Supporting elements for

the Alpine Natura 2000 review seminar

(2nd part: Fact sheets for "Low hanging fruits" habitats)

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Contents

1   Introduction

The following fact sheets describe 20 habitat types from the Alpine biogeographical region selected as "Low Hanging Fruits' habitats according to the methodology described in the document entitled "Supporting elements for the Alpine review seminar, 1st part: core document".

The following information is provided for each habitat:

- Summary: A summary of main features described in the following sections:
- Habitat description: as reflected in Manual of Habitats interpretation
- Distribution in the Alpine region and coverage by Natura 2000 network: as reported by Member States in their 2013 report (covering the period 2007-2012)
- Biogeographical conservation status assessment: as reported by Member States in their 2013 report (covering the period 2007-2012) and available at: http://bd.Eionet.europar.eu/article17/reports2012
- Pressures, threats and proposed measures: as reported by Member States in their 2013 report (covering the period 2007-2012)
- Reason for selection as 'Low Hanging Fruit' habitat in the Atlantic region: outcome of an analysis of the parameters which could rapidly improve
- Priority conservation measures needed: outcome of an expert judgment analysis
- Links: link to the relevant page on the Art 17 portal http://bd. Eionet.europar.eu/article17/reports2012
- In addition, a section to be filled by Member States is appended to each fact-sheet.

2 Fact sheets for LHF habitat types

3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition – type vegetation

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

Habitat summary

The overall conservation status in the Alpine biogeographical region is unfavourable - bad due to assessment of habitat structure by Italy. The centre of habitat 3150 distribution in the Alpine region lies in Alps and Western Carpathian, but habitat occurs also in Scandinavia, Pyrenees, Apennines, mountains of south Balkan in Bulgaria and in Romanian Carpathians. The largest part of habitat area (55 %) is reported from Romania. For the improvement of the overall conservation status, especially improvement of the habitat structure and function in Italy is needed. This means improving water quality and hydrologic regime of the habitat. The habitat restoration is needed in Spain and France and increase of the habitat representation in Natura 2000 network is an issue for most of countries.

Habitat description

Lakes and ponds with mostly dirty, grey to blue-green, more or less turbid, waters, particularly rich in dissolved bases (pH usually > 7), with free-floating surface communities of the *Hydrocharition* or, in deep, open waters, with associations of large pondweeds (*Magnopotamion*).

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat has quite broad range in Alpine biogeographical region. The centre of its distribution lies in Alps and Western Carpathian, but the habitat occurs also in Scandinavia (Sweden), Pyrenees, Apennines, Dinaric mountains, mountains of Bulgaria and in Romanian Carpathians. The representation of the habitat in Natura 2000 network is highly variable ranging from complete inclusion of habitat in Natura 2000 sites in Slovenia through location of around half of the habitat area in Natura 2000 sites (Bulgaria, Germany, and Slovakia) to low representation of habitat in the Natura 2000 sites (Poland, Romania, Sweden).
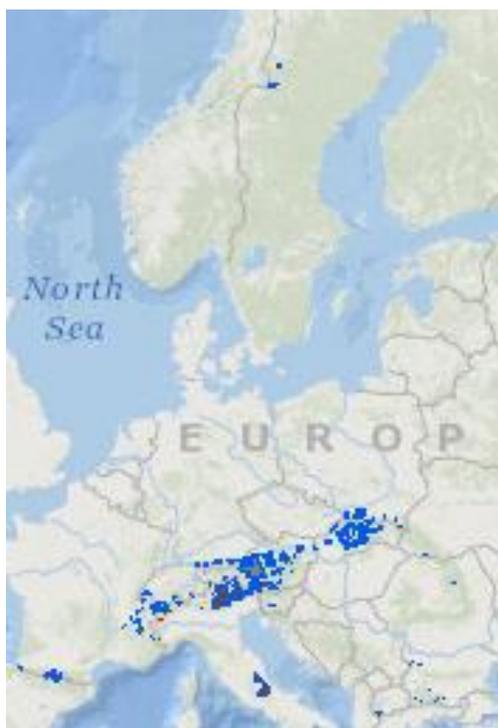
Natura 2000 sites in the Alpine region			
Country	Area /km²/	Coverage /%/	Number of sites
Austria	20.00	20	35
Bulgaria	0.06	50	1
Croatia	0.04	N/A	5
France	N/A	N/A	11
Germany	0.37	46	N/A
Italy	34.95	28	73
Poland	0.01	10	2
Romania	0.1-0.8	0-0.3	2
Slovakia	0.2-0.3	33-50	16
Slovenia	0.97	100	1
Spain	0.54	135	10
Sweden	2.00	13	1
Total	**59.2-60**	**11**	**152**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable - bad due to assessment of habitat structure by Italy. Besides Italy, also Spain assessed the habitat status as unfavourable - bad, Bulgaria and France assessed it as unfavourable - inadequate. The habitat has favourable conservation status in five countries: Germany, Romania, Sweden, Slovenia and Slovakia. The overall conservation status for the region has been changed from unknown to unfavourable - bad, the unknown status is still reported by Austria and Poland. The change in the overall conservation status is not genuine; it is due to better knowledge or different 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.
AT	20700	22.8	x	x	100	18.3	x	x	XX	XX	XX		XX	d
BG	5000	5.5	x	5000	0.12	0	x	0.12	U1	U1	U1	=	N/A	
DE	2384.76	2.6	0	2384.76	0.81	0.1	0	0.81	FV	FV	FV		FV	nc
ES	1502	1.7	0	≈1502	0.40	0.1	-	>>0.40	XX	U1	U2	=	U1	c1
FR	4200	4.6	0	≈4200	4	0.7	-	>4	U1	U1	U1	-	U2	c1
IT	44700	49.2	0	≈44700	124.17	22.7	0	>124.17	U2	U1	U2	-	FV	c1
PL	5220	5.7	0	≈5220	0.10	0	0	≈0.10	XX	XX	XX		U1	c1
RO	300	0.3	0	x	300	54.9	0	x	FV	FV	FV		N/A	
SE	300	0.3	0	300	15	2.7	0	15	FV	FV	FV		FV	
SI	980	1.1	0	≈980	0.97	0.2	0	≈0.97	FV	FV	FV		FV	nc
SK	5610.82	6.2	0	≈5610.82	0.60	0.1	0	≈0.60	FV	FV	FV		XX	b1

EU Biogeographical assessment and proposed corrections															Target 1	
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.		Contrib.	Type
EU27	90898	2GD	x	x		2GD	x	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 broad range of pressures; most countries reported pollution of surface waters as main pressure impacting the habitat type (Bulgaria, Italy and Spain consider it as highly intensive). Pressures related to agriculture such as fertilisation, cultivation and use of chemicals are also frequently reported. Other significant pressures are linked to modification of hydrologic condition and leisure fishing.

Code	Pressure name	AT	BG	DE	ES	FR	IT	PL	RO	SE	SI	SK
A01	Cultivation				M						M	
A04	Grazing				M							
A04.02	Non intensive grazing								M			
A05	Livestock farming and animal breeding (without grazing)				M							
A07	Use of biocides, hormones and chemicals				H		M					
A08	Fertilisation				H	H	M				M	L
A09	Irrigation				M							
A10	Restructuring agricultural land holding				M							
C01	Mining and quarrying					L						
C01.01	Sand and gravel extraction		L									
C02	Exploration and extraction of oil or gas		L									
D01	Roads, paths and railroads				M	M						
D01.02	Roads, motorways							L				
D01.04	Railway lines, TGV							L				
E01	Urbanised areas, human habitation				M	H						
E02	Industrial or commercial areas					H						
E03	Discharges				M							
F02.03	Leisure fishing	M	L	L	M		M	M				
G01.01	Nautical sports	M				L						
G01.02	Walking, horseriding and non-motorised vehicles				M							
G02	Sport and leisure structures			M								
G05.01	Trampling, overuse				M							
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	H		H	M	H	M				
H02	Pollution to groundwater (point sources and diffuse sources)		L		H							
I01	Invasive non-native species				M							
J02	Human induced changes in hydraulic conditions				H	H	M					M
J02.01.03	Infilling of ditches, dykes, ponds, pools, marshes or pits	M										
J02.02	Removal of sediments (mud…)										L	
J02.05	Modification of hydrographic functioning, general	M										M
K01.01	Erosion		L		M				M			
K01.02	Silting up				M							
K01.03	Drying out				M							
K02	Biocenotic evolution, succession		M		M							L
K02.03	Eutrophication (natural)								M			L
L08	Inundation (natural processes)								M			
M01	Changes in abiotic conditions		M									
X	No threats or pressures									X		

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

Five countries consider highly needed the establishment of protected areas, other three countries consider legal protection of species and habitats as well as restoration/improvement of the water quality as important measures to be implemented. To other reported measures belongs restoration/improvement of the hydrological regime, managing water abstraction.

Code	Measure name	AT	BG	DE	ES	FR	IT	PL	RO	SE	SI	SK
1.1	No measures needed for the conservation of the habitat/species										X	
1.2	Measures needed, but not implemented	NA										
1.3	No measure known/ impossible to carry out specific measures					M						
4.0	Other wetland-related measures				L							
4.1	Restoring/improving water quality		H		L		H			H		
4.2	Restoring/improving the hydrological regime		H		L		H					
4.3	Managing water abstraction		H		L							
4.4	Restoring coastal areas				L							
6.0	Other spatial measures			L								
6.1	Establish protected areas/sites		H				H	H		H		H
6.3	Legal protection of habitats and species						H	H	M	H		
6.4	Manage landscape features				L		H					
7.2	Regulation/ Management of fishery in limnic systems									M		
7.4	Specific single species or species group management measures									H		
8.1	Urban and industrial waste management				L							
9.1	Regulating/Management exploitation of natural resources on land		H					M				

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

Reason of selection for the first Alpine seminar

The habitat type was selected for the first Alpine seminar because of its high value of the Priority index. The habitat 3150 reached score 110 because of high values in both criteria A and B. The habitat occurs in eleven countries (criterion A). Two countries (Spain and Italy) reported unfavourable - bad overall conservation status, two countries (Bulgaria and France) indicated unfavourable - inadequate status and other two countries (Austria and Poland) unknown status. Countries reported also negative trends in two cases (criterion C).

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

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 3150 reached the LHF score 147.04. This habitat type was classified as LHF especially because to reach improvement. The change from negative to stable trend within the category U2 (unfavourable-bad) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of the improvement of only one parameter (Structure & Functions) in one country (Italy) is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the habitat conservation status in the Alpine biogeographic region, especially improvement of the habitat structure and function in Italy is needed. This means especially improving the water quality and hydrologic regime of the habitat - but because of the complexity of these issues, this task is quite demanding. Measures for reduction of water pollution from agriculture (fertilisation, use of biocides) are important; also measures for urban and industrial waste management and water abstraction reduction are relevant. Several countries indicated also the leisure fishing as important pressure and if it is real problem, probably its regulation is needed and its implementation is much easier than water quality and water regime measures.

The habitat restoration is needed also in countries reporting lower actual habitat area than the reference value: Spain and France. More information about the habitat in Austria and Poland as well as about habitat structure and functions in Spain is needed.

The increase of habitat representation in Natura 2000 network is also an issue for most of countries because the occurrence of the habitat type in Natura 2000 is low (11 %) on the level of biogeographical region. This need is recognised by countries (five of them reported this measure as highly needed) and the increased area of habitat in Natura 2000 sites could help to resolve also other problems with the habitat management.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Freshwater+habitats&subject=3150&region=ALP

3180 * Turloughs

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

Habitat summary

The overall conservation status of this priority habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Structure & Functions in Slovenia, although both Range and Area are favourable. Habitat 3180 occurs in the Alpine biogeographic region only in the karstic part of Slovenia.

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of structure and functions in Slovenia is needed. The regulation of the agricultural management and better protection of the groundwater quality is thus needed to reach improving status of the habitat. It is necessary to implement the set of measures for improvement of the water quality and water regime on local scale, in individual sites of the habitat distribution. In this respect, the regulation of groundwater abstraction will become very important and it is possible to use synergy with protection of water quality for human use. The whole habitat area in Slovenia is located in the Natura 2000 sites what should facilitate adoption of necessary measures. Also establishing of protection zones of water sources should contribute to improvement of the conservation status of this habitat.

Habitat description

Temporary lakes principally filled by subterranean waters and particular to karstic limestone regions, first described from Ireland but they also occur in the Alpine region of Slovenia. Most flood in the autumn and then dry up between April and July. However, some may flood at any time of the year after heavy rainfall and dry out again in a few days; others, close to the sea, may be affected by the tide in summer. These lakes fill and empty at particular places. The soils are quite variable, including limestone bedrock, marls, peat, clay and humus, while aquatic conditions range from ultra oligotrophic to eutrophic. The vegetation mainly belongs to the *alliance Lolio-Potentillion anserinae* Tx. 1947, but also to the *Caricion davallianae* Klika 1934.

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat occurs in the Alpine biogeographic region only in the karstic part of Slovenia and Croatia. The whole habitat area in Slovenia is located in the Natura 2000 sites.
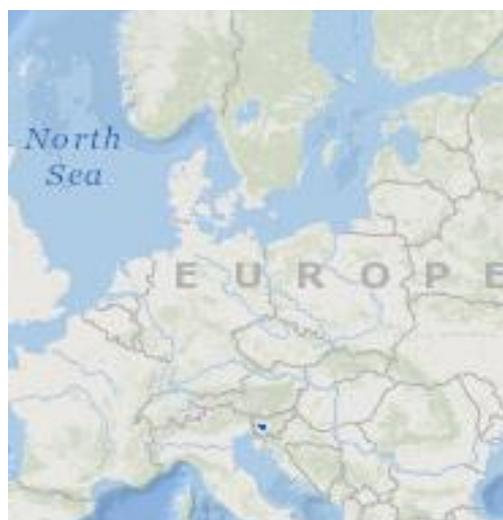
Natura 2000 sites in the Alpine region			
Country	Area /km²/	Coverage /%/	Number of sites
Croatia	1.40	N/A	1
Slovenia	27.67	100	3
Total	27.67	100	3

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Structure & Functions in Slovenia although both Range and Area are favourable. There has been no change in Conservation Status since 2001-2006, the qualifier is stable.

Treated data from Member States reports

MS	Range (km^2)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
SI	483	100	0	≈483	27.67	100	0	≈27.67	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	483	1	0	≈483	28	1	0	≈28	0	0	MTX	=	U1	nc	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

Changes to agriculture and hydrology together with pollution are noted as threats and pressures. Slovenia reported only two pressures of medium intensity: modification of cultivation practice and modification of standing water bodies. These two pressures could be interconnected.

Code	Pressure name	SI
A02	Modification of cultivation practices	M
J02.05.03	Mofification of standing water bodies	M

Legend: L Low intensity M Medium intensity H High intensity

Slovenia identified maintenance of grasslands and other open habitats as the main measure of high priority to be implemented for improvement of the conservation status of the habitat.

Code	Measure name	SI
2.1	Maintaining grasslands and other open habitats	H

Legend: L Low importance M Medium importance H High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 3180 reached the LHF score 1.00. This habitat type was classified as LHF especially because to reach improvement, the change from stable to improving trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because the improvement of trend in only one country (Slovenia) is needed to reach the overall improvement, Slovenia did not report pressures of high intensity and whole area of this habitat in Slovenia is located in Natura 2000 sites.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of structure and functions in Slovenia is needed. Slovenia did not report any pressure of high intensity; to pressures of middle intensity belong modification of cultivation practices and modification of standing water bodies. The regulation of the agricultural management and better protection of the groundwater quality is thus needed to reach improving status of the habitat. It is necessary to implement the set of measures for improvement of the water quality and water regime on local scale, in individual sites of the habitat distribution. In this respect, the regulation of groundwater abstraction will become very important and it is possible to use synergy with protection of water quality for human use. The whole habitat area in Slovenia is located in the Natura 2000 sites what should facilitate adoption of necessary measures. Also establishing of protection zones of water sources should contribute to improvement of the conservation status of this habitat.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Freshwater+habitats&subject=3180&region=ALP

4070 * Bushes with *Pinus mugo* and *Rhododendron hirsutum* (*Mugo-Rhododendretum hirsuti*)

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

Habitat summary

The overall conservation status of this priority habitat type in Alpine biogeographical region is unfavourable - inadequate due to assessment of structure & function in Bulgaria and Italy. The overall trend is deteriorating. The habitat is threatened mostly by ski resorts; to important threats belong also grazing, burning down, electricity and phone lines, erosion, roads, outdoor sports, leisure and recreational activities, removal of terrestrial plants. The habitat is broadly distributed in central part of Alps, quite abundant in higher pats of Carpathians and mountains of western Bulgaria, scattered in southwest Alps, an isolated occurrence is in highest parts of Apennines

For the improvement of the overall conservation status, improvement of the habitat structure and functions in Bulgaria and Italy is needed. The habitat type represents climax vegetation in sub-alpine zone of mountains and thus for improvement of its structure is crucial elimination of disturbing factors, especially by regulation of sport and recreation as well as building activities in mountains.

