

# **Ramsar Information Sheet**

Published on 18 October 2019 Update version, previously published on : 1 January 2007

# Croatia Nature Park Kopacki rit



Designation date Site number

2 November 1992 583 Coordinates 45°38'44"N 18°52'28"E Area 23 126,29 ha

https://rsis.ramsar.org/ris/583 Created by RSIS V.1.6 on - 8 May 2020

# 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

Kopacki rit is an inner delta wetland with specific morphological and sedimentation processes characteristics. It is situated in the central section of the Danube floodplain, at the confluence of the Danube and one of its five major tributaries, the Drava River. The area is a mosaic of lakes, marshes, wet grasslands, reed beds, and riverine forests. The area is annually flooded from one month on the higher parts up to the three months on the lower parts, usually from March to May. This interaction of water and land generates high biological diversity with over 524 vascular plant, 300 bird, 55 mammal, 53 fish, 12 amphibian and 12 reptile species.

# 2 - Data & location

2.1 - Formal data

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

# Compiler 1

Compiler 2

Name	Vlatko Rožac
Institution/agency	Public Institution Nature Park Kopački Rit
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Institution/agency	Public Institution Nature Park Kopački Rit
Postal address	Mali Sakadaš 1, 31327 Kopačevo, Bilje
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Phone	+385 31 285 371

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

From year	1999	
To year	2017	

# 2.1.3 - Name of the Ramsar Site

Official name (in English, French or	Nature Park Kopacki rit
Spanish)	
Unofficial name (optional)	Kopački rit

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

<sup>(Update)</sup> A Changes to Site boundary Yes     No O	
<sup>(Update)</sup> The boundary has been delineated more accurately	
<sup>(Update)</sup> The boundary has been extended 🗹	
<sup>(Update)</sup> The boundary has been restricted	
(Update) B. Changes to Site area the area has increased	
<sup>(Update)</sup> The Site area has been calculated more accurately	
<sup>(Update)</sup> The Site has been delineated more accurately	
<sup>(Update)</sup> The Site area has increased because of a boundary extension 🗹	
<sup>Update)</sup> The Site area has decreased because of a boundary restriction	

# 2.1.5 - Changes to the ecological character of the Site

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

# (Update) Optional text box to provide further information

The ecological state of Kopački rit Nature Park is changing due to hydrotechnical activities on rivers Dunav and Drava for the purpose of arranging and maintaining the waterway. This activities disable a development of the new river meanders and because of that the natural balance between two natural processes of meandering and succession is disturbed. Since there is no meandering, succession progresses towards vegetation climates. Progress of succession is visible but there is no certain evidence that ecological caracter is changed.

# 2.2 - Site location

# 2.2.1 - Defining the Site boundaries

b) Digital map/image
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<1 file(s) uploaded>

Former maps 0

# Boundaries description

The boundary of the Ramsa	r site is the same as an e	existing protected area	(Nature Park Kopacki rit).	
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# 2.2.2 - General location

a) In which large administrative region does	Osječko-baranjska
b) What is the nearest town or negulation	
centre?	Osijek

# 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 (

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?

## 2.2.4 - Area of the Site

Official area, in hectares (ha): 23126.29

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

# 2.2.5 - Biogeography

Biogeographic regions								
Regionalisation scheme(s)	Biogeographic region							
EU biogeographic regionalization	Continental							
Other scheme (provide name below)								

## Other biogeographic regionalisation scheme

EEA Habitats Directive 92/43/EEC

2. Meusel et al. 1965-1992: Vergleichende Chronologie der Zentraleuropeischen Flora. Hll. Fisher Verlag, Jena.

# 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	The main ecological significance of Kopački rit is comprised by flood dynamics, therefore, the Park is always different. This site is important for flood control and water purification. Water purification is important in sense of water supply services, because groundwater of wider area exists and it is used as a drinking water.					
Other ecosystem services provided	This site is important because it supports a great deal of biodiversity. Main reasons for great biodiversity are: very high rate of primary production, and constant landscape changes due to very high water dynamics in the area (often changes between floods and dry periods of park, which can appear in every season).					
Other reasons	Kopacki rit is the representative and best preserved example of an alluvial floodplain along the middle course of the Danube River, as well as intact, natural and functioning inland delta of a major river that is rare in temperate climes. (Source: World Heritage Nomination - IUCN technical evaluation 2000)					

## Criterion 2 : Rare species and threatened ecological communities

#### Criterion 3 : Biological diversity

The Kopacki rit supports diverse and important vertebrate fauna. It includes 53 fish, 12 amphibia, 12 reptiles, 300 bird and 55 mammal species. Regarding plant species, so far, the recorded number of vascular plants includes 524 species belonging to 96 families.

