Annex VII – Forest habitat Group

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

Contents

9180 *Tilio-Acerion* forests of slopes, screes and ravines

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

Habitat summary

The assessments of France and Italy led to the overall conservation status in the Mediterranean region being unfavourable-inadequate. The habitat occurs in the Mediterranean biogeographical region in Italy, France, Spain, and Greece. Around 65 % of the habitat area is located in Italy.

Improvement of the habitat structure in Italy is needed. Further improvement could be achieved through habitat restoration and thus increasing the habitat area in Italy. The main measures should include adaptation of forest management and restoring forest habitat. The measures should respect and support the soil protection and anti-erosion functions of the habitat. Management interventions should be minimised and fine measures preferred. Clear-cuts should be replaced by individual tree selection; the stands in extreme positions (steep relief, shallow soils, screes) should be excluded from management; natural regeneration should be preferred; and the dead wood should be left in stands. Other important measures include establishment of protected sites and legal protection of habitats and species. Better information about habitat area in France and habitat structure and functioning in Spain is needed.

Habitat description

Mixed forests of secondary species (*Acer pseudoplatanus, Fraxinus excelsior, Ulmus glabra, Tilia cordata*) of coarse scree, abrupt rocky slopes or coarse colluvium of slopes, particularly on calcareous, but also on siliceous, substrates (*Tilio-Acerion* Klika 55). A distinction can be made between one grouping which is typical of cool and humid environments (hygroscopic and shade-tolerant forests), generally dominated by the sycamore maple (*Acer pseudoplatanus*) - sub-alliance *Lunario-Acerenion* - and another which is typical of dry, warm screes (xerothermophile forests), generally dominated by limes (*Tilia cordata, T. platyphyllos*) - sub-alliance *Tilio-Acerenion*. The habitat types belonging to the *Carpinion* should not be included here.

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type occurs in Italy, France, Spain, and Greece. In France quite large proportion (around 70 %) of the national habitat area is located in Natura 2000 sites. In Spain a large part of the national habitat area is located in Natura 2000 sites; however, there seems to be a mistake in the data, possibly overestimation of habitat area in Natura 2000 sites.

Natura 2000 sites in the Mediterranean region			
Country	**Habitat area /km²/**	**Coverage /%/**	**Number of sites**
France	40-50	62-77	42
Greece	0	0	6
Italy	71	31	81
Spain	50	139	39
Total	**161-171**	**47**	**168**

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 France and Italy led to the overall conservation status of this habitat type in the Mediterranean biogeographical region being unfavourable-inadequate. The overall conservation status is favourable in Greece and unknown in Spain. Better knowledge of habitat area in France and habitat structure and functions in Spain is needed. At the biogeographical region level, all four parameters (Range; Area; Structure and functions; Future prospects) were assessed as unfavourable-inadequate. The overall conservation status for the region has not changed from previous reporting.

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
GR	23	0	0	23	23	6.6	0	23	FV	FV	FV		FV	
ES	33451	34.9	x	≈33451	36	10.3	0	≈36	XX	XX	XX		XX	
FR	31900	33.2	0	≈31900	65	18.5	x	x	FV	U1	U1	x	U1	nc
IT	30600	31.9	0	>30600	227.09	64.7	0	>227.09	U1	FV	U1	-	FV	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	95974	1	0	>95974	351	2XA	0		2XA	2XA	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 a broad range of pressures, the most important being grazing (reported by Spain). Other important pressures include forest exploitation without replanting or natural regrowth, roads, paths and railroads, livestock farming and animal breeding (without grazing), forest planting on open ground, pollution to surface waters, and burning down.

Code	Pressure name	ES	FR	IT
A04	Grazing	H		
A05	Livestock farming and animal breeding (without grazing)	M		
B01	Forest planting on open ground	M		
B01.02	Artificial planting on open ground (non-native trees)			M
B02	Forest and Plantation management & use		M	
B02.02	Forestry clearance			M
B03	Forest exploitation without replanting or natural regrowth	M		M
D01	Roads, paths and railroads	M	L	
D01.02	Roads, motorways			M
E03	Discharges		L	M
E06	Other urbanisation, industrial and similar activities	L		
F06	Hunting, fishing or collecting activities not referred to above	L		
G01	Outdoor sports and leisure activities, recreational activities	L		
G01.03	Motorised vehicles			M
G01.04	Mountaineering, rock climbing, speleology	L		
G02	Sport and leisure structures	L		
G02.02	Skiing complex	L		
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)			M
H06.01	Noise nuisance, noise pollution	L		
I01	Invasive non-native species		L	L
J01.01	Burning down			M
J02	Human induced changes in hydraulic conditions		L	
J02.05.02	Modifying structures of inland water courses			M
K01	Abiotic (slow) natural processes		L	
K01.01	Erosion	L		
K02	Biocenotic evolution, succession		L	
K03.04	Predation	L		
K04	Interspecific floral relations	L		
K05	Reduced fecundity/ genetic depression	L		
L04	Avalanche	L		
L09	Fire (natural)	L		

Legend: L Low intensity M Medium intensity H High intensity

Adapting forest management, and restoring/improving forest habitats are the most important proposed measures. Other important measures are establishment of protected areas/sites, legal protection of habitats and species, and other species management measures.

Code	Measure name	ES	FR	IT
1.2	Measures needed, but not implemented	N/A		
3.0	Other forestry-related measures	L		
3.1	Restoring/improving forest habitats	M		H
3.2	Adapt forest management	L	M	H
6.0	Other spatial measures	L		
6.1	Establish protected areas/sites	H		L
6.3	Legal protection of habitats and species	H		
7.0	Other species management measures	H		

Code	Measure name	ES	FR	IT
7.4	Specific single species or species group management measures	M		
9.0	Other resource use 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 9180 reached an LHF score of 13.60. 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 to achieve overall improvement and better information from Spain and France would also contribute to 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 Italy is needed. Further improvement could be achieved through habitat restoration and thus increasing the habitat area in Italy. The main measures should include adaptation of forest management and restoring forest habitat. The measures should respect and support the soil protection and anti-erosion functions of the habitat. Management interventions should be minimised and fine measures preferred. Clear-cuts should be replaced by individual tree selection; the stands in extreme positions (steep relief, shallow soils, screes) should be excluded from management; natural regeneration should be preferred; and the dead wood should be left in stands. Other important measures include establishment of protected sites and legal protection of habitats and species. Better information about habitat area in France and habitat structure and functioning in Spain is needed.

Links

https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9180&region=MED

9260 Castanea sativa woods

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 - bad due to the assessments of Spain and France. In the Mediterranean biogeographic region, the habitat is widespread in Italy and Greece; it also occurs in Spain, Portugal, and France. Around 57% of the habitat area is located in Italy, around 37% in Greece.

Improvement of the habitat structure in France and an increase of the habitat area by restoration in Spain are needed. Better information about habitat structure and functioning is needed in Portugal. The main measures should include establishment of protected sites and improvement of the habitat by adaptation of the forest management. It should address pressures like artificial planting using non-native trees, forest exploitation without replanting or natural regrowth, forestry clearance, grazing in forest and fires. Regulation of access, road construction and urbanisation are needed. There is also a need for measures against the fungi illness of chestnut trees as indicated by Spain and Portugal. Designation of protected areas are an important measure because a very small part of the habitat is located in Natura 2000 sites in Italy (15%).

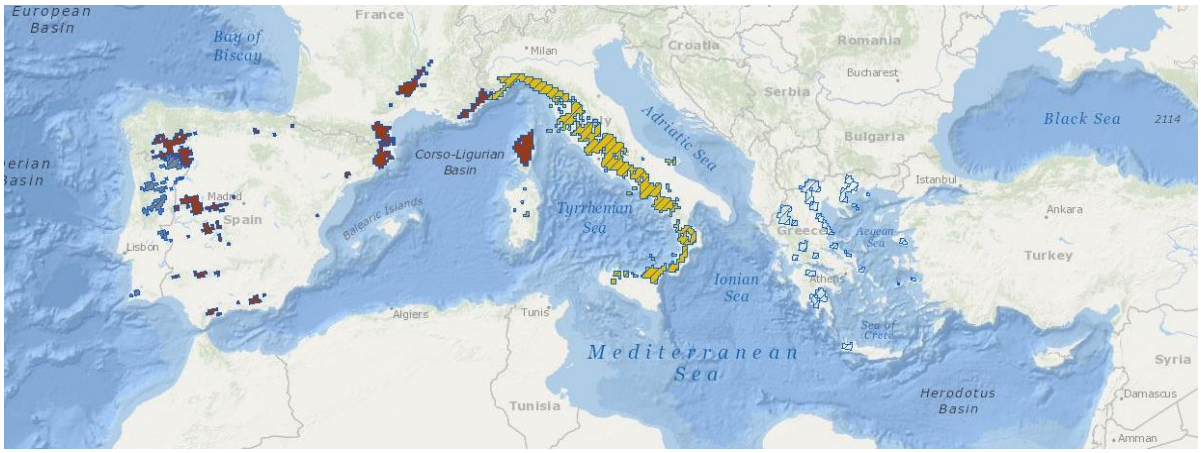
The recent strong regression of the space occupied by the habitat can be attributed mainly to the change in use and management, as well as to fires. Abandonment of chestnut trees is caused by the lack of profitability of their products. For the conservation of chestnut trees, silvicultural treatments are important, mainly clearing and pruning. In chestnut orchards more or less severe pruning depending on the sanitary condition of the tree are favourable, to allow rehabilitation; it is needed to remove dead branches. Grazing makes it possible to maintain the undergrowth by limiting scrub extension. Grazing in chestnut orchards is also useful for the production of a diversified resource with a herb that is rich in legumes and complement with the chestnuts. Implementation of fire protection measures are needed.

Habitat description

Supra-Mediterranean and sub-Mediterranean *Castanea sativa*-dominated forests and old established plantations with semi-natural undergrowth.

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is widespread in Italy and Greece. It also occurs in Spain, Portugal and France. The overall low representation of the habitat in Natura 2000 sites (ca 15%) is due to area of this habitat in Natura 2000 sites in Italy. A large national habitat area is located in Natura 2000 sites in France (62-70%). The habitat area in Natura 2000 sites in Spain is probably overestimated – it is larger than the total habitat area in Spain reported in the Article 17 report (2013).



Natura 2000 sites in the Mediterranean region			
Country	**Habitat area /km²/**	**Coverage /%/**	**Number of sites**
France	155-175	62-70	33
Greece	0	0.0	37
Italy	744	15.0	217
Portugal	0	N/A	13
Spain	377	147.0	80
Total	**1,276-1,296**	**15**	**380**

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 assessments of Spain and France. The other two countries - Greece and Italy – reported an unfavourable – inadequate conservation status and Portugal an unknown status. Knowledge about the habitat structure and functions is not sufficient in Portugal that assessed this parameter as unknown. On the biogeographical level, two parameters (Range; Area) were assessed as unfavourable - inadequate, Structure and Functions as favourable and the Future prospect as unfavourable – bad. The overall conservation status for the region has been changed compared to the previous reporting from unknown to unfavourable – inadequate. This change is considered not genuine; it is due to better data and different methods used in Spain and Italy.

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
GR	3300	1.7	0	3300	3300	37.3	0	3300	FV	U1	U1	N/A	U1	
ES	43834	22.8	0	>43834	257	2.9	-	>257	FV	U2	U2	-	XX	c1
FR	25600	13.3	0	≈25600	250	2.8	0	≈250	U2	U2	U2	=	U2	nc
IT	97600	50.7	-	≈97600	5051.25	57	-	<5051.25	FV	FV	U1	-	FV	c1
PT	22000	11.4	0	≈22000	N/A	N/A	0	≈	XX	XX	XX		XX	

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	192334	1	-	>192334	8858	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 several pressures with high or medium intensity. According to France the most important is forest and plantation management and use. Other countries emphasize forestry clearance, forest exploitation without replanting or natural regrowth, fire and fire suppression.

