

# Ramsar Information Sheet

Published on 22 June 2023 Update version, previously published on : 1 January 2008

# **Serbia** Vlasina



Designation date 13 November 2007

Site number 1738

Coordinates 42°42'28"N 22°20'31"E

Area 3 209,00 ha

# Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

# 1 - Summary

#### Summary

Lake Vlasina is a semi-artificial lake (reservoir) in south-east of Serbia. Located at an altitude of 1,211 m a.s.l., with an area of 16 km2, it is the highest and largest artificial water body in Serbia. It was created in 1951 when rivers feeding the peat bog Vlasinsko blato were closed off by a dam and the peat bog was submerged. The lake and its surroundings have attractive landscape characteristics, with hills, wet meadows and peat bogs in the Vlasina River Valley, along with two islands and several narrow peninsulas covered with meadows and birch thickets. The diversity of habitats allows for a high diversity of flora, fauna and ecosystems, which are representative and autochthonous, with different and rare habitats, as well as peat islands with highly specialized communities. Once Vlasinsko blato peat bog was the largest in Serbia and its features were unique in the Balkans. The nationally protected area, Landscape of Exceptional Features, Vlasina was established in 2006 and apart from Vlasina Lake includes the slopes of surrounding mountains belonging to the Rhodopian mountain range. The site hosts 219 plant taxa (without Bryophyta), including characteristic peat plants, such as Potentilla palustris, Betula pubescens, Drosera rotundifolia, Carex limosa, Menyanthes trifoliate, Balkan endemic plant taxa, such as Silene asterias, Trifolium trichopterum, Pedicularis hoermeniana, Centaurea kotschyana, Pinguicula balcanica and Aconitum pentheri can be found in this area. Fauna includes important rare and threatened species. Herpetofauna is represented with 12 species of amphibians (Triturus karelinii, Bombina variegate) and 12 species of reptiles (Zootoca vivipara, Ablepharus kitaibelii, Vipera ammodytes). Ornithofauna, as one of its fundamental features, is represented with circa 180 species of birds recorded so far. Most of the bird species are strictly protected by national legislation but there are also internationally important species, such as Vanellus vanellus, Aythya ferina, Aythya nyroca, Alectoris graeca, etc. Carpodacus erythrinus and Motacilla citreola, two of the rarest bird species in Serbia and in Balkan Peninsula have been recently discovered breeding around the shores of Lake Vlasina. The highlands of Vlasina are habitat of internationally important species Spermophilus citellus and Lutra lutra. In totoal 28 mammal species can be found.

# 2 - Data & location

# 2.1 - Formal data

#### 2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency Institute for Nature Conservation of Serbia

Postal address Dr. Ivana Ribara 91, 11070 Novi Beograd, Serbia

National Ramsar Administrative Authority

Institution/agency Ministry of Environmental Protection

Omladinskih brigada 1
11070 Belgrade

# 2.1.2 - Period of collection of data and information used to compile the RIS

From year 2016

To year 2019

Serbia

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

Vlasina

### 2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary Yes O No 

(Update) B. Changes to Site area

No change to area

(Update) For secretariat only. This update is an extension □

#### 2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?

# 2.2 - Site location

# 2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps 0

# Boundaries description

The Ramsar Site is situated on the bottom of Vlasina basin. The central part of the Ramsar site "Vlasina" includes Lake Vlasina with the islands of Stratoria and Dugi del. The boundaries cover the whole Lake Vlasinsko as well as coastal areas along the lake. The surrounding area is predominately a high mountain region with gentle slopes. All the water is draining in the water body of the lake and thus creates this Ramsar site. The biggest coastal part is on the southern part of the lake, a place known as mud Vlasinsko. This is also the most wooded part of the lake shore.

The northern part stretches along the river Vlasina, from the dam downstream in the length of 3 km, encompassing parts of the rivers Madjenica and Polomska, with the confluences of the Vlasina river tributaries.

In the east, the Ramsar area includes wetland meadows in the range of 500 to 1000 m, covering the watercourses Babina Reka, Pojište and Caričin kladenac all the way to Dražina mahala, where the area spreads covering the Murina River and waterlogged areas on both sides of the river. The border then narrows to a stretch of 100 m from the lake shore to the Božički kanal.

In the south, the Ramsar area encompasses a stretch of 1500 m from the lake, covering the Blato site with vast and occasionally flooded wetland meadows.

In the west, from the crossroads near the Hotel Promaja, the border follows the road Promaja - Vlasina Rid for about 2 km, and then spreads in the direction of 500 to 1000 m from the lake, including the sites Delnice and Bratanov del and watercourses Šaovica, Stevanovski potok, Jančin potok and Manojlovica.

# 2.2.2 - General location

a) In which large administrative region does the site lie?	Surdulica
b) What is the nearest town or population	Surdulica

#### 2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes O No lacktriangle

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes O No lacktriangle

# 2.2.4 - Area of the Site

Official area, in hectares (ha): 3209

Area, in hectares (ha) as calculated from GIS boundaries

3209.169

# 2.2.5 - Biogeography

#### Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Continental
Other scheme (provide name below)	central-south-European mountain region

#### Other biogeographic regionalisation scheme

Stevanović, V. (1995): Biogeografska podela Jugoslavije (Biogeographic regionalisation of Yugoslavia) - In: Stevanović, V., Vasić, V. (eds): Biodiverzitet Jugoslavije sa pregledom vrsta od međunarodnog značaja (Biodiversity of Yugoslavia with a review of internationally significant species) – Faculty of Biology, Belgrade, and Ecolibri, Belgrade.

# 3 - Why is the Site important?

# 3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided

In the past the area was a muddy wetland without permanent water body. After the formation of the lake, which took place from 1949 until 1954, all landscape features were changed. That includes permanent water level, and more water consumed space. Main water suppliers are Bratašnica river, Cvetkova reka, Manojlovica, Jarčeva river, Murina river, Dejanova river and Božička river. From the west Bratašnica river, Manojlovica and Cvetkova reka fill the Vlasina lake. From the south Jarčeva river is the biggest tributary, from the east Murina river, Dejanova river and Božička are. Murina river was the biggest watercourse that filled Vlasina mud. On its confluence with Vlasina mud used to flourish peatbog vegetation. Today, the part of the Murina is flooded but still brings water to lake. This site is important for water supply and water purification.

Other ecosystem services provided

The peat from the peatbog floating islands that were formed after flooding of Vlasina, was used as gardening material and was sold on the Yugoslavian market by the local furniture industry. This practice has stopped after Vlasina was proclaimed as national protected area. The intensive alteration of the autochthonous landscapes in Vlasina has been taking place for more than two centuries. Much that once was there is lost and now it's time of Vlasina's succession. These areas were covered by a dense coniferous forest that was destroyed by the development of mining. Beech forests, which were formed afterwards owing to the regression of coniferous forests, are mainly cleared. Forest thinning and clearing of the terrain lead to erosion that further degrades the surface layer of the soil. The afforestation of barren areas is done with the allochthonous species of trees, mainly black and white pine, Douglas-fir, and Norway spruce, the monocultures of which can be seen throughout the area. The medicinal herbs, edible wild plants, and forest fruits are used in different industries.

Vlasina is one of the most developed touristic areas in the south-east of Serbia, providing both people from Serbia as well people from Bulgaria with a leisure activity such as sport fishing, camping, birdwatching and other water outdoor activities.