Habitat description

The habitat "Bushes with *Pinus mugo* and *Rhododendron hirsutum* (*Mugo-Rhododendretum hirsuti*)" includes *Pinus mugo* formations usually with *Rhododendron* spp. of the dry eastern inner Alps, the northern and southeast outer Alps, the southwest Alps and the Swiss Jura, the eastern greater Hercynian ranges, the Carpathians, the Apennines, the Dinarides and the neighbouring Pelagonides, the Pirin, the Rila and the Balkan Range.

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat is broadly distributed in central part of Alps, quite abundant in higher parts of Carpathians, Dinaric mountains and mountains of western Bulgaria. The habitat has scattered distribution in southwest Alps and isolated occurrence in highest parts of Apennines. High proportion of the habitat area (more than 70 % is protected in Natura 2000 sites; in couple of countries (Bulgaria, Romania and Slovakia) more than 90 % of the habitat area is included in the Natura 2000 network, while whole habitat area is located in Natura 2000 sites in France and Poland.
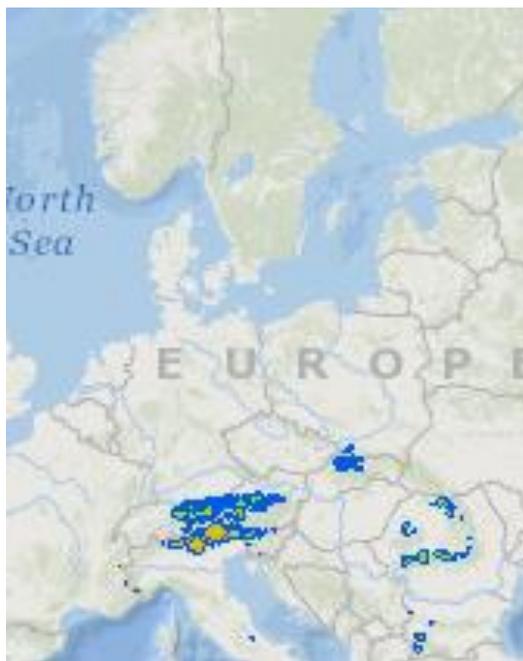
Habitat in Natura 2000 sites in the Alpine region			
Country	Area /km²/	Coverage /%/	Number of sites
Austria	250.00	46	39
Bulgaria	439.92	99	8
Croatia	34.90	N/A	8
France	8.00	100	4
Germany	89.56	62	24
Italy	442.41	61	123
Poland	25.00	100	5
Romania	220-230	92-96	21
Slovakia	140-145	96-100	16
Slovenia	125.00	86	7
Total	**1,775-1,790**	**72-73**	**247**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable - inadequate due to assessment of Bulgaria and Italy - both countries assessed in this category structure and function and Bulgaria the future progress as well. Other countries assessed all parameters as favourable. Both range and area were assessed as favourable by all nine countries. The overall trend is deteriorating.

The overall conservation status for the region has been changed from favourable to unfavourable - inadequate. However, this change is not genuine; it is caused by better knowledge.

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.
AT	36900	42	0	≈36900	540	22.3	0	≈540	FV	FV	FV		FV	nc
BG	3700	4.2	x	3700	445.81	18.4	x	445.81	U1	U1	U1	=	N/A	
DE	3762.51	4.3	0	3762.51	144.71	6	0	144.71	FV	FV	FV		FV	nc
FR	900	1	0	≈900	8	0.3	+	≈8	FV	FV	FV		FV	nc
IT	24900	28.3	0	≈24900	724.68	30	0	≈724.68	U1	FV	U1	-	FV	b1
PL	1012	1.2	0	≈1012	25	1	0	≈25	FV	FV	FV		U1	b1
RO	10900	12.4	0	≈10900	240	9.9	+	≈240	FV	FV	FV		N/A	
SI	2586	2.9	0	≈2586	145	6	0	≈145	FV	FV	FV		FV	nc
SK	3172.60	3.6	0	≈3172.60	145.55	6	0	145.55	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	87833	0	0	≈87833	2419	0	+	≈2419	2XA	2XA	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 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 quite broad range of pressures, considering skiing complexes as the most important one. Other pressures have of medium and low intensity, usually reported by a single country – grazing, removal of hedges and copses or scrub, burning down, electricity and phone lines, erosion, roads, outdoor sports and leisure activities, recreational activities, removal of terrestrial plants, urbanised areas, human habitation.

Code	Pressure name	AT	BG	DE	FR	IT	PL	RO	SI	SK
A04	Grazing				M	L				
A04.01	Intensive grazing			M						
A08	Fertilisation			L						
A10.01	Removal of hedges and copses or scrub							M		
B01	Forest planting on open ground				L					
B02	Forest and Plantation management & use				L					
D01.01	Paths, tracks, cycling tracks									L
D01.02	Roads, motorways					M				
D02.01	Electricity and phone lines					M				
D05	Improved access to site					L				
E01	Urbanised areas, human habitation					M				
E04.01	Agricultural structures, buildings in the landscape							L		
F04	Taking / Removal of terrestrial plants, general					M				
F04.01	Pillaging of floristic stations					M				
G01	Outdoor sports and leisure activities, recreational activities				L	M				
G01.06	Skiing, off-piste						M			
G02.02	Skiing complex		L	L		H			M	M
G02.10	Other sport / leisure complexes									L
H05.01	Garbage and solid waste		L							
J01	Fire and fire suppression									L
J01.01	Burning down			M						
K01.01	Erosion					M				
L04	Avalanche							L		
L09	Fire (natural)				L					L
X	No threats or pressures	X								

Legend: L Low intensity M Medium intensity H High intensity

The countries consider establishment of protected areas, wilderness areas and legal protection of habitats and species as the most important measures. This could partially improve the situation, but this approach has certain limits as current representation of the habitat type in protected areas and Natura 2000 network is already quite high.

Code	Measure name	AT	BG	DE	FR	IT	PL	RO	SI	SK
1.1	No measures needed for the conservation of the habitat/species	X							X	
1.3	No measure known/ impossible to carry out specific measures				M					
2.0	Other agriculture-related measures			L						
2.1	Maintaining grasslands and other open habitats		H							
3.0	Other forestry-related measures					M		H		
3.1	Restoring/improving forest habitats							M		
6.1	Establish protected areas/sites		H			H	H	H		H
6.2	Establishing wilderness areas/ allowing succession						H			
6.3	Legal protection of habitats and species					H	H	H		
6.4	Manage landscape features					H				
9.1	Regulating/Management exploitation of natural resources on land		H							

Legend: L Low importance M Medium importance H High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 4070 reached the LHF score 2.769. This habitat type was classified as LHF especially because to reach improvement, the change from negative to stable trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of high representation of the habitat in Natura 2000 sites (72 %) and the fact that the improvement of only one parameter (Structure & Functions) in one country (Italy) is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the habitat structure and functions in Bulgaria and Italy is needed. The habitat type represents climax vegetation in sub-alpine zone of mountains and thus for improvement of its structure is crucial elimination of disturbing factors. Italy indicated skiing complexes, outdoor sport, leisure and recreation activities, removal of plants as well as building of roads and electricity or phone lines as main pressures to the habitat. The regulation of sport and recreation and building activities in mountains could help to improve the habitat status. The establishing of protected areas also could help to resolve some problems: although, there is already quite high part of the habitat area (61 %) in Natura 2000 sites, there is certain space for designation of new protected sites in Italy. In Bulgaria it is almost the whole habitat area already protected in Natura 2000 sites.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Heath+%26+scrub&subject=4070&region=ALP

4080 Sub-Arctic *Salix* spp. scrub

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate due to the assessment of Italy. The habitat 4080 is broadly distributed in Scandinavia, Alps, less common is in Pyrenees and Western Carpathians and scattered in Apennines, Romanian Carpathians and Rila Mts. in Bulgaria. More than 80% of the habitat area is located in Sweden.

The improving the conservation status of the habitat requires especially improvement of the structure and function of the habitat in Italy. Because of very high part of its area in Italy (89 %) being already located in Natura 2000 sites, there are good preconditions for control or regulation main disturbing human activities, namely intensive grazing, mining, roads and electricity lines construction, outdoor sport, leisure and recreation activities, skiing and erosion.

Habitat description

Subarctic and boreo-alpine willow formations of the Scottish Highlands, the mountains of Iceland and the mountains of Scandinavia (often along streams) and similar communities in the Alps, Pyrenees, Cantabrian Mountains, Carpathians, and associated massifs. The habitat has typical features in individual mountain ranges, which is reflected by habitat sub-types delineated for individual mountain ranges.

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat is broadly distributed in Scandinavia as well as in central and western parts of Alps. It is less common in Pyrenees and Western Carpathians and scattered in Apennines, Romanian Carpathians and Rila Mts. in Bulgaria. Around half of the habitat area in Alpine biogeographical region is located in the Natura 2000 sites. The whole habitat area is covered by Natura 2000 network in Bulgaria, Poland and almost whole area in Romania and Slovakia. On the other hand, France reported only 8 % of the habitat area from the Natura 2000 network.
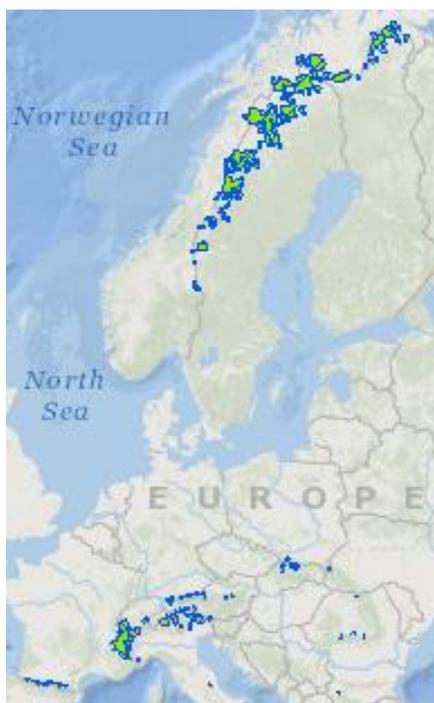
Natura 2000 sites in the Alpine region			
Country	Area /km²/	Coverage /%/	Number of sites
Austria	N/A	N/A	N/A
Bulgaria	0.04	100	2
Finland	17.00	85	16
France	15.00	8	18
Germany	N/A	N/A	N/A
Italy	33.79	89	90
Poland	0.05	100	4
Romania	0.001-0.0012	83-100	12
Slovakia	0.6-0.66	91-100	6
Sweden	610.00	55	46
Total	676.48-676.54	50.3	194

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status in the Alpine biogeographical region is unfavourable-inadequate, due to assessments of Italy, Romania and Slovakia. Crucial is the assessment of Italy because the habitat is very rare in other two countries. Six countries consider the conservation status favourable; Austria as unknown. All parameters except range were assessed as unfavourable-inadequate, but in all parameters the assessment was very close to favourable status. The overall trends is stable; trends of range and area are stable except Austria, Bulgaria and Germany that indicated unknown trend for one or both parameters. The previous conservation status was favourable, but the change is not genuine, it is caused by better knowledge and different thresholds in assessment.

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.
AT	N/A	N/A	x	x	N/A	N/A	x	x	XX	XX	XX		N/A	nc
BG	200	0.1	x	200	0.04	0	x	0.04	FV	FV	FV		N/A	
DE	2081.61	1.5	0	2081.61	N/A	N/A	x	x	FV	FV	FV		FV	nc
FI	17900	12.6	0	≈17900	20	1.5	0	≈20	FV	FV	FV		FV	
FR	18500	13	0	≈18500	185	13.8	0	≈185	FV	FV	FV		U1	c2
IT	36400	25.6	0	>36400	37.88	2.8	0	>37.88	U1	U1	U1	=	U1	b1
PL	580	0.4	0	≈580	0.05	0	0	≈0.05	FV	FV	FV		FV	nc
RO	1100	0.8	0	≈1100	0	0	0	>0	U1	U1	U1	=	N/A	
SE	64000	45.1	0	64000	1100	81.9	0	1100	FV	FV	FV		FV	
SK	1151.59	0.8	0	≈1151.59	0.66	0	0	0.66	U1	FV	U1	=	U1	

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.	Target 1 Type
EU27		2GD				2GD			2GD	2GD	MTX	=	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 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 extremely broad range of pressures, as pressures of high intensity were indicated sport and leisure structures and human-induced changes in hydraulic conditions (both by only one country). Grazing and especially intensive grazing is considered as an important pressure operating in medium to low intensity by higher number of countries. Several countries reported as important pressures also activities connected with constructions of roads, motorways, skiing complexes, electricity and phone lines, as well as mining.

Code	Pressure name	AT	BG	DE	FI	FR	IT	PL	RO	SE	SK
A02	Modification of cultivation practices									L	
A04	Grazing						M				
A04.01	Intensive grazing	M	L	L						L	
A04.01.02	Intensive sheep grazing								L		
A04.03	Abandonment of pastoral systems, lack of grazing									L	
B02	Forest and Plantation management & use					L					
C01	Mining and quarrying						M				
C01.04.01	Open cast mining									L	
D01	Roads, paths and railroads					L					
D01.02	Roads, motorways		L				M		M		
D02.01	Electricity and phone lines		L				M				
D05	Improved access to site								L		
E01.03	Dispersed habitation						L				
E04	Structures, buildings in the landscape									L	
F04	Taking / Removal of terrestrial plants, general						L				
F04.02	Collection (fungi, lichen, berries etc.)		L								
G01	Outdoor sports and leisure activities, recreational activities						M				
G01.02	Walking, horseriding and non-motorised vehicles										L
G01.03	Motorised vehicles									L	
G01.03.02	Off-road motorized driving		M								
G01.06	Skiing, off-piste						M				L
G02	Sport and leisure structures					H					
G02.02	Skiing complex	M	M				M				
G05.01	Trampling, overuse		M								
H04.01	Acid rain									L	
H04.02	Nitrogen-input									L	
H05.01	Garbage and solid waste		L								
J02	Human induced changes in hydraulic conditions					H					
K01.01	Erosion						M				
K02	Biocenotic evolution, succession					L	L				
K02.01	Species composition change (succession)								M		
K04.01	Competition (flora)								M	L	
M01	Changes in abiotic conditions					L					
M01.01	Temperature changes (e.g. Rise of temperature & extremes)								L	L	
M01.02	Droughts and less precipitations		L						M	L	
M02	Changes in biotic conditions					L					
M02.01	Habitat shifting and alteration								M		
X	No threats or pressures				X			X			

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

The establishment of protected areas or sited is the most important measure identified by seven countries, five of them consider it highly needed. It is quite surprising that also countries in which whole habitat area or its high proportion (more than 80 %) is located in Natura 2000 sites consider establishing of new protected sites highly relevant and needed. Other measures, indicated as highly important by two countries, include legal protection of habitat and species, management of landscape features, establishing of wilderness areas and maintaining grasslands and other open habitats. The regulation or management of nature resources exploitation was identified as highly important by one country.

Code	Measure name	AT	BG	DE	FI	FR	IT	PL	RO	SE	SK
1.1	No measures needed for the conservation of the habitat/species			L							
1.2	Measures needed, but not implemented	NA							H		
1.3	No measure known/ impossible to carry out specific measures					M					
2.1	Maintaining grasslands and other open habitats		H							H	
6.1	Establish protected areas/sites		H	M			H	NA	H	H	H
6.2	Establishing wilderness areas/ allowing succession			M				H			
6.3	Legal protection of habitats and species						H	H			
6.4	Manage landscape features						H	H			
9.1	Regulating/Management exploitation of natural resources on land		H								

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

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 62D0 reached the LHF score 19.861. This habitat type was classified as LHF especially because to reach improvement, the improvement of only one parameter (Structure & Functions) in one country (Italy) is needed to reach the overall improvement from unfavourable-inadequate to favourable. In addition, Italy did not report any pressure of high intensity. The habitat type was included to LHF also because of relatively high representation of the habitat in Natura 2000 sites (50 % of the habitat area).