Code	Pressure name	ES	FR	IT	PT
A02	modification of cultivation practices	M			
A04	grazing	M			
B01	forest planting on open ground	M			
B01.02	artificial planting on open ground (non-native trees)			M	
B02	Forest and Plantation management & use		H		
B02.01	forest replanting			L	
B02.02	forestry clearance			M	M
B02.03	removal of forest undergrowth			L	
B03	forest exploitation without replanting or natural regrowth	M	L		L
B04	use of biocides, hormones and chemicals (forestry)		L		
B06	grazing in forests/ woodland		M		
B07	Forestry activities not referred to above		L		
D01	Roads, paths and railroads	L			
D01.02	roads, motorways			M	
D02.01	electricity and phone lines			M	
E01	Urbanised areas, human habitation	L			
E01.02	discontinuous urbanisation			M	
G01.03	motorised vehicles			M	
G05	Other human intrusions and disturbances	L			
J01	fire and fire suppression	M	L		
J01.01	burning down			M	
K02	Biocenotic evolution, succession	L			
K03.03	introduction of disease (microbial pathogens)	M			M
K04	Interspecific floral relations	L			
L09	fire (natural)	M			

Legend: L Low intensity M Medium intensity H High intensity

Countries consider restoring/improving forest habitats, legal protection of habitats and species, establishment of protected areas/sites as important. France indicated that there is no measure known or possibility to carry out specific measures.

Code	Measure name	ES	FR	IT	PT
1.3	No measure known/ impossible to carry out specific measures		M		
3.0	Other forestry-related measures	M		H	
3.1	Restoring/improving forest habitats	M		H	M
3.2	Adapt forest management	L		M	
6.0	Other spatial measures	M		M	
6.1	Establish protected areas/sites	M		M	
6.3	Legal protection of habitats and species	M		H	
7.4	Specific single species or species group management measures	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 countries despite the relatively low value on the Priority index. The habitat reached score 30 because of quite high values for criteria A and B. The habitat occurs in five countries (criterion A). The unfavourable -

bad overall conservation status was reported by two countries (Spain and France) and an unfavourable - inadequate status by the other two countries (Greece, Italy). Two countries (Spain, Italy) 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).

Priority conservation measures needed

For improvement of the overall conservation status in the Mediterranean biogeographical region, improvement of the habitat structure in France and an increase of the habitat area by restoration in Spain are needed. Better information about habitat structure and functioning is needed in Portugal.

The main measures should include establishment of protected sites and improvement of the habitat by adaptation of the forest management. It should address pressures like artificial planting using non-native trees, forest exploitation without replanting or natural regrowth, forestry clearance, grazing in forest, fires, and burning down. The regulation of access, road construction and urbanisation are needed. There is also a need for measures against the fungi illness of chestnut trees as indicated by Spain and Portugal. The designation of protected areas is an important measure as a very low part of habitat is located in Natura 2000 sites in Italy (15%).

The recent strong regression of the space occupied by the habitat can be attributed mainly to the change in use and management, as well as to fires. The abandonment of chestnut trees is caused by the lack of profitability of their products. It is possible to maintain coppice (small wood) practices or to increase rotations towards timber production. The chestnut trees need to be conserved with silvicultural treatments, mainly clearing and pruning. Pruning helps to maintain the conditions of equilibrium between the aboveground and underground parts.

In chestnut orchards more or less severe pruning depending on the sanitary condition of the tree is favourable to allow a lasting rehabilitation; it is needed to remove dead branches. Grazing makes it possible to maintain the undergrowth by limiting scrub extension. If grazed by sheep, initial brushing is necessary; grazing in chestnut orchards is suitable and useful also for production of a diversified resource with a herb of quality rich in legumes and complement with the chestnuts. It is needed to implement the fire protection measures (INPN).

The lack of definition of chestnut trees as forests or as agricultural systems, and their possible origin of wild-caught allochthonous species, can be the cause of the lack of concrete and objective data on the dominant species and the habitat (Rubio 2009).

Links

https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9260&region=MED

ICNB: 9260 Florestas de *Castanea sativa*. - http://www.icnf.pt/portal/pn/biodiversidade/rn2000/resource/docs/rn-plan-set/hab/hab-9260

INPN: 9260 Forêts de *Castanea sativa*. - https://inpn.mnhn.fr/site/natura2000/habitat/9260/cahiers-habitats

Rubio A., 2009: 9260 Bosques de Castanea sativa. - 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. 64 pp.

9320 *Olea* and *Ceratonia* forests

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 five countries (Greece, Spain, France, Italy, and Portugal). This type of habitat is in the Mediterranean biogeographic region widespread in Spain and Italy; it occurs also in Portugal, United Kingdom (Gibraltar), France, Malta, Greece, and Cyprus. In Spain the habitat is located around 35% of the habitat area and in Italy around 32%. Improvement of the negative trend in habitat structure in Italy and Portugal is needed. Further improvement could be reached by improving of structure and function in Spain, France, Italy and Portugal and increasing habitat area by restoration in countries that reported smaller habitat area than the reference value: Greece, France, and Portugal. Better information about habitat area in Spain is needed.

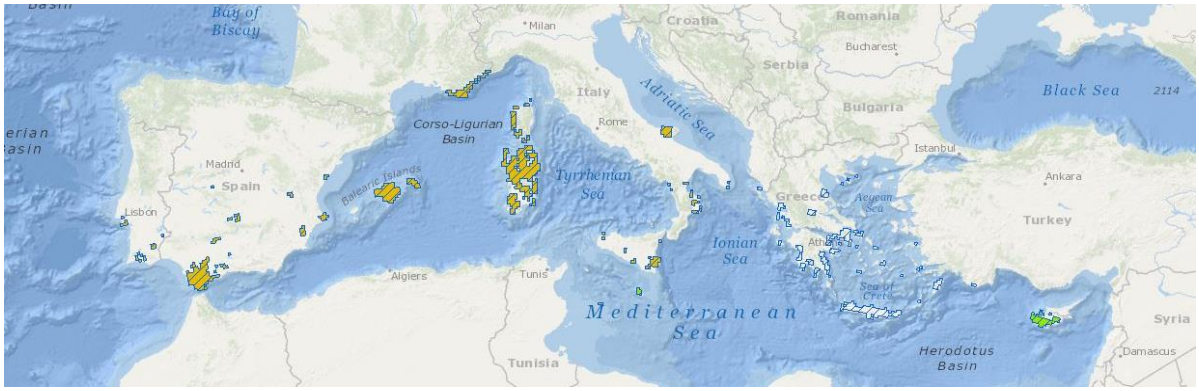
The main measures should include restoration or improvement of forest habitat, legal protection of habitat, and establishment of protected sites. More habitat should be strictly protected and ecological restoration should take place. Dominant plants of the habitat seem particularly successful after restoration and considerable information on the ecological restoration practices in the Mediterranean region exists. The landscape-level function of most wild olive trees depends to a large extent on the role of birds and other seed dispersants. The forest management adaptation should address practices like forestry clearance, removal of dead and dying trees, forest exploitation without replanting or natural regrowth, planting of non-native trees, and fires. Regulation of grazing, cultivation, urbanisation and road building, as well as removal of invasive alien species belong to important measures as well. The habitat would benefit significantly from a reduction in the livestock pressure and protection of juveniles (seedlings) against grazing.

Habitat description

Thermo-Mediterranean or thermo-Canarian woodland dominated by arborescent *Olea europaea* ssp. *sylvestris*, *Ceratonia siliqua*, *Pistacia lentiscus*, *Myrtus communis* or, in the Canary Islands, *by Olea europaea* ssp. *cerasiformis* and *Pistacia atlantica*. Most formations will be listed as arborescent matorral (32.12), but a few stands may have a sufficiently tall, closed canopy to qualify for this unit. This habitat type includes three sub-types: Wild olive woodland, Carob woodland, Canarian olive woodland.

Distribution in the Mediterranean region and coverage by Natura 2000 network

This habitat type is widespread in Spain and Italy. It also occurs in Portugal, United Kingdom (Gibraltar), France, Malta, Greece, and Cyprus. The overall low representation of the habitat in Natura 2000 sites (ca 21 %) is due to area of this habitat in Natura 2000 sites in Italy (15 %) and Spain (31%). In Natura 2000 sites in France, Malta and United Kingdom the whole national habitat area is located and relatively large parts can be found in Cyprus.



Natura 2000 sites in the Mediterranean region			
Country	**Habitat area /km²/**	**Coverage /%/**	**Number of sites**
Cyprus	60	55.0	18
France	34	100.0	23
Greece	0	0.0	64
Italy	117	15.0	77
Malta	24	100.0	7
Portugal	0	N/A	4
Spain	255	31.0	113
United Kingdom	2.25	100.0	1
Total	**492**	**21**	**307**

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 Mediterranean biogeographical region is unfavourable - inadequate due to assessment of five countries (Greece, Spain, France, Italy, and Portugal). The favourable status was reported in other three countries (Cyprus, Malta, and United Kingdom). On the level of biogeographical region, three parameters (Range; Area; Structure and Functions) were assessed as unfavourable - inadequate, and only Future prospect as unknown. The overall conservation status for the region has not been changed from previous reporting.

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
CY	2257	3.5	+	2257	107.77	4.6	0	107.77	FV	FV	FV		XX	b1
GR	605	0.9	-	>605	605	25.6	-	>605	FV	XX	U1	N/A	U1	
ES	23901	37.4	0	≈23901	835	35.4	x	≈835	U1	U1	U1	x	U1	c1
FR	6400	10	0	≈6400	33.80	1.4	0	>33.80	U1	U1	U1	=	U1	nc
IT	26600	41.6	-	≈26600	753.29	31.9	-	≈753.29	U1	U1	U1	-	FV	c1
MT	24	0	0	≈24	24	1	0	≈24	FV	FV	FV		XX	nc
PT	4200	6.6	0	≈4200	N/A	N/A	-	>	U1	XX	U1	-	U1	nc
UK	3	0	0	2.25	2.25	0.1	0	2.25	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	63990	1	-	>63989	2361	2GD	-		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 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 high number of pressures. The most important pressures seems to be fire and fire suppression, urbanised areas, human habitation, grazing. To other important pressures belong cultivation, abandonment of pastoral systems, lack of grazing, forestry clearance, structures, buildings in the landscape, invasive non-native species, burning down.

Code	Pressure name	CY	ES	FR	IT	MT	PT	UK
A01	Cultivation	L	H					
A04	grazing		H		H			
A04.03	abandonment of pastoral systems, lack of grazing					H		
A06.02	perennial non-timber crops						M	
B01.02	artificial planting on open ground (non-native trees)				M			
B02	Forest and Plantation management & use	L						
B02.02	forestry clearance				M		H	
B02.03	removal of forest undergrowth						L	
B02.04	removal of dead and dying trees					M		
B03	forest exploitation without replanting or natural regrowth				M			
B07	Forestry activities not referred to above					M		
D01	Roads, paths and railroads			L	M			
D01.01	paths, tracks, cycling tracks	L					M	
D01.02	roads, motorways				M		L	
D03	shipping lanes, ports, marine constructions			L				
D05	Improved access to site			L				
E01	Urbanised areas, human habitation	L	H	H			M	
E01.03	dispersed habitation				L			
E02	Industrial or commercial areas			M				
E03	Discharges			L	L			
E04	Structures, buildings in the landscape	L		M			H	
E05	Storage of materials			L				
G01	Outdoor sports and leisure activities, recreational activities			L				
G01.03	motorised vehicles				M		M	
G02	Sport and leisure structures		L	M			L	
G05	Other human intrusions and disturbances		L	M				M
G05.01	Trampling, overuse						M	
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)			M				
H04.03	other air pollution							M
H05.01	garbage and solid waste						L	
I01	invasive non-native species			M		H		
I03	introduced genetic material, GMO		L					
J01	fire and fire suppression		M	H			M	M
J01.01	burning down				M	H		
J02.01	Landfill, land reclamation and drying out, general						M	
K04	Interspecific floral relations		L					

Code	Pressure name	CY	ES	FR	IT	MT	PT	UK
L09	fire (natural)	M	M					

Legend: L Low intensity M Medium intensity H High intensity

Member countries consider restoring/improving forest habitats, legal protection of habitats and species, establishment of protected areas/sites as the most important proposed measures. Other important measures are regulation/management of hunting and taking, regulating/management exploitation of natural resources on land, other forestry-related measures. France informed that no measures are needed for the conservation of this habitat.