Other reasons

"Vlasina" is an exceptional example of a specific wetland, with humid meadows and peat bogs unique in the Balkan Peninsula, very rare and threatened in the relevant biogeographical region.

Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Vlasina region is one of the most important wet habitats and also the biggest one. This unique complex of aquatic, swamp, peat bog, and forest habitats, in the vicinity of the River Vlasina and the reservoir, represents a centre of ecosystem, species, and genetic diversity. Vlasina provides survival of valuable populations of plants and animals, significant for the conservation of the biological diversity in the relevant biogeographical region, such as round-leaved sundew (Drosera rotundifolia), sedge (Carex firosa), melancholy thistle (Cirsium helenioides), sand martin (Riparia riparia), redshank (Tringa totanus), tufted duck (Aythya fuligula), northern water vole (Arvicola terrestris), and the European otter (Lutra lutra). The peat island and peat bogs of this area represent one of the most important refuge of the boreal flora in southern Europe in general. On the slopes and shores of the Vlasina lake the biggest national population of round-leaved sundew (Drosera rotundifolia), a strictly protected species in Serbia grows. The other specific species of peatbogs that can be found here are purple marshlocks (Potentilla palustris), moor birch (Betula pubescens), bog sedge (Carex limosa), buck bean (Menyanthes trifoloata).

Justification

#### Criterion 4 : Support during critical life cycle stage or in adverse conditions

Optional text box to provide further

Vlasina lake is important bird area and thus, during the migration and mild winters it provides food for numerous bird species such as: dalmatian (Pelecanus crispus), great white pelican (Pelecanus onocrotalus), red-throated loon (Gavia stellata), black-throated loon (Gavia arctica), grey herons (Ardea cinerea), common cormorant (Phalacrocorax carbo) and other waterbirds.

Vlasina lake is the only known breeding site for citrine wagtail (Motacilla citreola) in Balkan peninsula and one of few breeding sites for common rosefinch (Carpodacus erythrinus), semicollared flycatcher (Ficedula semitorquata), rare bird species in Serbia.

A colony of sand martins (Riparia riparia) with around 300 active nests, unique in this biogeographical region, can be found on the slope near the confluence of the River Milovanska Reka into Lake Vlasinsko.

# 3.2 - Plant species whose presence relates to the international importance of the site

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae								
TRACHEOPHYTA/ LILIOPSIDA	Caldesia parnassifolia	Ø	<b>2</b>		LC		Habitat Directive (II, IV) Bern convention Annex I	wetlands in the hydrophilic vegetation
TRACHEOPHYTA/ MAGNOLIOPSIDA	Dracocephalum ruyschiana	<b>2</b>					Bern convention Annex I IUCN Red List (LC)	
BRYOPHYTA/ BRYOPSIDA	Hamatocaulis vernicosus	V	<b>2</b>				Habitat Directive (II) and Bern convention Annex I	neutral wetlands
TRACHEOPHYTA/ MAGNOLIOPSIDA	Lindernia procumbens	V	<b>2</b>		LC		Habitat Directive (IV) and Bern convention Annex I	
TRACHEOPHYTA/ LYCOPODIOPSIDA	Lycopodium clavatum	V					Strictly protected species in Serbia EU regulation of trade of fauna and flora Annex D	
TRACHEOPHYTA/ MAGNOLIOPSIDA	Ranunculus fontanus	V	V				Bern convention Annex I	wet and waterlogged meadows

A large number of plant species represented in the Ramsar region of Vlasina Lake are rare and endemic, therefore they found place in the annexes of the Habitats Directive as well as in the appendices of the Bern Convention.

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Sı qı t cr	peci ualif unde iter	ies ies er ion	col	Species ntributes under riterion	Pop.	Period of pop. Est.	%	IUCN	CITES	CMS Appendix I	Other Status Justification
Others								1	<b>'</b>				
CHORDATA/ REPTILIA	Ablepharus kitaibelii	<b>2</b>								LC			EU Habitats Directive Annexe IV Bern convention Annex II
CHORDATA/ REPTILIA	Anguis fragilis	€ (											Bern convention Annex II
CHORDATA/ MAMMALIA	Arvicola amphibius				<b>√</b>					LC			
CHORDATA/ AMPHIBIA	Bombina variegata	€								LC			EU Habitats Directive Annexe IV Bern convention Annexe II
CHORDATA/ AMPHIBIA	Bufo bufo	<b>2</b>	][							LC			Bern convention Annexe III
CHORDATA/ AMPHIBIA	Hyla arborea	1								LC			EU Habitats Directive Annexe IV Bern convention Annexe II
CHORDATA/ REPTILIA	Lacerta viridis	<b>1</b>								LC			EU Habitats Directive Annexe IV Bern convention Annexe II
CHORDATA/ MAMMALIA	Lepus europaeus europaeus	<b>2</b>											Bern Convention Annexe III
CHORDATA/ MAMMALIA	Lutra lutra	<b></b>	<b>2</b> (		V					NT	Ø		Strictly protected species in Serbia; EU Habitats Directive Annex II and IV; Bern Convention Annex II  EU regulation of trade of fauna and flora Annexe A Helsinki Convention - Natura 2000 species code - 1355. The species is present during all stages of life cycle.
CHORDATA/ MAMMALIA	Martes martes	<b>2</b>								LC			Bern III; Protected species in Serbia
CHORDATA/ MAMMALIA	Mustela putorius	<b></b>								LC			Bern III; Protected species in Serbia
CHORDATA/ REPTILIA	Natrix tessellata	<b>2</b>								LC			EU Habitats Directive Annexe IV Bern convention Annexe II
CHORDATA/ MAMMALIA	Neomys anomalus	<b>2</b>								LC			Bern Convention Annexe III
CHORDATA/ MAMMALIA	Neomys fodiens	<b>2</b>								LC			Bern Convention Annexe III
CHORDATA/ REPTILIA	Podarcis muralis	<b>2</b>								LC			EU Habitats Directive Annexe IV Bern convention Annexe II
CHORDATA/ AMPHIBIA	Rana dalmatina	<b>2</b>								LC			EU Habitats Directive Annexe IV Bern convention Annexe II
CHORDATA/ AMPHIBIA	Rana graeca	<b>2</b>	<b></b>							LC			EU Habitats Directive Annexe IV Bern convention Annexe II  National threat category assessed according to the DELH criteria - Endangered species, EN
CHORDATA/ AMPHIBIA	Rana temporaria	<b>2</b>								LC			EU Habitats Directive Annexe V Bern convention Annexe III  National threat category assessed according to the DELH criteria - Near Threatened species, NT-B1ab(iii)
CHORDATA/ AMPHIBIA	Salamandra salamandra	<b>V</b>	<b>—</b>							LC			Bern convention Annexe III; Strictly protected species in Serbia (The Rulebook on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi Appendix I)
CHORDATA/ MAMMALIA	Sciurus vulgaris	<b>2</b>								LC			Bern Convention Annexe III
CHORDATA/ MAMMALIA	Spermophilus citellus	<b>2</b>								VU			

