RIS for Site no. 2442, Djerdap, Serbia



# **Ramsar Information Sheet**

Published on 11 December 2020

# **Serbia** Djerdap



Designation date 8 June 2020 Site number

2442 Coordinates 44°34'05"N 22°07'52"E Area 66 525,22 ha

https://rsis.ramsar.org/ris/2442 Created by RSIS V.1.6 on - 7 January 2021

# 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

Đerdap consists of three separate gorges and two canyons associated with three valleys. It is the largest and oldest water accumulation that broke through and connected water basins in the eastern and western regions. Đerdap is one of the rarest areas in Europe, as there is a high concentration of specific geological, geomorphological, paleontological, climatic, edaphic, phytocoenological, phytogeographical, floristic, faunal, as well as cultural-historical and archaeological phenomena.

The area is characterized by its highly complex, differentiated and diverse forest and shrub vegetation, which reflects a certain origin, historical developments and the contemporary environmental conditions. There are 57 forest communities in this area. Out of those, 40 are characterized as relict and 17 as contemporary. The relict communities are differentiated, 12 being polydominant of the parental type, 23 are degraded and 5 communities contain lilac bushes.

Over 1100 species and subspecies of vascular flora has been determined in the Site, which is slightly more than a quarter of the total flora of Serbia. Derdap is also an internationally important area for plant protection (IPA- Important Plant Area).

Bird species are the most diverse of all the fauna in this area. There are approximately 170 bird species, out of which 110 are nesting. Due to the diversity of bird fauna and the presence of rare, threatened, and in other respects, important bird species, this area is included in the List of internationally Important Bird Areas - IBA (Important Bird Areas), within the BirdLife International program. Most of these birds are strictly protected in Serbia and many of them are species of international concern.

Mammal fauna consists of over 50 species, some of which are of exceptional importance and have a protected status, such as the water shrew, hazel dormouse, forest dormouse, otter, brown bear, wolf, lynx, wildcat, deer, chamois and a rich bat fauna. The Đerdap area is inhabited by approximately 23 species of amphibians and reptiles.

Fish fauna is very rich and diverse, with 61 species which mostly inhabit Đerdap lake and Danube (gibel carp, sterlet, common bream, whiteeye bream, bleak, asp, common barbel, common carp, chub, several species of gudgeon, eels, Caspian shad, Pontic shad, pike, common nase, swordfish, pigo, common rudd, Zingel)

# 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

Ivana Ribara 91, 11000 Belgrade, Serbia Postal address

## National Ramsar Administrative Authority

Institution/agency Ministry of Environmental Protection

Omladinskih brigada 1, 11000 Belgrade, Serbia Postal address

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

From year	2013
To year	2019

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Djerdap Spanish)

# 2.2 - Site location

#### 2.2.1 - Defining the Site boundaries

# b) Digital map/image

Former maps 0

#### Boundaries description

The northern border of the area follows the bank of the Danube, which is also followed by the border of the Djerdap National Park. The part of the border of the area located south of the Danube also follows the border of the Djerdap National Park. The border of the area starts at Vinci village and ends at village Mala Vrbica. The border on the south side of the area passes through the northern slopes of the Deli Jovan Mountain. The beginning and the end of the borders ending in the same places. More information can be found in additional material section.

# 2.2.2 - General location

a) In which large administrative region does the site lie?	Bor District
h) What is the nearest town or nonulation	
centre?	Municipalities of Golubac, Majdanpek and Kladovo

## 2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries?

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

# 2.2.4 - Area of the Site

Official area, in hectares (ha): 66525.22

Area, in hectares (ha) as calculated from 66524.749

**GIS** boundaries

2.2.5 - Biogeography

**Biogeographic regions** 

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Continental
Freshwater Ecoregions of the World (FEOW)	Continental