Code	Measure name	CY	ES	FR	IT	MT	PT	UK
1.1	No measures needed for the conservation of the habitat/species			M				
1.2	Measures needed, but not implemented						NA	
3.0	Other forestry-related measures		M			H		
3.1	Restoring/improving forest habitats	M	L		L	M	L	M
3.2	Adapt forest management		L					
6.0	Other spatial measures						H	
6.1	Establish protected areas/sites	H	L			H		
6.3	Legal protection of habitats and species	H	M			H		H
6.4	Manage landscape features		L					
7.1	Regulation/ Management of hunting and taking					H		
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 because of its high value of the Priority index. The habitat reached score 72 because of the high values in criteria A and B. The habitat occurs in eight countries (criterion A). Five countries reported unfavourable - inadequate overall conservation status. Countries reported also negative trends in three cases.

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 negative trend in habitat structure in Italy and Portugal is needed. Further improvement could be reached by improving of structure and function in Spain, France, Italy and Portugal and increase of the habitat area by restoration in countries that reported smaller habitat area than the reference value: Greece, France, and Portugal. Better information about habitat area in Spain is required.

The main measures should include restoration or improvement of forest habitat, legal protection of habitat, and establishment of protected sites. The surface occupied by the habitat is suboptimal in most of the enclaves where it still remains. Under no circumstances should the occupied surface of the habitat be further reduced - the habitat conservation should go through strict protection and the implementation of ecological restoration activities. The habitat could be included in the networks of integral micro-reserves to be created, possibly at municipal level and even in urban or sub-urban context (ICNB). Dominant plants of the habitat seem particularly prone to give successful results in

restoration (Rey et al. 2009). There is already considerable information on the implementation of ecological restoration practices in the Mediterranean region that suggests the use of pioneer shrubs and other plants already established as nurseries for the installation of seedlings. The landscape-level function of most wild olive trees depends to a large extent on the role of birds and other seed dispersants.

The forest management adaptation should address practices like forestry clearance, removal of dead and dying trees, forest exploitation without replanting or natural regrowth, planting of non-native trees, and fires. These formations are currently shown as fragmented habitat types immersed in anthropogenic habitat matrices, mainly agricultural land and livestock. An agricultural matrix based on olive groves can alleviate some of the problems derived from the fragmentation phenomenon. Regulation of grazing, cultivation, urbanisation and road building, as well as removal of invasive alien species belong to the other important measures. The habitat would benefit significantly from a reduction in the livestock pressure, the practices protected juveniles (seedlings) of the main species formation against grazing would be highly recommended for habitat regeneration.

Links

https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9320&region=MED

ICNB: 9320 Florestas de *Olea* e *Ceratonia*. - http://www.icnf.pt/portal/pn/biodiversidade/rn2000/resource/docs/rn-plan-set/hab/hab-9320

INPN: 9320 Forêts à *Olea* et *Ceratonia*. - https://inpn.mnhn.fr/site/natura2000/habitat/9320/cahiers-habitats

Rey, P.J., Alcántara, J.M., Fernández, J.M., 2009: 9320 Bosques de Olea y Ceratonia. - 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. 66 pp.

9330 *Quercus suber* forests

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 three countries (France, Italy, Portugal). This habitat type is widespread in the Mediterranean biogeographic region in Spain and Italy; it occurs also in France and Portugal. In Spain is located around 57% of the habitat area, in Italy around 36%.

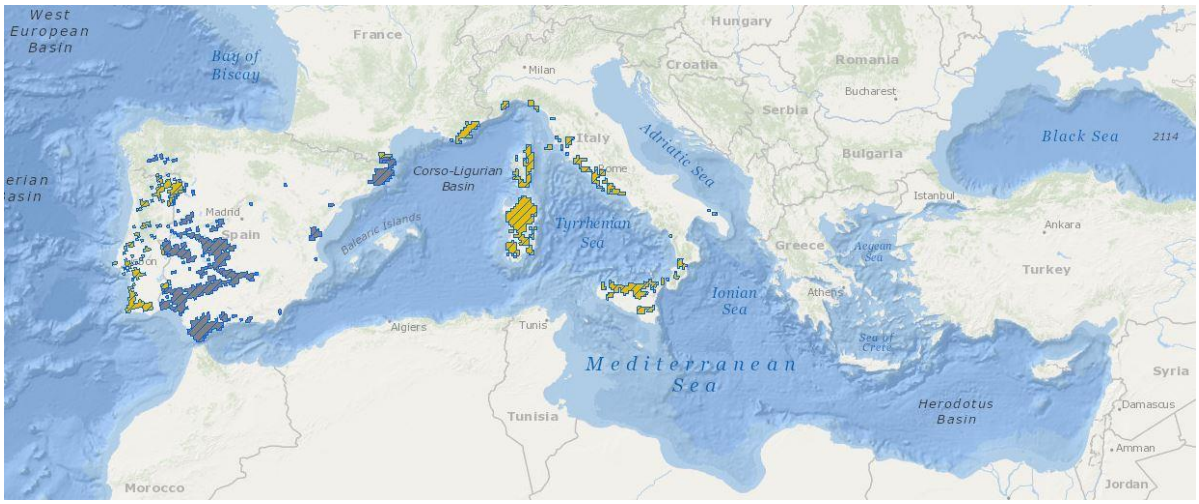
Improvement of the habitat structure and increase of the habitat area in Italy and Portugal are needed. Better information about this habitat is needed in Spain. The long-term conservation of habitat should be based on (a) preventing change to other land uses; b) promote the natural regeneration; c) make the extraction of cork in an appropriate manner; and d) avoid fires in newly uncorked areas. The main measures should include restoration and improvement of forest habitat, adaptation of forest management, legal protection of the habitat, and establishment of protected areas. The forest management adaptation should address the main pressures: forest exploitation without replanting or natural regrowth, forestry clearance, artificial planting of non-native trees, forest fires. It is necessary to avoid afforestation of the habitat by fast- growing tree species. The regeneration of habitat should be facilitated by the selective thinning of dense sticks, for seedlings support, it is useful to do some soil preparation (brushing and cropping). The freshly corked cork oaks are very susceptible to fires, therefore measures reducing fire risk are needed. The regulation of grazing and urbanisation as well as removal of invasive species (if occurring) is necessary as well. The abandonment of management of habitat 6310 (Dehesas with evergreen *Quercus* spp) is an obvious way to increase the occupancy area of habitat 9330 by ecological succession.

Habitat description

West-Mediterranean silicicolous forests dominated by *Quercus suber*, usually more thermophile and hygrophile than holm-oak forests (45.3). In this habitat type several sub-types are included: Tyrrhenian cork-oak forests, South-western Iberian cork-oak forests, North-western Iberian cork-oak forests, Aquitanian cork-oak woodland.

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is widespread in Spain and Italy. It occurs also in France and Portugal. The overall representation of the habitat in Natura 2000 sites is rather low (ca 32 %). This is due to area of this habitat in Natura 2000 sites in Italy (10 %). The largest national habitat area located in Natura 2000 sites is in Spain (46 %).



Natura 2000 sites in the Mediterranean region			
Country	**Habitat area /km²/**	**Coverage /%/**	**Number of sites**
France	170	39.0	29
Italy	237	10.0	100
Portugal	0	N/A	39
Spain	1,726	46.0	133
Total	**2,133**	**32**	**301**

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 Mediterranean biogeographical region is unfavourable - inadequate due to assessment of three countries - France, Italy, and Portugal. Only Spain reported unknown status due to insufficient data availability. On the level of the biogeographical region, three parameters (Range; Area; Structure and Functions) were assessed as unfavourable - inadequate, and Future prospect as unknown. The overall conservation status for the region has been changed against previous reporting from unknown to unfavourable – inadequate. This change is considered not genuine, due to the differences in measurement and evaluation methods used.

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
ES	98212	49.7	+	x	3744	57	x	x	XX	XX	XX		XX	
FR	9500	4.8	0	≈9500	436	6.6	0	≈436	U1	U1	U1	=	U1	nc
IT	41800	21.2	-	≈41800	2385.52	36.3	-	>2385.52	U1	U1	U1	-	FV	c1
PT	48000	24.3	0	≈48000	N/A	N/A	-	>	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	197512	2GD	-		6566	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 several pressures with high or medium intensity. The most important is grazing, forest exploitation without replanting or natural regrowth, fire and fire suppression. Other important pressures concern cultivation, urbanised areas, human habitation, biocenotic evolution, succession, interspecific floral relations, fire (natural).

Code	Pressure name	ES	FR	IT	PT
A01	Cultivation	M	M		L
A02	modification of cultivation practices	M			
A04	grazing	M		H	M
B01	forest planting on open ground	M			
B01.02	artificial planting on open ground (non-native trees)			M	
B02.01.02	forest replanting (non native trees)				L
B02.02	forestry clearance			M	L
B02.03	removal of forest undergrowth			L	L
B02.06	thinning of tree layer				M
B03	forest exploitation without replanting or natural regrowth	H		H	
B07	Forestry activities not referred to above		H		
D01	Roads, paths and railroads	L			
D01.01	paths, tracks, cycling tracks				L
D01.02	roads, motorways			M	L
E01	Urbanised areas, human habitation	L	M		L
E01.02	discontinuous urbanisation			M	
E02	Industrial or commercial areas		M		
E03	Discharges		M		
E04	Structures, buildings in the landscape		M		
E06	Other urbanisation, industrial and similar activities	L			
F03	Hunting and collection of wild animals (terrestrial)	L			
F06	Hunting, fishing or collecting activities not referred to above	L			
G01	Outdoor sports and leisure activities, recreational activities	L			
G01.03	motorised vehicles			M	L
G02	Sport and leisure structures				L
G05.01	Trampling, overuse				L
H05.01	garbage and solid waste				L
J01	fire and fire suppression	M	M		H
J01.01	burning down			M	
J02.01	Landfill, land reclamation and drying out, general				L
K02	Biocenotic evolution, succession		H		
K03	Interspecific faunal relations		M		
K04	Interspecific floral relations		H		
L09	fire (natural)	H			

Legend: L Low intensity M Medium intensity H High intensity

All member countries consider restoring/improving forest habitats being a very important measure. The adapting forest management, legal protection of habitats and species as well as other spatial measures are important proposed options.

Code	Measure name	ES	FR	IT	PT
1.2	Measures needed, but not implemented		M		NA
2.0	Other agriculture-related measures	M	M		
2.1	Maintaining grasslands and other open habitats		M		
3.0	Other forestry-related measures	M			M
3.1	Restoring/improving forest habitats	M	M	H	M
3.2	Adapt forest management	M	M	H	
6.0	Other spatial measures				H
6.1	Establish protected areas/sites	H		M	
6.3	Legal protection of habitats and species	M		M	H
6.4	Manage landscape features	L			
7.4	Specific single species or species group management measures	M			
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 the Member States agreement despite quite low value of the Priority index. The habitat reached score 20 because of medium values in all three criteria. The habitat occurs in four countries (criterion A). The unfavourable - inadequate overall conservation status reported three countries (France, Italy, and Portugal). Countries reported also negative trends in two cases.

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 and increase of the habitat area in Italy and Portugal are needed. Better information about habitat is needed in Spain.