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the structure and function of the habitat in Italy is needed. Italy reported grazing (especially intensive grazing), mining, roads and electricity lines, outdoor sport, leisure and recreation activities, skiing and erosion as main pressures. This is a high-mountain habitat and because very high part of its area (89 %) in Italy is already located in Natura 2000 sites, there are good preconditions for control or regulation of human activities listed above.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Heath+%26+scrub&subject=4080&region=ALP

40A0 * Subcontinental peri-Pannonic scrub

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

Habitat summary

The overall conservation status of this priority habitat type in the Alpine region is unfavourable - inadequate due to the assessment of Structure & Function in Slovakia. Habitat 40A0 is in the Alpine biogeographic region distributed in lower parts of Carpathian Mountains neighbouring to the Pannonian lowland: in southern periphery of the Western Carpathians in Slovakia and in southern Carpathians in Romania, including Apuseni Mts., with high proportion. Around 60 % of the habitat area is located in Romania, rest in Slovakia.

For the improvement of the overall conservation status, especially improvement of the structure and functions in Slovakia is necessary. Better regulation of activities, human disturbances like road building, gravel extraction and conversion to agriculturally used land is needed. Besides proposed establishment of protected areas also legal protection of the habitat could be applied. Relative small total habitat area (up to 3 km^2) is also favourable for implementation of regulation measures.

Habitat description

Low deciduous scrub with continental and submediterranean affinities of the Pannonic basin and neighbouring regions including the eastern Alpine periphery, the southern periphery of the Northwestern Carpathians, the Transylvanian plateau and the adjacent foothills and valleys of the Eastern and Southern Carpathians and the Apuseni mountains, the southern periphery of the Pannonic basin, the Moravian plateau and to the hills and valleys of the northern Balkan peninsula. This habitat type occurs on both calcareous and siliceous substrates forming mosaic-like vegetation with steppe grassland (6210) and forest-steppe elements or plants of the rupicolous Pannonic grasslands (6190) often along the fringes of woodlands. The characteristic species are *Amygdalus nana, Cerasus fruticosa, Cerasus mahaleb, Spiraea media, Rosa spinosissima, Rosa gallica* etc.

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat is distributed in lower parts of Carpathian Mountains neighbouring to the Pannonian lowland: in southern periphery of the Western Carpathians in Slovakia and in southern Carpathians in Romania, including Apuseni Mts. (the distribution in Romania not shown in the map). The habitat is well represented in the Natura 2000 network in Slovakia (more than 60 %) and less represented in Romania (up to 40 %).
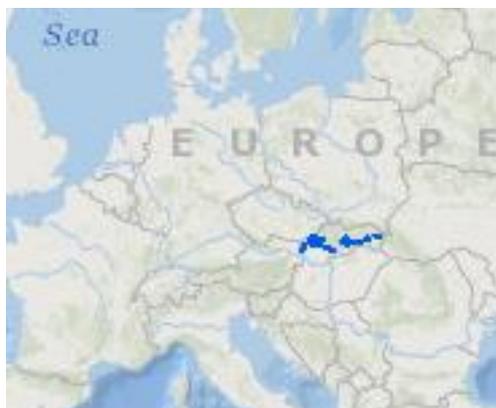
Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Romania	1-2	20-40	4
Slovakia	2-3	60-90	27
Total	**3-5**	**36-60**	**33**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Structure & Function in Slovakia. Other parameters were assessed as favourable; Romania assessed all parameters favourable. The overall conservation status for the region has been not changed against previous reporting period and it remains stable.

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.
RO	13400	72.8	0	≈13400	5	59.9	0	≈5	FV	FV	FV			N/A
SK	5002.40	27.2	+	≈5002.40	3.35	40.1	+	≈3.35	U1	FV	U1	=	U1	

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	18402	0	+	≈18402	8.35	0	+	≈8.35	2XA	2XA	MTX	=	U1	nc	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

Romania reported eight different pressures, considering species composition change (succession) as pressure of high intensity and two other pressures (competition; habitat shifting and alteration) as pressures of medium intensity. Other pressures operate with low intensity. Slovakia reported only two pressures operating with low intensity: modification of cultivation practices and sand and gravel extraction. Besides then, national interpretation manual (Viceníková et Polák 2003) specified also road building and conversion of warm slopes to vineyards and arable land.

Code	Pressure name	RO	SK
A02	Modification of cultivation practices		L
A04.02.05	Non intensive mixed animal grazing	L	
B01.01	Forest planting on open ground (native trees)	L	
C01.01	Sand and gravel extraction		L
D01.02	Roads, motorways	L	
E01.03	Dispersed habitation	L	
E01.04	Other patterns of habitation	L	
K02.01	Species composition change (succession)	H	
K04.01	Competition (flora)	M	
M02.01	Habitat shifting and alteration	M	

Legend: L Low intensity M Medium intensity H High intensity

It is quite surprising that country reporting the overall conservation status favourable (Romania) reported higher number of pressures while country where the conservation status is considered not favourable (Slovakia) indicated only two pressures of low intensity.

Slovakia proposed establishment of protected areas/sites as highly needed measure, Romania did not specify needed measures.

Code	Measure name	RO	SK
1.2	Measures needed, but not implemented	M	
6.1	Establish protected areas/sites		H

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

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 40A0 reached the LHF score 2.163. This habitat type was classified as LHF especially because to reach improvement, the change from stable to improving trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of quite significant representation of the habitat in Natura 2000 sites (up to 60 %) and the fact that the improvement of trend of only one parameter (Structure & Functions) in one country (Slovakia) is needed to reach the overall improvement. In addition, Slovakia reported only two pressure of low intensity.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the Structure & Function in Slovakia is necessary. The habitat is threatened by human disturbances like road building, gravel extraction and conversion to agriculturally used land (vineyards, arable land). Better regulation of these activities is needed. The proposed establishment of protected areas could help, although already large part of the habitat area (more than 60 %) is located in Natura 2000 sites. Another tool to be used is legal protection of the habitat. Relative small total habitat area (up to 3 km^2) is also favourable for implementation of regulation measures.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Heath+%26+scrub&subject=40A0&region=ALP

Viceníková, A., Polák, R., 2003: Európsky významní biotopy na Slovensku. – Štátna ochrana prírody SR, Banská Bystrica, 151 pp.

62D0 Oro-Moesian acidophilous grasslands

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate due to the assessment of Structure & Function in Bulgaria. Habitat 62D0 is in the Alpine biogeographic region distributed only in mountains of Bulgaria.

The improving of the habitat conservation status requires improvement of the habitat structure and functions in Bulgaria. The regulation of grazing, monitoring of the habitat state and implementation of the regulations for the national parks are mentioned by Roussakova (2015) as the main measures to be taken. The location of almost whole habitat area in Natura 2000 sites and in National and Nature Parks could facilitate implementation of these measures.

Habitat description

Alpine and sub-alpine grasslands developed over crystalline rocks and other lime-deficient substrates or on decalcified soils at 1600 – 2900 m above sea level on high mountains of the Central Balkan Peninsula. The communities are dominated by grasses such as *Festuca paniculata, Bellardiochloa violacea, Festuca airoides, Calamagrostis arundinacea, Fstuca nigrescens,*and *Agrostis capillaris*. The Balkan endemics *Festuca balcanica, F. riloensis, F. valida, Sesleria comosa* and *Carex bulgarica* also occur in these communities.

Distribution in the Alpine region and coverage by Natura 2000 network

Distributed in high mountains of the Central Balkan Peninsula, including the Balkan Range, Rila, Pirin, Slavyanka, the Central Rhodopes, Ossogovska Planina, Belassitza, in the Alpine biogeographical region of EU only in Bulgaria. The habitat is very well represented in Natura 2000 network – around 96 % of the habitat area is located in Natura 2000 sites in Bulgaria.

Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Bulgaria	320.15	96	12
Total	**320.15**	**96**	**12**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The conservation status in the Alpine region is unfavourable-inadequate and stable, in spite of the favourable range and area in the only reporting country Bulgaria. Parameters Structure & Function as well as Future prospect were assessed as unfavourable-inadequate. This habitat was reported for the first time in the Article 17 from 2013, there are no data to identify changes.
According to the Bulgarian Red Data Book (Roussakova 2015), this habitat is vulnerable.

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.
BG	13600	100	x	13600	331.83	100	x	331.83	U1	U1	U1	=		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.	Target 1 Type
EU27	13600	00	x	13600	332	00	x	332	00	00	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

Bulgaria reported five pressures of medium intensity influencing this habitat type (intensive grazing, structures and buildings (also related to sport and recreation), waste deposition and taking plants). As specified in the Red Book of Bulgaria (Roussakova, 2015), the stands of this habitat were used as pastures. Until 15 years ago, as a result of overgrazing, they were replaced by the vegetation dominated by grass *Nardus stricta*. After the intensity of the grazing decreased, besides restoration of original habitat, a revival of the shrub vegetation can be observed. Erosion is mentioned as a threat as well.

Code	Pressure name	BG
A04.01	Intensive grazing	M
E04	Structures, buildings in the landscape	M
F04	Taking / Removal of terrestrial plants, general	M
G02	Sport and leisure structures	M
H05.01	Garbage and solid waste	M

Legend: L Low intensity M Medium intensity H High intensity

Bulgaria specified four measures, three of them are considered highly needed: maintaining grasslands, establish protected areas and regulating/manage exploitation of natural resources. Other, not specified agriculture-related measures are considered as needed as well.

Code	Measure name	BG
2.0	Other agriculture-related measures	M
2.1	Maintaining grasslands and other open habitats	H
6.1	Establish protected areas/sites	H
9.1	Regulating/Management exploitation of natural resources on land	H

Legend:　L　Low importance　M　Medium importance　H　High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 62D0 reached the LHF score 1.036. This habitat type was classified as LHF especially because to reach improvement, the change from stable to improving trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of high representation of the habitat in Natura 2000 sites (96.5 % of the habitat area) and the fact that the improvement of only one parameter (Structure & Functions) in one country (Bulgaria) is needed to reach the overall improvement. In addition, Bulgaria did not report any pressure of high intensity.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, improvement of the habitat structure and functions in Bulgaria is needed. The pressures reported by Bulgaria should be addressed: intensive grazing, building activities in the high-mountain landscape, taking/removal of plants, sport and leisure activities and solid waste. The regulation of grazing, monitoring of the habitat state and implementation of the regulations for the national parks are mentioned as the main measures to be taken by Roussakova (2015). The location of almost whole habitat area in Natura 2000 sites and in National and Nature Parks could facilitate implementation of these measures.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Grasslands&subject=62D0&region=ALP

Roussakova, V. (2015): Subalpine acidophilic xerophytic grasslands. – In: Biserkov, V., Gussev, Ch. (eds).: Red Data Book of the Republic of Bulgaria. Vol. 3 – Natural habitats. *http://e-ecodb.bas.bg/rdb/en/vol3*/27E4.html

7220 * Petrifying springs with tufa formation (*Cratoneurion*)

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

Habitat summary

The overall conservation status of this priority habitat type in the Alpine region is unfavourable - inadequate due to the assessment of Italy. Habitat 7220 is abundant in Alps, Pyrenees and Western Carpathians, relatively often also Finland. Its distribution in Sweden, Eastern Carpathians, south Balkan mountains in Bulgaria and in Apennines is isolated or scattered. France hosts more than 77 % of the habitat area. The improving the conservation status of the habitat requires especially improvement of the habitat structure and functions in Italy. The measures against water and soil pollution, abstraction of water and for hydraulic regime improvement should be taken. The relatively small habitat area, completely located in Natura 2000 sites, is a good precondition for implementation of these measures. There is also need of habitat restoration in Italy, Austria, Spain, Slovenia, and Slovakia and better knowledge of the habitat in Germany, Romania, France and Spain.

Habitat description

Hard water springs with active formation of travertine or tufa. These formations are found in such diverse environments as forests or open countryside. They are generally small (point or linear formations) and dominated by bryophytes (*Cratoneurion commutati*).

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat widespread in northern and eastern periphery of Alps, Dinaric mountains, in Pyrenees and Western Carpathians (Slovakia), relatively often also in Alpine biogeographical region of Finland. Isolated or scattered distribution in Sweden, Eastern Carpathians (Romania), south Balkan mountains in Bulgaria and in Alpine region of Apennines. The habitat is very well represented in the Natura 2000 network – more than 98 % of habitat area lies in Natura 2000 sites. Whole national habitat area is located in the Natura 2000 sites in Bulgaria, Italy, and Poland, high proportion also in other countries except Austria and Slovenia. The reporting of habitat area in Spain is not reliable.
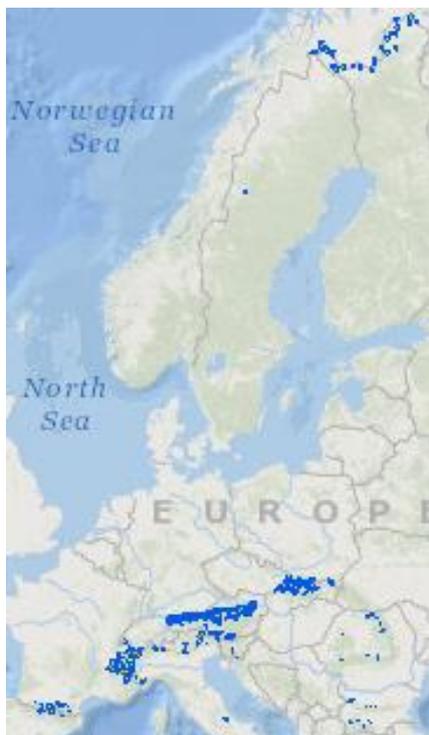
Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Austria	0.02	20	31
Bulgaria	0.56	100	7
Croatia	0.004	N/A	2
Finland	0.01-0.02	50-100	2
France	39.00	97	56
Germany	0.01	N/A	31
Italy	9.80	100	57
Poland	0.01	100	4
Romania	0.14	93	13
Slovakia	0.18-0.25	53-74	46
Slovenia	0.04	16	3
Spain	1.02	554	15
Sweden	0.00	0	0
Total	50.79-50.87	98.4	265

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate and declining, due to assessment of range and future prospect as unfavourable – inadequate. Austria and Italy reported all parameters as unfavourable – inadequate while Finland and Sweden assessed all parameters as favourable. Many parameters were assessed as "unknown" by the countries, leading to overall conclusion of parameters Area and Structure & Function as unknown. These two parameters are crucial for overall assessment, thus there is clearly a need for better information on this habitat from Germany, France, Spain, Poland, Romania and Slovakia. The overall conservation status for the region has been not changed against previous

Treated data from Member States reports

| MS | Range (km^2) | | | | Area | | | | Struct & func. | Future prosp. | Overall asses. | | | |
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
AT	24900	26.8	0	>24900	0.10	0.2	x	>0.10	U1	U1	U1	=	U1	nc
BG	3000	3.2	x	3000	0.56	1.1	x	0.56	U1	U1	U1	=	N/A	
DE	3908.51	4.2	0	3908.51	N/A	N/A	x	x	XX	XX	XX		XX	nc
ES	1265	1.4	+	>1265	0.18	0.4	x	>0.18	FV	FV	U1	+	XX	c1
FI	12000	12.9	0	≈12000	0.02	0	0	≈0.02	FV	FV	FV		FV	
FR	13400	14.4	0	≈13400	40.20	77.8	x	x	XX	U1	U1	=	U1	nc
IT	24200	26	0	>24200	9.80	19	0	>9.80	U1	U1	U1	-	FV	c1
PL	179	0.2	x	≈179	0.01	0	x	≈0.01	XX	U1	U1	-	U1	nc
RO	2900	3.1	x	x	0.15	0.3	x	x	XX	XX	XX		N/A	
SE	300	0.3	0	300	0.05	0.1	0	0.05	FV	FV	FV		FV	
SI	386	0.4	0	≈386	0.25	0.5	0	>0.25	FV	FV	U1	=	U1	nc
SK	6583	7.1	0	≈6583	0.34	0.7	-	>0.34	U1	U1	U1	=	U1	

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	93022	2GD		90122	52	2GD		11	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

Code	Pressure name	AT	BG	DE	ES	FI	FR	IT	PL	RO	SE	SI	SK
A01	Cultivation				L								
A02	Modification of cultivation practices				L								
A04	Grazing				H					H			
A04.01	Intensive grazing					L							
A04.02	Non intensive grazing	M		M									
A05	Livestock farming and animal breeding (without grazing)				L								
A07	Use of biocides, hormones and chemicals				H								
A08	Fertilisation				H		M						M
A09	Irrigation				L								
A11	Agriculture activities not referred to above						M						
B01	Forest planting on open ground				M								L
B02	Forest and Plantation management & use								M				
B02.01.02	Forest replanting (non native trees)			L									
B02.02	Forestry clearance			L									
B03	Forest exploitation without replanting or natural regrowth						L						
B07	Forestry activities not referred to above										L		
C01	Mining and quarrying				M								
C01.01	Sand and gravel extraction			H									
C02	Exploration and extraction of oil or gas			M									
D01	Roads, paths and railroads	M			L		M						
D01.01	Paths, tracks, cycling tracks								M				
D05	Improved access to site				L			M					
E01	Urbanised areas, human habitation				L								
E01.03	Dispersed habitation					L							
E02	Industrial or commercial areas				L								
E03	Discharges			L	L								
G01	Outdoor sports and leisure activities, recreational activities						L			M			
G01.02	Walking, horseriding and non-motorised vehicles									H			
G01.04	Mountaineering, rock climbing, speleology								M	H			
G02	Sport and leisure structures				L		M						
G05.01	Trampling, overuse				L								
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)		L		H			H					
H02	Pollution to groundwater (point sources and diffuse sources)		L				M		L				
H04	Air pollution, air-borne pollutants				M								
H05	Soil pollution and solid waste (excluding discharges)	L			L			M					
H05.01	Garbage and solid waste									L			
J02	Human induced changes in hydraulic conditions	H	M		H				L				L
J02.01.03	Infilling of ditches, dykes, ponds, pools, marshes or pits											L	
J02.05	Modification of hydrographic functioning, general			L				M					L
J02.06	Water abstractions from surface waters							M		M			
J02.06.02	Surface water abstractions for public water supply			L								L	
K01	Abiotic (slow) natural processes						L						
K01.01	Erosion		M						M				
K01.03	Drying out								M				L
K02	Biocenotic evolution, succession								L				M
K02.01	Species composition change (succession)									M			
K02.02	Accumulation of organic material												L
L05	Collapse of terrain, landslide							M					
M01	Changes in abiotic conditions		H										
M01.01	Temperature changes (e.g. Rise of temperature & extremes)				L								

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

The countries reported extremely high number of pressures affecting this habitat type, including nine high-intensity pressures. Some of them are related to alteration of water conditions like modification of hydraulic functioning, human-induced changes in hydraulic conditions, drying out, water abstraction, discharges, pollution of surface- and groundwater, fertilisation, use of chemicals. Other group of pressures is related to physical disturbance of this fragile habitat: grazing, forest planting, sand and gravel extraction, roads, paths, outdoor sports and leisure activities (walking, horse riding, non-motorised vehicles, mountaineering. Less important seems to be pressures related to abandonment, succession and changes of species composition.