Phylum	Scientific name	qua un crite	cies lifies der erion	Species contribute under criterior 3 5 7	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ REPTILIA	Testudo hermanni							NT			EU Habitats Directive Annexe II and IV Bern convention Annexe II CITES Anexe II EU regulation of trade of fauna and flora Annexe A	
CHORDATA/ REPTILIA	Vipera ammodytes	<b>I</b>						LC			EU Habitats Directive Annexe IV Bern convention Annexe II	National threat category assessed according to the IUCN criteria - Least concerne species, LC National threat category assessed according to the DELH criteria - Near Least Concerne species, LC
CHORDATA/ REPTILIA	Vipera berus	<b>2</b>		1000							Bern convention Annexe III IUCN LC	National threat category assessed according to the IUCN criteria - Vulnerable species, VU - C2a(i) National threat category assessed according to the DELH criteria - Near Vulnerable species, VU
CHORDATA/ REPTILIA	Zootoca vivipara							LC			Bern convention Annexe III	
Fish, Mollusc a	nd Crustacea											
CHORDATA/ ACTINOPTERYGII	Alburnoides bipunctatus	<b>2</b>									Bern convention Annexe III; Protected species in Serbia (The Rulebook on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi Appendix II)	
CHORDATA/ ACTINOPTERYGII	Barbus balcanicus	<b>I</b>						LC			Bern convention Annexe III; Protected species in Serbia (The Rulebook on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi Appendix II)	
CHORDATA/ ACTINOPTERYGII	Rhodeus amarus	<b>2</b>		1000				LC			Bern convention Annexe III; Protected species in Serbia (The Rulebook on the proclamation and protection of strictly protected and protected wild species of plants, animals and fungi Appendix II)	
Birds						I.						
CHORDATA/ AVES	Acanthis flammea							LC			Bern convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Acanthis hornemanni										Bern convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Accipiter brevipes	<b>2</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Accipiter gentilis	<b>/</b>						LC			Bern Convention Annex II; Protected species in Serbia	
CHORDATA/ AVES	Accipiter nisus	<b>2</b>						LC			Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Acrocephalus arundinaceus	<b>2</b>						LC			Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Acrocephalus melanopogon							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Acrocephalus paludicola							VU		V	Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Acrocephalus schoenobaenus	<b>2</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Actitis hypoleucos	<b>1</b>						LC			Bern Convention II; Strictly protected species in Serbia	

Phylum	Scientific name	qua un crit	cies lifies der erion	Species contribute under criterior 3 5 7	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Aegithalos caudatus	<b>1</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Alauda arvensis	<b>1</b>						LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Alcedo atthis	<b>2</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Alectoris graeca	<b>2</b>						NT			Birds Directive Annex I; Bern Convention Annex III; Strictly protected species in Serbia	
CHORDATA/ AVES	Anas crecca	<b>2</b>						LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Anas platyrhynchos	<b></b> □						LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Anas strepera	<b>1</b>									Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Anser anser	<b>1</b>						LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Anthus campestris	<b>Z</b>						LC			Annex I Birds Directive; Strictly protected species in Serbia	
CHORDATA/ AVES	Anthus cervinus	<b>2</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Anthus pratensis	<b></b> □						NT			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Anthus trivialis	2						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Apus apus	<b></b> □						LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Apus melba	<b>1</b>									Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Apus pallidus	<b></b> ✓ □						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Aquila chrysaetos	2			2			LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Aquila heliaca							VU	<b></b> ✓	V	Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Aquila pomarina										Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Ardea alba	<b>2</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Ardea cinerea	2						LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Ardea purpurea							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Ardeola ralloides							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Arenaria interpres							LC			Bern Convention II; Strictly protected species in Serbia	

Phylum	Scientific name	qua un crite	cies lifies der erion	co	Species ontribute under criterior 5 7	Pop Siz		% occurrence	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Asio flammeus								LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Asio otus	<b>2</b> -							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Athene noctua	<b>2</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Aythya ferina	<b>/</b>							VU			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Aythya fuligula	<b>V</b>				30	2003-2008		LC			Bern Convention III; Strictly protected species in Serbia	Most likely the species have disappeared from region due succession of habitat, but from time to time it breeds in the region. The species is present during migration and winter period.
CHORDATA/ AVES	Aythya nyroca								NT		V	Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Bombycilla garrulus	<b>2</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Botaurus stellaris								LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Bubo bubo	<b>2</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Buteo buteo	<b>Z</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Buteo rufinus	<b>2</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Calandrella brachydactyla	<b>2</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Calcarius Iapponicus	<b>2</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Calidris alpina	<b>Z</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Calidris ferruginea								NT			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Calidris temminckii								LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Caprimulgus europaeus								LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Carduelis carduelis								LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Carpodacus erythrinus	1							LC			Bern Convention II; Strictly protected species in Serbia	Species breeds in peat bog vegetation around the lake.
CHORDATA/ AVES	Cecropis daurica	<b>/</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Certhia brachydactyla	<b>2</b> 🗆							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Certhia familiaris	<b>2</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Cettia cetti	<b>/</b>							LC			Bern Convention II; Strictly protected species in Serbia	

Phylum	Scientific name	qua ur crit	ecies alifies ader erion	con	pecies tribute inder iterion	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix	Other Status	Justification
CHORDATA/ AVES	Charadrius dubius	<b>/</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Charadrius hiaticula	<b>/</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Charadrius morinellus	<b>V</b>										Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Chlidonias hybrida	<b>V</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Chlidonias leucopterus	<b>/</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Chlidonias niger	<b>2</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Cinclus cinclus	<b></b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Circaetus gallicus	<b>/</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Circus aeruginosus	<b>2</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Circus pygargus	<b>2</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Coccothraustes coccothraustes	<b>2</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Columba oenas	<b>1</b>							LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Coracias garrulus	<b>/</b>							LC		V	Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Corvus corax	<b>/</b>							LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Coturnix coturnix	<b>/</b>							LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Crex crex		900						LC			Strictly protected species in Serbia	Criterion 4: Swamps and wet meadows around Lake Vlasinsko and the River Vlasina enable survival of the corncrake (Crex crex) during unfavourable periods of its life cycle, which nests both in the area of the Ramsar site and on meadows on slopes of the surrounding mountains.
CHORDATA/ AVES	Cuculus canorus	<b>/</b>							LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Cyanistes caeruleus								LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Cygnus olor	<b>4</b>							LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Delichon urbicum	<b>1</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Egretta garzetta	<b>2</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Emberiza calandra								LC			Bern Convention III; Strictly protected species in Serbia	

Phylum	Scientific name	qua un crite	cies lifies der erion	Specie contribu under criterio 3 5 7	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Emberiza cia	<b>/</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Emberiza cirlus	<b>/</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Emberiza citrinella	<b>1</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Emberiza hortulana	<b>2</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Emberiza melanocephala	<b>1</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Emberiza schoeniclus	€ 🗆						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Eremophila alpestris	€ 🗆						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Erithacus rubecula	€ 🗆						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Falco biarmicus							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Falco cherrug	<b>2</b>						EN		V	Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Falco naumanni	<b>2</b>						LC		V	Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Falco peregrinus	2						LC	<b></b> ✓		Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Falco subbuteo	<b>/</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Falco tinnunculus	<b>2</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Falco vespertinus	<b>2</b>						NT		V	Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Ficedula albicollis	<b>2</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Ficedula hypoleuca							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Ficedula parva	<b>2</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Ficedula semitorquata	<b>V</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	Species is present during breeding period and it also breeds in birch forest that surrounds the lake.
CHORDATA/ AVES	Fringilla coelebs	<b></b> □						LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Fringilla montifringilla	<b>2</b>						LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Fulica atra	<b>2</b>						LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Galerida cristata	<b>/</b>						LC			Bern Convention III; Strictly protected species in Serbia	