# 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

The current state of wetlands and bird fauna was the result of the setting up of a dam, which caused the formation of new wetlands favourable to lake and aquatic bird species. Derdap area is generally dominated by forest communities: communities of beech forests (Fagetum montanum) and communities of Hungarian Oak and Turkey Oak (Quercetum farnetto-cerris serbicum). What makes this area well known is a wide distribution of diverse, polydominant and impoverished relict forest associations, including some, for the first time described in Europe, at this location. The location also comprises Dierdap Dam Reservoir, rivers, streams and different water bodies with associated wetland communities (Potamnion, Hydrocharition, Lemnion, Phragmition, Magnocaricion, Bidention, Alnion glutinosae, Salicion etc.). Some of these wetland habitat types are rare in its biogeographic region. Due to the pronounced aorge length, striking morphological shape of the terrain, different exposures, geological and pedological diversity, as well as the specific climate and microclimate characteristics and anthropogenic impacts, the area of Derdap also has a distinct diversity of other habitat types (e.g. grasslands, cliffs, rocks, screes, ruderal sites, etc.) with associated plant communities (Festucion valesiacae, Festucion vaginatae, Achnatherion calamagrostis, Seslerion rigidae, Polygonion avicularis, etc.). In area of Djerdap, field research and literature data shows presence of a total of 1013 species and subspecies of vascular flora Other reasons (446 genera and 110 families) which makes little more than a guarter of the total flora of Serbia. The presence of 13 species of tertiary relics is explained by the role of the Dierdap gorge and its steep limestone slopes as a refuge for the ancient Tertiary Central European forest flora. Of Balkan endemic species. 14 are found in Dierdap area (2.56% of the total 547 endemic plant taxa of Serbia. Ramsar site "Dierdap" includes two important bird areas, IBA Dierdap and IBA Mala Vrbica, IBA Dierdap includes approximately 170 bird species, while the list of bird species IBA Mala Vrbica includes approximately 120 bird species. In total, this area supports the presence of up to 200 bird species. Among them are extremely rare and internationally important species. Speaking about internationally important water habitats, a large part of the area is covered by water and wetland habitats, and especially the wetland fragments of Mala Vrbica and smaller areas along the banks of the Danube. These fragments are important for the nesting and feeding of species such as the Whiskered Tern Chlidonias hybridus, Common Tern Sterna hirundo, Ferruginous Duck Aythya nyroca, Marsh Harrier Circus aeruginosus, Little Ringed Plover Charadrius dubius and Northern Lapwing Vanellus vanellus. Especially important is the nesting of the Red-necked Grebe Podiceps grisegena. In the winter, the population of the Smew Mergellus albellus with about 4000 individuals stands out.

## Criterion 2 : Rare species and threatened ecological communities

#### Criterion 3 : Biological diversity

The site supports endemic species important for maintaining the biological diversity within the Continental biogeographic region. There are 14 endemic plant species of the Balcan region (Acanthus hungaricus, Acer hyrcanum subsp. intermedium, Betonica scardica, Campanula sparsa subsp. sphaerothrix, Cytisus procumbens, Genista subcapitata, Viola macedonica, Eryngium palmatum, Cerastium rectum, Heliosperma pusillum subsp. moehringiifolia, Trifolium dalmaticum, Trifolium medium subsp. balcanicum, Sesleria latifolia and Festuca panciciana). Besides these, there are also several Carpathian endemic species and sub-endemic species, such as: Athamanta turbith subsp. hungarica, Seseli gracile or Campanula crassipes, while 3 taxa are extinct in the Djerdap area (Veronica bachofenii, Crocus banaticus and Tulipa hungarica).

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

#### Criterion 5 : >20,000 waterbirds

Overall waterbird numbers	100000
Start year	2013
Source of data:	WC

## Criterion 6 : >1% waterbird population

#### Criterion 7 : Significant and representative fish

Justification Justification Fish fauna is very rich and diverse, with 61 species which mostly inhabit Đerdap lake and Danube (gibel carp, sterlet, common bream, white-eye bream, bleak, asp, common barbel, common carp, chub, several species of gudgeon, eels, Caspian shad, Pontic shad, pike, common nase, swordfish, pigo, common rudd, Zingel). This number of fish species represents 60% of all species to be found in Serbia.

#### Criterion 8 : Fish spawning grounds, etc.

According to studies conducted in the area, the reservoir is a very important breeding and juvenile site for Acipenser ruthenus, a species that migrates upstream to lay the eggs. For other fish species migrating into Danube at maturity, the similar situation exists all along the green corridor of Danube River, especially in the part of the park where the pools and swamps are. These pools, swamps, tributaries and gulfs have important role for reproduction of many fish species. Unfortunately, there is no synchronization between the regulation of water levels in reservoir and fish spawning period, so it often happens that fish row remain on dry surface. Another problem is absence of synchronization between the fishing prohibition period and spawning period. This decimates the fish populations in the Iron Gates area. Other specific threats for fish species are mentioned under the point 26a.

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

Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae							
Acanthus hungaricus		Ø				National list-LC	enndemic
Acer hyrcanum		Ø		LC		National list-LC	enndemic
Athamanta turbith hungarica		V				National list	enndemic
Campanula crassipes		V				National list	sub endemic
Campanula sparsa sphaerothrix		Ø				National list	enndemic
Cerastium rectum	V	V				National list-VU	enndemic
Crocus banaticus		V				National list-DD	enndemic
Cytisus procumbens		V				National list	enndemic
Eryngium palmatum		V				National list-LC	enndemic
Festuca panciciana		Ø				National list	enndemic
Genista subcapitata		Ø				National list	enndemic
Heliosperma pusillum moehringiifolium	Ø					National list-VU	
Seseli gracile		V				National list	sub endemic
Sesleria latifolia		V				National list-LC	enndemic
Trifolium dalmaticum		V				National list-LC	enndemic
Trifolium medium balcanicum		Ø				National list-LC	enndemic
Tulipa hungarica	Ø	Ø		NT		National list-EX	enndemic
Veronica bachofenii	Ø	Ø				National list-EX	enndemic
Viola macedonica		Ø				National list	enndemic

