



Lycopodium spp.

Annex	V
Priority	No
Species group	Vascular plants
Regions	Alpine, Atlantic, Boreal, Continental, Macaronesian, Mediterranean, Pannonian

Lycopodium spp. is a genus of clubmosses, belonging to ferns. The Clubmosses were formerly all included in a single genus (*Lycopodium*) which is now usually split into several genera including *Diphasiastrum*, *Lycopodiella* and *Huperzia*. For Article 17 reporting all species in the family *Lycopodiaceae* were included, namely: *Diphasiastrum alpinum*, *D. complanatum*, *D. madeirense*, *D. tristachyum*, *Diphasium issleri*, *Huperzia dentata*, *H. selago*, *Lycopodiella cernua*, *L. inundata*, *Lycopodium annotinum*, and *L. clavatum*; some countries consider also *Diphasiastrum zeilleri* as valid species and report it. These species are mostly found in moist, shaded woodlands. The IUCN Red List does not contain any species of this genus. The European red list classifies *Lycopodium clavatum* as Least Concern (LC). Most of the clubmosses are relatively common and widespread but some species are threatened and redlisted in one or more countries.

Given the different approaches taken in reporting and missing data, it was not possible to assess this taxon for the Alpine, Atlantic, Continental, and Mediterranean biogeographic regions (see audit trail), therefore it is considered unknown in these regions. The conservation status in the Boreal and Macaronesian regions is assessed as "Favourable" and in Pannonian region as "Unfavourable Inadequate". The previous conservation status was considered "Unfavourable Inadequate" for Macaronesian and Pannonian regions and "Unknown" for all other regions. The absence of quantitative data and/or maps is crucial for final conclusion as "Unknown". Quite high number of countries assessed conservation status of this group of species as "Favourable", knowing also that some species belonging to the group have different conservation status. For the next assessment more comprehensive and coordinated approach is needed.

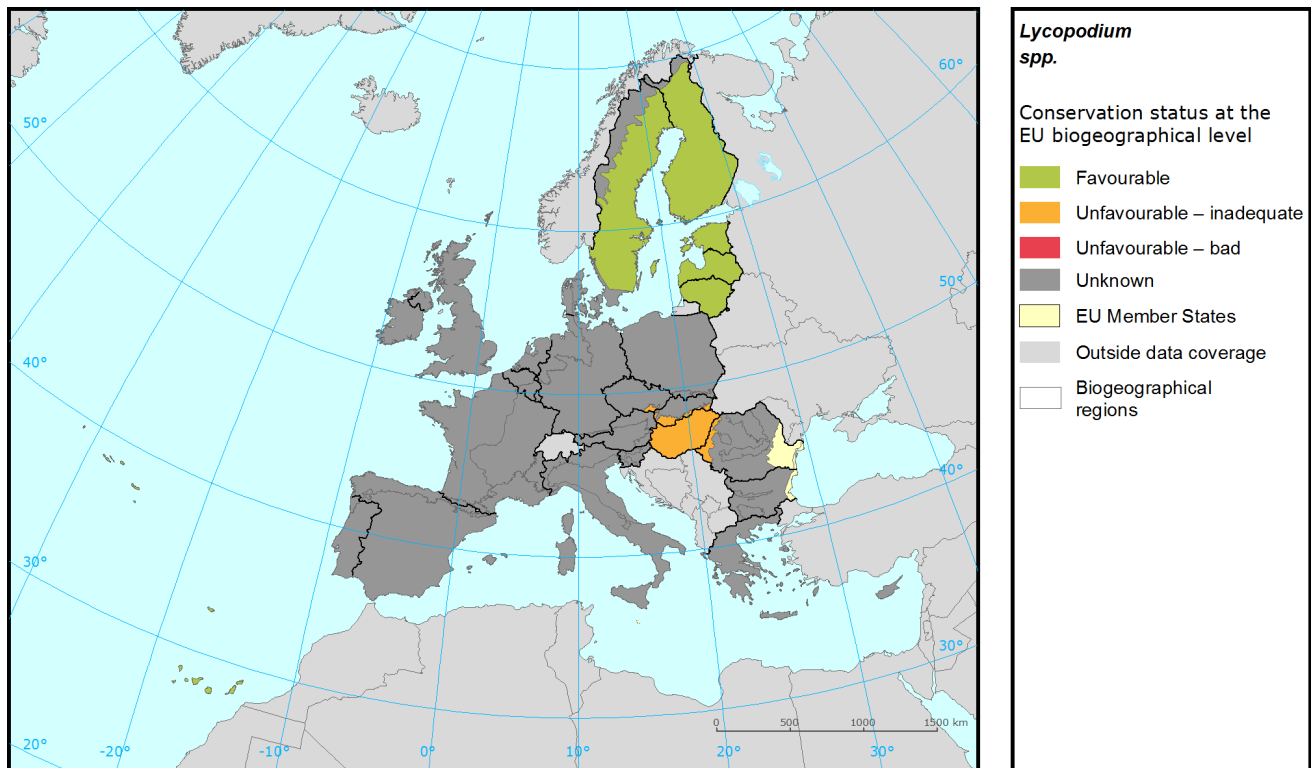
Large scale of threats were reported as highly relevant for *Lycopodium* spp. The abandonment of pastoral systems, lack of grazing, species composition change (succession), agricultural intensification, modification of cultivation practices, grazing, air-borne pollutants, nitrogen-input, burning down, forest planting on open ground, anthropogenic reduction of habitat connectivity, human induced changes in hydraulic conditions, and invasive non-native species were most frequently mentioned ones.