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

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

Overall waterbird numbers 33930

Start year 2000

Source of data: Public Institution Nature Park Kopački rit

#### ✓ Criterion 6 : >1% waterbird population

# Criterion 7 : Significant and representative fish

Justification Justification Floodplain area of Kopački rit supports 49 fish species, while almost 60 species are documented for the rivers Danube and Drava. This is the most significant spawning ground in the central and upper Danube area for all fish species of it, including Acipenser ruthenus, Misgurnus fossilis, Aspius aspius, Carassius carassius, Cyprinus carpio, Rutilus pigus, Gymnocephalus schraetser, Zingel streber and Zingel zingel, species that are listed on IUCN Red lists.

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

Justification Justification Floodplain area of the Kopački rit is an outstandingly important source of food, spawning ground and nursery for Danube fish stocks. During 1945-1968 period, when commercial fishery was allowed in the whole floodplain, the average annual catch was 758 tonnes/year (Source: J. Mikuska 1979) indicating the importance of the fish stocks.

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

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Salvinia natans	Floating fern	<b>X</b>			LC		Annex 1 fo Bern convention	
Trapa natans	Water Caltrop	<b>X</b>			LC		Annex 1 fo Bern convention	

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

Phylum	Scientific name	Common name	Species qualifies under criterion 2 4 6 9	Species contributes under criterion 9 3 5 7 8	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Birds												
CHORDATA/ AVES	Accipiter gentilis	Northern Goshawk	ØOOC					LC			Bern Convention apendix II National Red List - nesting population (LC)	The site supports populations of this species and it's important for maintaining the biological diversity
CHORDATA/ AVES	Accipiter nisus	Eurasian Sparrowhawk	ØOOC					LC			Bern Convention apendix II	The site supports populations of this species and it's important for maintaining the biological diversity
CHORDATA/ AVES	Aegypius monachus	Cinereous Vulture	• Ø000					NT			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (RE)	Criterion 2: The species is RE in National Red List, but it was recorded once on site, in 2003.
CHORDATA/ AVES	Anas acuta	Northern Pintail						LC			EU Bird Directive 79/409/EEC ANNEX II, ANNEX III National Red List - nesting population (RE)	Criterion 4: The site is an important migration and wintering site for waterfowl such as this species. Criterion 4: The species is on wintering every year.
CHORDATA/ AVES	Anas clypeata	Northern Shoveler	r 🗆 🖉 🗆 C								EU Bird Directive 79/409/EEC ANNEX II, ANNEX III National Red List - nesting population (RE), migration population (LC)	Criterion 4: The site is an important migration and wintering site for waterfowl such as this species.
CHORDATA/ AVES	Anas crecca	Eurasian Teal; Green-winged Teal						LC			EU Bird Directive 79/409/EEC ANNEX II, ANNEX III	Criterion 4: The site is an important migration and wintering site for waterfowl such as this species.
CHORDATA/ AVES	Anas penelope	Eurasian Wigeon									EU Bird Directive 79/409/EEC ANNEX II, ANNEX III	Criterion 4: The site is an important migration and wintering site for waterfowl such as this species.
CHORDATA/ AVES	Anas platyrhynchos	Mallard			20000	2005	1	LC			EU Bird Directive 79/409/EEC ANNEX II, ANNEX III	Criterion 3: The site is an important migration and wintering site for this species. Criterion 6: Average population estimates in Kopacki rit: 20.000 ind (2000-2005) Wintering, biogeographic region: Eastern Europe/Black Sea & East Mediterranean
CHORDATA/ AVES	Anas strepera	Gadwall	220C								EU Bird Directive 79/409/EEC ANNEX II National Red List - nesting population (RE), wintering population (VU)	Criterion 4: The site is an important migration and wintering site for waterfowl such as this species.
CHORDATA/ AVES	Anser albifrons	Greater White- fronted Goose			20000	) 2014	3.6	LC			EU Bird Directive 79/409/EEC ANNEX II	Criterion 3: The site is an important migration and wintering site for waterfowl such as this species. Criterion 5: Wintering population (2014) was larger than 20000 Criterion 6: Average population estimates in Kopacki rit: 4.000 ind (2000-20016) Wintering, Biogeographic region: Western Siberia/Central Europe