The long-term conservation of cork oak forests should be based on (a) preventing change to other land uses (dehesas, intensive hunting, urbanization); b) promote the natural regeneration of tree populations; c) make the extraction of cork in an appropriate manner (in terms of season, frequency and method); and d) avoid fires in newly uncorked areas. These strategies go through properly incentivizing the farms in a way that the owners find profitable to maintain them (Díaz et al. 2009). In rural areas habitat should be included in programs for the integrated development of the territory in order to enhance and value its persistence as a source of services directly associated with economic value (tourism, ecotourism, landscape value) (ICNB).

The main measures should include restoration and improvement of forest habitat, adaptation of forest management, legal protection of the habitat, and establishment of protected areas. The forest management adaptation should address the main pressures: forest exploitation without replanting or natural regrowth, forestry clearance, artificial planting of non-native trees, forest fires. It is necessary to avoid afforestation of the habitat by fast- growing tree species. In regenerating spots, the process of establishment of tree dominance should be facilitated by the selective thinning of very dense sticks and very close to dominated individuals favouring the larger ones. In mixed stands all species are to

be taken into account during thinning. For seedlings support, it is useful to do some soil preparation (brushing and cropping) in the immediate vicinity of the cork oaks (INPN). The natural edge of high forest should be preserved as far as possible, since this structure is part of the vegetation system of the forest, protecting from the microclimatic action of sunshine and wind, as well as herbivores and aggressive or heliophilous vegetation, tending to invade the interior of the forest.

The cork oaks, in natural conditions, resist both fire and uncorking. However, freshly corked cork oaks are very susceptible to fires, and poorly made or out of season harvesting also affects the tree very negatively. Therefore, the legal minimum periods between corks should be strictly observed, and always leaving uncropped trees to reduce the effect of fires in newly uncropped forests (Díaz et al. 2009). Due to the frequency of fires in the areas where this habitat is present, it is preferable to limit the harvesting of cork to areas protected by fire protection devices (INPN). To reduce the risk of fire contribute also cleaning roads and bushes, reducing the degree of coverage of the neighbouring shrub vegetation by mechanical methods, creation of water points and opening of fireworks are possibilities.

The regulation of grazing and urbanisation is also necessary. If there are regeneration deficits due to excessive livestock (or hunting) pressure, temporary or permanent exclusions of grazing is a solution. If the habitat is invaded by exotic or spontaneously by ecologically alien trees, they must be removed.

The abandonment of management of habitat 6310 (Dehesas with evergreen *Quercus* spp) is an obvious way to increase the occupancy area of habitat 9330 by ecological succession. 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.

Links

Díaz, M., Pulido, F.J., Pausas, J.D., 2009: 9330 Alcornocales de *Quercus suber*. - 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, 58 pp.

https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9330&region=MED

ICNB: 9330 Florestas de *Quercus suber*. - http://www.icnf.pt/portal/pn/biodiversidade/rn2000/resource/docs/rn-plan-set/hab/hab-9330

INPN: 9330 Forêts à *Quercus suber*. - https://inpn.mnhn.fr/site/natura2000/habitat/9330/cahiers-habitats

9340 Quercus ilex and Quercus rotundifolia forests

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 four countries (Spain, Italy, Malta and Portugal). Habitat is in the Mediterranean biogeogr. region is widespread in Spain and Italy. In Spain this habitat type is located around 68% of the habitat area.

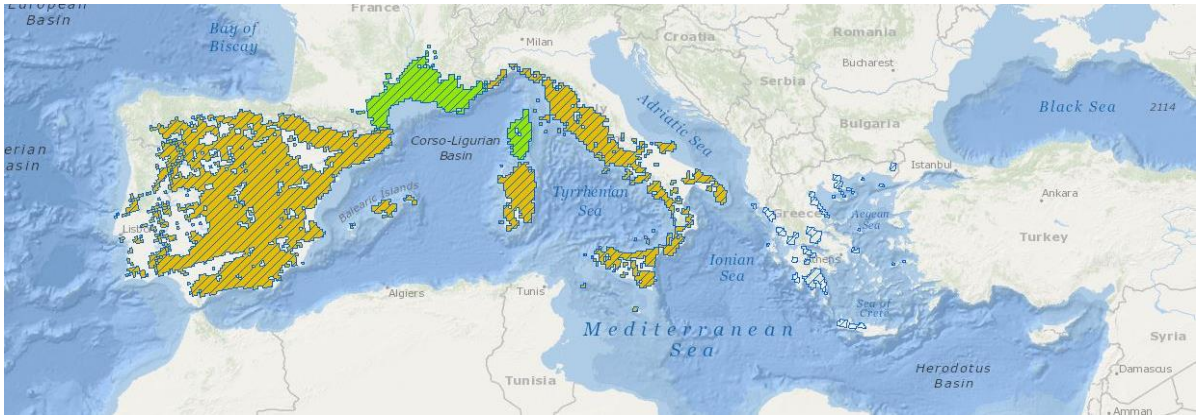
The change of the trend in the habitat structure in Spain and Italy from declining to stable and trend of the habitat area from decreasing to stable in Italy are needed. The further improvement could be reached by improving the habitat structure in Spain, Italy, Malta, and Portugal. The habitat restoration is, besides in Italy, also needed in Malta and Portugal that reported smaller habitat area than the reference value. The main measures should include restoration or improvement of the forest habitat, adaptation of forest management, legal protection of habitat, and establishment of protected sites. The adaptation of forest management should favour the evolution of the forest toward more mature structures, support trees or scrub producing fruits and seeds, increase the presence of other species besides the oak, to favour the development of an understory formed by sclerophyllous or lauroid species typical to holm oaks. In managed oak forests, leaving enough of extra-mature trees and dead wood should be included in management plans. It is necessary to perform measures aimed at preventing and reducing fire risks. The heterogeneity in the landscape scale should be favoured, maintaining or generating mosaics of forest-scrub-grassland. In areas where holm oaks are highly fragmented conserve or restore ecological connectivity. The natural edge of high forest should be preserved as far as possible. Other important measures are regulation of grazing, hunting, urbanisation, sport and recreation, as well as sand and gravel extraction. The grazing by wild or domestic ungulates needs to be maintained on the balanced level and excluded if the effective regeneration of seedlings needs to be supported. The conversion of habitat 6310 to 9340 could be supported in its marginal areas.

Habitat description

Forests dominated by *Quercus ilex* or *Q. rotundifolia*, often, but not necessarily, calcicolous. The habitat includes three sub-types: Meso-Mediterranean holm-oak forests, Supra-Mediterranean holm-oak forests, Aquitanian holm-oak woodland.

Distribution in the Mediterranean region and coverage by Natura 2000 network

This habitat type is widespread in Spain and Italy. It occurs also in Portugal, France, Malta, and Greece. The overall low representation of the habitat in Natura 2000 sites (ca 17 %) is due to the Spanish area of this habitat (19%) in Natura 2000 sites. The whole national habitat area is located in Natura 2000 sites in Malta.



Natura 2000 sites in the Mediterranean region			
Country	**Habitat area /km²/**	**Coverage /%/**	**Number of sites**
France	50-150	3-8	113
Greece	0	0.0	53
Italy	1,764	25.0	500
Malta	10	100.0	4
Portugal	0	N/A	34
Spain	5,429	19.0	655
Total	**7,253-7,353**	**17**	**1,359**

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 Mediterranean biogeographical region is unfavourable - inadequate due to assessment of Spain, Italy, Malta and Portugal. Greece and France reported a favourable conservation status. On the level of biogeographical region, only the Range was assessed as favourable, other three parameters (Area; Structure and Functions; Future prospect) were assessed as unfavourable – inadequate. The overall conservation status for the region has been changed against previous reporting from unknown to unfavourable – inadequate. This change is considered not genuine, due to the different methods of measurement or evaluation.

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
GR	5000	0.7	0	5000	5000	11.7	0	5000	FV	FV	FV		FV	
ES	412252	56.3	0	≈412252	29010	67.8	x	≈29010	U1	U1	U1	-	XX	c1
FR	129700	17.7	+	≈129700	1790	4.2	+	≈1790	FV	FV	FV		FV	nc
IT	133700	18.3	-	≈133700	6998.57	16.3	-	>6998.57	U1	U1	U1	-	FV	c1
MT	10	0	0	>10	10	0	0	>10	U1	U1	U1	=	U2	c2
PT	51500	7	0	≈51500	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	732162	1	0	≈732162	42809	2GD	x		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 several pressures with high or medium intensity. The most important is fire and fire suppression, grazing, collapse of terrain, landslide, and fire (natural). Other important pressures concern urbanised areas, human habitation, industrial or commercial areas, removal of forest undergrowth.

Code	Pressure name	ES	FR	IT	MT	PT
A01	Cultivation	M				L
A02	modification of cultivation practices	M				
A04	grazing	L		H		M
A05	livestock farming and animal breeding (without grazing)	M				
A07	use of biocides, hormones and chemicals	M				
A08	Fertilisation	M				
A09	Irrigation	M				
B01	forest planting on open ground	M	L			
B01.02	artificial planting on open ground (non-native trees)			M		
B02	Forest and Plantation management & use	M	L			
B02.01.02	forest replanting (non native trees)					L
B02.02	forestry clearance			M		L
B02.03	removal of forest undergrowth			M	L	L
B02.04	removal of dead and dying trees				M	
B02.06	thinning of tree layer					M
B03	forest exploitation without replanting or natural regrowth	M	L	M		
C01.01	Sand and gravel extraction			M		
D01	Roads, paths and railroads	M		M		
D01.01	paths, tracks, cycling tracks					L
D01.02	roads, motorways			M		L
D05	Improved access to site				L	
E01	Urbanised areas, human habitation	M	M			L
E02	Industrial or commercial areas	M	M			
E03	Discharges	M	L			
E06	Other urbanisation, industrial and similar activities	M				
F03	Hunting and collection of wild animals (terrestrial)	M	L			
G01	Outdoor sports and leisure activities, recreational activities	L	L			
G01.03	motorised vehicles			M		L
G02	Sport and leisure structures					L
G05.01	Trampling, overuse					L
H05.01	garbage and solid waste					L
I01	invasive non-native species		L			
J01	fire and fire suppression	H	H			H
J01.01	burning down			M		
J02.01	Landfill, land reclamation and drying out, general					L
K01.01	Erosion			M		
L05	collapse of terrain, landslide			M	H	
L09	fire (natural)	H				
M01	Changes in abiotic conditions	M				

Legend: L Low intensity M Medium intensity H High intensity

All countries consider restoring/improving forest habitats as a very important measure. Also other forestry-related measures, legal protection of habitats and species, and establishment of protected areas/sites are important proposed measures in almost every country. Other important measures are adapting forest management, regulation/management of hunting and taking as well as other spatial measures.

Code	Measure name	ES	FR	IT	MT	PT
1.2	Measures needed, but not implemented		M			NA
2.0	Other agriculture-related measures	M	M			
2.1	Maintaining grasslands and other open habitats	L	M			
3.0	Other forestry-related measures	M	M		H	M
3.1	Restoring/improving forest habitats	M	H	L	H	M
3.2	Adapt forest management	M	H	H		
6.0	Other spatial measures	L				H
6.1	Establish protected areas/sites	M		M	H	
6.3	Legal protection of habitats and species	M		M	H	H
6.4	Manage landscape features	L			M	
7.0	Other species management measures	L				
7.1	Regulation/ Management of hunting and taking				H	
7.4	Specific single species or species group management measures	M				
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 the Member Countries agreement despite its quite low value of the Priority index. The habitat reached a score of 24 because of high value of criterion A and medium value of criterion B. The habitat occurs in six countries (criterion A). The unfavourable - inadequate overall conservation status is reported by four countries (Spain, Italy, Malta and Portugal).

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, the change of the trend in the habitat structure in Spain and Italy from declining to stable and trend of the habitat area from decreasing to stable in Italy are needed. The further improvement could be reached by improving the habitat structure in Spain, Italy, Malta, and Portugal. The habitat restoration is, besides in Italy, also needed in Malta and Portugal that reported smaller habitat area than the reference value.