Better data required from most member states.

Species: *Lycopodium spp.*

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Assessment of conservation status at the European biogeographical level



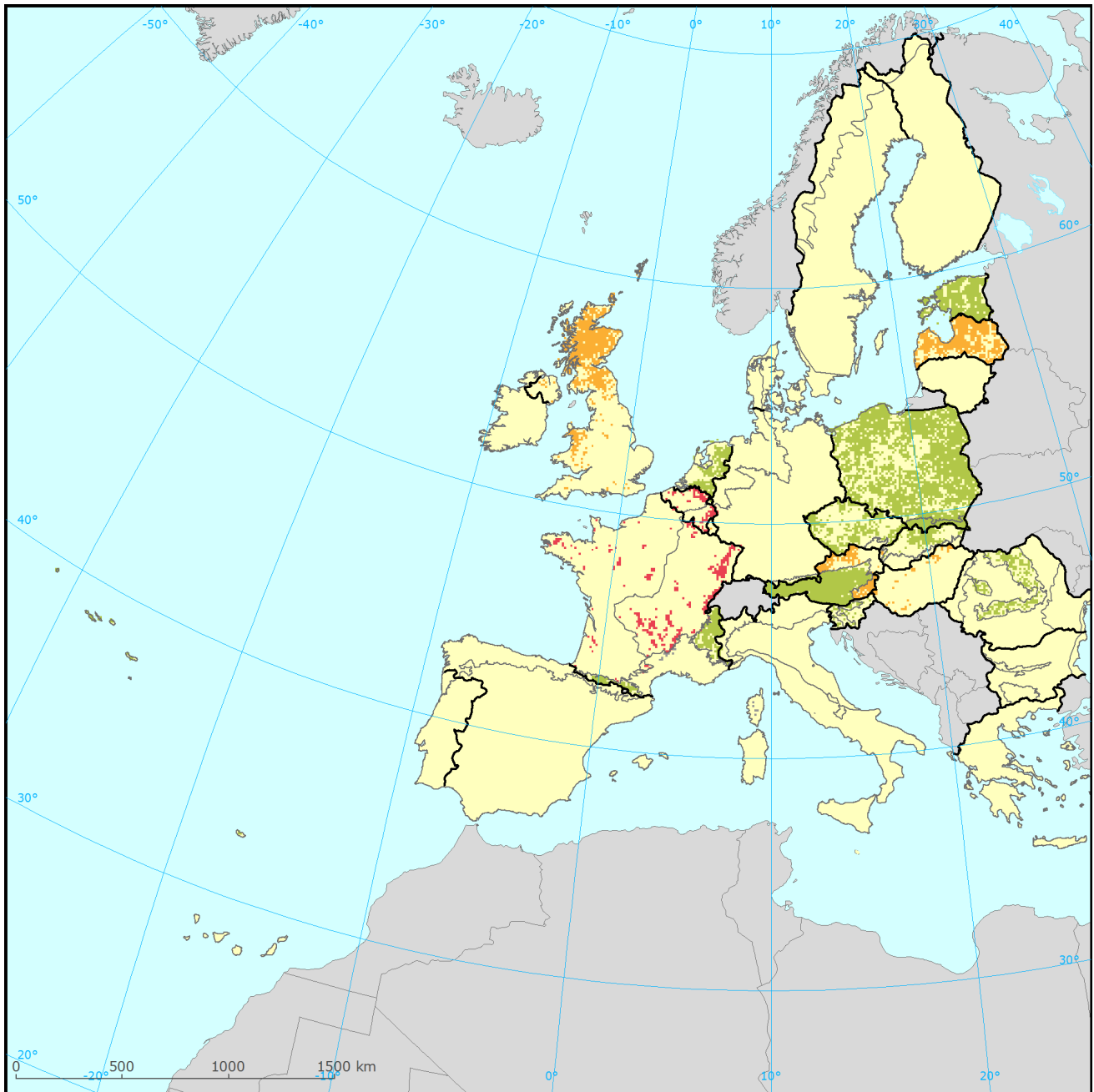
Region	Conservation status (CS) of parameters				Current CS	Trend in CS	% in region	Previous CS	Reason for change
	Range	Population	Habitat	Future prospects					
ALP					XX		21	XX	
ATL					XX		16	XX	
BOR					FV		14	XX	Not genuine
CON					XX		47	XX	
MAC	FV	FV	FV	FV	FV	=	0.49	U1	Not genuine
MED					XX	x	0.3	XX	
PAN	U1	U1	U1	U1	U1	-	0.94	U1	

