review; c1 – due to different methods to measure or evaluate; c2 - due to different thresholds use; d - no information about nature of change; e - due to less accurate or absent data; nc - no change
Target 1 contribution	A - favourable assessments; B - improved assess.; C - deteriorated assessments; D - unfavourable and unknown assessments that did not change; E - assessments that became unknown.

Pressures, threats and proposed measures

The countries reported several pressures with high or medium intensity. Only Portugal presented threats of high intensity: intensive cattle grazing, stock feeding, introduction of disease (microbial pathogens). Other important pressures are cultivation, fire and fire suppression. France did not report any threat or pressure for this habitat type.

Code	Pressure name	ES	FR	IT	PT
A01	Cultivation	M		M	
A02	modification of cultivation practices	M			
A04	grazing	L			
A04.01.01	intensive cattle grazing				H
A04.03	abandonment of pastoral systems, lack of grazing				M
A05	livestock farming and animal breeding (without grazing)	L			
A05.02	stock feeding				H
A09	Irrigation	L			
A10	Restructuring agricultural land holding	L			
B01.01	forest planting on open ground (native trees)			M	
B01.02	artificial planting on open ground (non-native trees)			M	
B02.01	forest replanting				L
B03	forest exploitation without replanting or natural regrowth				M
B07	Forestry activities not referred to above	L			
C01.01	Sand and gravel extraction			M	
D01	Roads, paths and railroads	M			
D01.02	roads, motorways			M	
E01	Urbanised areas, human habitation	M			
E01.02	discontinuous urbanisation			L	
E02	Industrial or commercial areas	M			
E03	Discharges	M			
G01	Outdoor sports and leisure activities, recreational activities	L			
G01.03	motorised vehicles			M	
J01	fire and fire suppression	M			M
J01.01	burning down			M	
K01.01	Erosion			L	
K02.01	species composition change (succession)				L
K04.03	introduction of disease (microbial pathogens)				H
X	No threats or pressures		X		

Legend: **L** Low intensity **M** Medium intensity **H** High intensity

France indicated no measure known or possibility to carry out specific measures for this habitat. According to other countries, maintaining grasslands and other open habitats, restoring/improving forest habitats are the most important proposed measures. Spain proposed also other important measures: adaptation of the forest management, establishing protected areas/sites, legal protection of habitats and species, regulating/management exploitation of natural resources on land.

Code	Measure name	ES	FR	IT	PT
1.3	No measure known/ impossible to carry out specific measures		M		

2.0	Other agriculture-related measures	M		
2.1	Maintaining grasslands and other open habitats	M	H	M
3.0	Other forestry-related measures	M		
3.1	Restoring/improving forest habitats	H	L	M
3.2	Adapt forest management	H		
6.1	Establish protected areas/sites	H		
6.3	Legal protection of habitats and species	H		
6.4	Manage landscape features	L		
7.0	Other species management measures	M		
7.1	Regulation/ Management of hunting and taking	M		
7.4	Specific single species or species group management measures	M		
9.1	Regulating/Management exploitation of natural resources on land	H		

Legend: **L** Low importance **M** Medium importance **H** High importance

Reason of selection for the first Mediterranean seminar

The habitat type was selected for the first Mediterranean seminar by an agreement of Member States despite a low value on the Priority index. The habitat reached score 16 because of medium to low values for criteria A and B. The habitat occurs in 4 countries (criterion A). The unfavourable - bad overall conservation status was reported by one country (Spain) and an unfavourable - inadequate status by two countries (Italy and Portugal). One country also reported a negative trend.

The Priority Index was calculated using information from the reports of Member States based on requirements of the Article 17 of the Habitats Directive for period 2001-2006. It is based on three parameters: A) Number of Member States where habitat type is present; B) Unfavourable conservation status of the habitat type (U2 – 2 points; U1 & XX – 1 point each), and C) Trend information: number of negative trends for parameters “Area of the habitat type” and qualifiers for “Structure & functions”. The index is then calculated using formula: $A*(B+C)$.