The main measures should include restoration or improvement of the forest habitat, adaptation of forest management, legal protection of habitat, and establishment of protected sites. The well-preserved areas of habitat should be included into micro-reserves networks to be created. The adaptation of forest management should address pressures as forest exploitation without replanting or natural regrowth, forest replanting using non native trees, forest fires, forestry clearance, removal of forest undergrowth, removal of dead and dying trees. It should favour the evolution of the forest toward more mature structures that are characterized by greater presence of trees of high diameters; greater basal area; and moderate or low major foot densities and support trees or scrub producing fruits and seeds. In tree layer to increase the presence of other species besides the oak and to favour

the development of an understory formed by sclerophyllous or lauroid species typical to holm oaks. In managed oak forests, leaving enough of extra-mature, preferably thick and branched trees as well as dead wood of different dimensions and states of decomposition is necessary (Rodà et al. 2009). When traditionally used, the coppicing could be accepted. It is necessary to perform measures aimed at preventing and reducing the risk of fire, e.g. cleaning roads and bushes, reducing the degree of cover of the neighbouring shrubby vegetation by mechanical methods, creating water points and opening fireworks (INPN).

The heterogeneity in the landscape scale should be favoured, maintaining or generating mosaics of forest-scrub-grassland in which all the dynamic phases of the forest are represented. In rural areas, the habitat should be included in programs for the integrated development of the territory, in order to enhance and value its persistence as a source of services directly associated with economic value (tourism, eco-tourism, landscape value). In areas where holm oaks are highly fragmented conserve or restore ecological connectivity between fragments and between fragments and potential source areas of colonizing organisms and avoid loss of fragments and reduction of their surface. The natural edge of high forest should be preserved as far as possible (Rodà et al. 2009; INPN).

Other important measures are regulation of grazing, hunting, urbanisation, sport and recreation, as well as sand and gravel extraction. The changes of the land use in the area of habitat occupancy should be minimised: expansion of agricultural use, afforestation with fast-growing species, and urban sprawl. The grazing by wild or domestic ungulates needs to be maintained on the balanced level and excluded rotationally for the period necessary for effective regeneration or adequately protect the seedlings until they reach a size sufficient to resist damage. In the context of fire protection, this habitat may be opened and grazed on the right-of-way of "brush strips".

The increase the resistance of the habitat to the increase of aridity predicted in the Mediterranean region could be done by reducing excessive densities through silvicultural treatments – it can increase water availability for the remaining trees and improve their resistance to drought. If the habitat is invaded by exotic or spontaneous trees ecologically alien to this habitat, they must be removed.

The conversion of habitat 6310 (Dehesas with evergreen *Quercus* spp) tp 9340 through planting, protection of regeneration and absolute elimination of agro-pastoral use could be promoted in its marginal areas. The abandonment of management of habitat 6310 is an obvious way to increase the occupancy area of habitat 9334 by ecological succession. 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 (INPN).

Links

https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9340&region=MED

ICNB: 9340 Florestas de *Quercus ilex* e *Quercus rotundifolia*. - http://www.icnf.pt/portal/pn/biodiversidade/rn2000/resource/docs/rn-plan-set/hab/hab-9340

INPN: 9340 Forêts à *Quercus ilex* et *Quercus rotundifolia*. - https://inpn.mnhn.fr/site/natura2000/habitat/9340/cahiers-habitats

Rodà, F., Vayreda, J., Ninyerola, M., 2009: 9340 Encinares de *Quercus ilex* y *Quercus rotundifolia*. - 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, 94 pp.

9430 Subalpine and montane *Pinus uncinata* forests (* if on gypsum or limestone)

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

Habitat summary

Spain’s assessment led to the overall conservation status in the Mediterranean region being unfavourable-bad. The habitat occurs in the Mediterranean biogeographical region in France and Spain. Around 62 % of the habitat area is located in France.

Improvement of the habitat structure in Spain is needed. The main measures should include establishment of protected areas, adaptation of forest management, restoration or improvement of forest habitat, and legal protection of the habitat. The management of the habitat should preserve the habitat extent and the processes and dynamics that regenerate these forests and maintain their biodiversity. There is a need to apply management techniques that emulate the regime of natural disturbances in the opening of clearings. The forest regeneration should be protected from excessive pressure from herbivores, especially in relict populations with recruitment difficulties. The protected areas or forests must be preserved without intervention for their integral conservation, monitoring and research. The regulation or elimination of other human activities is also needed, especially urbanisation, mining, road building, sport and recreation, and hunting.

Habitat description

Mountain pine (*Pinus uncinata*) forests, usually open and with a very developed shrubby understorey, of the subalpine and montane levels; on limestone, gypsum or siliceous substrate in a cool or thermophile situation depending on the region. Sometimes mixed with *Pinus sylvestris*, more rarely with *Larix-Pinus cembra*. There are two major types: mountain pine forests of the western outer Alps, the Jura and Pyrenean ubacs, developed on siliceous or decalcified soils of the subalpine level with a predominately ericaceous undergrowth comprising *Rhododendron ferrugineum* (*Rhododendro-Vaccinion* p.), and xerocline mountain pine forests of the inner Alps, of the western outer Alps and the Jura, and of Pyrenean adrets, accompanied by a shrubby undergrowth in which *Rhododendron ferrugineum* (*Junipero-Pinion* p., *Erico-Pinion* p.).

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type occurs in France and Spain. The overall representation of the habitat in Natura 2000 sites is high; a more precise calculation is not possible because of the large range reported by France. In Spain a large part of the national habitat area is located in Natura 2000 sites (95 %).

Natura 2000 sites in the Mediterranean region			
Country	**Habitat area /km²/**	**Coverage /%/**	**Number of sites**
France	2-60	3-100	9
Spain	35	95	21
Total	**37-95**	**68**	**30**

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

Spain's assessment led to the overall conservation status of this habitat type in the Mediterranean biogeographical region being unfavourable-bad. This conclusion was reached despite favourable status in France. At the biogeographical region level, two parameters (Range; Area) were assessed as favourable, Structure and functions as unfavourable-inadequate, and Future prospect as unfavourable-bad. The overall conservation status for the region has changed from previous reporting from unfavourable-inadequate to unfavourable-bad, but only because of the use of different methods to measure or evaluate (Spain), and improved knowledge (France).

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
ES	8413	34.9	0	≈8413	37	38.1	0	≈37	U1	U2	U2	-	XX	c1
FR	15700	65.1	0	≈15700	60	61.9	0	≈60	FV	FV	FV		U1	b1

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	24113	0	0	≈24113	97	0	0	≈97	2XA	2XA	MTX	-	U1	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 member countries reported a broad range of pressures. According to Spain, forestry clearance is the most important pressure. Both countries reported grazing, forest and plantation management and use, roads, paths and railroads, sport and leisure structures, and Introduced genetic material, GMO. Other important pressures include removal of dead and dying trees, forest exploitation without replanting or natural regrowth, hunting of wild animals, and outdoor sports and leisure activities, recreational activities.

Code	Pressure name	ES	FR
A04	Grazing	M	M
A05	Livestock farming and animal breeding (without grazing)	M	
B02	Forest and Plantation management & use	M	L
B02.02	Forestry clearance	H	
B02.04	Removal of dead and dying trees	M	
B03	Forest exploitation without replanting or natural regrowth	M	
B06	Grazing in forests/ woodland		L
B07	Forestry activities not referred to above	M	
C01.04	Mines	L	
D01	Roads, paths and railroads	L	L
E01.03	Dispersed habitation	M	
E05	Storage of materials	L	
F03	Hunting and collection of wild animals (terrestrial)	M	
G01	Outdoor sports and leisure activities, recreational activities	M	
G02	Sport and leisure structures	M	L
H04	Air pollution, air-borne pollutants		L
I03	Introduced genetic material, GMO	L	L
J01	Fire and fire suppression	M	
K01.01	Erosion	L	
K04	Interspecific floral relations	L	
L09	Fire (natural)	M	
M01	Changes in abiotic conditions	M	

Legend: L Low intensity M Medium intensity H High intensity

According to both countries, restoring/improving forest habitats and adapting forest management are important proposed measures. Other important measures are establishment of protected areas/sites, legal protection of habitats and species, and specific single species or species group management measures.

Code	Measure name	ES	FR
3.0	Other forestry-related measures	M	
3.1	Restoring/improving forest habitats	M	M
3.2	Adapt forest management	M	M
6.0	Other spatial measures	M	
6.1	Establish protected areas/sites	H	
6.3	Legal protection of habitats and species	M	
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 9430 reached an LHF score of 2.11. 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 U2 (unfavourable-bad). 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 and the fact that the trend of only one parameter (Structure & functions) in one country (Spain) needs to improve 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. The main measures should include establishing protected areas, adaptation of forest management, restoration or improvement of forest habitat, and legal protection of the habitat. The management of the habitat should preserve the habitat extent and the processes and dynamics that regenerate these forests and maintain their biodiversity. It is recommended to carry out integrated and sustainable forest management respecting also accompanying forest tree species and the preservation of specific habitat features such as stumps, and dead standing trees. There is a need to apply management techniques that emulate the regime of natural disturbances in the opening of clearings necessary for the regeneration and establishment of seedlings. The forest regeneration should be protected from excessive pressure from herbivores, especially in relict populations with recruitment difficulties. The protected areas or forests must be preserved without intervention for their integral conservation, monitoring and research (Camarero, 2009). The regulation or elimination of other human activities is also needed, especially urbanisation, mining, road building, sport and recreation, and hunting.

Links

Camarero, J. J., 2009. 9430 Bosques montanos y subalpinos de Pinus uncinata (en sustratos yesosos o calcáreos) (*). 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. 64 pp. http://www.jolube.es/Habitat_Espana/documentos/9430.pdf

https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9430&region=MED

9510 Southern Apennine *Abies alba* forests

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

Habitat summary

Italy reported unfavourable-inadequate overall conservation status for this habitat type in the Mediterranean biogeographical region. In the Mediterranean biogeographical region this habitat is distributed in Italy only.

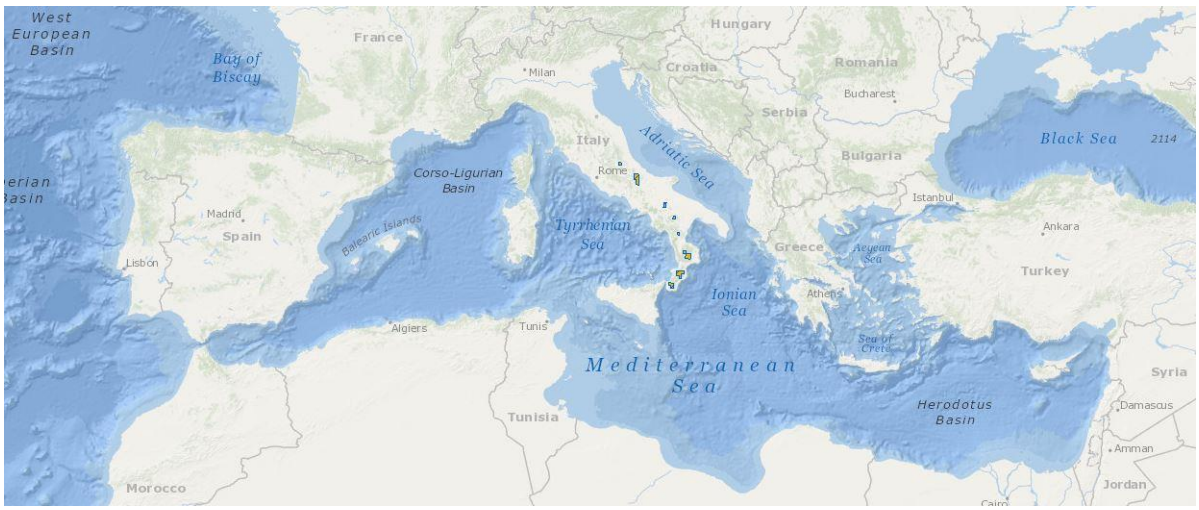
Improvement of habitat structure and increase of the habitat area through habitat restoration in Italy are needed. The main measures are establishment of protected sites, legal protection of habitat, and adaptation of forest management. The forest management adaptation should include the elimination or reduction of unsustainable practices such as artificial forest planting using non-native trees, forest exploitation without replanting or natural regrowth, and removal of forest undergrowth. It is also important to control human activities such as roads, motorways, skiing complex building, and urbanisation.