See the endnote for more informationⁱ

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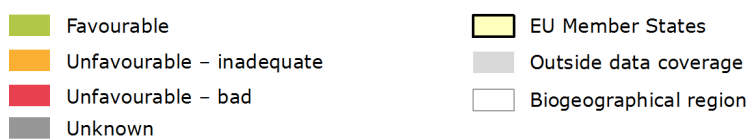
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Assessment of conservation status at the Member State level



Lycopodium spp.

Distribution and conservation status at the Member State level



The map shows both Conservation Status and distribution using a 10 km x 10 km grid. Conservation status is assessed at biogeographical level. Therefore the representation in each grid cell is only illustrative.

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MS	Region	Conservation status of parameters				Current CS	Trend in CS	% in region	Previous CS	Reason for change
		Range	Population	Habitat	Future prospects					
AT	ALP	FV	FV	FV	FV		42.9	FV		
BG	ALP				U1	-				
DE	ALP	U1	U1	U1	U1	-		FV		
ES	ALP	FV	XX	FV	FV			XX	Changed method	
FI	ALP				FV			FV		
FR	ALP	FV	FV	FV	FV		18.8	U2		
IT	ALP	XX	XX	XX	XX			FV	Changed method	
PL	ALP	FV	FV	FV	FV		9.3	FV		
RO	ALP	FV	FV	FV	FV		17.2			
SE	ALP	FV	FV	FV	FV			FV		
SI	ALP	FV	FV	FV	FV		2.0	U1		
SK	ALP	FV	FV	FV	FV		9.8	FV		
BE	ATL	U1	U1	U2	U1	=	4.4	U2		
DE	ATL	XX	XX	XX	XX			U2		
DK	ATL	XX	XX	XX	XX			U2-		
ES	ATL	FV	XX	FV	FV			XX	Changed method	
FR	ATL	U2	U2	U2	U2	-	7.5	U2		
IE	ATL				U1	=		U1		
NL	ATL	FV	FV	FV	FV		18.0	FV		
PT	ATL	XX	U2	U2	U2	-				
UK	ATL	FV	XX	XX	U1	-	70.1	U1	Changed method	
EE	BOR	FV	FV	FV	FV		46.4	FV		
FI	BOR				FV			FV		
LT	BOR	FV	FV	FV	FV					
LV	BOR	FV	U1	U1	U1	-	53.6	U1	Genuine	
SE	BOR	FV	FV	FV	FV			FV		
AT	CON	FV	FV	U1	FV	=	5.6	U1		
BE	CON	FV	U2	XX	U1	+	1.1	U2		
BG	CON				FV					
CZ	CON	FV	FV	FV	FV		11.7	FV		
DE	CON	XX	XX	XX	XX			U1		
DK	CON	XX	XX	XX	XX			U2-		
FR	CON	XX	XX	XX	U2	x	8.6	U2		
IT	CON	XX	XX	XX	XX			FV	Changed method	