Reason for selection as “Low Hanging Fruit” (LHF) habitat in the Mediterranean region

Applying the methodology to identify LHF habitats in the Mediterranean region, habitat 6310 reached LHF score 25.88. This habitat type was classified as LHF especially because to reach improvement, the change from a declining to a stable trend within the category U2 (unfavourable-bad) is sufficient. It is normally much easier to improve a trend than to reach a different category. The habitat type was included to LHF also because of the fact that the improvement of the trend of only one parameter (Structure & Functions) in one country (Spain) and better information from Portugal is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, improvement of the habitat structure in Spain is needed. Better information about habitat in France, and improvement of information on the habitat range in Portugal is needed. The main measures should include maintenance of open habitats, regulation/management of natural resources exploitation, establishment of protected sites, legal protection of habitats and species, restoring/improving forest habitats, and adaptation of forest management.

Long-term conservation of dehesa should be based on (a) preventing changes to other land uses (irrigated crops, housing estates, intensive game farms) and (b) promoting natural regeneration of tree populations. Both strategies go through the proper incentive of the farms in a way that the owners find it profitable to maintain the configuration of the wooded pasture, making the necessary investments for the maintenance of this artificial habitat, in a way that is efficient from the socioeconomic point of view (Díaz et Pulido 2009).

ICNB proposed three management options, depending on the objectives to be achieved: 1) maintenance of traditional pastoral use; 2) spatial separation of forest use and agro-pastoral uses; 3) abandonment and conversion to forest habitat by ecological succession. The territorial planning should be implemented based on the objectives to be achieved, and through the implementation of specific guidelines for each option (ICNB). In option 1, the natural regeneration should be supported, grazing organised and the economic sustainability of traditional activities linked to the forest promoted. In option 2, the forest use and agro-pastoral uses should be spatially separated, reserving more fertile soils and places with access to water for grazing; tree plantation in gaps, thickening, if deemed necessary and maintenance of the forest areas for forest goods and services. Option 3: this "abandonment" is likely to happen spontaneously due to the lack of interest in those areas considered economically marginal, but in other areas it may constitute a conscious "non-management" option. It also implies an increase in forest fires and measures should be taken to prevent and reduce risk. The combination of these three options may constitute a rational planning strategy at the territorial scale and even co-exist within the same management unit (ownership).

The problem of the absence of natural regeneration could be solved by cycles of abandonment / reopening distributed in rotation in each farm or local group of farms, so that in the abandonment phases the regeneration of the trees is produced and in the open phases the environmental and commercial values associated with the woody configuration of the trees. Excluding of livestock for about twenty years, allowing for scrub, increases the recruitment of young trees until reaching an age structure that would ensure long-term regeneration (balanced proportions of young and old) (Ramírez et Díaz 2008). The areas to be regenerated would be reserved at all from pastoralism and agriculture until they regenerate and recover their "health".

Links

Díaz, M., Pulido, F.J., 2009: 6310 Dehesas perennifolias de *Quercus* spp. - In: VV.AA., Bases ecológicas preliminares para la conservación de los tipos de hábitat de interés comunitario en España. Madrid: Ministerio de Medio Ambiente, y Medio Rural y Marino. 69 pp.

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Grasslands&subject=6310®ion=MED>

ICNB: 6310 Montados de *Quercus* spp. de folha perene. -

<http://www.icnf.pt/portal/pn/biodiversidade/rn2000/resource/docs/rn-plan-set/hab/hab-6310>

Ramírez, J.A., Díaz, M., 2008: The role of temporal shrub encroachment for the maintenance of Spanish holm oak *Quercus ilex* dehesas. - Forest Ecology and Management 255: 1976-1983.

6520 Mountain hay meadows

	Selected for first round of Biogeographical Seminar
X	Selected using "Low hanging fruit" approach

Habitat summary

France's assessment led to the overall conservation status in the Mediterranean region being unfavourable-inadequate. The habitat is widespread in the Mediterranean biogeographical region. All of the habitat area is located in France.