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

Phylum	Scientific name	Species qualifies under criterion2469	Species contributes under criterion 3 5 7 8	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Others											
CHORDATA/ MAMMALIA	Canis Iupus	ØOOO					LC	<b>V</b>		Habitat directive Annex II and Annex IV	Protected species
CHORDATA/ MAMMALIA	Felis silvestris	ØOOO					LC			Habitat directive Annex II and Annex IV	Protected species

		5	Spec Juali	ies fies		S	Spec ntril	ies bute	s	_					%	IUCN	017770				
Phylum	Scientific name		und	er rior		c	und	ler rion		Pop. Size	Peri	od of p	oop. Est	t. occu	Irrence	Red List	Appendix I	Appen	s dix I	Other Status	Justification
		2	4	6	9	3	5	7	8												
CHORDATA/ MAMMALIA	Lutra lutra	1				Ø										NT	s.			Habitat directive Annex II and Annex IV	Strictly protected species
CHORDATA/ MAMMALIA	Lynx lynx	Z														LC				Habitat directive Annex II and Annex IV	Strictly protected species
CHORDATA/ MAMMALIA	Rupicapra rupicapra balcanica	Z																		Habitat directive Annex II and Annex IV	Protected species
CHORDATA/ MAMMALIA	Ursus arctos	Z														LC	<b>V</b>			Habitat directive Annex II and Annex IV	Strictly protected species
Fish, Mollusc a	nd Crustacea				1																
CHORDATA/ ACTINOPTERYGII	Abramis brama							Ø								LC					Protected species
CHORDATA/ ACTINOPTERYGII	Acipenser ruthenus	V						V								VU				Bern convention appendix III and CD 92/43 EEC Annex II	Protected species, hunting permanently prohibited
CHORDATA/ ACTINOPTERYGII	Alburnus alburnus							V								LC					
CHORDATA/ ACTINOPTERYGII	Alosa caspia							Ø								LC				CD 92/43 EEC Annex V	Strictly protected
CHORDATA/ ACTINOPTERYGII	Barbus barbus							V								LC					Protected species
CHORDATA/ ACTINOPTERYGII	Blicca bjoerkna							Ø								LC					
CHORDATA/ ACTINOPTERYGII	Chondrostoma nasus							Ø								LC					Protected species
CHORDATA/ ACTINOPTERYGII	Cyprinus carpio	V						V								VU					Protected species
CHORDATA/ ACTINOPTERYGII	Gymnocephalus schraetser	V						V								LC				Bern convention appendix III and CD 92/43 EEC Annex V $$	Protected species
CHORDATA/ ACTINOPTERYGII	Hypophthalmichthys molitrix							Ø								NT					
CHORDATA/ ACTINOPTERYGII	Leuciscus idus							V								LC					
CHORDATA/ ACTINOPTERYGII	Perca fluviatilis							V								LC					Protected species
CHORDATA/ ACTINOPTERYGII	Rutilus rutilus							V								LC					
CHORDATA/ ACTINOPTERYGII	Sander lucioperca	V						V								LC				Bern convention appendix III	Protected species
CHORDATA/ ACTINOPTERYGII	Sander volgensis	V						V								LC				Bern convention appendix III	Protected species
CHORDATA/ ACTINOPTERYGII	Silurus glanis	Ø						V								LC				Bern convention appendix III	Protected species
CHORDATA/ ACTINOPTERYGII	Squalius cephalus							V								LC					Protected species
CHORDATA/ ACTINOPTERYGII	Vimba vimba	Ø						V								LC				Bern convention appendix III	Protected species
CHORDATA/ ACTINOPTERYGII	Zingel zingel	V						Ø								LC				Bern convention appendix III and CD 92/43 EEC $\ensuremath{AnnexV}$	
Birds	I															· I					
CHORDATA/ AVES	Accipiter brevipes	V														LC				Bird Directive Annex I	Nationally Endangered species. Strictly protected breeding species.