Phylum	Scientific name	qua un crite	cies lifies der erion	Species contribut under criterio 3 5 7	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Gallinago gallinago	<b>2</b>						LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Gallinago media							NT			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Gallinula chloropus							LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Gavia arctica	1						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	Species is present during migration and winter. It doesn't breeds on Vasina lake.
CHORDATA/ AVES	Gavia stellata	<b>V</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	Species is present during migration and winter. It doesn't breeds on Vasina lake.
CHORDATA/ AVES	Gelochelidon nilotica							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Grus grus							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Haliaeetus albicilla	<b>2</b>						LC	V	V	Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Hieraaetus pennatus							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Himantopus himantopus							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Hippolais icterina	1						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Hirundo rustica							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Hydrocoloeus minutus							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Hydroprogne caspia	<b>2</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Ichthyaetus melanocephalus										Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Iduna pallida	<b>1</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	lxobrychus minutus	<b>2</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Jynx torquilla	<b>1</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Lanius collurio			1000				LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Lanius excubitor	<b>Z</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Lanius minor							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	

Phylum	Scientific name	qua un crit	ecies Ilifies Ider erion	Species contributes under criterion	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Lanius senator	<b>2</b>		10000	]			LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Larus cachinnans			10000	]			LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Larus canus			امممد	]			LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Larus fuscus	<b>2</b>		10000	]			LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Larus marinus			10000	]			LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Larus michahellis	<b>V</b>						LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Limicola falcinellus			10000	]						Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Limosa Iapponica	<b>/</b>			]			NT			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Limosa limosa	<b>2</b>			]			NT			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Linaria cannabina			امممد	]			LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Linaria flavirostris			10000	]			LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Locustella fluviatilis				)			LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Locustella Iuscinioides				]			LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Lophophanes cristatus	<b>2</b>			]			LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Loxia curvirostra	<b>1</b>			]			LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Lullula arborea	<b>/</b>			)			LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Luscinia Iuscinia	$\mathbf{Z}$			]			LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Luscinia megarhynchos				]			LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Luscinia svecica	<b>V</b>			)						Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Lymnocryptes minimus			10000	]			LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Melanocorypha calandra	<b>V</b>			]			LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Melanocorypha leucoptera			10000	]						Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Mergus merganser	<b>V</b>			]			LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Merops apiaster	<b>/</b>			]			LC			Bern Convention II; Strictly protected species in Serbia	

Phylum	Scientific name	qua un crit	cies lifies der erion	Species contribute under criterion 9 3 5 7	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Microcarbo pygmeus										Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Milvus migrans	<b>2</b> C						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Milvus milvus	<b>2</b>						NT			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Monticola saxatilis	<b>2</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Monticola solitarius	<b>V</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Montifringilla nivalis	<b>/</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Motacilla alba	<b>V</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Motacilla cinerea	2						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Motacilla citreola	1						LC			Bern Convention II; Strictly protected species in Serbia	The species breeds in peatbog meadows on locality Blato.
CHORDATA/ AVES	Motacilla flava	<b>1</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Muscicapa striata	2						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Nucifraga caryocatactes	<b>/</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Numenius arquata	<b>/</b>						NT			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Numenius phaeopus	<b>2</b>						LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Oenanthe hispanica	<b>/</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Oenanthe oenanthe	<b>/</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Oriolus oriolus	<b>/</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Otus scops	<b>V</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Pandion haliaetus	<b>2</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Panurus biarmicus	<b>2</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Parus major	<b>V</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Passer hispaniolensis							LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Passer montanus							LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Pastor roseus	<b>/</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Pelecanus crispus	1						NT	V	V	Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	Irregular visitor of Vlasina lake. Most likely to record during migration.

Phylum	Scientific name	qua ur crit	ecies lifies ider erion	COI	Species ntribute under riterior	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Pelecanus onocrotalus								LC	V	Ø	Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	Irregular visitor of Vlasina lake. Most likely to record during migration.
CHORDATA/ AVES	Perdix perdix	<b>2</b>							LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Periparus ater	<b>2</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Pernis apivorus	<b>/</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Petronia petronia	<b>2</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Phalacrocorax carbo	<b>V</b>							LC			Protected species in Serbia	The species is breeding on lakes island Stratoria, but it is also present during all year round.
CHORDATA/ AVES	Phalaropus Iobatus	<b>2</b> C							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Philomachus pugnax	<b>V</b>										Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Phoenicurus ochruros	2							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Phoenicurus phoenicurus	<b>Z</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Phylloscopus bonelli	<b>2</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Phylloscopus collybita	2							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Phylloscopus sibillatrix	<b>2</b>										Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Phylloscopus trochilus	<b>Z</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Picoides tridactylus	<b>V</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Picus canus	<b>V</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Picus viridis	<b>2</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Pinicola enucleator	2							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Platalea Ieucorodia	<b></b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Plectrophenax nivalis	<b>V</b>							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Plegadis falcinellus	<b>/</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Pluvialis apricaria	<b>V</b>							LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Pluvialis squatarola	<b>2</b>							LC			Bern Convention III; Strictly protected species in Serbia	

Phylum	Scientific name	qua un crit	ecies lifies der erion	Specie contribut under criterio	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Podiceps cristatus							LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Podiceps grisegena	<b>2</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Podiceps nigricollis	$\square$						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Poecile montanus	<b>V</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Poecile palustris	<b>2</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Porzana parva	<b>/</b>									Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Porzana porzana	<b>V</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Prunella collaris	<b>2</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Prunella modularis	<b>V</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Ptyonoprogne rupestris	<b>2</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Pyrrhocorax graculus							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Pyrrhula pyrrhula	<b>V</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Rallus aquaticus	<b>V</b>						LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Recurvirostra avosetta	<b>1</b>						LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Regulus ignicapilla	<b>V</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Regulus regulus	<b>V</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Remiz pendulinus	<b>2</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Riparia riparia	1			2000	2006-2008		LC			Bern Convention II; Strictly protected species in Serbia	The species breeds on the eroded shores of Bozicki channel.
CHORDATA/ AVES	Rissa tridactyla							VU			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Saxicola rubetra	<b>V</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Saxicola torquatus	<b>/</b>						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Serinus serinus							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Sitta europaea							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Spinus spinus							LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Stercorarius Iongicaudus							LC			Bern Convention III; Strictly protected species in Serbia	

Phylum	Scientific name	Species qualifies under criterion	Species contributes under criterion 3 5 7 8	Size	Period of pop. Est. occurrence	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Stercorarius parasiticus					LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Sterna hirundo	<b>2</b> 000	10000			LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Sternula albifrons	<b>2</b> 000	10000			LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Streptopelia decaocto					LC			Bern Convention III; Protected species in Serbia	
CHORDATA/ AVES	Streptopelia turtur					VU			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Strix aluco	<b>2</b> 000	10000			LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Sylvia atricapilla					LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Sylvia borin					LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Sylvia communis					LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Sylvia crassirostris					LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Sylvia curruca					LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Sylvia nisoria					LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Tachybaptus ruficollis					LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Tetrastes bonasia								Bird directive annex I, Bern III, Revised Annex I of Resolution 6; Strictly protected species in Serbia	
CHORDATA/ AVES	Tringa erythropus					LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA / AVES	Tringa glareola		10000			LC			Birds Directive Annex I; Bern Convention Annex II; Strictly protected species in Serbia	
CHORDATA/ AVES	Tringa nebularia		10000			LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Tringa ochropus					LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Tringa stagnatilis					LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Tringa totanus			14	2003-2008	LC			Bern Convention III; Strictly protected species in Serbia	Most likely the species is present only during migration. Probably it stopped breeding on locality.
CHORDATA/ AVES	Troglodytes troglodytes					LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Turdus iliacus					NT			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Turdus merula					LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Turdus philomelos					LC			Bern Convention III; Strictly protected species in Serbia	