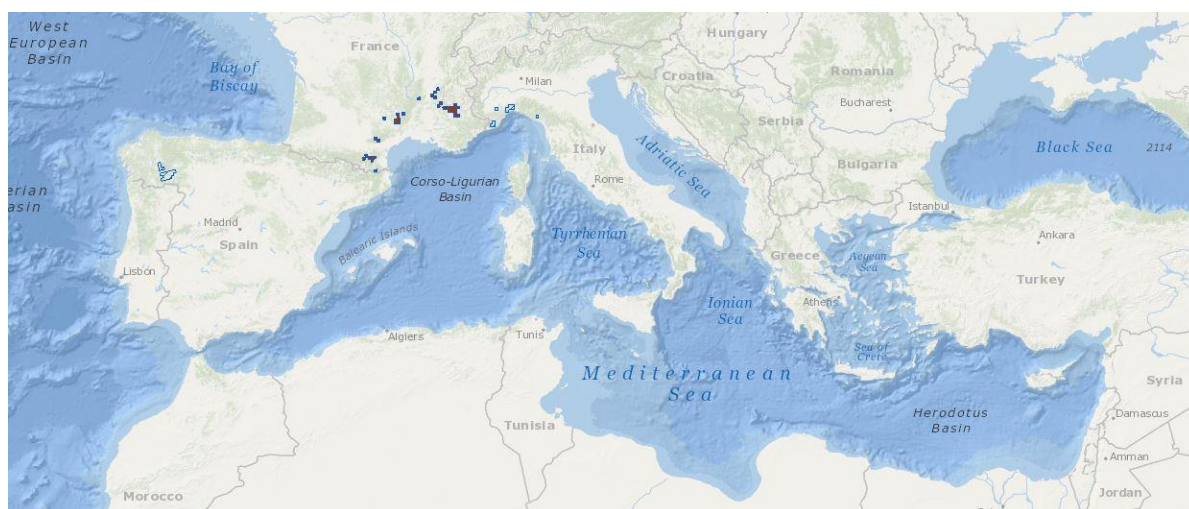
For the improvement of the overall conservation status, halting the decrease in habitat area in France is needed. Further improvement could be achieved through habitat restoration. The restoration measures include removal of scrub, trees and dead herb biomass, and starting mowing and grazing. Improving the conservation status of the habitat requires suitable management on large spatial scale and avoidance of intensive management. The most effective management is a combination of mowing once a year with subsequent grazing by small herds of cattle.

Habitat description

Species-rich mesophile hay meadows of the montane and sub-alpine levels (mostly above 600 metres) usually dominated by *Trisetum flavescens* and with *Heracleum sphondylium*, *Viola cornuta*, *Astrantia major*, *Carum carvi*, *Crepis mollis*, *C. pyrenaica*, *Bistorta major* (*Polygonum bistorta*), *Silene dioica*, *S. vulgaris*, *Campanula glomerata*, *Salvia pratensis*, *Centaurea nemoralis*, *Anthoxanthum odoratum*, *Crocus albiflorus*, *Geranium phaeum*, *G. sylvaticum*, *Narcissus poeticus*, *Malva moschata*, *Valeriana repens*, *Trollius europaeus*, *Pimpinella major*, *Muscari botryoides*, *Lilium bulbiferum*, *Thlaspi caerulescens*, *Viola tricolor* ssp. *subalpina*, *Phyteuma halleri*, *P. orbiculare*, *Primula elatior*, *Chaerophyllum hirsutum* and many others.

Distribution in the Mediterranean region and coverage by Natura 2000 network

In the Mediterranean biogeographical region the habitat type occurs only in France, with a habitat area of 54 km². The entire national habitat area is located in Natura 2000 sites.