Phylum	Scientific name	Species qualifies under criterion	Species contributes under criterion	pp. ze Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Anas platyrhynchos			000	3.33	LC				Protected wintering and breeding species.
CHORDATA/ AVES	Anser erythropus	2000				VU		<b>V</b>	Bird Directive Annex I	SPEC 1 winter, Strictly protected wintering species
CHORDATA/ AVES	Aquila chrysaetos	ØOOC				LC			Bird Directive Annex I	Nationally winerable species. Strictly protected breeding species.
CHORDATA/ AVES	Aquila heliaca	ØOOC				VU	V	V	Bern convention appendix II, CMS Annex I	SPEC I, Strictly protected species in Serbia. National critically endangered.
CHORDATA/ AVES	Aquila pomarina	ØOOC							Bird Directive Annex I	Critically endangered species in Serbia. Strictly protected breeding species of the site.
CHORDATA/ AVES	Ardea alba	ØOOC				LC			Bird Directive Annex I, Bern convention appendix II	Strictly protected bredding species of the site.
CHORDATA/ AVES	Ardea purpurea	ØOOC				LC			Bird Directive Annex I, Bern convention appendix II	Vulnerable and strictly protected bredding species of the site.
CHORDATA/ AVES	Aythya ferina	222		000	4	VU				Protected wintering species of Serbia.
CHORDATA/ AVES	Aythya fuligula		- <b>I</b>	000	1.57	LC				Endagered species and protected wintering species of Serbia.
CHORDATA/ AVES	Aythya nyroca	ØOOC				NT		<b>X</b>	Bird Directive Annex I, CMS Annex I	SPEC 1, Strictly protected breeding species of the site.
CHORDATA/ AVES	Bucephala clangula		15	000	7.5	LC				Strictly protected wintering species of the site.
CHORDATA/ AVES	Buteo rufinus	ØOOC				LC			Bird Directive Annex I	Strictly protected breeding species of the site.
CHORDATA/ AVES	Chlidonias niger	ØOOC				LC			Bird Directive Annex I	Critically endangereda and stricty protected breeding species.
CHORDATA/ AVES	Ciconia ciconia	ØOOC				LC			Bird Directive Annex I, Bern convention appendix II	Strictly protected breeding species.
CHORDATA/ AVES	Ciconia nigra	2000				LC			Bird Directive Annex I, Bern convention appendix II	Strictly protected breeding species.
CHORDATA/ AVES	Circaetus gallicus	ØOOO				LC			Bird Directive Annex I	Near threatened species and strictly protected breeding species of the site.
CHORDATA/ AVES	Circus aeruginosus	ØOOO				LC			Bird Directive Annex I	Near threatened species and strictly protected breeding species of the site.
CHORDATA/ AVES	Circus pygargus	ØOOC				LC			Bird Directive Annex I	Vulnerable species and strictly protected breeding species of Serbia, but not of the site.
CHORDATA/ AVES	Crex crex					LC			Bird Directive Annex I, Bern convention appendix II	Strictly protected breeding species of the site.
CHORDATA/ AVES	Cygnus columbianus	ØOOC				LC			Bird Directive Annex I, Bern convention appendix II	Strictly protected wintering species.
CHORDATA/ AVES	Cygnus cygnus	ØOOC				LC			Bird Directive Annex I, Bern convention appendix II	Strictly protected wintering species.
CHORDATA/ AVES	Cygnus olor			00	3.78	LC				Strictly protected breeding species.

Phylum	Scientific name	2 2	Spec Juali unc rite 4	ries fies ler rion 6	9	S  con cr 3	peci Itribu Inde iteri 5 7	es utes ir íon 7 {	F S	op. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Falco peregrinus	V						סכ					LC	V		Bird Directive Annex I	Endangered species in Serbia and strictly protected breeding species of the site.
CHORDATA/ AVES	Gavia arctica	Ø						כ					LC			Bird Directive Annex I	Strictly protected wintering species.
CHORDATA/ AVES	Gavia stellata	Ø				ומ		כ					LC			Bird Directive Annex I	Strictly protected wintering species.
CHORDATA/ AVES	Grus grus	V				]6	20	וכ					LC			Bird Directive Annex I, Bern convention appendix II	Strictly protected migratory species.
CHORDATA/ AVES	Haliaeetus albicilla	V						וכ					LC	V	×	Bird Directive Annex I,	Near threatened species and also native to the site.
CHORDATA/ AVES	Hieraaetus pennatus	V						סכ					LC			Bird Directive Annex I	Vulnerable species and strictly protected breeding species of the site.
CHORDATA/ AVES	Himantopus himantopus	V						סכ					LC			Bird Directive Annex I, Bern convention appendix II	Near threatened species and strictly protected breeding species of the site.
CHORDATA/ AVES	Ixobrychus minutus	Ø						סכ					LC			Bird Directive Annex I, Bern convention appendix II	Strictly protected breeding species of the site.
CHORDATA/ AVES	Mergellus albellus	Ø				36	20	כ	] 4	000			LC			Bird Directive Annex I, Bern convention appendix II	Strictly protected wintering species.
CHORDATA/ AVES	Microcarbo pygmeus	Ø		Ø		]6	20	כ	] 1	700		2.43				Bird Directive Annex I, Bern convention appendix II	Strictly protected breeding and wintering species of the site.
CHORDATA/ AVES	Milvus migrans	V						סכ					LC			Bird Directive Annex I	Endangered species and strictly protected breeding species of the site.
CHORDATA/ AVES	Pandion haliaetus	Ø				ום		סכ					LC			Bird Directive Annex I	Strictly protected migratory species.
CHORDATA/ AVES	Pelecanus crispus	Ø						כ					NT	я.	×	Bern convention appendix II, CMS Annex I	SPEC I winter, Strictly protected migratory species in Serbia.
CHORDATA/ AVES	Pernis apivorus	Ø				ום		כ					LC			Bird Directive Annex I	Strictly protected breeding species of the site.
CHORDATA/ AVES	Recurvirostra avosetta	1						סכ					LC			Bird Directive Annex I	Strictly protected migratory species.
CHORDATA/ AVES	Sterna hirundo	V						סכ					LC			Bird Directive Annex I	Vulnerable species and strictly protected breeding species of the site.