Habitat description

Relict *Abies alba* woods associated with the beech forests of the *Geranio versicolori-Fagion.*

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type occurs in Italy. The overall representation of the habitat in Natura 2000 sites is high (ca 75 %).



Natura 2000 sites in the Mediterranean region			
Country	**Habitat area /km²/**	**Coverage /%/**	**Number of sites**
Italy	31	75	12
Total	**31**	**75**	**12**

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

Italy reported unfavourable-inadequate overall conservation status for this habitat type in the Mediterranean biogeographical region. Two parameters (Range; Future prospects) were assessed as favourable, and the other two (Structure and functions; Area) as unfavourable-inadequate. The overall conservation status for the region has changed from previous reporting from favourable to unfavourable–inadequate. However, this change is considered not genuine, but is due to the use of different methods to measure or evaluate.

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
IT	4400	100	0	≈4400	41.12	100	0	>41.12	U1	FV	U1	-	FV	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	4400	00	0	≈4400	41	00	0	>41	00	00	MTX	-	FV	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

Italy reported several pressures of medium intensity: artificial planting on open ground (non-native trees), removal of forest undergrowth, roads, motorways, skiing complex, and genetic pollution (plants). Low-intensity pressures include forest exploitation without replanting or natural regrowth, and urbanised areas, human habitation.

Code	Pressure name	IT
B01.02	Artificial planting on open ground (non-native trees)	M
B02.03	Removal of forest undergrowth	M
B03	Forest exploitation without replanting or natural regrowth	L
D01.02	Roads, motorways	M
E01	Urbanised areas, human habitation	L
E01.02	Discontinuous urbanisation	M
G02.02	Skiing complex	M
I03.02	Genetic pollution (plants)	M

Legend: L Low intensity M Medium intensity H High intensity

The establishment of protected areas/sites and legal protection of habitats and species are the most important proposed measures in Italy. Another important measure is adaptation of forest management.

Code	Measure name	IT
3.2	Adapt forest management	M
6.1	Establish protected areas/sites	H
6.3	Legal protection of habitats and species	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 9510 reached an LHF score of 2.65. 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. Other reasons for including the habitat type as LHF are its fairly significant representation in Natura 2000 sites (up to 75 %) and the fact that the trend of only one parameter (Structure & functions) in one country (Italy) needs to be improved in order to achieve overall improvement. In addition, no pressure of high intensity was reported.

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. Additional improvement could be achieved by increasing the habitat area through habitat restoration. The main measures should include establishment of protected sites, legal protection of habitat, and adaptation of forest management. The forest management adaptation should include avoiding or reducing unsustainable practices such as artificial forest planting using non-native trees, forest exploitation without replanting or natural regrowth, and removal of forest undergrowth. It is also important to control human activities such as roads, motorways, skiing complex building, and urbanisation.

Links

https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9510&region=MED

9540 Mediterranean pine forests with endemic Mesogean pines

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 Italy, Malta, and France. In the Mediterranean biogeographic region, the habitat is widespread in Spain and Greece; it occurs also in France, Italy, and Malta. Around 55% of the habitat area is located in Spain, in Greece around 34%.

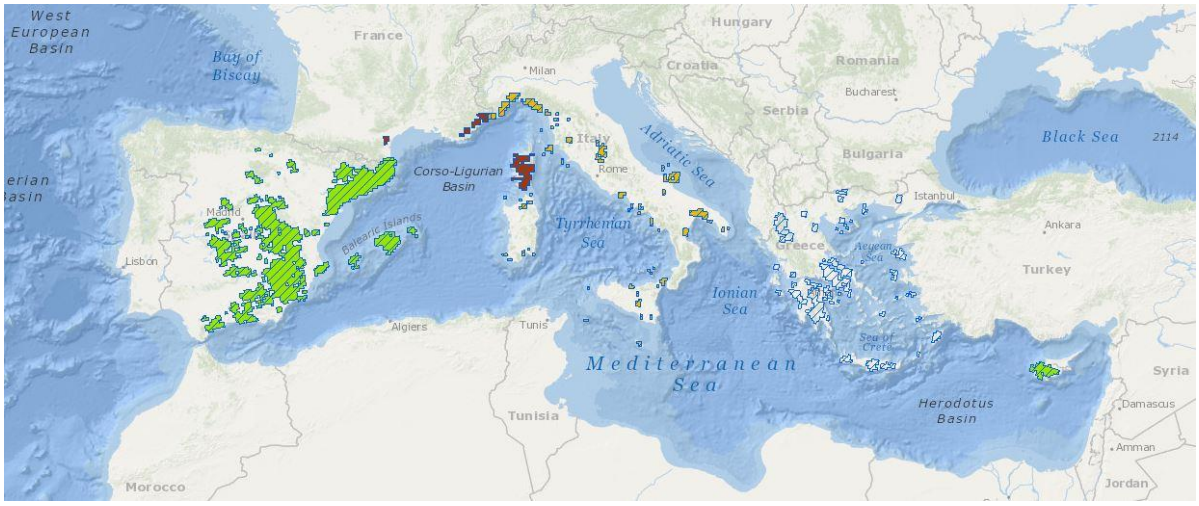
Improvement of the habitat structure in France, Italy, and Malta is needed. An increase of the habitat area by restoration is needed in Greece, France and Malta, because these countries have reported a smaller actual habitat area than the reference value. The main measures should include forestry-related measures, adaptation of forest management, and establishment of protected sites, legal protection of habitat, forest habitats restoration and regulation of hunting. Very conservative silviculture (thinning with low intensities, regeneration cuts in small gaps) could be applied, or let the tree and shrub species of the undergrowth thrive without significant interventions, more or less rapidly. The introduced pines should be harvested as a priority and the interventions should favour native pines. Special attention needs to be paid to fire protection actions aimed at preserving the rare remaining "mature" stands. In areas where the insect *Matsucoccus feytaudi* is abundant, it is possible either to accept the natural dynamics leading to oak groves or to introduce small islands of resistant maritime pines from local breeds. In highly visited areas, it is necessary to limit too much trampling due to walkers, the 4x4cars, and the motorcycles by appropriate measures (well-identified trails, barriers, fencing, cords not cleared of bush).

Habitat description

Mediterranean and thermo-Atlantic woods of thermophilous pines, mostly appearing as substitution or paraclimactic stages of forests of the *Quercetalia ilicis* or *Ceratonio-Rhamnetalia*. Long-established plantations of these pines, within their natural area of occurrence, and with an undergrowth basically similar to that of paraclimactic formations, are included. Sub-types: Maritime pine forests, Mesogean pine forests, Stone pine forests, Aleppo pine forests, Aegean pine forests,

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is widespread in Spain and Greece. It occurs also in France, Italy, and Malta. The overall low representation of the habitat in Natura 2000 sites (ca 19 %) is due to low area of this habitat in Natura 2000 sites in Spain (27 %) and absence thereof in France. Whole national habitat area is located in Natura 2000 sites in Malta, a large part can also be found in Italy (75 %).



Natura 2000 sites in the Mediterranean region			
Country	**Habitat area /km²/**	**Coverage /%/**	**Number of sites**
Cyprus	405	31.0	26
France	0	0.0	47
Greece	0	0.0	84
Italy	293	75.0	122
Malta	6	100.0	2
Portugal	N/A	N/A	1
Spain	2493	27.0	173
Total	3197	19	455

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 Mediterranean biogeographical region is unfavourable - inadequate due to assessment of Greece, Italy, and Malta. This conclusion was reached despite favourable status in two countries - Cyprus and Spain. France reported unfavourable – bad conservation status. The parameter of Structure and Functions was assessed as favourable, two parameters (Range, Area) as unfavourable – inadequate, and the last one (Future prospect) was assessed 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, due to different measurement or evaluation methods.

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
CY	3806	1.8	+	3806	1291.30	7.6	0	1291.30	FV	FV	FV		FV	
GR	5680	2.7	-	>5680	5680	33.6	-	>5680	FV	XX	U1	N/A	U1	
ES	163910	77.1	+	≈163910	9365	55.4	+	≈9365	FV	FV	FV		XX	c1
FR	14300	6.7	0	≈14300	173	1	-	>>173	U2	U2	U2	-	U2	nc
IT	25000	11.8	-	≈25000	391.89	2.3	-	≈391.89	U1	U1	U1	-	FV	c1
MT	6	0	0	>6	6	0	0	>6	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	212702	1	+	>212702	16907	1	+	>16907	2XA	2XA	MTX	=	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 countries reported several pressures with high or medium intensity. The most important is fire (natural) and fire suppression. Other important pressures concern interspecific faunal relations, forest planting on open ground, urbanised areas, human habitation, burning down.

Code	Pressure name	CY	ES	FR	IT	MT
A02	modification of cultivation practices			L		
A04	grazing		L			
A04.01.04	intensive goat grazing	L				
A05	livestock farming and animal breeding (without grazing)		L			
B01	forest planting on open ground		M	M		
B01.01	forest planting on open ground (native trees)				M	
B01.02	artificial planting on open ground (non-native trees)				M	
B02	Forest and Plantation management & use		L	M		
B02.03	removal of forest undergrowth					L
B02.04	removal of dead and dying trees					M
B03	forest exploitation without replanting or natural regrowth		M			
B06	grazing in forests/ woodland		L			
B07	Forestry activities not referred to above		M			
C01	Mining and quarrying			L		
D01	Roads, paths and railroads		M	L		
D01.01	paths, tracks, cycling tracks	L				
D01.02	roads, motorways	L				
D02.02	pipe lines	L				
D05	Improved access to site					L
E01	Urbanised areas, human habitation	L	M	M		
E02	Industrial or commercial areas			M		
E06	Other urbanisation, industrial and similar activities		M			
G01	Outdoor sports and leisure activities, recreational activities	L	L	M		
G02	Sport and leisure structures		M			
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)			L		
H05	Soil pollution and solid waste (excluding discharges)			L		
I01	invasive non-native species			M		
I03.02	genetic pollution (plants)				M	
J01	fire and fire suppression		M	H		
J01.01	burning down				M	M
J02	human induced changes in hydraulic conditions		L			
K02	Biocenotic evolution, succession			M		
K03	Interspecific faunal relations			H		
K04	Interspecific floral relations		L			
K04.03	introduction of disease (microbial pathogens)				M	
L09	fire (natural)	M	H	H		
M01	Changes in abiotic conditions		M	L		
M01.01	temperature changes (e.g. rise of temperature & extremes)	L				

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

This habitat is located in coastal areas, hence it is sensitive to tourist traffic (trampling); threatened by high winds and spray; exposition to polluted spray (hydrocarbons and detergents), frequent fires; fungal attacks and damage by insect *Matsucoccus feytaudi*. There is also a risk of hybridization with non-native pines used for afforestation in the past and conversion of mixed pine grove to species-poor, monodominant stands spontaneously or as a consequence of spontaneous succession. The anthropization by more or less diffuse urbanization and tourist developments represent another risk (INPN).

All member countries consider forestry-related measures being a very important measure. The establishment of protected areas/sites and legal protection of habitats and species are also important proposed measures. Other important measures are restoring/improving forest habitats, adaptation of forest management, regulation/management of hunting and taking.