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage /%/	Number of sites
France	54	100	17
Italy	N/A	N/A	2
Total	54	100	19

The table shows the size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographical region ('coverage') as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

France reported unfavourable-bad overall conservation status for this habitat type. Only the parameter Range was assessed as favourable. The parameter Structure and functions was assessed as unfavourable-inadequate, and the other two parameters (Area and Future prospects) as unfavourable-bad. The overall conservation status for the region has not changed from previous reporting.

Treated data from Member States reports															
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.				
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.	
FR	8500	100	0	≈8500	54	100	-	>>54	U1	U2	U2	-	U2	nc	

EU Biogeographical assessment and proposed corrections																	
MS/EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1		
															Contrib.	Type	
EU27	8500	00	0	≈8500	54	00	-	>>54	00	00	MTX	-	U2	nc	C	-	

Legend: MS – Member State; Overall asses – Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole biogeographical region; Ref. – reference value; Struct & func. – Structure and functions; Future prosp. – Future prospects; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1 – target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV	Favourable	U1	Unfavourable - inadequate	U2	Unfavourable - bad	XX	Unknown
Trend	0 = stable; + = increase; - = decrease; x = unknown							
Qualifier	= stable; + positive; - negative; x unknown							
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomical review; c1 – due to different methods to measure or evaluate; c2 – due to use of different thresholds; d – no information about nature of change; e – due to less accurate or absent data; nc – no change							
Target 1 contribution	A – favourable assessments; B – improved assess.; C – deteriorated assessments; D – unfavourable and unknown assessments that did not change; E – assessments that became unknown.							

Pressures, threats and proposed measures

France reported several pressures; the most important is fertilisation. Other important pressures include cultivation and biocenotic evolution, succession.

Code	Pressure name	FR
A01	Cultivation	M
A02	Modification of cultivation practices	L
A04	Grazing	L
A08	Fertilisation	H
K02	Biocenotic evolution, succession	M

Legend: **L** Low intensity **M** Medium intensity **H** High intensity

France considers maintaining grasslands and other open habitats, adapting crop production, and other agriculture-related measures of medium importance.

Code	Measure name	FR
2.0	Other agriculture-related measures	M
2.1	Maintaining grasslands and other open habitats	M
2.2	Adapting crop production	M

Legend: **L** Low importance **M** Medium importance **H** High importance

Reason for selection as “Low Hanging Fruit” (LHF) habitat in the Mediterranean region

Applying the methodology to identify LHF habitats in the Mediterranean region, habitat 6520 reached an LHF score of 3.00. This habitat type was classified as LHF because in order to achieve improvement it is sufficient to change from a decreasing to a stable trend in the category U1 (unfavourable-inadequate). It is normally much easier to improve a trend than to achieve a change in category. Other reasons for including the habitat type as LHF are that all of the habitat area in France is located in Natura 2000 sites and the fact that the trend of only one parameter (Area) in one country (France) needs to be improved in order to achieve overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, halting the decrease in habitat area in France is necessary. Further improvement could be achieved through habitat restoration. The most effective way of maintaining the species structure of mountain hay meadows is a combination of mowing once a year with subsequent grazing. Grazing, however, should not be done by small herds of cattle grazing the vegetation for a short time at the beginning of the growing season, and then after the first or second mowing (the autumn grazing of fresh grass). Mulching twice a year, while leaving the biomass on the site, is the preferred way of maintaining the meadows with a lower biomass production in lower altitudes, especially where the hay has no use. It is not suitable for grasslands in higher altitudes with frequent rains where decomposition of a large volume of biomass is slower. If the meadows are only mown, it is appropriate to fertilise them (Hegedüšová et al., 2011). The restoration measures include removal of scrub, trees and dead herb biomass and start of mowing and grazing.

Links

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Grasslands&subject=6520®ion=MED>

Hegedüšová, K., Ružičková, H., Janák, M., 2011: Mountain hay meadows. - In: ŠefferoVá Stanová, V., Plassman Čierna M. (eds.): Management models for grassland habitats. Daphne, Bratislava: 16-17.