1) Percentage of the total biogeographic population at the site

Đerdap area is exceptionally important for birds in migration and wintering. In addition to being geographically located in the area of eastern European migration corridor, Đerdap is also convenient due to the accumulation, as a large body of water, which rarely freezes in winter. During wintering period, the most present species are those of Anatidae duck family (16 species). 100000-150000 birds, primarily ducks, and other bird species related to aquatic habitats, are regularly present there in winter.

The species with largest numbers of individuals are the mallard Anas platyrhynhchos, common pochard Aythya ferina, tufted duck Aythya fuligula, common golden eye Bucephala clangula, smew Mergellus albelus and graylag goose Anser anser. During the nesting period, the species common tern Sterna hirundo and whiskered tern Chlydonias hybrida are nesting in Đerdap area.

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
C1.34 Rooted floating vegetation of eutrophic waterbodies	Ø		EU Habitats directive annex I
C1.62 Mesotrophic temporary waters	V		EU Habitats directive annex I
C3.21 [Phragmites australis] beds	V		EU Habitats directive annex I
C3.22 [Scirpus lacustris] beds	V		EU Habitats directive annex I
C3.23 [Typha] beds	Ø		EU Habitats directive annex I
C3.25 Water-fringe medium-tall grass beds	Ø		EU Habitats directive annex I
C3.5 Pioneer and ephemeral vegetation of periodically inundated shores	Ø		EU Habitats directive annex I
E1.12 Euro-Siberian pioneer calcareous sand swards	Ø		EU Habitats directive annex I
E1.2F Pannonic sand steppes	×		EU Habitats directive annex I
E1.22 Arid subcontinental steppic grassland ([Festucion valesiacae])	Ø		EU Habitats directive annex l
E4.4 Calciphilous alpine and subalpine grassland	Ø		EU Habitats directive annex I
F3.24 Subcontinental and continental deciduous thickets	Ø		EU Habitats directive annex I
G1.11 Riverine [Salix] woodland	V		EU Habitats directive annex I
G1.2 Mixed riparian floodplain and gallery woodland	Ø		EU Habitats directive annex I
G1.A4 Ravine and slope woodland	×		EU Habitats directive annex I
G1.69 Moesian [Fagus] forests			EU Habitats directive annex I
G1.73 Eastern [Quercus pubescens] woods	V		EU Habitats directive annex I
G1.75 South-eastern sub-thermophilous [Quercus] woods	Ø		EU Habitats directive annex I
G1.7C Mxed thermophilous woodland	V		EU Habitats directive annex I
G1.8 Acidophilous Quercus dominated woodland	Ø		EU Habitats directive annex l
C1.33 Rooted submerged vegetation of eutrophic waterbodies	Ø		EU Habitats directive annex I

## Optional text box to provide further information

Habitat types according to EUNIS Habitat Classification:
C1.33 Rooted submerged vegetation of eutrophic waterbodies
C1.34 Rooted floating vegetation of eutrophic waterbodies
C1.62 Mesotrophic temporary waters
C1.63 Eutrophic temporary waters
C3.21 [Phragmites australis] beds
C3.22 [Scirpus lacustris] beds
C3.23 [Typha] beds
C3.25 Water-fringe medium-tall grass beds
C3.5 Pioneer and ephemeral vegetation of periodically inundated shores
E1.12 Euro-Siberian pioneer calcareous sand swards
E1.2F Pannonic sand steppes
E1.22 Arid subcontinental steppic grassland ([Festucion valesiacae])
E4.4 Calciphilous alpine and subalpine grassland
F3.24 Subcontinental and continental deciduous thickets
G1.11 Riverine [Salix] woodland
G1.2 Mixed riparian floodplain and gallery woodland
G1.A4 Ravine and Slope Woodland
G1.59 Moesian [Fagus] torests
G1.75 Eastern [Quercus publications] woods
G1.75 Souri-eastern sub-inermophilous [Quercus] woods
H1 Torrestrial undergrau degues cave systems passages and waterbodies
11 Arable land and market cardeas
I Constructed industrial and other artificial babitats