The establishing of protected areas and legal protection of species and habitats are the most important measures proposed by higher number of countries. Some other measures were identified as highly needed as well: restoring or improving hydrological regime and water quality, managing water abstraction and exploitation of natural resources, establishing wilderness areas.

Code	Measure name	AT	BG	DE	ES	FI	FR	IT	PL	RO	SE	SI	SK
1.2	Measures needed, but not implemented									H			
1.3	No measure known/ impossible to carry out specific measures			L			M					NA	
2.2	Adapting crop production				L								
4.0	Other wetland-related measures				L								
4.1	Restoring/improving water quality		H		L			H					
4.2	Restoring/improving the hydrological regime		H		L			H					
4.3	Managing water abstraction		H					H					
6.0	Other spatial measures				L								
6.1	Establish protected areas/sites		H				H		H		H		H
6.2	Establishing wilderness areas/ allowing succession						H		H				
6.3	Legal protection of habitats and species	M			L			H	H	H	H		
7.4	Specific single species or species group management measures										H		
9.1	Regulating/Management exploitation of natural resources on land		H					H					

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

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 7220 reached the LHF score 21.35. This habitat type was classified as LHF especially because to reach improvement, the change from negative to stable trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of high representation of the habitat in Natura 2000 sites (98 %) and the fact that the improvement of only one parameter (Structure & Functions) in one country (Italy) is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status, especially improvement of the habitat structure and functions in Italy is needed. The measures against pollution of water and soil, abstraction of water as well as for improvement of hydraulic regime should be taken. The regulation of mountaineering/climbing is needed as well. The relatively small habitat area, completely located in Natura 2000 sites is a good precondition for implementation of these measures.

Besides these measures, also improvement of some other parameters is needed. The need of habitat restoration in Italy, Austria, Spain, Slovenia, and Slovakia indicates smaller actual habitat area than the reference value. More information about habitat in Germany, Romania, France and Spain is necessary to remove unknown assessments.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Bogs%2C+mires+%26+fens&subject=7220&region=ALP

9050 Fennoscandian herb-rich forests with *Picea abies*

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate due to the assessment of Area and Future prospect in Sweden. Habitat 9050 is in the Alpine biogeographic region distributed only in northern part of Fenno-Scandinavia where is abundant in the Alpine biogeographical region of both Sweden and Finland. Finland hosts 84 % of the habitat area.

For the improvement of the overall conservation status, especially stopping the habitat area decline in Sweden is necessary. Simultaneously, the measures for habitat restoration and enlarging of its area should be taken. The adaptation of the forest management is also desirable - the habitat structure can be diversified by cutting small gaps and leaving large scale laying wood in the stand.

Habitat description

This type occurs in areas of brown forest soils with mull, often in low-lying areas, ravines and slopes with fine sediment and a favourable water regime. The succession of this vegetation type normally leads to the dominance of spruce in the tree layer, although the broad-leaved trees often comprise a significant element. Tall herbs and ferns dominate, but the species composition varies greatly between northern, southern and western Fennoscandia. The forests are characterized by distinct layers of vegetation. The bottom layer is covered unevenly by bryophytes, the field layer is dominated by herbs and grasses, the bush and tree layers are well developed including a variety of species. Several vegetation types have been described, the main groups being dry, mesic and moist grass-herb forests. Sometimes ground water is flowing near the ground surface, which give rise to a specific species rich "wet-forest" flora and invertebrate fauna.

Distribution in the Alpine region and coverage by Natura 2000 network

This forest type occur only in northern part of Fenno-Scandinavia where is abundant in the Alpine biogeographical region of both Sweden and Finland. While in Finland high proportion of the habitat area (84 %) is located in Natura 2000 sites, in Sweden the representation of this habitat in the Natura 2000 network is lower.

Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Finland	7.60	84	7
Sweden	188.00	28	40
Total	195.6	29	47

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Area and Future prospect in Sweden. Sweden also reported negative trend. Finland assessed all parameters as favourable. The overall conservation status for the region has been changed from favourable to unfavourable – inadequate. But this change is not considered genuine; it is due to different methods used.

Treated data from Member States reports

MS	Range (km^2)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
FI	14700	21.2	0	≈14700	9	1.3	0	≈9	FV	FV	FV		FV	
SE	54500	78.8	0	54500	661	98.7	-	710	FV	U1	U1	-	FV	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.	Target 1 Type
EU27	69200	0	0	69200	670	1	-	719	0	2XA	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 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

Sweden identified forest management and use as the main pressure of high intensity. Finland specified that main threats to the structure and function of this habitat type are rising temperature, damage by moths and intensive grazing. The combination of these three threats is assessed to be relevant. Rising temperature increases the risk of moth invasions which makes the effects of intensive grazing more severe and hinders regeneration of birches. All these factors have an effect on protected areas as well.

Code	Pressure name	FI	SE
A04.01	Intensive grazing	L	
B02	Forest and Plantation management & use		H
K04.05	Damage by herbivores (including game species)	L	

Legend: L Low intensity M Medium intensity H High intensity

Both countries proposed establishing of protected areas/sites as an important measure, Finland considers also establishment of wilderness areas and allowing succession as highly important measure. Sweden proposed as important measure also restoration or improvement of forest

habitats. This proposal is very relevant taking into account that Sweden assessed habitat area unfavourable and the reference value is bigger than actual one.

Code	Measure name	FI	SE
3.1	Restoring/improving forest habitats		M
3.2	Adapt forest management		L
6.1	Establish protected areas/sites	H	M
6.2	Establishing wilderness areas/ allowing succession	H	
6.3	Legal protection of habitats and species		L

Legend: L Low importance M Medium importance H High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 9050 reached the LHF score 3.425. This habitat type was classified as LHF especially because to reach improvement, the change from negative to stable trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of the improvement of only one parameter (Area) in one country (Sweden) is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially stopping of the habitat area decline in Sweden is necessary. Simultaneously, the measures for habitat restoration and enlarging of its area should be taken – the reference value is higher than actual habitat area by 50 km^2. The adaptation of the forest management is also desirable - the habitat type 9050 is mostly a human-influenced semi-natural forest that needs frequent management activities for its maintaining in good condition. The habitat structure can be diversified by cutting small gaps (up to 15 m of diameter) and leaving large scale laying wood in the stand.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9050&region=ALP

9110 *Luzulo-Fagetum* beech forests

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate due to the assessment of Structure & Function in Italy, Slovenia and Bulgaria. Austria assessed the conservation status as unfavourable – bad. Habitat 9110 is broadly distributed in Alps, Carpathians, Dinaric Mts. in Slovenia and Croatia and south Balkan Peninsula in Bulgaria. Around 55 % of the habitat area is located in Romania.

For the improvement of the overall conservation status, especially improvement of the habitat structure and function in Italy is needed. The priority conservation measures should be focused to regulation of roads, electricity and phone lines construction, access to the site, skiing activities and burning. The adaptation of forest management, establishing of protected and wilderness sites could contribute to the improvement needed

Habitat description

Fagus sylvatica and, in higher mountains, *Fagus sylvatica-Abies alba* or *Fagus sylvatica-Abies alba-Picea abies* forests developed on acid soils of the medio-European domain of central and northern Central Europe, with *Luzula luzuloides, Polytrichum formosum* and often *Deschampsia flexuosa, Calamagrostis villosa, Vaccinium myrtillus, Pteridium aquilinum.* Two types are distinguished: the Medio-European collinar woodrush beech forests (lesser Hercynian ranges, Lorraine, the Jura and the Alpine periphery, western sub-Pannonic and the intra-Pannonic hills) and Medio-European montane woodrush beech forests (greater Hercynian ranges, Vosges, from the Black Forest to the Bohemian Quadrangle, the Jura, the Alps, the Carpathians and the Bavarian Plateau).

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat broadly distributed in Alps (where it avoids their central, highest part), Carpathians, Dinaric Mts. in Slovenia and Croatia (distribution in Croatia not shown in the map) and mountains of south Balkan Peninsula in Bulgaria. It absents in Scandinavia, Pyrenees and Apennines. Taking into account that this habitat type is forest type with large and abundant distribution, its representation in the Natura 2000 network is quite high (around 40 %). Very high proportion of the habitat area is located in the Natura 2000 sites in Bulgaria, Germany, and Poland.

Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Austria	140.00	14	16
Bulgaria	45.82	96	20
Croatia	17.36	N/A	2
France	40.09	N/A	18
Germany	5.5-8	69-100	2
Italy	281.76	14	102
Poland	360.00	77	24
Romania	3,000-3,500	50-58	64
Slovakia	50-120	12-29	94
Slovenia	58.00	7	5
Total	**3,981-4,554**	**37-42**	**345**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Structure & Function in three countries: Italy, Slovenia and Bulgaria. Austria hosting ca 9 % of the habitat area assessed the conservation status as unfavourable – bad. Four countries (Romania, Poland, Slovakia, and Germany) reported favourable conservation status; it seems that despite unknown Structure & Function, the habitat is in good conditions also in France. All countries assessed range and habitat area as favourable. The overall conservation status for the region has been changed from favourable to unfavourable – inadequate. However, this change is not genuine – it is due because of different assessment methods or thresholds were used.

Treated data from Member States reports

MS	Range (km^2)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
AT	30500	15	+	≈30500	980	9.1	+	≈980	U2	U2	U2	=	U1	c2
BG	16800	8.3	x	16800	47.88	0.4	N/A	47.88	U1	U1	U1	=	N/A	
DE	2679	1.3	0	2679	8	0.1	0	8	FV	FV	FV		FV	nc
FR	13400	6.6	0	≈13400	N/A	N/A	0	≈	XX	FV	FV		FV	nc
IT	33000	16.3	0	≈33000	2033.18	18.8	0	≈2033.18	U1	U1	U1	-	FV	c1
PL	9991	4.9	0	≈9991	470	4.4	x	≈470	FV	FV	FV		FV	nc
RO	62480	30.8	0	≈62480	6000	55.6	0	≈6000	FV	FV	FV		N/A	
SI	4450	2.2	0	≈4450	841	7.8	0	≈841	U1	FV	U1	+	FV	c2
SK	29480.46	14.5	0	≈29480.46	420	3.9	+	≈420	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	202780	0	+	202780	10800	0	+	10800	2GD	2GD	MTX	=	U1	nc	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 quite broad range of pressures, mostly of low or medium intensity. Only Austria indicated three pressures of high intensity: forestry clearance, removal of dead and dying trees; and damage caused by game. All three pressures were reported also by other countries, with lower intensity. Other pressures are related to forest management and use, grazing in forest, mining

and drilling, disturbance related to improved access to the site, roads, paths, tracks and electricity lines, skiing, burning down, problematic native or invasive species and abiotic disturbance (storms, erosion.)

Code	Pressure name	AT	BG	DE	FR	IT	PL	RO	SI	SK
B01.02	Artificial planting on open ground (non-native trees)									L
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	H	L			L				
B02.04	Removal of dead and dying trees	H	L	M						L
B06	Grazing in forests/ woodland		L					L		
B07	Forestry activities not referred to above			M						
C01.04.01	Open cast mining							L		
C02.01	Exploration drilling							L		
C02.02	Production drilling							M		
D01.01	Paths, tracks, cycling tracks						L			
D01.02	Roads, motorways					M		M		
D02.01	Electricity and phone lines					M				
D05	Improved access to site					M				
E01.02	Discontinuous urbanisation							L		
E01.03	Dispersed habitation		L					L		
E01.04	Other patterns of habitation							L		
F03.01.01	Damage caused by game (excess population density)	H		M						
G01.02	Walking, horseriding and non-motorised vehicles						L			
G01.03	Motorised vehicles						L			
G02.02	Skiing complex				M	M				
H04	Air pollution, air-borne pollutants	M		L						
I01	Invasive non-native species				L					
I02	Problematic native species				M					
J01.01	Burning down		L			M				
K01.01	Erosion					L				
K02.01	Species composition change (succession)		L							
L07	Storm, cyclone		M							
X	No threats or pressures								X	

Legend: L Low intensity   M Medium intensity   H High intensity

Besides establishing of protected areas, adaptation of the forest management was identified as the highly needed measure by almost all countries. Bulgaria and Poland consider important also restoration of forest habitat. Single countries consider as highly important also restoration of hydrological regime, establishment of wilderness areas, legal protection of habitats and species, management of landscape features and regulation of natural resources.

Code	Measure name	AT	BG	DE	FR	IT	PL	RO	SI	SK
3.1	Restoring/improving forest habitats		H				H			
3.2	Adapt forest management	M	H	H	M	H		M	H	
4.2	Restoring/improving the hydrological regime						H			
6.0	Other spatial measures						NA			
6.1	Establish protected areas/sites		H				H	H	H	H
6.2	Establishing wilderness areas/ allowing succession						H			
6.3	Legal protection of habitats and species					H	NA			
6.4	Manage landscape features					H				
9.1	Regulating/Management exploitation of natural resources on land		H							

Legend: L Low importance   M Medium importance   H High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 9110 reached the LHF score 15.303. This habitat type was classified as LHF especially because to reach improvement, the change from stable to improving trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because the improvement of trend of only one parameter (Structure & Functions) in one country (Italy) is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the habitat structure and function in Italy is needed. Italy did not report any pressure related to forest management, the pressures of medium intensity are: roads, electricity and phone lines, improved access to the site, skiing complexes and burning down. Taking into account these pressures, the priority conservation measures should be focused to regulation of mentioned human activities. Their implementation could profit from declaration of new Natura 2000 sites - there is a lot of space for improvement because of low coverage of the habitat distribution by Natura 2000 sites (14 %). The adaptation of forest management is proposed as the main measure to improve the habitat structure. The establishment of protected and wilderness sites could contribute to this improvement, but the forestry measures are crucial. As regards structure, it is advisable to maintain heterogeneity (vertical and horizontal) and good connectivity for species with low dispersal capability. On a landscape scale, it is recommended to have several regimes (reserves, coppices, even-aged stands, uneven-aged stands) in a mosaic, which could be achieved by creating more small cutting and regeneration areas (Thauront et Stallegger 2008).

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9110&region=ALP

Thauront M. & Stallegger M. 2008. Management of Natura 2000 habitats. 9110 Luzulo-Fagetum beech forests. European Commission. Technical Report 2008 22/24, 26 pp.