8240 Limestone pavements

	Selected for first round of Biogeographical Seminar
X	Selected using "Low hanging fruit" approach

Habitat summary

Portugal's assessment led to the overall conservation status in the Mediterranean region being unfavourable-inadequate. The habitat occurs in the Mediterranean biogeographical region in Italy, France, and Portugal. Around 73 % of the habitat area is located in Italy.

For the improvement of the overall conservation status in the Mediterranean biogeographical region, halting the decrease in habitat area in Portugal is needed. Further improvement could be achieved through habitat restoration and thus increasing the habitat area in Portugal. The main measure is regulation of exploitation of natural resources, especially prohibition of quarrying in the area of habitat occurrence. Pasture management should be oriented to the maintenance of extensive grazing (ICNB). Another important measure is legal protection of the habitat.

Habitat description

Regular blocks of limestone known as "clints" with loose flags separated by a network of vertical fissures known as "grykes" or "shattered pavements", containing more loose limestone rubble. The rock surface is almost devoid of overlying soils (considerably less than 50 % cover) except for some patches of shallow skeletal or loessic soils, although more extensive areas of deeper soil occasionally occur; sometimes there is encroachment of peat. This morphology offers a variety of microclimates allowing the establishment of complex vegetation consisting of a mosaic of different communities. The fissures provide a cold humid microclimate where shade-tolerant vascular plants such as *Geranium robertianum* and *Ceterach officinale* occur, as well as formations of herbaceous species typical of calcareous woodland; the small pockets of soil are occupied by communities of *Mesobromion* (e.g. *Seslerio-Mesobromenion*); heath and scrub also occur (e.g. *Corylo-Fraxinetum*). Apart from areas of species-rich scrub (generally *Prunetalia spinosae*), the ecosystem is maintained by grazing in some regions; this, combined with severe winds, means that isolated shrubs can only survive in prostrate growth form (e.g. *Dryas octopetala*); *Geranium sanguineum* occurs at the margins of ungrazed sites.

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type occurs in Italy, France, and Portugal. The overall representation of the habitat in Natura 2000 sites is high (ca 99 %). In both France and Italy the entire national habitat area is located in Natura 2000 sites.



Natura 2000 sites in the Mediterranean region			
Country	Habitat area /km ² /	Coverage /%/	Number of sites
France	11	100	7
Italy	31	100	33
Portugal	0	N/A	5
Total	42	99	45

The table shows the size of the habitat area in Natura 2000 sites and its proportion compared to habitat area in the whole biogeographical region ('coverage') as reported by MS in the 2013 Article 17 report. The number of sites was extracted from the 2016 Natura 2000 database.

Biogeographical conservation status assessment

Portugal's assessment led to the overall conservation status of this habitat type in the Mediterranean biogeographical region being unfavourable-inadequate. This conclusion was reached despite favourable status in France and Italy. At the biogeographical region level, two parameters (Structure and functions; Range) were assessed as favourable, the other two (Future prospects; Area) as unfavourable-inadequate. The overall conservation status for the region has not changed from previous reporting.

Treated data from Member States reports														
MS	Range (km ²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
FR	1500	7.7	0	≈1500	11.40	26.9	0	≈11.40	FV	FV	FV		FV	nc
IT	11300	57.7	0	≈11300	31.01	73.1	0	≈31.01	FV	FV	FV		FV	
PT	6800	34.7	0	x	N/A	N/A	-	>	FV	U1	U1	-	U1	nc

EU Biogeographical assessment and proposed corrections																
MS/EU27	Surface	Range Concl.	Trend	Ref.	Surface	Area Concl.	Trend	Ref.	Struct. func.	Future prosp.	Curr. CS Concl.	Qualifier	Prev. CS Concl.	Nat. of ch.	Target 1	
															Contrib.	Type
EU27	19600	0	0	≈19600	42	2GD	-	>42	0	2GD	MTX	-	U1	nc	C	-

Legend: MS – Member State; Overall asses – Overall assessment; % MS – percentage of the surface area in the respective Member State compared to whole biogeographical region; Ref. – reference value; Struct & func. – Structure and functions; Future prosp. – Future prospects; Curr. CS – current conservation status; Prev. CS – previous conservation status; Nat. of ch. – nature of change; EU27: assessment on the level of all EU Member Countries; Concl. – conclusion; Target 1 – target 1 of the EU 2020 Biodiversity Strategy.