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

# 4.1 - Ecological character

Đerdap is dominated by forest ecosystems, reaching 80% of coverage. The forests of Đerdap are dominated by just two communities -Fagetum montanum and Quercetum confertae - cerris, although there is a presence of 57 different communities. Derdap is also characterized by phytocenologic diversity, mosaic -like aspect of associations and frequent changes in vegetal layers. According to the analysis of pollen, the age of phytocenoses in the area od Derdap is boreal. The ecological characteristics of the Derdap area are best illustrated by the major vegetation groups. The first group consists of herbaceous vegetation that covers the lowest parts of the terrain. These are wetland and forest ecosystems in wet or periodically flooded land. This group includes all hygrophilic and hydrophilic vegetation that inhabits water and wetlands, and where the groundwater level during the vegetation period is on the surface or close to it. It also includes lowland forests of willow, poplar and pedunculate oak. Phytocenoses of the first group have a wide range and inhabit the lowest parts of the area. The second group is characterized by the vegetation on the deepest substrates and on the slightly inclined terrain. This group primarily includes mixed forests of oak. Oak trees are distributed in the major part of the area dominated by the species Quercus conferta K, Quercus cerris L., Quercus sessilis Ehrt. and Quercus pubenscens L. The most common phytocenosis is Quercetum confertae - cerris Rudski, dominated by Quercus conferta with more than 80%.

The group that develops on the sandstone and loess terrains is exceptionally important. It is distributed only in the far eastern parts of the area. It is in a very restrictive area, and very endangered due to anthropogenic impacts. The existence of numerous cave ecosystems across Djerdap is certainly worth noting. The area of Djerdap is, due to its refugial character, distinguished by a high diversity of plant and animal species of different origin, distribution, and ecology, present in a relatively small range of altitudes and total surface of the area.

Nowadays, Djerdap's great ecosystem variety is threatened with continuous and significant anthropogenic influence.

# 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		1		Representative

# Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type
2: Ponds	bare	3	
4: Seasonallyflooded agricultural land		2	
9: Canals and drainage channels or ditches		3	

#### Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Forests	
Agricultural	
grasslands	
cliffs	
ruderal sites	

# 4.3 - Biological components

#### 4.3.1 - Plant species

<no data available>

# 4.3.2 - Animal species

<no data available>

# 4.4 - Physical components

#### 4.4.1 - Climate

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RIS for Site no. 2442, Djerdap, Serbia

Climatic region	Subregion
D: Moist Mid-Latitude climate with cold winters	Dfa: Humid continental (Humid with severe winter, no dry season, hot summer)

## 4.4.2 - Geomorphic setting

a) Mnimum elevation above sea level (in metres) 40
a) Maximum elevation above sea level (in metres) 806
Entire river basin
Upper part of river basin
Mddle part of river basin
Lower part of river basin 🗹
More than one river basin
Not in river basin
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.

# Danube river basen

4.4.3 - Soil

Mineral 🗵

Organic 🗹

No available information  $\Box$ 

# Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)?

# 4.4.4 - Water regime

# Water permanence

Presence?	
Usually permanent water present	No change

Source of water that maintains character of the site		
Presence?	Predominant water source	
Water inputs from precipitation		No change
Water inputs from groundwater	×	No change

#### Water destination

Presence?	
Marine	No change

# Stability of water regime

Presence?	
Water levels largely stable	No change

## 4.4.5 - Sediment regime

- Significant erosion of sediments occurs on the site  $\Box$
- Significant accretion or deposition of sediments occurs on the site  $\Box$
- Significant transportation of sediments occurs on or through the site  $\hfill\square$
- Sediment regime is highly variable, either seasonally or inter-annually
  - Sediment regime unknown 📝

## 4.4.6 - Water pH

- Acid (pH<5.5) 🗖
- Circumneutral (pH: 5.5-7.4 )
  - Alkaline (pH>7.4)
    - Unknown 🗖

# 4.4.7 - Water salinity

- Fresh (<0.5 g/l) 🗹
- Mixohaline (brackish)/Mixosaline (0.5-30 g/l)
  - Euhaline/Eusaline (30-40 g/l) 🗖
  - Hyperhaline/Hypersaline (>40 g/l) 🗖
    - Unknown 🗖

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

Eutrophic	
Mesotrophic 🗹	
Oligotrophic	
Dystrophic	

Unknown 🗆

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

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  $\Box$ 

- Surrounding area has higher human population density  $\Box$
- Surrounding area has more intensive agricultural use

Surrounding area has significantly different land cover or habitat types

# 4.5 - Ecosystem services

#### 4.5.1 - Ecosystem services/benefits

#### **Provisioning Services**

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High

	Cultural Services				
	Ecosystem service	Examples	Importance/Extent/Significance		
	Recreation and tourism	Picnics, outings, touring	Medium		
	Spiritual and inspirational	Cultural heritage (historical and archaeological)	High		
	Scientific and educational	Educational activities and opportunities	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

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site?