9170 *Galio-Carpinetum* oak hornbeam forests

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate and trend is stable due to the assessment of Bulgaria. Habitat 9170 is in the Alpine biogeographic region distributed mainly in central Europe with connection to sub-continental climate. It occurs in Alps (Austria, Italy), Carpathians (Poland, Romania, Slovakia) and mountains of south Balkan Peninsula in Bulgaria. The habitat type is in the Alpine biogeographical region most abundant in Romania and Bulgaria, with 47.4 % and 46.9 % of the habitat area respectively.

The improving the conservation status of the habitat requires especially improvement of the habitat structure and functions in Bulgaria. This means adaptation of forest management addressing the main pressures indicated by Bulgaria: forest replanting using non-native trees, forestry clearance and removal of dead and dying trees, partly also grazing in forest. Mapping and monitoring of the best preserved and most vulnerable habitats, increasing area of this habitat type within protected areas and improved forest protection is needed. Besides measures in Bulgaria, it is necessary also improve the habitat structure in Austria, Italy, and Slovakia as well as habitat restoration in Slovakia

Habitat description

Quercus petraea-Carpinus betulus forests of regions with sub-continental climate within the central European range of *Fagus sylvatica*, dominated by *Quercus petraea* (41.261). Also included are related lime-oak forests of eastern and eastern-central European regions with a continental climate, east of the range of *F. sylvatica* (41.262). The habitat occurs on variety of soils, therefore wide variability in plant composition.

Distribution in the Alpine region and coverage by Natura 2000 network

Oak-hornbeam forest (9170) with dominance of sessile oak *Quercus petraea* can be found mainly in central Europe with connection to sub-continental climate. It occurs in Alps (mostly Austria, very rare in Italy), Carpathians (especially Poland and Romania, rarer in Slovakia) and mountains of south Balkan Peninsula in Bulgaria. Around 33 % of the habitat area in the Alpine Biogeographical region is located in the Natura 2000 sites, and almost whole habitat area is in the Natura 2000 network in Slovakia.

Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Austria	35.00	38	8
Bulgaria	473.00	48	20
Italy	0.04	54	1
Poland	10-12	50-60	16
Romania	150-180	15-18	22
Slovakia	6-7	86-100	5
Total	674-707	32-34	72

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable - inadequate and trend is stable, due to the report of Bulgaria that hosts a major part of the habitat. Three member states - Austria, Italy and Slovakia - have reported unfavourable – bad; the favourable status indicated only Romania that hosts also significant part of the habitat. The range and habitat area were assessed favourable on the level of biogeographical region. The overall conservation status for the region has been changed from unfavourable – bad to unfavourable - inadequate. This change is not genuine; it is caused partly by different thresholds used in assessment, partly by absence of previous reports from three countries.

Treated data from Member States reports

MS	Range (km^2)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
AT	7900	9	0	≈7900	92	4.4	+	≈92	U2	U2	U2	=	U1	c2
BG	25900	29.6	x	25900	990	46.9	x	990	U1	U1	U1	=	N/A	
IT	100	0.1	x	x	0.08	0	x	x	U2	U2	U2	x	N/A	
PL	7699	8.8	0	≈7699	20	0.9	0	≈20	U1	FV	U1	+	U1	nc
RO	45590	52	0	≈45590	1000	47.4	0	≈1000	FV	FV	FV		N/A	
SK	399.96	0.5	-	>399.96	7	0.3	+	>7	U2	U2	U2	-	U2-	

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	87589	1	0	≈87489	2109	2GD	0	≈2109	2GD	2GD	MTX	=	U1	nc	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	a – genuine change; b – change due to better data or improved knowledge; b2 – due to taxonomic

change	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 broad range of pressures, considering invasive non-native species, forest management, removal of dead and dying trees and forest replanting as the most important ones. Species composition change was reported by three countries. Besides these pressures, forestry clearance, burning down, mining and drilling are disturbances of medium intensity. Other pressures are related to improved access and human activities – roads, paths, tracks, car parking areas, urbanisation, collection of forest non-timber products, outdoor sport, leisure and recreational activities. The processes like species composition change (succession), habitat fragmentation, eutrophication, air pollution are considered important as well.

Code	Pressure name	AT	BG	IT	PL	RO	SK
B01.02	Artificial planting on open ground (non-native trees)						L
B02	Forest and Plantation management & use			H			
B02.01	Forest replanting	H					
B02.01.02	Forest replanting (non native trees)			M			
B02.02	Forestry clearance			M			
B02.04	Removal of dead and dying trees	H	M				L
B06	Grazing in forests/ woodland		L			L	
B07	Forestry activities not referred to above			M			
C01.03	Peat extraction						L
C01.04.01	Open cast mining					M	
C02.01	Exploration drilling					L	
C02.02	Production drilling					M	
D01	Roads, paths and railroads			M			
D01.01	Paths, tracks, cycling tracks				L	L	
D01.02	Roads, motorways					M	
D01.03	Car parcs and parking areas				L		
E01	Urbanised areas, human habitation			M			
E01.03	Dispersed habitation		L				
F04.02	Collection (fungi, lichen, berries etc.)		M				
G01	Outdoor sports and leisure activities, recreational activities			M			
G01.02	Walking, horseriding and non-motorised vehicles				L		
G02.02	Skiing complex						L
G05	Other human intrusions and disturbances			M			
H04	Air pollution, air-borne pollutants	M					
H05	Soil pollution and solid waste (excluding discharges)			L			
I01	Invasive non-native species	H			L	H	
I02	Problematic native species					M	
J01.01	Burning down			M			
J02.01.02	Reclamation of land from sea, estuary or marsh						L
J03.02	Anthropogenic reduction of habitat connectivity			M			
K02	Biocenotic evolution, succession						L
K02.01	Species composition change (succession)	M	L			M	
K02.03	Eutrophication (natural)	M					
K05.01	Reduced fecundity/ genetic depression in animals (inbreeding)						L
L07	Storm, cyclone			L			L

Legend: L Low intensity   M Medium intensity   H High intensity

The establishment of protected areas/sites was identified as the most important measure. Other highly needed measures include adaptation of forest management, restoration or improvement of forest habitats, establishing wilderness areas and regulation of natural resources exploitation.

Code	Measure name	AT	BG	IT	PL	RO	SK
3.1	Restoring/improving forest habitats		H		H		
3.2	Adapt forest management	M	H	H		M	
4.2	Restoring/improving the hydrological regime				NA		
6.1	Establish protected areas/sites		H		H	H	H
6.2	Establishing wilderness areas/ allowing succession				H		
6.3	Legal protection of habitats and species				NA		
7.1	Regulation/ Management of hunting and taking				NA		
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 Alpine seminar

Despite quite low Priority index, the habitat type was selected for the first Alpine seminar based on decision of the Steering Committee of 3.10.2012. The reason for addition was not sufficient representation of forest habitats. The habitat 9170 was added on suggestion of Romania, and supported by Slovakia.

The habitat 9170 reached score 30 due to medium values in both criteria A and B. The habitat occurs in six countries (criterion A). Three countries (Austria, Italy, and Slovakia) reported unfavourable – bad conservation status, two countries (Bulgaria and Poland) indicated unfavourable - inadequate conservation status (criterion B).

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

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 9170 reached the LHF score 36.69. This habitat type was classified as LHF especially because to reach improvement, the change from stable to improving trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of the improvement of only one parameter (Structure & Functions) in one country (Bulgaria) is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the habitat structure and functions in Bulgaria is needed. This means especially adaptation of forest management that will address the main pressures indicated by Bulgaria: forest replanting using non-native trees, forestry clearance and removal of dead and dying trees, partly also grazing in forest. Dimitrov (2015) proposed mapping and monitoring of the best preserved and most vulnerable habitats, to increase area of this habitat type that are within protected areas and improved forest protection.

Besides measures in Bulgaria, it is necessary also improve the habitat structure in countries that reported unfavourable – bad status: Austria, Italy, and Slovakia. In Slovakia the habitat restoration is needed as well because the actual habitat area is smaller than the reference value. Knowledge of habitat area and range should be improved in Italy.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9170&region=ALP

Dimitrov, M., 2015: Mountain forests of Carpinus betulus and Quercus dalechampii. – In: Biserkov, V., Gussev, Ch. (eds).: Red Data Book of the Republic of Bulgaria. Vol. 3 – Natural habitats. http://e-ecodb.bas.bg/rdb/en/vol3/27G1.html

91H0 * Pannonian woods with *Quercus pubescens*

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

Habitat summary

The overall conservation status of this priority habitat type in the Alpine region is unfavourable - bad due to the assessment of Structure & Function in Italy. The overall trend is negative. Habitat 91H0 is in the Alpine biogeographic region distributed across the warm region of the hilly Pannonian plain and its periphery, largest distribution is in Western Carpathians (Slovakia) and Alps (north-eastern Italy). Habitat is scattered also in Alps in northwest Italy, in eastern Austria and mountains of south Balkan Peninsula in western Bulgaria. The largest part of Alpine habitat area (69 %) is reported from Italy.

The improving the conservation status of the habitat requires especially improvement of the negative trend of structure and functions in Italy. The adaptation of the forestry management is needed, addressing especially artificial planting of non-native trees, forest management and use. Better regulation of human activities is also needed (especially roads building), the anthropogenic reduction of habitat connectivity is also an issue. The increase of the habitat representation in Natura 2000 sites in Italy is needed (current area is small) and it could facilitate implementation of other measures. The habitat restoration is needed both in Italy and Austria because the actual habitat area is smaller than the reference value.

Habitat description

Xerophyle oak woods of the periphery and hills of the Pannonic plain dominated by *Quercus pubescens* on extremely dry, southern exposed locations on shallow, calcareous soils. Because of these extreme site conditions, the woods are often fragmentary and low-growing, sometimes only shrubby. The herb layer is rich in species and often contains xerothermic species from dry grasslands or forest fringes. Occasionally *Tilia platyphyllos* and *Fraxinus excelsior* can become dominant.

Distribution in the Alpine region and coverage by Natura 2000 network

Xerophilous oak woods (91H0) are distributed across the warm region of the hilly Pannonian plain and its periphery. The largest distribution in the Alpine biogeographical region is in south part of Western Carpathians in Slovakia and in Alps in north-eastern Italy. Habitat is scattered also in Alps in northwest Italy, in eastern Austria and mountains of south Balkan Peninsula in western Bulgaria. Habitat type has quite low coverage by Natura 2000 network; high proportion of the habitat area is located in Natura 2000 sites only in Austria.
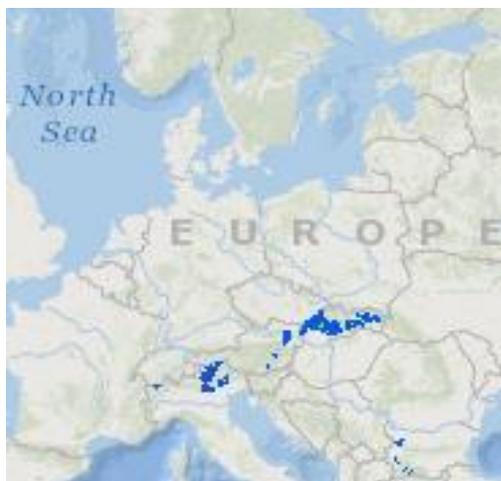
Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Austria	1,40	82	4
Bulgaria	1,73	66	4
Italy	8,59	6	10
Slovakia	30-40	48-63	63
Total	**42-52**	**19-24**	**81**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – bad due to assessment of Structure & Function in Italy. Other countries concluded unfavourable – inadequate. The overall trend is negative. The overall conservation status for the region has been changed from unfavourable – inadequate to unfavourable – bad. This change in the overall conservation status between 2001-06 and 2007-12 reports is mostly caused by different methodical approach and better data rather than real change in conservation status. Only Austria reported genuine change related to change of trend from stable to decreasing.

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.
AT	2600	8.2	0	≈2600	1.70	0.8	-	>1.70	FV	U1	U1	-	U1	a
BG	4700	14.9	x	4700	2.64	1.2	x	2.64	U1	U1	U1	=	N/A	
IT	14800	46.8	0	>14800	149.60	69	0	>149.60	U2	U2	U2	-	FV	c1
SK	9503.83	30.1	0	>9503.83	63	29	+	≈63	FV	FV	U1	=	U1	

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	31604	1	0	>31604	217	1	+	>217	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 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 range of pressures, there is no single pressure dominating. From forestry-related pressures were reported grazing in forest and not specified other forestry activities as pressures of high intensity. As pressures of medium intensity were specified forest management and use, artificial planting and replanting (non-native trees), forestry clearance and removal of dead and dying trees. From other pressures are reported as high-intensity ones: roads, outdoor sport, leisure and recreational activities, burning down, species composition change (succession), and invasive non-native species.

Code	Pressure name	AT	BG	IT	SK
B01.02	Artificial planting on open ground (non-native trees)			M	L
B02	Forest and Plantation management & use			M	
B02.01.02	Forest replanting (non native trees)		M		
B02.02	Forestry clearance		M		
B02.04	Removal of dead and dying trees		M		L
B06	Grazing in forests/ woodland		H		
B07	Forestry activities not referred to above	H		M	
D01	Roads, paths and railroads	M			
D01.01	Paths, tracks, cycling tracks			M	
D01.02	Roads, motorways			H	
D05	Improved access to site			L	
E01.03	Dispersed habitation		L	L	
F04.02	Collection (fungi, lichen, berries etc.)		M		
G01	Outdoor sports and leisure activities, recreational activities	H			
G05	Other human intrusions and disturbances			M	
I01	Invasive non-native species	H			L
I02	Problematic native species	M			
J01.01	Burning down		H	M	
J03.02	Anthropogenic reduction of habitat connectivity			M	
K02	Biocenotic evolution, succession	M			
K02.01	Species composition change (succession)		H		
L07	Storm, cyclone		L		

Legend: L Low intensity   M Medium intensity   H High intensity

The adaptation of forest management, restoration or improvement of forest habitats, establishing of protected areas or sites and regulation of natural resources exploitation were identified as the highly needed measures.

Code	Measure name	AT	BG	IT	SK
1.2	Measures needed, but not implemented	NA			
3.1	Restoring/improving forest habitats		H		
3.2	Adapt forest management		H	H	
6.1	Establish protected areas/sites		H		H
6.3	Legal protection of habitats and species			M	
9.1	Regulating/Management exploitation of natural resources on land		H		

Legend: L Low importance   M Medium importance   H High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 91H0 reached the LHF score 32.75. This habitat type was classified as LHF especially because to reach improvement, the change from negative to stable trend within the category U2 (unfavourable-bad) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of the improvement of only one parameter (Structure & Functions) in one country (Italy) is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the negative trend of structure and functions in Italy is needed. The adaptation of the forestry management is needed, addressing especially the main pressures reported by Italy: artificial planting of non-native trees, forest management and use. Better regulation of human activities is also needed, especially roads building and burning down. The anthropogenic reduction of habitat connectivity is also an issue, but the measures for improving situation are quite complicated. Despite not being proposed by the country, increase of the habitat representation in Natura 2000 sites is needed (current area is small) and it could facilitate implementation of other measures. The habitat restoration is needed both in Italy and Austria as the actual habitat area is smaller than the reference value.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=91H0&region=ALP

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

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate due to the assessment of Structure & Function in the Italian national report. Habitat 91L0 is in the Alpine biogeographic region distributed in south-eastern part of Alps in Italy and Austria, Alpine parts of Apennines and in Dinaric Mountains in Slovenia and Croatia. The main part of the habitat (90.3 %) is located in Italy.

The improving the conservation status of the habitat requires especially improvement of the negative trend in structure and functions in Italy. The adaptation of forest management is needed in favour of the habitat, what includes also addressing of artificial planting using non-native trees and forestry activities that were not specified closely in the Article 17 report. It is desirable to implement measures for removal of invasive alien species and for better regulation of human activities like building of roads and paths, outdoor sport, leisure and recreational activities. The habitat restoration is needed both in Italy and Slovenia in order to reach the reference value of the habitat area. The representation of the habitat in Natura 2000 sites should be improved in all three countries.

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 middle 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 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 Alpine region and coverage by Natura 2000 network

Illyrian oak-hornbeam forest (91L0) can be found in the south-eastern part of Alps in Italy and Austria, Alpine parts of Apennines and in Dinaric Mountains in Slovenia and Croatia (distribution in Croatia not shown in the map below). The habitat type is quite poorly represented in the Natura 2000 network.

Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Austria	0.00	0	3
Croatia	48.43	N/A	4
Italy	39.49	26	20
Slovenia	2.80	19	5
Total	**90.72**	**26**	**28**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – bad due to assessment of Structure & Function in the Italian national report that is related to more than 90 % of the area in the region. Austria assessed the overall conservation status as unfavourable – bad as well, while Slovenia concluded unfavourable – inadequate. Changes in overall conservation status between 2001-06 and 2007-12 reports (from favourable to inadequate – bad) are mostly caused by different methodical approach and better data rather than real change in conservation status.

Treated data from Member States reports

MS	Range (km^2)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
AT	1000	6.3	x	≈1000	1	0.6	0	≈1	U2	U2	U2	x	N/A	nc
IT	12700	80.1	0	>12700	149.29	90.3	0	>149.29	U2	U2	U2	-	U1	c1
SI	2163	13.6	0	≈2163	15	9.1	0	>15	U1	U1	U1	=	FV	c2

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	15863	1	0	>15863	165	1	0	>165	2XA	2XA	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 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

Austria reported forest replanting and removal of dead and dying tress as pressures of high intensity. Some other pressures directly linked to forestry were found important: forest management and use, artificial planting of non-native species on open ground, not specified other forestry-related activities, and damage caused by game. From other pressures were reported by two countries urbanised areas and invasive non-native species. Pressures of medium intensity reported by single country include roads, paths and tracks; outdoor sport, leisure and recreational activities.

All countries identified the adaptation of forest management as highly needed measure. Other important measures include establishment of protected areas, legal protection of habitats and species, management of landscape features and hunting management.

Code	Pressure name	AT	IT	SI
A11	Agriculture activities not referred to above			M
B01.02	Artificial planting on open ground (non-native trees)		L	
B02	Forest and Plantation management & use		M	
B02.01	Forest replanting	H		
B02.04	Removal of dead and dying trees	H		
B07	Forestry activities not referred to above		M	L
D01	Roads, paths and railroads	L		
D01.01	Paths, tracks, cycling tracks		M	
D01.02	Roads, motorways		M	
D05	Improved access to site		L	
E01	Urbanised areas, human habitation	M	M	
E06	Other urbanisation, industrial and similar activities			M
F03.01.01	Damage caused by game (excess population density)			M
G01	Outdoor sports and leisure activities, recreational activiti		M	
G05	Other human intrusions and disturbances		L	
H04	Air pollution, air-borne pollutants	L		
I01	Invasive non-native species	M	M	
J02.07	Water abstractions from groundwater		L	
J03	Other ecosystem modifications		L	

Legend: L Low intensity   M Medium intensity   H High intensity

Code	Measure name	AT	IT	SI
3.2	Adapt forest management	M	H	H
6.1	Establish protected areas/sites		H	
6.3	Legal protection of habitats and species		H	
6.4	Manage landscape features		H	
7.1	Regulation/ Management of hunting and taking			H

Legend: L Low importance   M Medium importance   H High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 91L0 reached the LHF score 31.27. This habitat type was classified as LHF especially because to reach improvement, the change from negative to stable trend within the category U2 (unfavourable-bad) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of the improvement of only one parameter (Structure & Functions) in one country (Italy) is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the negative trend in structure and functions in Italy is needed. The adaptation of forest management is needed in favour of the habitat, what includes also addressing of artificial planting using non-native trees and forestry activities that were not specified closely in the Article 17 report. It is desirable to implement measures for removal of invasive alien species and for better regulation of human activities like building of roads and paths, outdoor sport, leisure and recreational activities. The habitat restoration is needed both in Italy and Slovenia in order to reach the reference value of the habitat area. The representation of the habitat in Natura 2000 sites should be improved in all three countries.

Links

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

91M0 Pannonian-Balkanic turkey oak- sessile oak forests

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate due to the assessment of Structure & functions and Future prospects by all countries. Habitat 91M0 is in the Alpine biogeographic region most abundant in southern periphery of Western Carpathian Mountains in Slovakia and in mountains of south Balkan Peninsula in Bulgaria. Isolated occurrences are in South Carpathians in Romania and in Lower Austria. The main part of the habitat area in the Alpine biogeographical region is located in Bulgaria (76.9 %).

The improving the conservation status of the habitat requires especially improvement of the trend of habitat structure and function in Bulgaria and Slovakia. The adaptation of forest management is needed – it should address reported pressures: forest planting using non-native trees, removal of dead and dying trees and forestry clearance. Further measures include regulation of logging in private forests; restoration measures including restoration from seeds and fighting of the fungal diseases on the shoots. The regulation of grazing in forest and collection of forest products as well as measures against burning are needed. The increase of the habitat presence in protected sites (i.e. establishment of new or enlargement of existing sites) is also needed.

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 Balkan 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. *Acer tataricum, Carpinus orientalis, Fraxinus ornus, Tilia tomentosa, Ligustrum vulgare* and *Euonymus europaeus* are common trees and shrubs here.

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat type is most abundant in southern periphery of Western Carpathian Mountains in Slovakia and in mountains of south Balkan Peninsula in Bulgaria (Stara Planina, Rhodope, Rila, Pirin). Isolated occurrences are in South Carpathians in Romania and Lower Austria (although indicated as a scientific reserve in Article 17 report in 2013, later the presence of habitat in Austria was confirmed). The habitat is well represented in the Natura 2000 network – more than 70 % of the habitat area lies in Natura 2000 sites. In Bulgaria is this proportion even higher (90 %).

Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Austria	15.00	63	1
Bulgaria	44.81	90	18
Slovakia	5-10	33-67	17
Total	**65-70**	**73**	**36**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate – all three countries concluded in this category. All countries also assessed Structure & functions and Future prospects as unfavourable – inadequate. There is no change in overall conservation status comparing with the previous assessment. After confirmation of the habitat presence in Austria, conclusion for Area would be unfavourable – inadequate and thus all parameters refer to this category on level of the biogeographical region.

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.
AT	900	4	x	≈900	24	36.9	0	>24	U1	U1	U1	x	N/A	nc
BG	19000	84.3	x	19000	50.01	76.9	x	50.01	U1	U1	U1	=	N/A	
SK	3549.89	15.7	0	>3549.89	15	23.1	+	≈15	U1	U1	U1	=	U1	

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.	Target 1 Type
EU27	22550	1	x	>22550	65	1	x	≈65	2XA	2XA	MTX	=	U1	nc	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

Invasive non-native species were identified by Austria as pressure of high intensity. To the most important pressures belong also removal of dead and dying trees, burning down and forest replanting (both native and non-native trees). Species composition change is considered as a pressure of medium intensity.

The establishment of protected areas or sites was proposed as the most important measure. To other important measures belong adaptation of forest management, restoration or improvement of forest habitats and regulation of natural resources exploitation.

Code	Pressure name	AT	BG	SK
B01.02	Artificial planting on open ground (non-native trees)			L
B02.01	Forest replanting	M		
B02.01.02	Forest replanting (non native trees)		M	
B02.02	Forestry clearance		L	
B02.04	Removal of dead and dying trees	M	M	L
B06	Grazing in forests/ woodland		L	
E01.03	Dispersed habitation		L	
F04.02	Collection (fungi, lichen, berries etc.)		L	
I01	Invasive non-native species	H		L
J01.01	Burning down		M	
K02.01	Species composition change (succession)		M	
L07	Storm, cyclone		L	

Legend: L Low intensity M Medium intensity H High intensity

Code	Measure name	AT	BG	SK
1.2	Measures needed, but not implemented	NA		
3.1	Restoring/improving forest habitats		H	
3.2	Adapt forest management		H	
6.1	Establish protected areas/sites		H	H
9.1	Regulating/Management exploitation of natural resources on land		H	

Legend: L Low importance M Medium importance H High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 91M0 reached the LHF score 6.265. This habitat type was classified as LHF especially because to reach improvement, the change from stable to improving trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of high representation of the habitat in Natura 2000 sites (79.8 % of the habitat area) and the fact that the improvement of trend of only one parameter (structure and function) in two countries (Bulgaria and Slovakia) is needed to reach the overall improvement. In addition, these countries did not report any pressure of high intensity.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the trend of habitat structure and function in Bulgaria and Slovakia is needed. The adaptation of forest management is needed – it should address reported pressures: forest planting using non-native trees, removal of dead and dying trees and forestry clearance. The regulation of grazing in forest and collection of forest products as well as measures against burning are needed. Tzonev et al. (2015) proposed legal amendments in order to terminate the clear cuttings in the private forests; restoration measures including restoration from seeds and fighting of the fungal diseases on the shoots; proclamation of some of the representative coenoses as protected areas. The increase of the habitat presence in protected sites (i.e. establishment of new or enlargement of existing sites) is also needed.

Links

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

Tzonev, R., Zhelev,P., Tzavkov, E., 2015: Moesian mixed thermophilic oak forests. – In: Biserkov, V., Gussev, Ch. (eds).: Red Data Book of the Republic of Bulgaria. Vol. 3 – Natural habitats. http://e-ecodb.bas.bg/rdb/en/vol3/15G1.html

91WO Moesian beech forests

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate due to the assessment of Structure & Function and Future prospects by Bulgaria. Habitat 91W0 is in the Alpine biogeographic region restricted to mountains of south Balkan Peninsula in Bulgaria – Stara Planina, Rhodope, Rila, Pirin.

For the improvement of the overall conservation status, improvement of the habitat structure and functions in Bulgaria is needed. The main pressures are forest replanting using non-native trees, removal of dead and dying trees, composition change (succession) and burning down. Therefore the adaptation of the forest management as well as restoration and improvement of forest habitats are the main measures. They could be supported by establishing protected sites, mapping and monitoring of the best preserved and most vulnerable habitats and improvement of the forest guarding.

Habitat description

Fagus sylvatica or *Fagus moesiaca* forests of the Balkan Range, the southern Dinarides, the Moeso-Macedonian mountains, the Pelagonids and the Rhodopids of the alliance *Doronico orientalis-Fagion moesiaci* (syn *Fagion moesiacum*). *Fagus sylvatica* is accompanied, at the higher altitudes and latitudes, by *Abies alba* and *Picea abies*. The forests have, even in the south of their range, a pronounced medio-European character, marked by the frequency of species such as *Acer pseudoplatanus, Quercus petraea, Fragaria vesca,* and *Oxalis acetosella.*

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat distribution of the Alpine biogeographical region of the EU is restricted to mountains of south Balkan Peninsula in Bulgaria – Stara Planina, Rhodope, Rila, Pirin. Around 68 % of the habitat area is located in the Natura 2000 sites.

Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Bulgaria	269.52	68	16
Total	**269.52**	**68**	**16**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Structure & Function and Future prospects by Bulgaria – the only country with occurrence of this habitat type. Bulgaria assesses range and habitat area as favourable. This is first reporting of the habitat in Article 17 reporting as Bulgaria was not obliged to report in 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.
BG	21500	100	x	21500	394.84	100	x	394.84	U1	U1	U1	=		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.	Target 1 Type
EU27	21500	00	x	21500	395	00	x	395	00	00	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

Bulgaria reported eight pressures; four of them are of medium intensity: forest replanting using non-native trees, removal of dead and dying trees, composition change (succession) and burning down. Other reported pressures operate with low intensity. Dimitrov (2015) specified that the unregulated logging, fires, building and exploitation of infrastructure constructions have the heaviest negative impact on state of these forests.

Code	Pressure name	BG
B02.01.02	Forest replanting (non native trees)	M
B02.02	Forestry clearance	L
B02.04	Removal of dead and dying trees	M
B06	Grazing in forests/ woodland	L
E01.03	Dispersed habitation	L
J01.01	Burning down	M
K02.01	Species composition change (succession)	M
L07	Storm, cyclone	L

Legend: L Low intensity M Medium intensity H High intensity

The adaptation of forest management, restoration or improvement of forest habitats, regulation of natural resources exploitation, and establishment of protected areas were identified as the highly needed measures.

Code	Measure name	BG
3.1	Restoring/improving forest habitats	H
3.2	Adapt forest management	H
6.1	Establish protected areas/sites	H
9.1	Regulating/Management exploitation of natural resources on land	H

Legend: L Low importance   M Medium importance   H High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 91W0 reached the LHF score 1.332. This habitat type was classified as LHF especially because to reach improvement. The change from stable to improving trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of high representation of the habitat in Natura 2000 sites (75 %) and the fact that the improvement of only one parameter (Structure & Functions) in one country (Bulgaria) is needed to reach the overall improvement. In addition, Bulgaria did not report any pressure of high intensity affecting this habitat.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the habitat Structure & Function in Bulgaria is needed. The main pressures are forest replanting using non-native trees, removal of dead and dying trees, composition change (succession) and burning down. Therefore the adaptation of the forest management and restoration and improvement of forest habitats are the main measures. They could be supported by establishing protected sites. Dimitrov (2015) recommended also mapping and monitoring of the best preserved and most vulnerable habitats; increase of the areas of this habitat included in protected areas; improvement of the forest guarding.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=91W0&region=ALP

Dimitrov, M., 2015: Moesian beech forests. – In: Biserkov, V., Gussev, Ch. (eds.): Red Data Book of the Republic of Bulgaria. Vol. 3 – Natural habitats. *http://e-ecodb.bas.bg/rdb/en/vol3*/10G1.html

91Z0 Moesian Silver lime woods

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate due to the assessment of Structure & Function and Future prospects by Bulgaria. Habitat 91Z0 is in the Alpine biogeographic region restricted to mountains of south Balkan Peninsula in Bulgaria – Stara Planina, Rila, and Rhodope.

The improving the conservation status of the habitat requires especially improvement of the structure and functions in Bulgaria. The adaptation of forest management is crucial, it should address pressures like forest replanting using non-native trees, removal of dead and dying trees, forestry clearance, grazing in forest, regulation of forest non-timber products collection. The wider application of the selective forestry systems in accordance with the principles for sustainable management of the biological resources, habitat restoration, mapping and monitoring is proposed.

Habitat description

Tilia tomentosa dominated facies of mixed deciduous forests of Southern Central Europe and the northern and middle part of the Balkan Peninsula, mostly within the range of *Quercion frainetto*, but also locally developed in conjunction with eastern *Carpinion betuli* forests, in particular *Tilia tomentosa* woods of the *Carpinus betulus - Quercus petraea* belt of Bulgaria. Located mainly on the northern slopes of the foothills in connection with acidic soils and high soil moisture, they usually form monodominant communities with an impressive aroma when flowering. In the spring rich undergrowth is formed by *Coridalis cava, Coridallis solida, Scilla bifolia, Erytronium dens-canis, Ficaria verna. Carex sylvatica* is a common species in the summer.

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat distribution in the Alpine biogeographical region of the EU is restricted to mountains of south Balkan Peninsula in Bulgaria – Stara Planina, Rila, and Rhodope. Around 91 % of the habitat area is located in Natura 2000 sites.
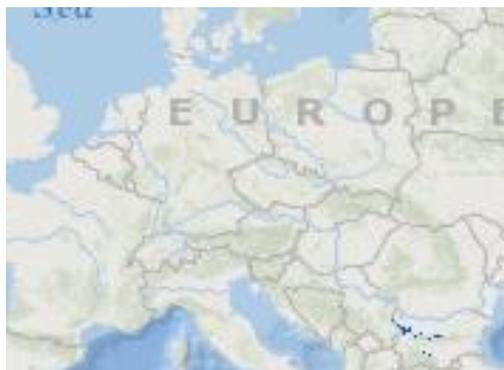
Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Bulgaria	2.95	91	12
Total	**2.95**	**91**	**12**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Structure & Function and Future prospects by Bulgaria – the only country with occurrence of this habitat type. Bulgaria assesses range and habitat area as favourable. This is first reporting of the habitat in Article 17 reporting as Bulgaria was not obliged to report in previous reporting.

Treated data from Member States reports

MS	Range (km^2)				Area				Struct & func.	Future prosp.	Overall asses.			
	Surface	% MS	Trend	Ref.	Surface	% MS	Trend	Ref.			Curr. CS	Qualifier	Prev. CS	Nat. of ch.
BG	6000	100	x	6000	3.24	100	x	3.24	U1	U1	U1	=		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	6000	00	x	6000	3.24	00	x	3.24	00	00	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

Bulgaria reported nine pressures; three of them are of medium intensity: forest replanting using non-native trees, removal of dead and dying trees, and collection of forest non-timber products (fungi, berries etc.). Other reported pressures operate with low intensity. Tzonev (2015) further specified pressures: "large-scale clear cuttings, overexploitation of the wood, grazing by domestic animals, increase of light quantity, invading of mat-forming grass species, general climate aridisation. Collecting of lime flowers through cutting of big branches and even whole trees also has negative impact".