Conservation status	FV	Favourable	U1	Unfavourable - inadequate	U2	Unfavourable - bad	XX	Unknown
Trend	0 = stable; + = increase; - = decrease; x = unknown							
Qualifier	= stable; + positive; - negative; x unknown							
Nature of change	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomical review; c1 – due to different methods to measure or evaluate; c2 – due to use of different thresholds; d – no information about nature of change; e – due to less accurate or absent data; nc – no change							
Target 1 contribution	A – favourable assessments; B – improved assess.; C – deteriorated assessments; D – unfavourable and unknown assessments that did not change; E – assessments that became unknown.							

Pressures, threats and proposed measures

The countries reported several pressures, the most important being mining and quarrying. Other important pressures include abandonment of pastoral systems, lack of grazing, sand and gravel quarries, renewable abiotic energy use, discharges, and skiing complex.

Code	Pressure name	FR	IT	PT
A04.03	Abandonment of pastoral systems, lack of grazing			M
C01	Mining and quarrying	M	H	
C01.01.01	Sand and gravel quarries			M

Code	Pressure name	FR	IT	PT
C03	Renewable abiotic energy use	M		
D01	Roads, paths and railroads	L		
D02	Utility and service lines	L		
E01	Urbanised areas, human habitation	L		
E02	Industrial or commercial areas	L		
E03	Discharges	M		
E04	Structures, buildings in the landscape	L		
E05	Storage of materials	L		
G01.04	Mountaineering, rock climbing, speleology		L	
G01.06	Skiing, off-piste		L	
G02.02	Skiing complex		M	
G05.01	Trampling, overuse		L	
K02.01	Species composition change (succession)			L
L04	Avalanche		L	

Legend: **L** Low intensity **M** Medium intensity **H** High intensity

The regulating/management of the exploitation of natural resources is the most important proposed measure. Another important measure is legal protection of habitats and species. According to France, there is no measure known or it is impossible to carry out specific measures.

Code	Measure name	FR	IT	PT
1.3	No measure known/ impossible to carry out specific measures	M		
2.1	Maintaining grasslands and other open habitats			L
6.3	Legal protection of habitats and species		M	
9.1	Regulating/Management exploitation of natural resources on land		H	H

Legend: **L** Low importance **M** Medium importance **H** High importance

Reason for selection as “Low Hanging Fruit” (LHF) habitat in the Mediterranean region

Applying the methodology to identify LHF habitats in the Mediterranean region, habitat 8240 reached an LHF score of 1.00. This habitat type was classified as LHF because to achieve improvement it is sufficient to change from a decreasing to a stable trend in the category U1 (unfavourable-inadequate). It is normally much easier to improve a trend than to achieve a change in category. Other reasons for including the habitat type as LHF are its quite significant representation in Natura 2000 sites (up to 99 %) and the fact that the trend of only one parameter (Area) in one country (Portugal) needs to be improved in order to achieve overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Mediterranean biogeographical region, halting the decrease in habitat area in Portugal is needed. Further improvement could be achieved through habitat restoration and thus increasing the habitat area in Portugal. The main measure is regulation of exploitation of natural resources, especially prohibition of quarrying in the area of habitat occurrence. Pasture management should be oriented to the maintenance of extensive grazing (ICNB). Another important measure is legal protection of the habitat. According to France, there is no measure known or it is impossible to carry out specific measures.

Links

<https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Rocky+habitats&subject=8240®ion=MED>

ICNB: 8240 *Lajes calcarias. <http://www.icnf.pt/portal/pn/biodiversidade/rn2000/resource/docs/rn-plan-set/hab/hab-8240>