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MS	Region	Conservation status of parameters				Current CS	Trend in CS	% in region	Previous CS	Reason for change
		Range	Population	Habitat	Future prospects					
LU	CON	XX	FV	U1	XX	U1	=		U2	Changed method
PL	CON	FV	FV	FV	FV	FV		72.1	FV	
SE	CON	FV	U1	U1	U1	U1	-		U1-	
SI	CON	FV	FV	FV	FV	FV		0.7	U1	
PT	MAC	FV	FV	FV	FV	FV		100.0	FV	
ES	MED	U1	XX	U1	XX	U1	=		XX	Changed method
FR	MED	XX	XX	XX	XX	XX		100.0	U2	
IT	MED	XX	XX	XX	XX	XX			XX	
PT	MED	XX	U1	U2	U1	U2	x			
HU	PAN	U1	U1	U1	U1	U1	-	94.6	U1-	
SK	PAN	FV	U1	U1	FV	U1	+	5.4	U1+	

Knowing that not all changes in conservation status between the reporting periods were genuine, Member States were asked to give the reasons for changes in conservation status. Bulgaria and Romania only joined the EU in 2007 and Greece did not report for 2007-12 so no reason is given for change for these countries. Greek data shown above is from 2001-06.

Main pressures and threats reported by Member States

Member States were asked to report the 20 most important threats and pressures using an agreed hierarchical list which can be found on the [Article 17 Reference Portal](#). Pressures are activities which are currently having an impact on the species and threats are activities expected to have an impact in the near future. Pressures and threats were ranked in three classes 'high, medium and low importance'; the tables below only show threats and pressures classed as 'high', for some species there were less than ten threats or pressures reported as highly important.

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Ten most frequently reported 'highly important' pressures

Code	Activity	Frequency
B02	Forest and plantation management & use	14
K02	Vegetation succession/Biocenotic evolution	14
D01	Roads, railroads and paths	8
H04	Air pollution, air-borne pollutants	8
K04	Interspecific floral relations	8
B01	Afforestation	5
F04	Taking and collection of terrestrial plants	5
G01	Outdoor sports, leisure and recreational activities	5
J01	Fire and fire suppression	5
J02	Changes in water bodies conditions	5

Ten most frequently reported 'highly important' threats

Code	Activity	Frequency
K02	Vegetation succession/Biocenotic evolution	15
B02	Forest and plantation management & use	10
D01	Roads, railroads and paths	8
H04	Air pollution, air-borne pollutants	8
J02	Changes in water bodies conditions	8
K04	Interspecific floral relations	8
A08	Fertilisation in agriculture	5
F04	Taking and collection of terrestrial plants	5
G01	Outdoor sports, leisure and recreational activities	5
J01	Fire and fire suppression	5

This information is derived from the Member State national reports submitted to the European Commission under Article 17 of the Habitats Directive in 2013 and covering the period 2007-2012. More detailed information, including the MS reports, is available at:

<http://bd.eionet.europa.eu/article17/reports2012/species/summary/?group=Vascular+plants&period=3&subject=Lycopodium+spp.>

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i Assessment of conservation status at the European biogeographical level: Current Conservation Status (Current CS) shows the status for the reporting period 2007-2012, Previous Conservation Status (Previous CS) for the reporting period 2000-2006. Reason for change in conservation status between the reporting periods indicates whether the changes in the status were genuine or not genuine. Previous Conservation Status was not assessed for Steppic, Black Sea and Marine Black Sea regions. For these regions the Previous status is therefore considered as 'unknown'. The percentage of the species population occurring within the biogeographical/marine region (% in region) is calculated based on the area of GIS distribution.