Code	Pressure name	BG
B02.01.02	Forest replanting (non native trees)	M
B02.02	Forestry clearance	L
B02.04	Removal of dead and dying trees	M
B06	Grazing in forests/ woodland	L
E01.03	Dispersed habitation	L
F04.02	Collection (fungi, lichen, berries etc.)	M
J01.01	Burning down	L
K02.01	Species composition change (succession)	L
L07	Storm, cyclone	L

Legend: L Low intensity M Medium intensity H High intensity

The adaptation of forest management, restoration or improvement of forest habitats, regulation of natural resources exploitation, and establishment of protected areas were identified as the highly needed measures.

Code	Measure name	BG
3.1	Restoring/improving forest habitats	H
3.2	Adapt forest management	H
6.1	Establish protected areas/sites	H
9.1	Regulating/Management exploitation of natural resources on land	H

Legend: L Low importance M Medium importance H High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 91Z0 reached the LHF score 1.098. This habitat type was classified as LHF especially because to reach improvement, the change from stable to improving trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of high representation of the habitat in Natura 2000 sites (91 %) and the fact that the improvement of only one parameter (Structure & Functions) in one country (Bulgaria) is needed to reach the overall improvement. In addition, Bulgaria did not report any pressure of high intensity.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the Structure & Functions in Bulgaria is needed. The adaptation of forest management is crucial, it should address pressures like forest replanting using non-native trees, removal of dead and dying trees, forestry clearance, grazing in forest, regulation of forest non-timber products collection. Tzonev (2015) proposed wider application of the selective forestry systems that are in accordance with the principles for sustainable management of the biological resources; restoration activities; mapping and monitoring of the most preserved and vulnerable phytocoenoses of Silver lime and their proclamation as protected areas.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=91Z0&region=ALP

Tzonev, R., M., 2015: Silver lime (Tilia tomentosa) woods. – In: Biserkov, V., Gussev, Ch. (eds).: Red Data Book of the Republic of Bulgaria. Vol. 3 – Natural habitats. *http://e-ecodb.bas.bg/rdb/en/vol3*/23G1.html

9260 *Castanea sativa* woods

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate due to the assessment of Structure & Function by Italy. France and Romania assessed conservation status in their territories as unfavourable – bad. The core of the habitat 9260 distribution in the Alpine biogeographical region is south periphery of Alps in Italy; small areas are also in Apennines, French part of Pyrenees, the habitat is scattered in Austria and western Bulgaria, an isolated site is in northwest Romania. Italy hosts dominant part of the habitat area in the Alpine biogeographical region (98.7 %).

The improving the conservation status of the habitat requires especially improvement of the habitat structure and functions in Italy. The adaptation of forest management should address pressures like artificial planting using non-native trees, forestry clearance and removal of undergrowth. The regulation of access, road construction, outdoor sport, leisure and recreation activities and measures against biocoenotic succession are needed. The designation of protected areas represent an important measure because of very low part of habitat is located in Natura 2000 sites in Italy (7 %). There is also need of measures against the fungi illness of chestnut trees as indicated by Austria, Bulgaria, and Romania. The habitat restoration is needed especially in Romania.

Habitat description

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

Distribution in the Alpine region and coverage by Natura 2000 network

The core of the habitat distribution is in south periphery of Alps in Italy; small areas are also in Apennines and in French part of Pyrenees. The habitat type has scattered distribution in Austria and western Bulgaria, an isolated site is reported from northwest Romania. Only small part of the habitat area (8 %) is located in Natura 2000 sites.
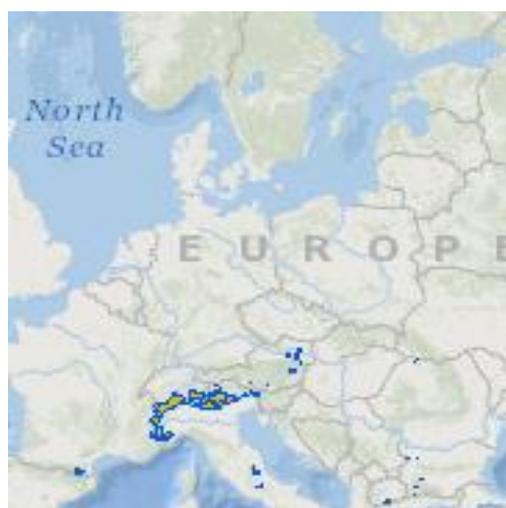
Natura 2000 sites in the Alpine region			
Country	Area /km²/	Coverage /%/	Number of sites
Austria	6.00	50	n/a
Bulgaria	0.91	83	2
France	11.00	69	6
Italy	198.18	7	83
Romania	2.8-3	43-46	3
Total	**218.89-219.09**	**8.2**	**94**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Structure & Function by Italy hosting major habitat area. Austria and Bulgaria concluded in the same category while France and Romania assessed conservation status in their territories as unfavourable – bad. On the level of biogeographical region, all parameters were assessed as unfavourable – inadequate. The changes in overall assessments (from unfavourable – bad in 2007 to unfavourable – inadequate in 2013) is not genuine, it is a consequence of better knowledge or different assessment 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.
AT	900	1.8	0	≈900	12	0.4	-	x	XX	U1	U1	-	U1	b1
BG	1000	2	x	1000	1.10	0	x	1.10	U1	U1	U1	=	N/A	
FR	3300	6.5	0	≈3300	16	0.6	0	≈16	U2	U2	U2	-	U2	nc
IT	45000	88.2	0	≈45000	2647.13	98.7	0	<2647.13	U1	U1	U1	-	FV	c1
RO	800	1.6	0	≈800	6.50	0.2	-	>6.50	U2	U1	U2	-	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	51000	1	0	≈51000	2683	1	0	<2671	2XA	2XA	MTX	-	U2	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 most important reported pressure is introduction of disease (microbial pathogens). The collection of forest products (fungi, lichen, berries etc.) and parasitism were highlighted as pressures of high intensity as well. Forestry activities like forest replanting, forestry clearance, removal of dead and dying trees, and other not specified forestry activities were identified as pressures of medium intensity. To other pressures of medium intensity belong grazing in forest, damage caused by game, urbanisation, roads building, motorised vehicle, invasive non-native species, biotic evolution and species composition change (succession) and reduced fecundity / genetic depression. Lyubenova et Bratanova (2015) reported for Bulgaria natural degradation that is increased by direct (grazing, logging for wood exploitation, cutting and thrashing of the branches to collect the fruits, and for "rejuvenating" of the trees for higher fruit yield, etc.) and indirect (tourist pressure, pollution, deceases and pests) anthropogenic factors.

Code	Pressure name	AT	BG	FR	IT	RO
B01.02	Artificial planting on open ground (non-native trees)				L	
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			
B06	Grazing in forests/ woodland		M			L
B07	Forestry activities not referred to above				M	
D01.02	Roads, motorways				M	
E01	Urbanised areas, human habitation	M				
E01.03	Dispersed habitation		M			
F03.01.01	Damage caused by game (excess population density)	M				
F04.02	Collection (fungi, lichen, berries etc.)		H			
G01	Outdoor sports and leisure activities, recreational activities				L	
G01.03	Motorised vehicles				M	
G05	Other human intrusions and disturbances				M	
H04	Air pollution, air-borne pollutants	L				
I01	Invasive non-native species	M				
J01.01	Burning down		L		L	
K02	Biocenotic evolution, succession			M	M	
K02.01	Species composition change (succession)		M			M
K03.02	Parasitism (fauna)					H
K03.03	Introduction of disease (microbial pathogens)	H	H			H
K04	Interspecific floral relations				M	
K05	Reduced fecundity/ genetic depression				M	
L07	Storm, cyclone		L			

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

The adaptation of forest management, restoration or improvement of forest habitats, establishment of protected areas, legal protection of habitats and species, management of landscape features and regulation of natural resources exploitation were identified as the highly needed measures. Lyubenova et Bratanova (2015) proposed following measures: monitoring of the state of the habitat, elaboration of forestry schemes for sustainable management and maintenance of an optimal structure of the chestnut forests; preservation of good health state; prevention of degradation, fragmentation and destruction.

Code	Measure name	AT	BG	FR	IT	RO
1.2	Measures needed, but not implemented	NA				
1.3	No measure known/ impossible to carry out specific measures			M		
3.1	Restoring/improving forest habitats		H		H	H
3.2	Adapt forest management		H		H	H
6.1	Establish protected areas/sites		H		H	H
6.3	Legal protection of habitats and species				H	H
6.4	Manage landscape features				H	
9.1	Regulating/Management exploitation of natural resources on land		H			

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

Reason of selection for the first Alpine seminar

Despite quite low Priority index, the habitat type was selected for the first Alpine seminar based on decision of the Steering Committee of 3.10.2012. The reason for addition was not sufficient representation of forest habitats. The habitat 9260 was added on suggestion of Romania, and supported by Italy.

The habitat 9260 reached score 30 due to medium values in both criteria A and B. The habitat occurs in five countries (criterion A). Two countries (France and Romania) reported unfavourable – bad conservation status while remaining three countries (Austria, Bulgaria, and Italy) indicated unfavourable - inadequate conservation status (criterion B).

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

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 9260 reached the LHF score 134.75. This habitat type was classified as LHF especially because to reach improvement, the change from negative to stable trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of the improvement of only one parameter (Structure & Functions) in one country (Italy) is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the habitat structure and functions in Italy is needed. The adaptation of forest management should address pressures like artificial planting using non-native trees, forestry clearance and removal of undergrowth. The regulation of access, road construction, outdoor sport, leisure and recreation activities and measures against biocoenotic succession are needed. The designation of protected areas represent an important measure because of very low part of habitat is located in Natura 2000 sites in Italy (7 %). There is also need of measures against the fungi illness of chestnut trees as indicated by Austria, Bulgaria, and Romania. The habitat restoration is needed especially in Romania.

Links

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

Lyubenova, M., Bratanova, S., 2015: Chestnut (Castanea sativa) forests. – In: Biserkov, V., Gussev, Ch. (eds).: Red Data Book of the Republic of Bulgaria. Vol. 3 – Natural habitats. *http://e-ecodb.bas.bg/rdb/en/vol3*/24G1.html

9270 Hellenic beech forests with *Abies borisii-regis*

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate due to the assessment of parameters Structure & Function and Future prospects by Bulgaria. Habitat 9270 is in the Alpine biogeographic region restricted to mountains of south Balkan Peninsula in Bulgaria – Stara Planina, Rhodope, Pirin, and Rila.

The improving the conservation status of the habitat requires especially improvement of the habitat structure and functions in Bulgaria. The adaptation of forest management is probably the most important measure – it should address pressures like forest replanting using non-native trees, removal of forest undergrowth, species composition change (succession), and burning down. The habitat is poorly represented in Natura 2000 sites (14 %) and this proportion should be increased either by designation of new sites or enlargement of existing ones. Especially stands in which *Abies alba* subsp. *borisii-regis* currently forms the second layer and such in which the species occurs with few but old trees with large diameter should be protected.

Habitat description

Fagus sylvatica forests with reduced medio-European character and high endemism, characterised by the presence of *Abies borisii-regis, Doronicum caucasicum, Galium laconicum, Lathyrus venetus, Helleborus cyclophyllus (Fagion hellenicum)*.

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat distribution of the Alpine biogeographical region of the EU is restricted to mountains of south Balkan Peninsula in Bulgaria – Stara Planina, Rhodope, Pirin, and Rila. The Bulgarian Red Book (Roussakova 2015) indicates smaller distribution than Article 17 map and no occurrence in Stara Planina Mts. Around 14 % of the habitat area is located in Natura 2000 sites.

Natura 2000 sites in the Alpine region			
Country	Area /km²/	Coverage /%/	Number of sites
Bulgaria	13.32	14	5
Total	**13.32**	**14**	**5**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Structure & Function and Future prospects by Bulgaria – the only country with occurrence of this habitat type. Bulgaria assesses range and habitat area as favourable. This is first reporting of the habitat in Article 17 reporting as Bulgaria was not obliged to report in 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.
BG	11500	100	x	11500	98.20	100	x	98.20	U1	U1	U1	=		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	11500	00	x	11500	98	00	x	98	00	00	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

Bulgaria reported eight pressures, four of them are of medium intensity: forest replanting using non-native trees, removal of forest undergrowth, species composition change (succession), and burning down. Other reported pressures operate with low intensity. Roussakova (2015) indicated as pressures wood felling (the phytocoenoses are a source for wood extraction), wind storms, fires, and parasites.

Code	Pressure name	BG
B02.01.02	Forest replanting (non native trees)	M
B02.02	Forestry clearance	L
B02.03	Removal of forest undergrowth	M
B06	Grazing in forests/ woodland	L
E01.03	Dispersed habitation	L
J01.01	Burning down	M
K02.01	Species composition change (succession)	M
L07	Storm, cyclone	L

Legend: L Low intensity M Medium intensity H High intensity

The adaptation of forest management, restoration or improvement of forest habitats, establishment of protected areas, and regulation of natural resources exploitation were identified as the highly needed measures.

Code	Measure name	BG
3.1	Restoring/improving forest habitats	H
3.2	Adapt forest management	H
6.1	Establish protected areas/sites	H
9.1	Regulating/Management exploitation of natural resources on land	H

Legend: L Low importance M Medium importance H High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 9270 reached the LHF score 7.372. This habitat type was classified as LHF especially because to reach improvement, the change from stable to improving trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because the improvement of trend of only one parameter (Structure & Functions) in one country (Bulgaria) is needed to reach the overall improvement. In addition, Bulgaria did not report any pressure of high intensity.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the habitat structure and functions in Bulgaria is needed. The adaptation of forest management is probably the most important measure – it should address pressures like forest replanting using non-native trees, removal of forest undergrowth, species composition change (succession), and burning down. The habitat is poorly represented in Natura 2000 sites (14 %) and this proportion should be increased either by designation of new sites or enlargement of existing ones. Roussakova (2015) proposed following measures: detailed phytosociological study and mapping of the plant communities; long-term monitoring. Protection of the stands in which *Abies alba* subsp. *borisii-regis* currently forms the second layer and such in which the species occurs with few but old trees with large diameter.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9270&region=ALP

Roussakova, V., 2015: King Boris's fir (*Abies alba* subsp. *borisii-regis*) forests. – In: Biserkov, V.,

Gussev, Ch. (eds).: Red Data Book of the Republic of Bulgaria. Vol. 3 – Natural habitats. *http://e-ecodb.bas.bg/rdb/en/vol3*/33G3.html

9410 Acidophilous *Picea* forests of the montane to alpine levels (*Vaccinio-Piceetea*)

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

Habitat summary

The overall conservation status in the Alpine region is unfavourable - inadequate due to the assessment of Structure & Functions in Italy, Romania, and Austria. Habitat 9410 is in the Alpine biogeographic region widespread in the Alps, Carpathians, Pyrenees and mountains of western Bulgaria. The largest areas are in Italy (30.7 % of Alpine habitat area), Romania (30.2 %) and Austria (28.4 %).

The improving the conservation status of the habitat requires especially improvement of the habitat structure and functions in Italy and change trend from negative to stable. The adaptation of the forest management should address pressure like (intensive) forest management and use, removal of forest undergrowth, forest exploitation without replanting or natural regrowth, grazing in forest. Regulation of other disturbance factors like roads, paths and skiing complexes building, and prevention of forest burning are other measures needed.

Habitat description

Sub-alpine and alpine coniferous forests dominated by Norway spruce (*Picea abies*) and oriental spruce (*Picea orientalis*). This habitat is wide spread in the Alps, Carpathians and Hercynian ranges. These forests also occur in the montane zone of the inner Alps and inner Carpathian basins in areas with a climate unfavourable to both beech (*Fagus sylvatica*) and fir (*Abies alba*). Subtypes: Alpine and Carpathian sub-alpine spruce forests. *Piceetum subalpinum*, Inner range montane spruce forests. *Piceetum montanum*, Hercynian sub-alpine spruce forests, Southern European Norway spruce forests, Peri-Alpine spruce forests.

Distribution in the Alpine region and coverage by Natura 2000 network

This habitat is widespread in Pyrenees, Alps, Dinaric mountains, Carpathians, and mountains of western Bulgaria. Taking into account that this is a widespread forest habitat, its representation in Natura 2000 network is quite high (37-38 %). Whole habitat area in Poland is located in Natura 2000 sites, high proportion also in Bulgaria, France, and Germany.