# 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 Duse that maintain the ecological character of the wetland

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

Description if applicable

An important element of the historical and cultural identity of the National park is the diverse and valuable immovable cultural heritage, primarily archaeological sites "Lepenski Vir" (7000 to 6000 year BC) and Vlasac from the Mesolithic period, as well as numerous Immovable Cultural Goods from the Roman period. The economy of the area of the National Park depends on the development of two major companies: Rudnik bakra Majdanpek (Copper Mine Majdanpek) and Hydropower system "Đerdap". Residents of the Danube villages are engaged in fishing. Forestry was the main source of income for the inhabitants of mountainous villages. Industrial production is underdeveloped, whereas the processing of agricultural products is dominant. The diversity of rural and cultural heritage, in particular the preserved examples of popular architecture and residential units, might contribute to strengthening the identity of the National Park and to the identification of residents and visitors with the natural and cultural values of rural areas, thus enabling a better conservation and valuing of cultural heritage. The area is populated by multi - ethnic population. Each ethnic group preserves its traditions and customs, which contributes to the multicultural character of the area.

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples

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

Public ownership		
Category	Within the Ramsar Site	In the surrounding area
Public land (unspecified)	×	
Private ownership		
Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	V	Ø

## 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:	Public Enterprise National Park Djerdap
Provide the name and/or title of the person or people with responsibility for the wetland:	Lazar Mitrovic Director
Postal address:	Kralja Petra I 14, 19220 Donji Milanovac
E-mail address:	office@npdjerdap.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 agricul	ltural)			
Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Housing and urban areas	Low impact	Low impact		1
1. P				
Water regulation				
Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Canalisation and river regulation	Low impact	Low impact		V
L				
Agriculture and aquaculture				
Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Annual and perennial non-	Low impact	Low impact		Ø

# timber crops Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Renewable energy	Low impact	Low impact	×	×

#### Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	Low impact	Low impact	1	×

# Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Unspecified	unknown impact	unknown impact	1	×.

#### Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact	Low impact	×	V

Natural system modifications				
Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Dams and water management/use	Medium impact	Medium impact	×	

How is the Site managed?, S5 - Page 1

Invasive and other problematic species and genes					
	Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
	Invasive non-native/ alien species	unknown impact	unknown impact	×	×

# Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Household sewage, urban waste water	Low impact	Low impact		V

#### Geological events

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Avalanches/landslides	Low impact	Low impact	×	<b>V</b>

#### Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Storms and flooding	Medium impact	Low impact	1	<b>X</b>

# 5.2.2 - Legal conservation status

#### National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Ecological network of the Republic of Serbia	Djerdap		partly
Ecological network of the Republic of Serbia	Mala Vrbica		partly
National Park	Djerdap	http://www.npdjerdap.org/?page_i d=99	partly

Non-statutory designations			
Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Djerdap	http://datazone.birdlife.org/sit e/factsheet/derdap-gorge-iba-ser bia	partly
Important Bird Area	Mala Vrbica	http://datazone.birdlife.org/sit e/factsheet/3134	partly

#### 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
- M Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

# 5.2.4 - Key conservation measures

Legal protection	
Measures	Status
Legal protection	Implemented

Human Activities

RIS for Site no. 2442, Djerdap, Serbia

Measures	Status
Regulation/management of recreational activities	Implemented
Communication, education, and participation and awareness activities	Implemented
Research	Implemented

#### 5.2.5 - Management planning

Is there a site-specific management plan for the site? In preparation

Has a management effectiveness assessment been undertaken for the site? Yes O No O 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 managing authority implements the activities (informational and promotional materials, direct contact with the local population, thematic workshops) in order to raise the public awareness of the importance of protecting and preserving the values of the protected area and of reducing the exploitation of natural resources, with a view to sustainable development. In the area of NP, there are two Visitors Centers of the National Park Đerdap, where one can get the necessary information about the protected area and the activities of the NP management. Besides these centers, there are also three tourist information centers in the local turist organizations in Golubac, Donji Milanovac and Kladovo, which provide tourist brochures (information on the accommodation and restaurants).

URL of site-related webpage (if relevant): http://www.npdjerdap.org/?lang=en

## 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

#### 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Animal species (please specify)	Implemented
Birds	Implemented
Plant species	Implemented
Water regime monitoring	Implemented

#### Fish

Monitoring of the qualitative composition and age structure of fish stocks, biomass, production and fishing pressure (CPUE) on fish stocks is carried out. Monitoring of use of the fishing area is carried out every three years for the following species: Acipenser ruthenus, Alburnus alburnus, Squalius cephalus, Barbus barbus, Aspius aspius, Abramis sapa, Rutilus rutilus, Abramis brama, Cyprinus carpio, Carassius gibelio, Chondrostoma nasus, Silurus glanis, Perca fluviatilis, Sander lucioperca, Sander volgense, Perccottus glenii, Zingel zingel, Lepomis gibbosus, Vimba vimba, Ameiurus melas, Neogobius melanostomus, Neogobius fluviatilis, Hypophthalmichthys molitrix, Arystichthys nobilis, Leuciscus idus