Phylum	Scientific name	Species qualifies under criterion 2 4 6 9	Species contributes under criterion 8 5 7 8	Pop. Size	Period of pop. Est.	l	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Turdus pilaris						LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Turdus torquatus		0000				LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Turdus viscivorus						LC			Bern Convention III; Strictly protected species in Serbia	
CHORDATA/ AVES	Tyto alba						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Upupa epops						LC			Bern Convention II; Strictly protected species in Serbia	
CHORDATA/ AVES	Vanellus vanellus			140			NT			Bern Convention III; Strictly protected species in Serbia	

<sup>1)</sup> Percentage of the total biogeographic population at the site

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Populo tremuli-Betuletum pendulae		Dominated by Populus tremula and Betula pendula.	Second most widespreaded forest association of Vlasina region.
Festuco-Nardetum strictae		The vegetation of mountain meadows and pastures of Vlasina plateau is developed secondarily, due to deforested forest communities. The most common type of associations is Festuco-Nardetum strictae.	Diagnostic species are Nardus stricta, Crocus veluchensis, Vaccinium mytillus, Peucedaum aeqiradium and Lilium jankae.
Caricetum goodenov		The association Caricetum goodenovi is developed on mire deposits in the valleys of larger streams and at peat islands.	The characteristic species of the association are sedges (Carexnigra) and (Juncus filiformis), the common sundew (Drosera rotundifolia), marsh cinquefoil (Potentilla palustris) and several species of moss that form cushions.
Sphagno-Equsethum fluviatilis	Ø	The association Sphagno-Equsethum fluviatilis develops in a muddy and mire land where there is always water in the soil.	The characteristic species are Sphagnum moss species and Equisetum fluviatile.
Alnetea glutinosae		Dominated by Alnus glutinosa	Most prominent vegetation is of the class Anetea glutinosae, which is represented by the association of Salici pentandro-auritae, and along major mountain streams the most prominent is the association of Salicetum albo-fragilis.
Danthonio-Trifolietum velenovskyi		The vegetation of mountain meadows and pastures of Vasina plateau is developed secondarily, due to deforested forest communities. The second most common type of associations is Danthonio-Trifolietum velenovskyi.	Diagnostic species are Trifolium angulatum and Trifolium velenovsky.
Eriophoro-Caricetum flavae		Eriophoro-Caricetum flavae develops on shallow mire layer on a slightly sloping ground near the creeks.	The characteristic species are Carex flava and Eriophorum angustifolium and a small number of sphagnum mosses.
Potentillo-Salicetum rosmarinifoliae		On peat islands, besides other peat vegetation, there is also developed a peatland thickets vegetation.	Characteristic species there are also rosemary leaved willow (Salix rosmarinifolia), moor birch (Betula pubescens) and marsh cinquefoil (Potentilla palustris).
Drosero-Caricetum stelluatae	<b>Ø</b>	Develops on peat islands and around the major streams	The characteristic species are Drosera rotundifolia, Carex limosa and Carex stelluata.
Fagetum montanum	<b>2</b>	Dominated by beech (Fagus moesiaca), and apart from this species there are also sycamore (Acer pseudoplatanus), silver birch (Betula pendula) and aspen (Populus tremula).	Autochthonous mountain beech forests (Fagetum moesiacae montanum) are the most important and most distributed type of forest in this area.

# 4 - What is the Site like? (Ecological character description)

# 4.1 - Ecological character

The vegetation of Vlasina is very diverse and is represented by a large number of communities, which is in accordance with the Site's great diversity of habitats and the complex influence of ecological factors.

In the wider area of Vlasina, forest vegetation dominates. The area around Vlasina water body is within the clima-zonal belt of the Fagetum moesiacum montanum forest. The belt of the mesophilous deciduous forests (Fagetum montanum) is best developed between 800 and 1300 m.

Widespread coniferous forests developed during the postglacial period (pine, Norway spruce, and mixed deciduous-coniferous). Fossilized remains are a testimony of the presence of conifers in Vlasina in the recent past, as well as a large quantity of the pollen preserved in the peat. The birch forests Populo-Betuletum (Populo-Betuletum pendulae (Košanin 1910) prov., Betuletum pendulae (Ranđelović, V. 1994) prov.) are best developed below the Predstojčeva and Dojčinova Mahala, towards Vlasina River, but they also occur in other parts of Vlasina. In the river valleys and creeks that flow from the plateau, willow groves vegetation grows. Willow groves of the Salicetum albae-fragilis type grow around large watercourses, as well as of the Salicetum purpureae type, which develops around creeks too. Wet and peaty areas around reservoir and small rivers are distinguished by vegetation composition that consists of several species of willows: Salix pentandra, S. aurita, S. cinerea, and S. purpurea.

However, the vegetation of Vlasina is characterised with various types of herbaceous meadow and pastures as well. These are often secondarily developed, derivatives of the meadow-pasture or turf vegetation developed on account of the cleared forest communities. Namely, these associations are of the Festuco-Nardetum strictae, Danthonio-Trifolietum velenovskyi, and more rarely Diantho-Armerietum rumelicae type.

On swampy habitats near mountain creeks of Vlasina, a specific community of the Hygronardetum strictae type is developed, though more locally present than the previously mentioned communities of the Nardetum type. In some cases, the Hygronardetum communities develop along the edge of the peat bog, therefore containing elements of the peat bog's vegetation.

The Rhinantho-Cynosuretum and Trifolio-Cynosuretum cristati communities represent hygro-mesophilous meadows developed in fragments on a deep to moderately deep wet soils of Vlasina, in the zone of hilly beech forests. The meadow vegetation built of Deschampsia caespitosa is particularly interesting. Such communities occur in several places around Vlasina water body, on swampy habitats around creeks, peat bogs, etc., forming characteristic bumpy areas made from large clusters of this grass.

The valley and swampy meadows vegetation are developed in wet habitats around larger creeks and rivers. The valley meadows are represented by communities such as Deschampsietum caespitosae, Equiseto - Scirpetum silvaticae, and Filipenduletum ulmariae. The Deschampsietum caespitosae is the community of wet valley and mountain meadows that has intrazonal and patchy distribution in the mountain areas of Vlasina in the zone of the beech forest (Fagetum montanum), near the creeks that empty into Vlasina reservoir and around the reservoir as well.

See additional material for further information.