Code	Measure name	CY	ES	FR	IT	MT
2.0	Other agriculture-related measures		M			
3.0	Other forestry-related measures	H	M	M	H	H
3.1	Restoring/improving forest habitats	H	M			M
3.2	Adapt forest management		M		H	
6.1	Establish protected areas/sites	H	H		M	H
6.3	Legal protection of habitats and species	H	M		H	H
6.4	Manage landscape features		L			L
7.0	Other species management measures		M			
7.1	Regulation/ Management of hunting and taking					H
7.4	Specific single species or species group management measures		L			

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 because of its high value of the Priority index. The habitat reached a score of 42 because of high values in the criteria A and B. The habitat occurs in countries 6 (criterion A). The unfavourable - bad overall conservation status are reported one country (France) and an unfavourable - inadequate status in three countries. Countries reported also negative trends in two cases.

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 France, Italy, and Malta is needed. The increase of the habitat area by restoration is needed in Greece, France, and Malta, because these countries reported smaller actual habitat area than the reference value.

The main measures should include forestry-related measures, adaptation of forest management, establishment of protected sites, legal protection of habitat, forest habitats restoration, and regulation of hunting. In rare cases where pine forests are still well developed, the rare remaining "mature" stands should be protected. In other stands either very conservative silviculture (thinning of low intensities, regeneration cuts in small gaps, considering the violence of the winds) could be applied

or leave the tree and shrub species of the undergrowth thrive without significant interventions, more or less rapidly. In particular because of the early fungal attacks, a fairly dynamic silviculture would be desirable, containing early and strong thinning; and early regeneration cuts (80-100 years), by clearcuts of variable sizes. The introduced pines should be harvested as a priority and the interventions should favour native pines. If during regeneration of the habitat the seedlings are not established spontaneously, small clearing operations may prove useful, combined with the soil preparation.
Special attention needs to be paid to fire protection actions aimed at preserving the rare remaining "mature" stands. When applied anti-fire measures, it is necessary to avoid complete brushing that will transform the habitat sooner or later into monospecific formation of pines. The clearing for the protection of fires should be limited to what is strictly necessary - the selective brushing is suitable as it retains a portion of the tree and shrub undergrowth. On the other hand, heavy work on clearing will be necessary in post-fire regeneration if this habitat is to be preserved - otherwise these formations will re-burn because they are highly flammable and combustible. While habitat well regenerates after the fire, regeneration after repeated fires is weak.
In areas where the insect maritime pine bast scale (*Matsucoccus feytaudi*) is abundant, are two options: 1) accepting the natural dynamics that can lead to the reconstitution of oak groves (over a longer or shorter time) that belong to habitats of Community interest as well; or 2) to introduce small islands of maritime pines from local breeds supposed to be resistant to this pest. In areas where the damage by this pest begins, anticipated harvests and resistance research should be combined.
In highly visited areas, it is necessary to limit too much trampling of the public by putting in place the appropriate devices to limit the rambling of the walkers, the 4x4 and the motorcycles. It is possible to open and maintain well-identified trails, and to install piping devices (barriers, fencing, cords not cleared of bush).

Links

https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9540&region=MED

INPN: 9540 Pinèdes méditerranéennes de pins mésogéens endémiques. - https://inpn.mnhn.fr/site/natura2000/habitat/9540/cahiers-habitats

Ruiz Benito P., Álvarez-Uria P., Zavala M.A., 2009: 9540 Pinares mediterráneos de pinos mesogeanos endémicos. - 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.112 pp.

9560 Endemic forests with *Juniperus* spp.

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

Habitat summary

Spain’s assessment led to the overall conservation status in the Mediterranean region being unfavourable-bad. The habitat is widespread in the Mediterranean biogeographical region in Spain; it also occurs in Portugal, France, Italy, Cyprus, and Greece. Around 96% of the habitat area is located in Spain.

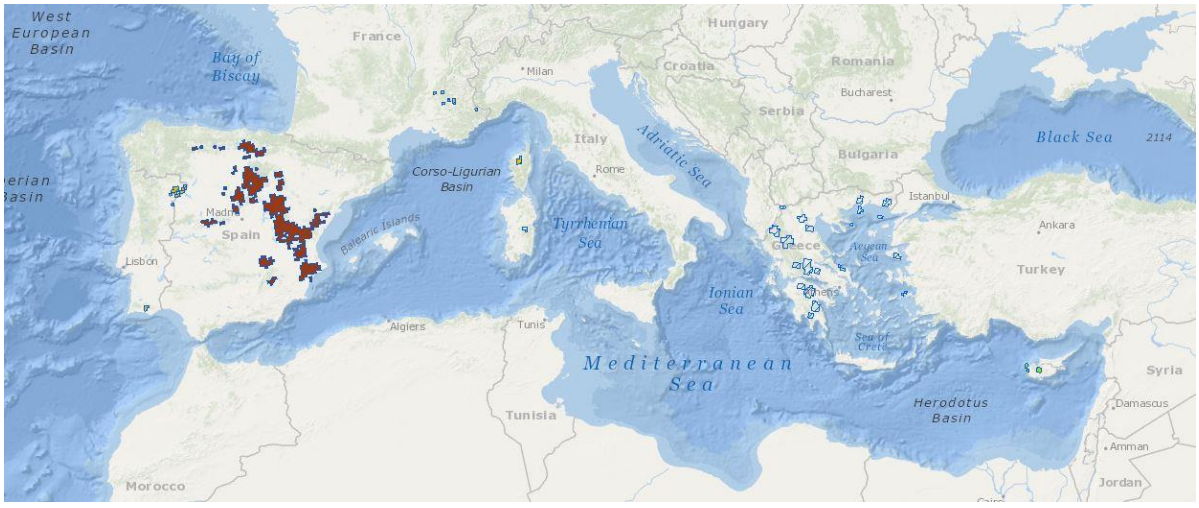
Improvement of habitat structure in Spain is needed. To achieve further improvement, habitat structure should also be improved in France and Portugal. Habitat restoration is needed in Portugal because it reported a smaller habitat area than the reference value. The main measures should include establishment of protected sites, legal protection of habitat, and restoring or improving forest habitat. Forest management should be adapted in order to address the main reported pressures: forest replanting using non-native trees, forestry clearance, removal of dead and dying trees, and forest exploitation without replanting or natural regrowth. Further measures should focus in particular on regulation of grazing in forests, regulation of recreational activities, elimination or reduction of problematic native and invasive alien species, prevention of forest fires, and measures against vegetation succession. It would be advisable to develop ecological restoration programmes that include the elimination of exotic species (*Opuntia* sp., *Agave americana*), and the planting of juvenile junipers in areas where natural regeneration is problematic.

Habitat description

Medium altitude forest formations dominated by *Juniperus* spp. The arborescent matorrals (32.13 and 31.3) should not be included. There are five sub-types: Spanish juniper woods (*Juniperon thuriferae*), Grecian juniper woods (*Juniperetum excelsae*), Stinking juniper woods, Syrian juniper woods, Macaronesian juniper woods.

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is widespread in Spain. It also occurs in Portugal, France, Italy, Cyprus, and Greece. The overall quite low representation of the habitat in Natura 2000 sites (ca 35 %) is due to the area of this habitat in Natura 2000 sites in Spain (only 34 %) and missing data from Portugal. In both Cyprus and France the entire national habitat area is located in Natura 2000 sites. Information on the coverage of the Natura 2000 sites in Portugal is not available.



Natura 2000 sites in the Mediterranean region			
Country	**Habitat area /km²/**	**Coverage /%/**	**Number of sites**
Cyprus	2.1	100	3
France	4	100	8
Greece	0	0	13
Italy	N/A	N/A	1
Portugal	50-80	N/A	8
Spain	1,145	34	113
Total	**1,201-1,231**	**35**	**146**

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

Spain's assessment led to the overall conservation status of this habitat type in the Mediterranean biogeographical region is unfavourable-bad. Greece and Cyprus indicated favourable status, and France and Portugal reported unfavourable-inadequate conservation status. At the biogeographical region level, two parameters (Range; Area) were assessed as favourable, Structure and functions as unfavourable-inadequate, and 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 genuine, but is due to better data (Cyprus and France) and the use of different methods (Spain).

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
CY	99.48	0.1	+	99.48	2.09	0.1	+	2.09	FV	FV	FV		XX	b1
GR	120	0.1	+	120	120	3.5	+	120	FV	FV	FV		FV	
ES	75211	89.4	0	≈75211	3347	96.4	x	≈3347	U1	U2	U2	-	XX	c1
FR	5600	6.7	0	≈5600	4	0.1	+	≈4	U1	U1	U1	=	FV	b1
PT	3100	3.7	0	x	N/A	N/A	+	>	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	84130	2GD	0		3473	2GD	x		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 member countries reported a broad range of pressures, the most important being grazing, fire and fire suppression. Other important pressures include modification of cultivation practices, problematic native species, biocenotic evolution, succession, fire (natural), and changes in abiotic conditions.

Code	Pressure name	CY	ES	FR	PT
A01	Cultivation				L
A02	Modification of cultivation practices		M	M	
A03	Mowing / cutting of grassland		M		
A04	Grazing		M	H	M
A04.01.04	Intensive goat grazing	L			
A05	Livestock farming and animal breeding (without grazing)		L		
A10	Restructuring agricultural land holding		M		
B01	Forest planting on open ground			M	
B02	Forest and Plantation management & use			M	
B02.01	Forest replanting		M		
B02.01.02	Forest replanting (non native trees)				L
B02.02	Forestry clearance		M		L
B02.03	Removal of forest undergrowth				L
B02.04	Removal of dead and dying trees		M		
B03	Forest exploitation without replanting or natural regrowth		M		
B06	Grazing in forests/ woodland			H	
B07	Forestry activities not referred to above		M		
C01	Mining and quarrying			L	
D01	Roads, paths and railroads		M		
D01.01	Paths, tracks, cycling tracks	L			L
D01.02	Roads, motorways				L
D02	Utility and service lines		L		
E01	Urbanised areas, human habitation		L		L
E04.01	Agricultural structures, buildings in the landscape		L		
G01.03	Motorised vehicles				L
G05.01	Trampling, overuse	L			L
H05.01	Garbage and solid waste				L
H06.01	Noise nuisance, noise pollution		L		
I01	Invasive non-native species			M	
I02	Problematic native species			H	
J01	Fire and fire suppression		M	M	M
J02.01	Landfill, land reclamation and drying out, general				L
K01.01	Erosion	M			
K02	Biocenotic evolution, succession			H	
K04	Interspecific floral relations		L		
L05	Collapse of terrain, landslide			L	
L09	Fire (natural)		M	M	
M01	Changes in abiotic conditions		H		
M02	Changes in biotic conditions			L	

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

The establishment of protected areas/sites, legal protection of habitats and species, and restoring/improving forest habitats are the most important proposed measures. Other important measures are other agriculture-related measures, forestry-related measures, and other spatial measures.

Code	Measure name	CY	ES	FR	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	M	
2.1	Maintaining grasslands and other open habitats		L		
3.0	Other forestry-related measures	H	M		
3.1	Restoring/improving forest habitats	H	M		M
3.2	Adapt forest management		M		
6.0	Other spatial measures		M		H
6.1	Establish protected areas/sites	H	H		L
6.3	Legal protection of habitats and species	H	H		
6.4	Manage landscape features		L		
7.0	Other species management measures		M		
7.4	Specific single species or species group management measures		M		
8.2	Specific management of traffic and energy transport systems	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 9560 reached an LHF score of 14.17. 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 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 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. To achieve further improvement, habitat structure should also be improved in France and Portugal. Habitat restoration is needed in Portugal because it reported a smaller habitat area than the reference value.

The main measures should include establishment of protected sites (integrated micro-reserves networks to be created), legal protection of habitat, and restoring or improving forest habitat. Changes to land use should be prohibited in the area of habitat occupancy, e.g. expansion of agricultural use, forest with species of rapid growth, and urban expansion (ICNB).The the most direct threat factors (cuts, devastation, sub-forest disturbance, partial or total destruction) should be minimised. Forest management should be adapted in order to address the main reported pressures: forest replanting using non-native trees, forestry clearance, removal of dead and dying trees, and forest exploitation without replanting or natural regrowth.