#### Reptiles

In accordance with the management programme, permanent monitoring of these reptiles is carried out: Emys orbicularis, Testudo hermanni, Anguis fragilis, Lacerta viridis, Darevskia praticola, Podarcis muralis, Podarcis tauricus, Ablepharus kitaibelii, Coronella austriaca, Dolichophis caspius, Zamenis longissimus, Natrix natrix, Natrix tessellata, Vipera ammodytes, #Vipera berus

#### Amphibians

In accordance with the management programme, permanent monitoring of these amphibians is carried out: Salamandra salamandra, Triturus cristatus, #Triturus dobrogicus, Lissotriton vulgaris, Bufo bufo, Pseudepidalea viridis, #Pelobates fuscus, #Pelobates syriacus, Bombina bombina, Bombina variegate, Hyla arborea, Rana dalmatina, Rana temporaria, Pelophylax lessonae, Pelophylax ridibundus, Pelophylax esculentus

#### Birds

In accordance with the management programme, permanent monitoring of these bird species (besides IWC) is carried out: Phalacrocorax pygmaeus, Egretta garzetta, Casmerodius albus, Ciconia ciconia, Pernis apivorus, Haliaeetus albicilla, Circaetus gallicus, Aquila pomarina, Aquila chrysaetos, Falco peregrinus, Bubo bubo, сова Strix uralensis , Alcedo atthis

# 6 - Additional material

# 6.1 - Additional reports and documents

## 6.1.1 - Bibliographical references

Birdlife International (2004): Birds in European Union, a status assessment. Wageningen. The Netherlands: Birdlife.

Diklić, N. (1999): Tulipa hungarica Borbas In: Stevanović, V. (ed) Crvena knjiga flore Srbije 1. Ministarstvo za životnu sredinu R Srbije, Biološki fakultet Univ. u Beogradu i Zavod za zaštitu prirode R Srbije. 91-93.

Diklić, N., Nikolić, V. (1972): O nekim livadskim zajednicama iz Đerdapske klisure. - Glasnik Prirodnjačkog muzeja, B27: 201-212, Beograd.

Medarević, M., Jovanović, B., Banković, S., Karadžić, D. (2001) Šume Đerdapa. Donji Milanovac: Nacionalni park Đerdap.

Медаревић, М. (2005): Типови шума Националног парка "Ђердап". - Шумарски факултет Универзитета у Београду, Боград.

Пузовић, С., Симић, Д., Савељић, Д., Гергељ, Ј., Туцаков, М., Стојнић, Н., Хуло, И., Хам, И., Визи, О., Шћибан, М., Ружић, М., Вучановић, М. & Јовановић, Т. (2003): Птице Србије и Црне Горе- величине гнездилишних популација и трендови: 1990-2002. Ciconia 12: 35-120. Нови Сад.

Puzović, S., Sekulić, G., Stojnić, N. Grubač, B., Tucakov, M. (2009): Značajna područja za ptice u Srbiji. Ministarstvo životne sredine i prostornog planiranja. Zavod za zaštitu prirode Srbije. Beograd.

Sekulić, N., Šinžar-Sekulić, J. (ed)(2010): Emerald ecological network in Serbia. Ministry of environment and spatial planning, Institute for nature conservation of Serbia.

Stevanović, V. (ed) (2003): Preliminarna crvena lista flore Srbije i Crne Gore, manuskript-baza podataka, Beograd.

Stevanović, V. (ed.) (1999): Crvena knjiga flore Srbije 1. Ministarstvo za životnu sredinu Republike Srbije, Biološki fakultet Univerziteta u Beogradu i Zavod za zaštitu prirode Republike Srbije.

Tomović, G. (2007): Fitogeografska pripadnost, distribucija i centri diverziteta balkanske endemične flore u Srbiji. Doktorska disertacija (manuskript): 1-532. -Univerzitet u Beogradu, Biološki fakultet, Beograd.

#### 6.1.2 - Additional reports and documents

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

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

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

iv. relevant Article 3.2 reports

v. site management plan

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vi. other published literature
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<1 file(s) uploaded>

#### 6.1.3 - Photograph(s) of the Site

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







Kovilovo (M. Milenkovic Srbulovic, 10-05-2020







Kovilovo (N.Radakovic, 14-08-2020







Mali Strbac ( A. Srbulovic, 04-07-2020)



Ploce ( D. Milojkovic, 06-05 2020



Sokolovac ( D.Ilic, 24-09-2020



Sokolovac ( D.Ilic, 24-09-2020

# 6.1.4 - Designation letter and related data

Designation letter <1 file(s) uploaded> Date of Designation 2020-06-08