#### 4.2 - What wetland type(s) are in the site?

#### Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks		4	,	Rare
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		4		Representative
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		3		Rare
Fresh water > Marshes on peat soils >> U: Permanent Non- forested peatlands		2		Rare
Fresh water > Marshes on inorganic soils >> W: Shrub- dominated wetlands		3		Rare
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		4		Representative

# Human-made wetlands

Human-made wellands			
Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type
6: Water storage areas/Reservoirs		1	
9: Canals and drainage channels or ditches		3	

# 4.3 - Biological components

# 4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	Betula pubescens	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Callitriche palustris	protected in Serbia
TRACHEOPHYTA/LILIOPSIDA	Carex limosa	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Cirsium helenioides	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Cynoglossum montanum	
TRACHEOPHYTA/LILIOPSIDA	Dactylorhiza cordigera	protected in Serbia
TRACHEOPHYTA/LILIOPSIDA	Dactylorhiza incarnata	protected in Serbia
TRACHEOPHYTA/LILIOPSIDA	Dactylorhiza saccifera	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Dianthus superbus	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Drosera rotundifolia	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Elatine triandra	protected in Serbia
TRACHEOPHYTA/LILIOPSIDA	Epipactis palustris	protected in Serbia
TRACHEOPHYTA/EQUISETOPSIDA	Equisetum fluviatile	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Geum rhodopeum	protected in Serbia
TRACHEOPHYTA/LILIOPSIDA	Gymnadenia frivaldii	protected in Serbia
TRACHEOPHYTA/LILIOPSIDA	Juncus capitatus	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Knautia magnifica	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Lathyrus palustris	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Menyanthes trifoliata	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Pedicularis palustris	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Polemonium caeruleum	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Ranunculus aquatilis	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Ranunculus lingua	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Ranunculus ophioglossifolius	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Silene flavescens	
TRACHEOPHYTA/MAGNOLIOPSIDA	Silene waldsteinii	
TRACHEOPHYTA/LILIOPSIDA	Sparganium natans	
TRACHEOPHYTA/MAGNOLIOPSIDA	Utricularia minor	protected in Serbia
TRACHEOPHYTA/MAGNOLIOPSIDA	Utricularia vulgaris	protected in Serbia
TRACHEOPHYTA/LILIOPSIDA	Veratrum lobelianum	protected in Serbia

# 4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	Coloeus monedula				
CHORDATA/AVES	Columba palumbus				
CHORDATA/AVES	Corvus cornix				
CHORDATA/AVES	Corvus frugilegus				
CHORDATAMAMMALIA	Erinaceus roumanicus				
CHORDATA/AVES	Garrulus glandarius				
CHORDATA/ACTINOPTERYGII	Oncorhynchus mykiss				
CHORDATAVAVES	Passer domesticus				
CHORDATAVAVES	Phasianus colchicus				
CHORDATAVAVES	Pica pica				
CHORDATA/ACTINOPTERYGII	Salmo trutta				
CHORDATAVAVES	Stercorarius pomarinus				
CHORDATAVAVES	Sturnus vulgaris				
CHORDATA/MAMMALIA	Talpa europaea				

# 4.4 - Physical components

#### 4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude	Cfb: Marine west coast (Mild with no dry season,
climate with mild winters	warm summer)

The continental features of the climate in the area of Vlasina are distinguished with temperate cold and humid climate of the submontane type, with very cold winters, and with moderately warm summers. Autumn is warmer and more arid than spring, and the mean monthly amplitudes of the air temperature are very distinct. Before flooding the average annual temperature was 6.4 C. The warmest month was august (average 16.1 C), and the coldest was January 3.4 C. After formation of Vlasina lake, the average temp dropped down to 5.7 C and the only recognizable change was in average temp in January (-4 C).

# 4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)
a) Maximum elevation above sea level (in metres)
Entire river basin
Upper part of river basin $\Box$
Middle part of river basin
Lower part of river basin $\Box$
More than one river basin $\Box$
Not in river basin $\Box$
Coastal 🗆

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

The area of Vlasina belongs to the watersheds of the Vlasina (Južna Morava), Jerma (Nišava), and Dragovištica (Struma). The main watercourses are the Božička Reka with its headwater branches Dejanova, Kolunička, and Pusta Reka, the Lisinska Reka – the right tributary of the Božica, and Vučja Reka – a headwater branch of the Jerma.

4.4.3 - Soi				
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7	H-0 - 001
	Organic <b>☑</b>
	<sup>(Update)</sup> Changes at RIS update No change <b>②</b> Increase O Decrease O Unknown O
	No available information $\square$
	Are soil types subject to change as a result of changing hydrological Yes O No   conditions (e.g., increased salinity or acidification)?

#### Please provide further information on the soil (optional)

The pedological cover in the surroundings of Lake Vlasinsko is very homogeneous. Namely, besides the peat, there are pebble-alluvial and deluvial soils in the levelled shore area, but only fragmentary and in smaller areas, mainly along watercourses. Much wider areas are covered with district rankers on shale and sand and acid brown soils.

#### 4.4.4 - Water regime

#### Water permanence

Presence?	Changes at RIS update		
Usually seasonal, ephemeral or intermittent water present	No change		
Usually permanent water present	No change		

#### Source of water that maintains character of the site

Course of water that manifesting character of the site					
Presence?	Predominant water source	Changes at RIS update			
Water inputs from surface water	<b>/</b>	unknown			

#### Water destination

Presence?	Changes at RIS update
To downstream catchment	No change

#### Stability of water regime

Presence?	Changes at RIS update
Water levels fluctuating (including tidal)	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology

The area of Vlasina belongs to the watersheds of the Vlasina (Južna Morava), Jerma (Nišava), and Dragovištica (Struma). The main watercourses are the Božička Reka with its headwater branches Dejanova, Kolunička, and Pusta Reka, the Lisinska Reka – the right tributary of the Božica, and Vučja Reka – a headwater branch of the Jerma. The direction of the river valleys and watercourses of the Vlasina complex follows the rift and the tectonic zones. It is supposed that the watershed of the Jerma (Vučja Reka) and the Vlasina were once coalesced. The valleys of larger watercourses are of the ravine type. The hydrographic network is divided to temporary and permanent watercourses. It mainly consists of mountain rivulets and creeks, the headwaters of which are difficult to determine, since they are divided into the large number of small springs. The acidic brown soils are widely distributed in the hilly-mountain region of Serbia.

#### 4.4.5 - Sediment regime

0 11 1		unknown	
Sediment	reaime	unknown	36

(ECD) Water turbidity and colour	The water close shore is pale blue, but dark blue in deeper parts of the lake.
(ECD) Water temperature	The temperature of the water reaches 21 to 23 °C in the summer months. It freezes in the winter.

# 4.4.6 - Water pH

Circumneutral (pH: 5.5-7.4 ) 

(Update) Changes at RIS update No change Increase ODecrease OUnknown O

Alkaline (pH>7.4) 

(Update) Changes at RIS update No change Increase ODecrease OUnknown O

Unknown 

Unknown

# 4.4.7 - Water salinity

Fresh (<0.5 g/l) (Update) Changes at RIS update

Unknown Unknown

#### 4.4.8 - Dissolved or suspended nutrients in water

Unknown 🗷

# 4.4.9 - Features of the surrounding area which may affect the Site

Surrounding area has significantly different land cover or habitat types

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the i) broadly similar O ii) significantly different site itself:

Surrounding area has greater urbanisation or development 

Surrounding area has higher human population density 

Surrounding area has more intensive agricultural use

#### Please describe other ways in which the surrounding area is different:

The surrounding area of Vlasina Ramsar site is different in a lot of aspects. First and most important is lack of urban/rural areas in surrounding region. All settlemnts are placed near Vlasina lake. Surrounding area is predominantly mountanous region and on the slopes of the mountains habitats are very different where silver birch and european beech forests trive. Above the tree line, spreads the vast area of high mountain meadows.