Further measures should focus in particular on the regulation of grazing in forests, regulation of recreational activities (camping areas, off-road vehicles, hunting, etc.), elimination or reduction of problematic native and invasive alien species, and measures against vegetation succession.

Measures to prevent forest fires and reduce fire risks should be taken, in particular by cleaning roads and shrubs, reducing the degree of coverage of nearby shrub vegetation. However, the maintenance of these sites by winter pastoral fires has been complementary to grazing.

It would be advisable to develop ecological restoration programmes that include the elimination of exotic species (*Opuntia* sp., *Agave americana*), and the planting of juvenile junipers in areas where natural regeneration is problematic (Montesinos et al., 2009). In regenerating spots, the process of establishing tree dominance can be facilitated by the selective thinning of very dense sticks and closely coupled or dominated individuals favouring larger ones.

Primary stands situated on rock bars and steep rocky areas apparently need no management.

Links

https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9560&region=MED

ICNB: 9560 Florestas endemicas de Juniperus spp. http://www.icnf.pt/portal/pn/biodiversidade/rn2000/resource/docs/rn-plan-set/hab/hab-9560

Montesinos, D., Otto, R., Fernández Palacios, J. M., 2009: 9560 Bosques endémicos de Juniperus 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. Madrid. 84 p. http://www.jolube.es/Habitat_Espana/documentos/9560.pdf

Tzonev, R., Dimitrov, D., 2015: Forests of Grecian juniper (Juniperus excelsa). – In: Biserkov, V., Gussev, Ch. (eds).: Red Data Book of the Republic of Bulgaria. Vol. 3 – Natural habitats. http://e-ecodb.bas.bg/rdb/envol3/39G3.html

91M0 Pannonian-Balkanic turkey oak-sessile oak forests

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

Habitat summary

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

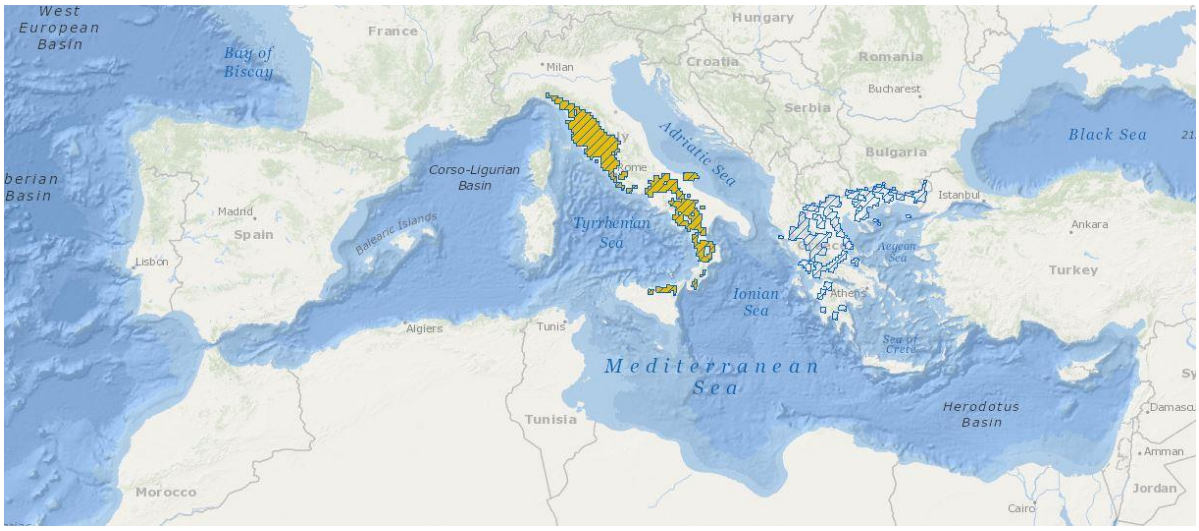
Improvement of the habitat structure in Italy is needed. The adaptation of forest management is the main proposed measure. It should include promotion of the renewal of the tree species, the maintenance of the undergrowth species (particularly the rare ones), retaining of dead trees and trunks, as well as prohibition of grazing in forests. Any abandoned areas adjacent to the current nuclei of this habitat could be used for habitat expansion. Effective fire plans should be prepared.

Habitat description

Sub-continental thermo-xerophile *Quercus cerris, Q. petraea* or *Q. frainetto* and related deciduous oaks, locally of *Q. pedunculiflora* or *Q. virgiliana* forests of the Pannonic, hills and plains of western and southern Romania, northern Balkanic hilly regions, and of the supra-Mediterranean level of continental north-east Greece, and of supra-Mediterranean Anatolia and in lower mountains with the continental *Acer tataricum*. Distributed generally between 250 and 600 (800) m above sea level and developed on varied substrates: limestones, andesites, basalt, loess, clay, sand, etc., on slightly acidic, usually deep brown soils.

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type is widespread in Italy and Greece. The overall representation of the habitat in Natura 2000 sites is very low (ca 3 %).



Natura 2000 sites in the Mediterranean region			
Country	**Habitat area /km²/**	**Coverage /%/**	**Number of sites**
Greece	N/A	N/A	N/A
Italy	593.91	11	161
Total	**594**	**3**	**161**

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

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

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
GR	14000	17.9	0	14000	14000	72.5	0	14000	FV	FV	FV		FV	
IT	64000	82.1	0	≈64000	5304.56	27.5	0	≈5304.56	U1	U1	U1	x	N/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	78000	0	0	≈78000	19305	0	0	≈19305	2XA	2XA	MTX	x	FV	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

Italy reported some pressures of medium intensity: grazing, artificial planting on open ground (non-native trees), removal of forest undergrowth, urbanised areas, human habitation, roads, motorways, dispersed habitation, and burning down.

Code	Pressure name	IT	GR
A04	grazing	M	
B01.02	artificial planting on open ground (non-native trees)	M	
B02.02	forestry clearance	L	
B02.03	removal of forest undergrowth	M	
D01.02	roads, motorways	M	
E01	Urbanised areas, human habitation	M	
E01.03	dispersed habitation	M	
J01.01	burning down	M	

Legend: L Low intensity M Medium intensity H High intensity

The adaptation of forest management was the only measure proposed by Italy.

Code	Measure name	IT	GR
3.2	Adapt forest management	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 91M0 reached an LHF score of 6.07. This habitat type was as LHF because to achieve improvement, it is sufficient to change from an unknown 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 is that the trend of only one parameter (Structure & functions) in one country (Italy) needs to be improved in order to achieve overall improvement. In addition, no pressure of high intensity was reported.

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 adaptation of forest management is the main proposed measure. This should include promotion of the renewal of the tree species, the maintenance of the undergrowth species (particularly the rare ones), retaining of dead trees and trunks, as well as prohibition of grazing in forests. Any abandoned surfaces adjacent to the current nuclei of this habitat could be used for habitat expansion. Effective fire plans should be prepared.

Links

https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=91M0&region=MED

91L0 Illyrian oak-hornbeam forests (*Erythronio-Carpinion*)

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

Habitat summary

The habitat occurs in the Mediterranean biogeographical region only in Italy, which reported unfavourable-inadequate overall conservation status. While two parameters (Range; Area) were assessed as favourable, the other two (Structure and functions; Future prospects) were reported as unfavourable-inadequate.

Improvement of habitat structure and increase of habitat area in Italy are needed. The main measures should include adaptation of forest management, restoration or improving the forest habitats and other forestry-related measures as proposed by Italy. The adaptation of forest management is needed in favour of the habitat, including avoidance of practices like artificial planting using non-native trees, forestry clearance and removal of forest undergrowth. The suitable measures are: adopting a specific forest management plan, definition of forest areas to be left free to evolve, definition of conversion guidelines and structural improvement interventions that promote maximum floristic-structural diversification, promoting lower-impact forest management techniques, regulation of grazing in forests, and the introduction of measures for the regulation of hunting activities. It is also desirable to implement measures for better regulation of human activities like building of roads and urbanisation. The representation of the habitat in Natura 2000 sites should be improved.

Habitat description

Forests of *Quercus robur* or *Q. petraea*, sometimes *Q. cerris*, and *Carpinus betulus* on both calcareous and siliceous bedrocks, mostly on deep neutral to slightly acidic brown forest soils, with mild humus in the SE-Alpine-Dinaric region, West and Central Balkans extending northwards to Lake Balaton mostly in hilly and submontane regions, river valleys and the plains of the Drava and Sava. The climate is more continental than in sub-Mediterranean regions and warmer than in central Europe; these forests are intermediate between oak-hornbeam woods (e.g. 9170) of central Europe and those of the Balkans and merge northwards into the Pannonic oak woods (91G0). They have a much higher species richness than the Central European oak woods. Outliers of these forests also occur in Frioul and the northern Apennines.

Distribution in the Mediterranean region and coverage by Natura 2000 network

The habitat type occurs in the Mediterranean biogeographical region only in Italy. Indication of the habitat from Greece should be confirmed. The overall representation of the habitat in Natura 2000 sites is low (ca 12 %).

Natura 2000 sites in the Mediterranean region			
Country	**Habitat area /km²/**	**Coverage /%/**	**Number of sites**
Greece	N/A	N/A	1
Italy	53	12	34
Total	**53**	**12**	**35**

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

Italy assessed the overall conservation status of this habitat type in the Mediterranean biogeographical region as unfavourable-inadequate. Two parameters (Range; Area) were assessed as favourable; the other two (Structure and functions; Future prospects) were assessed as unfavourable-inadequate. The overall conservation status for the region has changed compared to previous reporting from unknown to unfavourable-inadequate. This change is not considered genuine.

Treated data from Member States reports

MS	Range (km²)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
IT	32000	100	0	≈32000	443.52	100	0	≈443.52	U1	U1	U1	x	N/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	32000	00	0	≈32000	444	00	0	≈444	00	00	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 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

Italy reported some pressures of medium intensity: artificial planting on open ground (non-native trees), removal of forest undergrowth, roads, motorways, discontinuous urbanisation, burning down. Less important pressures include forestry clearance and dispersed habitation.

Code	Pressure name	IT
B01.02	Artificial planting on open ground (non-native trees)	M
B02.02	Forestry clearance	L
B02.03	Removal of forest undergrowth	M
D01.02	Roads, motorways	M
E01.02	Discontinuous urbanisation	M
E01.03	Dispersed habitation	L
J01.01	Burning down	M

Legend: L Low intensity M Medium intensity H High intensity

The adaptation of forest management and other forestry-related measures are the most important measures proposed by Italy. Another important measure is restoring/improving forest habitats.

Code	Measure name	IT
3.0	Other forestry-related measures	H
3.1	Restoring/improving forest habitats	M
3.2	Adapt forest management	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 91L0 reached an LHF score of 8.40. This habitat type was classified as LHF because to achieve improvement, it is sufficient to change from an unknown to an improving trend in 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 (Italy) needs to be improved in order to achieve overall improvement. In addition, no pressure of high intensity is reported by Italy.

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 adaptation of forest management, restoration or improving the forest habitats and other forestry-related measures as proposed by Italy. The adaptation of forest management is needed in favour of the habitat, including avoidance of practices like artificial planting using non-native trees, forestry clearance and removal of forest undergrowth. The suitable measures are: adopting a specific forest management plan, definition of forest areas to be left free to evolve, definition of conversion guidelines and structural improvement interventions that promote maximum floristic-structural diversification, promoting lower-impact forest management techniques, regulation of grazing in forests, and the introduction of measures for the regulation of hunting activities. It is also desirable to implement measures for better regulation of human activities like building of roads and urbanisation. The representation of the habitat in Natura 2000 sites should be improved.

Links

https://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=91L0&region=MED

https://www.regione.marche.it/natura2000/pagina_base98d2.html?id=1666