Natura 2000 sites in the Alpine region			
Country	Area /km^2/	Coverage /%/	Number of sites
Austria	900-1,000	18-20	50
Bulgaria	735.30	76	13
Croatia	67.80	N/A	6
France	211-214	84-86	43
Germany	39-45	78-90	23
Italy	933.47	18	189
Poland	80.00	100	15
Romania	3,200-3,300	61-63	59
Slovakia	200-300	52-79	35
Slovenia	24.27	22	5
Total	6,391-6,700	37-38	432

The table above 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

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Italy, Romania, and Austria. Another four countries assessed it in the same category. Their assessments were mostly driven by assessment of Structure & Functions. Germany and France assessed all parameters as favourable. The range and habitat area were assessed favourable by all countries except assessment of habitat area by Slovakia (unfavourable – inadequate). There is no change in overall conservation status against previous assessment, but the trend is negative. The change in trend represents non-genuine change due to different methods and more accurate data 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.
AT	52000	26.8	0	≈52000	4922	28.4	0	≈4922	U1	U1	U1	=	U1	nc
BG	13800	7.1	x	13800	966.75	5.6	x	966.75	U1	U1	U1	=	N/A	
DE	4057.69	2.1	0	4057.69	50	0.3	0	50	FV	FV	FV		FV	nc
FR	35200	18.1	0	≈35200	250	1.4	0	≈250	FV	FV	FV		FV	nc
IT	37700	19.4	0	≈37700	5320.66	30.7	0	<5320.66	U1	FV	U1	-	FV	c1
PL	6537	3.4	0	≈6537	80	0.5	0	≈80	U1	U1	U1	=	FV	b1
RO	35000	18	0	≈35000	5230	30.2	0	≈5230	U1	U1	U1	=	N/A	
SI	2789	1.4	0	≈2789	108.81	0.6	0	≈108.81	U1	FV	U1	=	FV	c2
SK	7248.21	3.7	0	≈7248.21	382	2.2	-	>382	FV	FV	U1	=	U1	

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.	Target 1 Type
EU27	194332	0	0	≈194332	17310	1	0	≈17310	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 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 broad range of pressures, two of them as high-intensity ones: skiing complex and forestry clearance. As pressures of medium intensity related to forestry were indicated: forest management and use, forest replanting (using non-native trees), removal of forest undergrowth, removal of dead and dying trees, forest exploitation without replanting or natural re-growth and not

specified other forestry activities. Also some pressures not linked to forest management were reported as pressures of medium intensity: grazing in forest, damage caused by game, burning down, roads, paths and tracks, urbanisation, outdoor sports, leisure and recreational activities, air pollution, changes in abiotic conditions, temperature changes, storms. Other pressures were reported as low intensity.

Code	Pressure name	AT	BG	DE	FR	IT	PL	RO	SI	SK
A02	Modification of cultivation practices				L					
B01	Forest planting on open ground				L					
B01.02	Artificial planting on open ground (non-native trees)									L
B02	Forest and Plantation management & use				M	M				
B02.01.02	Forest replanting (non native trees)		M							
B02.02	Forestry clearance	H	L							
B02.03	Removal of forest undergrowth		M			M				
B02.04	Removal of dead and dying trees		M	M						L
B03	Forest exploitation without replanting or natural regrowth				L	L		M		
B04	Use of biocides, hormones and chemicals (forestry)				L					
B05	Use of fertilizers (forestry)				L					
B06	Grazing in forests/ woodland		L		L	M		L		
B07	Forestry activities not referred to above			M	L	M		L		
D01	Roads, paths and railroads				L					
D01.01	Paths, tracks, cycling tracks	L				L	M			
D01.02	Roads, motorways					M				
E01	Urbanised areas, human habitation				L	M				
E01.03	Dispersed habitation		L							
E02	Industrial or commercial areas				L					
F03.01.01	Damage caused by game (excess population density)	M		M						
F04.02	Collection (fungi, lichen, berries etc.)						L			
G01	Outdoor sports and leisure activities, recreational activities					M	L			
G02.02	Skiing complex	H	H			H				
G05	Other human intrusions and disturbances				L	L	M			
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)				L					
H04	Air pollution, air-borne pollutants	M		L			L			
I01	Invasive non-native species				L					L
J01	Fire and fire suppression				L					
J01.01	Burning down		M			M		L		
J02	Human induced changes in hydraulic conditions						L			
J03	Other ecosystem modifications						L			
K02	Biocenotic evolution, succession						L			
K02.01	Species composition change (succession)		L							
K04.05	Damage by herbivores (including game species)							L		
L07	Storm, cyclone		M					M		
M01	Changes in abiotic conditions					M	L			
M01.01	Temperature changes (e.g. Rise of temperature & extremes)								M	
M01.02	Droughts and less precipitations							L		

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

The adaptation of forest management and establishment of protected areas or sites were proposed as the most important measure. To other important measures belong: restoration or improvement of forest habitats, legal protection of habitats and species, establishment of wilderness areas, management of landscape features, and regulation of natural resources exploitation.

Code	Measure name	AT	BG	DE	FR	IT	PL	RO	SI	SK
3.0	Other forestry-related measures				M		NA			
3.1	Restoring/improving forest habitats		H		M		H			
3.2	Adapt forest management	M	H	H	M	H		H	H	
6.0	Other spatial measures						NA			
6.1	Establish protected areas/sites		H			H	H	H		H
6.2	Establishing wilderness areas/ allowing succession					L	H			
6.3	Legal protection of habitats and species					H	H	H		
6.4	Manage landscape features					H				
9.1	Regulating/Management exploitation of natural resources on land		H							

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

Reason of selection for the first Alpine seminar

Despite quite low Priority index, the habitat type was selected for the first Alpine seminar based on decision of the Steering Committee of 3.10.2012. The reason for addition was not sufficient representation of forest habitats.

The habitat 9410 reached score 45 due to high value in criterion A and medium value of criterion B. The habitat occurs in nine countries (criterion A). Seven countries (Austria, Bulgaria, Italy, Poland, Romania, Slovenia, and Slovakia) reported unfavourable – inadequate conservation status (criterion B).

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

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 9410 reached the LHF score 18.726. This habitat type was classified as LHF especially because to reach improvement, the change from negative to stable trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of the improvement of only one parameter (Structure & Functions) in one country (Italy) is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, it is necessary especially improve the habitat structure and functions in Italy and change trend from negative to stable. The adaptation of the forest management represents the main measure to be taken. It should address pressure like (intensive) forest management and use, removal of forest undergrowth, forest exploitation without replanting or natural regrowth, grazing in forest. Regulation of other disturbance factors like roads, paths and skiing complexes building, and prevention of forest burning are other measures needed. The smaller actual habitat area than the reference value indicates a need of habitat restoration in Slovakia. The storm disturbance, bark beetle outbreaks and climate change represent current challenges to which the forest management should be adapted.

Links

http://bd.eionet.europa.eu/article17/reports2012/habitat/summary/?period=3&group=Forests&subject=9410&region=ALP

9510 * Southern Apennine *Abies alba*

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

Habitat summary

The overall conservation status of this priority habitat type in the Alpine region is unfavourable - inadequate due to the assessment of Structure & Function and Future prospects by Italy. The distribution of habitat 9510 is in the Alpine biogeographical region is restricted to Alpine region of the Apennine Mts.

The improving the conservation status of the habitat requires especially improvement of the habitat structure and functions in Italy. Despite Italy indicated that no measure is known or it is impossible to carry out specific measures, certain adaptation of the forest management is probably possible. It should address reported pressures – (intensive) forest management and use, artificial planting using non-native trees. Also measures for regulation outdoor sport, leisure and recreational activities, building of skiing complexes, roads and paths could be feasible. The high part of the habitat area already located in Natura 2000 sites could facilitate both regulation measures and adaptation of forest management.

Habitat description

Relict *Abies alba* woods associated with the beech forests of the *Geranio versicolori-Fagion*, located in the southern Apennines.

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat distribution is restricted to Alpine region of Apennine Mts. High proportion (92 %) of the habitat area is located in Natura 2000 sites.

Natura 2000 sites in the Alpine region			
Country	Area /km²/	Coverage /%/	Number of sites
Italy	6.56	92	2
Total	**6.56**	**92**	**2**

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Structure & Function and Future prospects by Italy – the only country with occurrence of this habitat type. Italy assesses range and habitat area as favourable. The overall conservation status for the region has been changed from unknown to unfavourable – inadequate, but this is no genuine change due to more accurate data 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.
IT	2000	100	0	≈2000	7.16	100	0	≈7.16	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	2000	00	0	≈2000	7.16	00	0	≈7.16	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 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

Italy reported seven pressures; two of them are of medium intensity: forest and plantation management and use and skiing complex. Other reported pressures operate with low intensity.

Code	Pressure name	IT
B01.02	Artificial planting on open ground (non-native trees)	L
B02	Forest and Plantation management & use	M
B07	Forestry activities not referred to above	L
D01.01	Paths, tracks, cycling tracks	L
D01.02	Roads, motorways	L
G01	Outdoor sports and leisure activities, recreational activities	L
G02.02	Skiing complex	M

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

Italy reported that no measure is known or it is impossible to carry out specific measures.

Code	Measure name	IT
1.3	No measure known/ impossible to carry out specific measures	NA

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

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 9510 reached the LHF score 1.091. This habitat type was classified as LHF especially because to reach improvement, the change from unknown to improving trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of high representation of the habitat in Natura 2000 sites (91.6 %) and the fact that the improvement of only one parameter (Structure & Functions) in one country (Italy) is needed to reach the overall improvement. In addition, Italy did not report any pressure of high intensity affecting this habitat type.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the habitat structure and functions in Italy is needed. Despite Italy indicated that no measure is known or it is impossible to carry out specific measures, certain adaptation of the forest management is probably possible. It should address reported pressures – (intensive) forest management and use, artificial planting using non-native trees. Also measures for regulation outdoor sport, leisure and recreational activities, building of skiing complexes, roads and paths could be feasible. The high part of the habitat area already located in Natura 2000 sites could facilitate both regulation measures and adaptation of forest management.

Links

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

9560 * Endemic forests with *Juniperus* spp.

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

Habitat summary

The overall conservation status of this priority habitat type in the Alpine region is unfavourable - inadequate due to the assessment of Structure & Function and Future prospect by all three countries (France, Italy, and Bulgaria). Habitat 9560 is in the Alpine biogeographic region distributed in western Alps (both France and Italy) and in Bulgaria (Stara Planina Mts., Rhodope Mts.). The largest part of the habitat area in Alpine biogeographical region (87.1 %) is located in France.

The improving the conservation status of the habitat requires especially improvement of the habitat structure and functions in France in order to reach change of overall trends from stable to improving. The measures should be focused especially to regulation of grazing in forest, elimination or reduction of problematic native and invasive alien species and measures against succession. The adaptation of forest management should include measures addressing main reported pressures: forest replanting using non-native trees, (intensive) forest management and use. The fact that almost whole habitat area in France is located in Natura 2000 sites should facilitate implementation of individual measures. The improvement in structure and functions is, besides France, also needed in Bulgaria and Italy.

Habitat description

Medium altitude forest formations dominated by *Juniperus* spp (*Juniperus brevifolia, J. cedrus, J. drupacea, J. excelsa, J. foetidissima, J. oxycedrus, J. phoenicea, J. thurifera*). Number of sub-types is distinguished: Spanish juniper woods (dominated by *Juniperus thuriferae*); Grecian juniper woods (dominated by *J.excelsa*); Stinking juniper woods (dominated by *J. foetidissima*); Syrian juniper woods (*J. drupacea* woods); Macaronesian juniper woods (*J. cedrus* formations).

Distribution in the Alpine region and coverage by Natura 2000 network

The habitat occurs in the Alpine biogeographical region in western Alps (both France and Italy) and in Bulgaria (Stara Planina Mts., Rhodope Mts.). The habitat type is very well represented in the Natura 2000 network – around 90 % of the overall habitat area and whole habitat area in Bulgaria and France is located in Natura 2000 sites.

Natura 2000 sites in the Alpine region			
Country	Area /km²/	Coverage /%/	Number of sites
Bulgaria	0.03	100	2
France	13.3-14	95-100	9
Italy	0.98	48	2
Total	14.3-15	89-93	13

The table above 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 2015 Natura 2000 database.

Biogeographical conservation status assessment

The overall conservation status of this habitat type in Alpine biogeographical region is unfavourable – inadequate due to assessment of Structure & Function and Future prospect by all three countries. Range and habitat area are favourable. There is no change in overall assessment since previous reporting. The trend is stable.

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.
BG	300	5.9	x	300	0.03	0.2	x	0.03	U1	U1	U1	=	N/A	
FR	4100	80.4	0	≈4100	14	87.1	+	≈14	U1	U1	U1	=	U1	nc
IT	700	13.7	0	≈700	2.05	12.7	0	≈2.05	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.	Target 1 Type
EU27	5100	0	0	≈5100	16	0	+	≈16	0	0	MTX	=	U1	nc	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

To the most important pressures of high intensity belong grazing, problematic native species, biocoenotic evolution, succession, and burning down. The pressures of medium intensity include modification of cultivation practices, forest planting on open ground, forest management and use, invasive non-native species, fire and fire suppression, roads and paths. Tzonev et Dimitrov (2015) specified following pressures in Bulgaria: logging, overgrazing, fires, existing roads and paths, electric transmitters, hydroenergy constructions (particularly in the area of Izgoryaloto Gyune Strict Nature Reserve) and other economic activities. Of particular threat is the possible construction of the Struma highway that will pass through Tisata Strict Nature Reserve. Old juniper trees die due to different reasons: general climate aridisation, parasites (*Gelechia senticetella*), pollution, forestry activities. The species composition changes due to the invasion of alien species and ruderals in some places.

Code	Pressure name	BG	FR	IT
A02	Modification of cultivation practices		M	
A04	Grazing		H	M
B01	Forest planting on open ground		M	
B02	Forest and Plantation management & use		M	M
B02.01.02	Forest replanting (non native trees)	L		
B02.02	Forestry clearance	L		
B02.04	Removal of dead and dying trees	L		
B06	Grazing in forests/ woodland	M	H	
C01	Mining and quarrying		L	
D01	Roads, paths and railroads			M
E01.03	Dispersed habitation	L		
I01	Invasive non-native species		M	
I02	Problematic native species		H	
J01	Fire and fire suppression		M	
J01.01	Burning down	H		
K02	Biocenotic evolution, succession		H	
K02.01	Species composition change (succession)	M		
L05	Collapse of terrain, landslide		L	
L09	Fire (natural)		M	
M02	Changes in biotic conditions		L	

Legend: L Low intensity M Medium intensity H High intensity

The adaptation of forest management, restoration or improvement of forest habitats, establishment of protected areas or sites, and regulation of natural resources exploitation were identified as the highly needed measures. Tzonev et Dimitrov (2015) proposed mapping and monitoring of all coenoses of the Grecian juniper; restoration activities in the damaged localities.

Code	Measure name	BG	FR	IT
1.3	No measure known/ impossible to carry out specific measures		M	NA
3.1	Restoring/improving forest habitats	H		
3.2	Adapt forest management	H		
6.1	Establish protected areas/sites	H		
9.1	Regulating/Management exploitation of natural resources on land	H		

Legend: L Low importance M Medium importance H High importance

Reason for selection as "Low Hanging Fruit" (LHF) habitat in the Alpine region

Applying the methodology to identify LHF habitats in the Alpine region, habitat 9560 reached the LHF score 3.291. This habitat type was classified as LHF especially because to reach improvement, the change from stable to improving trend within the category U1 (unfavourable-inadequate) is sufficient. It is normally much easier to improve a trend than to reach change in category. The habitat type was included to LHF also because of high representation of the habitat in Natura 2000 sites (91 %) and the fact that the improvement of trend of only one parameter (Structure & Functions) in one country (France) is needed to reach the overall improvement.

Priority conservation measures needed

For the improvement of the overall conservation status in the Alpine biogeographical region, especially improvement of the habitat structure and functions in France is needed in order to reach change of overall trends from stable to improving. The measures should be focused especially to regulation of grazing in forest, elimination or reduction of problematic native and invasive alien species and measures against succession. The adaptation of forest management should include measures addressing main reported pressures: forest replanting using non-native trees, (intensive) forest management and use. The fact that almost whole habitat area in France is located in Natura 2000 sites should facilitate implementation of individual measures. The improvement in structure and functions is besides France needed also in Bulgaria and Italy - despite this improvement has no impact to overall assessment.

Links

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

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/en/vol3*/39G3.html

3 Template for reporting on Member States perspectives

Each descriptive fact should be completed by a report compiled by Member States, answering questions according to the below template

Member States perspectives (to be filled by MS, experts; length not restricted)

Situation of the habitat (conservation status and main problems)
Is the habitat considered a good candidate for the 'Low Hanging Fruit' approach
Could a intensified cooperation with other MS be considered in practical terms?
What changed since last seminar? (cons. status, measures undertaken and planned, other)
Conservation objectives
Conservation measures undertaken and planned
Specialist species linked to the habitat type
Other comments