# 4.5 - Ecosystem services

#### 4.5.1 - Ecosystem services/benefits

#### **Provisioning Services**

Ecosystem service	Examples	Importance/Extent/Significance		
Fresh water	Drinking water for humans and/or livestock	Medium		
Genetic materials	Ornamental species (live and dead)	Medium		

#### Regulating Services

rtogulating controco		
Ecosystem service	e Examples	Importance/Extent/Significance
Pollution control and detoxification	d Water purification/waste treatment or dilution	Medium
Climate regulation	Local climate regulation/buffering of change	Medium

#### **Cultural Services**

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Picnics, outings, touring	Medium
Recreation and tourism	Nature observation and nature-based tourism	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
Scientific and educational	Educational activities and opportunities	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium
Scientific and educational	Major scientific study site	Medium

#### Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance		
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High		
Soil formation	Accumulation of organic matter	Low		
Nutrient cycling	Carbon storage/sequestration	Medium		
Pollination	Support for pollinators	Low		

#### Other ecosystem service(s) not included above

After the Vlasina peat bog was flooded and the lake was formed, certain specific climate-meteorological changes were observed. They are primarily manifested as a mild decrease of the mean annual air temperature in the period after the peat bog was flooded. The total quantity of the precipitation is only slightly greater, but instead of two annual maximums before the flooding of the peat bog, there is only one distinct spring maximum. The formation of the reservoir caused the decrease of the temperature extremes. The wet meadows in the valley of the River Vlasina participate in the processes of water purification.

See additional material for further information

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes O No O Unknown ●

# 4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland

#### Description if applicable

There are several legends on Vlasinsko Blato and dangers that it hides. One of them tells on the destruction of a "great army". Another is the myth of a great water bull, which came out from the swamp at nights, and on the pastures on the shore attacked village cattle. In order to prevent him, the village blacksmith covered the horns of his bull with iron. In this way, the blacksmith's bull overpowered the water bull who never again went into dangerous ventures. His roar was occasionally heard from the swamp, which made the hills shake and triggered giant bubbles on the water surface. This legend amalgamates the motives of traditional cattle breeding and ecological features of the aquatic habitat.

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

# 4.6 - Ecological processes

<no data available>

# 5 - How is the Site managed? (Conservation and management)

# 5.1 - Land tenure and responsibilities (Managers)

#### 5.1.1 - Land tenure/ownership

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Category	Within the Ramsar Site	In the surrounding area
National/Federal government	✓	<b>₽</b>

#### Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<b>2</b>	<b>2</b>

Provide further information on the land tenure / ownership regime (optional):

#### a) within the Ramsar site:

A large part of the area is covered by Lake Vlasinsko (44%), which is state-owned. Other areas around the lake are more or less equally state-owned or represent private properties.

#### b) in the surrounding area:

According to the ownership structure of the cadastre municipalities, around 55% of the land is privately owned and around 45% is state-owned or under other forms of ownership.

# 5.1.2 - Management authority

Please list the local office / offices of any	Tourist organization of municipality Surdulica
agency or organization responsible for	
managing the site:	
Provide the name and/or title of the person	
or people with responsibility for the wetland:	Novica Stanković
Destal address	5. Septembra 27 17530 Surdulica +381 17 813 712
Postal address.	+381 17 813 712
F-mail address:	info@tosurdulica.org

# 5.2 - Ecological character threats and responses (Management)

# 5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Tourism and recreation areas	Medium impact	Medium impact	✓	No change		No change
Housing and urban areas	Medium impact	Medium impact	<b>✓</b>	No change		No change
Commercial and industrial areas	Medium impact	Medium impact	✓	No change		No change

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Drainage			✓			

# Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Non specified	Medium impact	Medium impact	<b>✓</b>	No change		No change
Livestock farming and ranching	Medium impact	Medium impact		No change	<b>2</b>	No change

# Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Gathering terrestrial plants	Medium impact	Medium impact	<b>2</b>	No change		No change

#### Human intrusions and disturbance

Hui	Truman mudsions and disturbance						
	Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
	Recreational and tourism activities	Medium impact	Medium impact	<b>/</b>	No change		No change

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified/others	Medium impact	Medium impact	✓	No change	<b>✓</b>	No change
Fire and fire suppression	Medium impact	Medium impact	✓	No change		No change

#### Please describe any other threats (optional):

#### a) within the Ramsar site:

The area of Vlasina is one of the areas with the most intensive depopulation processes in Serbia, with the stagnation of economic growth. The production is decreasing even within traditional trades. On the other side, the expansion of the tourist-recreational pressure causes the sudden and hardly stoppable process of degradation of the natural values of the area. Such actions include sudden and unplanned urbanization, considerable hydro-ameliorative activities, spreading of agricultural complexes, construction of roads, waste depots, etc.

Wet habitats were drained in order to create arable land and meadows, and the aquifers are used for water supply.

The most significant changes, the effects of which are felt even today, occurred after April 9, 1949, when the filling of the lake started. The reservoir was formed after the construction of the dam on the place where the River Vlasina flowed out of the peat bog, among people known as "Vlasinsko Blato", so that 2/3 of the former peat bog was covered with water.

Other various factors that act permanently or occur sporadically in the area of Vlasina are the following: fires unintentionally caused by human factor, intentional fires for the needs of cattle breeding, burning of shore vegetation for fishing, extinguishing, mowing, accumulating waste, collecting of particular species for collections, etc.

The peat is also exploited at this location by the factory for peat processing that operates in scope of the furniture factory "Simpo" from Vranje.

One of the important processes that influence the changes of the configuration of the terrain is the alteration of the lake shore belt under the influence of waves and sedimentation, as well as drastic water level changes in the lake. Besides the changes they cause from the geomorphological aspect, these processes lead to a significant stability disturbance of ecological processes in and around the lake.

see additional material for further information.

#### 5.2.2 - Legal conservation status

#### National legal designations

rational logal doolghatono			
Designation type	Name of area	Online information url	Overlap with Ramsar Site
Landscape of Outstanding Features	Vlasina		whole

#### Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area		http://datazone.birdlife.org/sit e/factsheet/Masina-iba-serbia	whole
Important Plant Area		http://www.zzps.rs/wp/ipa/?scrip t=lat	whole
Other non-statutory designation	Emerald Ecological network	http://www.zzps.rs/wp/emerald/?l ang=en&script=lat	whole
Other non-statutory designation	Prime Butterfly Areas	http://www.zzps.rs/wp/pba/?lang= en	whole

# 5.2.3 - IUCN protected areas categories (2008)

la Strict Nature Reserve
Ib Wilderness Area: protected area managed mainly for wilderness protection
Il National Park: protected area managed mainly for ecosystem protection and recreation
III Natural Monument: protected area managed mainly for conservation of specific natural features
IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
VI Managed Resource Protected Area: protected area managed mainly

#### 5.2.4 - Key conservation measures

Measures	Status
Legal protection	Implemented

#### Habitat

Measures	Status
Habitat manipulation/enhancement	Proposed
Hydrology management/restoration	Proposed

#### Species

Measures	Status
Reintroductions	Proposed

#### **Human Activities**

Measures	Status
Research	Proposed

#### Other:

In 1947, a group of experts of the Natural History Museum of Serbia, in the report on their research of Lake Vlasinsko and its surroundings, proposed that Vlasinsko Blato, for its natural values, should be protected from anthropogenic influence. The report was not positively appraised, and in 1948, the year to follow, the construction of the large Vlasina hydro-reservoir started. The next effort to protect the rest of the Vlasina peat bog were made through the works of V. F. Vasić and J. Šoti. The results of this research were presented to the Republic Institute for Nature Conservation. In the period 1980-1982, the Institute gave propositions for protection of certain parts of Lake Vlasinsko, where the most valuable remains of Vlasinsko Blato were preserved – the representatives of the relic flora and fauna. The propositions for protection, together with sketches of the reserve were on several occasions delivered to the municipality assemblies of Surdulica, Crna Trava, and Bosilegrad. The attempts were made to mark the reserve and place the warning and information boards in several parts around Lake Vlasinsko. The boards were placed on previously chosen locations and some of them remained there until the renewal of the research activities on Lake Vlasinsko in 1995. As the result of the research of a group of experts of the Institute for Nature Conservation of Serbia, the Decree on preliminary protection of the natural asset "Vlasinsko Jezero" was issued in 1999, by which it was attempted to protect the area around the lake, the peat islands, as well as the belt around the lake 500 m wide measured from the highest water level.

#### 5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site?

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning Yes O No 

processes with another Contracting Party?

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site.

The Municipality of Surdulica has included the natural values of Vlasina in its tourist offer. In scope of this programme, the promotional material is printed and distributed (posters, leaflets, etc.), which promotes the nature of Vlasina and the necessities for its protection. Ecological programmes are included in the schedule of the manifestation "Vlasinsko Leto" (Vlasina Summer), held on the shores of Lake Vlasinsko, in addition to entertaining and cultural-artistic programmes

#### 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, but restoration is needed

#### Further information

The succession of the peat bogs into meadows with sparse forest started to take place. The problem has been acknowledged, but nothing has been done about restoration plan.

# 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Plant community	Implemented
Animal community	Implemented

The area of Vlasina even today represents an exceptional scientific proving ground, on which numerous studies and scientific papers bear witness. Coordinated planning and monitoring of scientific research would result in providing answers to many questions of fundamental importance, directives and practical solutions for the future management of the protected natural asset. At the beginning of 21st century, the Institute for Nature Conservation of Serbia realises extensive, multidisciplinary research necessary for the realisation of the Protection Study for the Landscape of Outstanding Features "Vlasina". The basis for continuation of the research is the Management Programme, which includes the programme for biomonitoring of the complex physical-geographical environmental conditions of meteorological parameters, pedological characteristics and the regime of ground waters, as well as rare species of flora and fauna; the research and regular monitoring of physical-chemical and biological characteristics of the lake water; the project of monitoring of the primeval nature using the bioindicator organisms (test organisms – vegetation, flora, fauna); the project of determination of the flora inventory; the project of vegetation mapping of the natural asset; the monitoring of the population dynamics of the natural rarities from the Red List of the Fauna of Serbia (with the priority of monitoring the otter, corncrake, and minnow populations); the project of research of the qualitative and quantitative composition of the fauna of the natural asset. In scope of this last project, the faunistic and ecological research of the vertebrate and invertebrate fauna should be planned, as well as specific individual projects on protection of rare species of birds, minnow, and other significant species, and the programme of systematic, complex research of the theriofauna in this area – the inventory of this faunal group and biocoenological research as the basis for implementation of adequate protection measures.

Conservation measures proposed but not yet implemented:

The basic purpose of the Management Programme is to define the conditions necessary for maintenance of the biological equilibrium, namely the existing typical and specific autochthonous ecosystems, which represent fundamental values as a whole or in some of their components that are the reason for the implementation of the protection regime.

# 6 - Additional material

# 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Blaženčić, J. (1977): Vlasinsko jezero – hidrobiološka studija (Lake Vlasinsko – a hydrobiological study).

Biološki fakultet, Novi Sad.

Blaženčić, J. (1997): Vlasinsko jezero – hidrobiološka studija (Lake Vlasinsko - a hydrobiological study).

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Bogdanović, M., Tešić, Ž., Todorović, M., Stojiljković, B. (1976): Studija o tresetu Vlasinskog jezera, njegovoj eksploataciji i preradi (A study on the peat of Lake Vlasinsko, its exploitation and processing). Beograd.

Bogdanović, M., Tešić, Ž., Todorović, M., Stojiljković, B. (1973): Vlasinska tresava i osobine njenog treseta (The Vlasina peat bog and the characteristics of its peat). Prvi kongres ekologa Jugoslavije, čovek i okolina, Beograd.

Branković, M. D.: Taksonomija pijora (Phoxinus phoxinus LINNE 1758) Vlasinskog jezera (Taxonomy of the minnow (Phoxinus phoxinus LINNE 1758) of Lake Vlasinsko).

Cvijić, J.(1886): Izvori, tresave i vodopadi u Istočnoj Srbiji (Springs, peat bogs, and waterfalls in eastern Serbia). Glas SKAN LI, Beograd. Cvijić, J. (1903): Novi rezultati o glacijalnoj eposi Balkanskog poluostrva (New results on the glacial era in the Balkan Peninsula). Glas SKAN, sv. 65, Beograd.

Černjavski, P. (1938): Postglacijalna istorija vlasinskih šuma (Postglacial history of the forests of Vlasina).

Beograd.

Detaljna urbanistička rešenja za komplekse na Vlasinskom jezeru, knjiga I i II (Detailed urbanistic solutions for the complexes of Lake Vlasinsko, Book I and II). Zavod za unapreñenje komunalne delatnosti, Beograd 1972.

Dragišić, V. (1996): Geološko-hidrološke karakteristike sliva Vlasinskog jezera (Geological-hydrological characteristics of the watershed of Lake Vlasinsko). Vlasinsko jezero-hidrobiološka studija, Beograd.

Dukić, D. (1977): Vode SR Srbije (Waters of SR Serbia). SGD, posebna izdanja 44, Beograd.

Gavrilović, D. (1976): Glacijalni reljef Srbije (The glacial relief of Serbia). Glasnik SGD-a, sv. LVI, br. 1, Beograd.

See other published literature for further information.

#### 6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<1 file(s) uploaded>

vi. other published literature

# 6.1.3 - Photograph(s) of the Site

#### Please provide at least one photograph of the site



Vlasina (Institute for Nature Conservation of Serbia, 28-05-2013 )



Charadrius dubius ( Ivan Medenica, 10-06-2017 )



Carpodacus erythrinus (
Ivan Medenica, 10-06-



Motacilla citreola ( Ivan Medenica, 10-06-2017 )



Stratorija ( *Dragana* Nedeljkovic, 20-06-2017 )



Areal view of Vlasina's island ( Novica Stanković 12-08-2020 )



Polygonum amphibium ( Novica Stanković, 12-08 2020 )



Areal view of Vlasina's islands ( *Novica Stanković*, 12-08-2020 )



Murin bay and floating isles of Vlasina ( *Novica Stanković*, 12-08-2020 )



Landscape view of Vlasina lake ( Novica Stanković, 13 08-2020 )



Confluence of river Božica and Vlasina lake ( Novica Stanković, 12-08-2020 )



Areal view of Vlasina ( Novica Stanković, 12-08 2020 )



Old photography of Vlasina region (1935) ( PIO Vlasina, 05-12-2018 )

# 6.1.4 - Designation letter and related data

<1 file(s) uploaded>

Date of Designation 2007-11-13