Phylum	Scientific name	Common name	Spe qual un crite	cies lifies der erior 6	5 5 n 9	Sp con u cr 3	tribut Inder Iterio	s es n 8	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Anser anser	Greylag Goose	ØD	Ø		ØC			3500	2018	3.57	LC			EU Bird Directive 79/409/EEC ANNEX II, ANNEX III National Red List - nesting population (VU)	Criterion 3: The site is an important migration and wintering site for waterfowl such as this species. Criterion 6: Average population estimates in Kopacki rit: 3.500 ind. (2018) during the whole year, biogeographic region: Central Europe/North Africa
CHORDATA/ AVES	Anser fabalis	Bean Goose										LC			EU Bird Directive 79/409/EEC ANNEX II	Criterion 4: The site is an important migration and wintering site for waterfowl such as this species.
CHORDATA/ AVES	Aquila chrysaetos	Golden Eagle	ØD			ØC						LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (CR)	The site supports populations of this species and it's important for maintaining the biological diversity
CHORDATA/ AVES	Aquila clanga	Greater Spotted Eagle												×	Bern Convention apendix II Bonn Convention apendix I EU Bird Directive 79/409/EEC ANNEX I National Red List - wintering population (CR) IUCN Red list (Clanga clanga) VU	The site supports populations of this species and it's important for maintaining the biological diversity
CHORDATA/ AVES	Aquila heliaca	Eastern Imperial Eagle; Asian Imperial Eagle				20						VU	V	×	Bern Convention apendix II Bonn Convention apendix I EU Bird Directive 79/409/EEC ANNEX I, National Red List - nesting population (CR)	The site supports populations of this species and it's important for maintaining the biological diversity
CHORDATA/ AVES	Aquila pomarina	Lesser Spotted Eagle	ØD			ØC									Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I, National Red List - nesting population (EN)	The site supports populations of this species and it's important for maintaining the biological diversity
CHORDATA/ AVES	Ardea alba	Great Egret	ØD			ØC			500	2005	1.06	LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I, National Red List - nesting population (EN)	max 1100, Criterion 4: The site is an important migration and wintering site for waterfowl such as this species. Criterion 6: Average population estimates in Kopacki rit: 500 ind (2000-2005) Passage Criterion 3: the site is very important for the during whole year.
CHORDATA/ AVES	Ardea cinerea	Grey Heron; Gray Heron	OØ	2					2400	2010	20	LC				Criterion 4: The site is an important nesting site for this species. It supports the largest colony of the species in Croatia (400-800 breeding pairs in period 2009-2019). It is the largest colony on the national level. The percentage is also on national level.
CHORDATA/ AVES	Ardea purpurea	Purple Heron	ØD									LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (EN)	
CHORDATA/ AVES	Ardeola ralloides	Squacco Heron	Ø									LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (EN)	
CHORDATA/ AVES	Aythya ferina	Common Pochard				ØC						vu			EU Bird Directive 79/409/EEC ANNEX II, ANNEX III	Criterion 4: The site is an important migration and wintering site for waterfowl such as this species.
CHORDATA/ AVES	Aythya fuligula	Tufted Duck				ØC						LC			EU Bird Directive 79/409/EEC ANNEX II, ANNEX III	Criterion 4: The site is an important migration and wintering site for waterfowl such as this species.
CHORDATA/ AVES	Aythya nyroca	Ferruginous Duck										NT		I	Bonn Convention apendix I EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (NT)	
CHORDATA/ AVES	Botaurus stellaris	Eurasian Bittern	ØD									LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (EN)	
CHORDATA/ AVES	Chlidonias hybrida	Whiskered Tern	ØD									LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (NT)	
CHORDATA/ AVES	Ciconia ciconia	White Stork	ØD									LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (LC)	

Phylum	Scientific name	Common name	Species qualifies under		Species contributes under criterion	Pop. Size Period of pop. Est.	% occurrence	IUCN Red	CITES Appendix	CMS Appendix	C Other Status	Justification
			2 4 6	93	3 5 7 8		,	LISU		1.1		
CHORDATA/ AVES	Ciconia nigra	Black Stork	ØOO					LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (VU)	
CHORDATA/ AVES	Falco cherrug	Saker Falcon	ØOO					EN		V	Bern Convention apendix II Bonn Convention apendix I EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (CR)	
CHORDATA/ AVES	Haliaeetus albicilla	White-tailed Eagle	Ø00			210 2019	1	LC	<b>s</b>	<b>1</b>	Bern Convention apendix II Bonn Convention apendix I EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (VU)	The site supports the largest population on the national and Danube macro-region level. Percentage is based on the European level.
CHORDATA/ AVES	Ixobrychus minutus	Little Bittern	ØOO					LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX 1 National Red List - nesting population (LC)	
CHORDATA/ AVES	Microcarbo pygmeus	Pygmy Cormorant	ØOO					LC			Barcelona Convention apendix II Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (CR)	Criterion 4: The site is an important migration and wintering site for waterfowl such as this species and new breading place since 2018.
CHORDATA/ AVES	Milvus migrans	Black Kite	ØOO					LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (EN)	
CHORDATA/ AVES	Nycticorax nycticorax	Black-crowned Night Heron; Black-crowned Night-Heron	ØOO					LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (NT)	
CHORDATA/ AVES	Phalacrocorax carbo	Great Cormorant				1836 2005	2.37	LC				Criterion 6: Average population estimates in Kopacki rit: 1836 pairs (2000-2005) Breeding
CHORDATA/ AVES	Platalea leucorodia	Eurasian Spoonbill	ZZZ			400 2005	3.33	LC			EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (EN)	Criterion 4: The site is an important migration and wintering site for waterfowl such as this species. max 1000 Criterion 6: Average population estimates in Kopacki rit: 400 ind (2000- 2005) Passage
CHORDATA/ AVES	Riparia riparia	Sand Martin	ØOO					LC			Bern Convention apendix II National Red List - nesting population (VU), migration population (LC)	
CHORDATA/ AVES	Sterna hirundo	Common Tern	ØOO					LC			Bern Convention apendix II EU Bird Directive 79/409/EEC ANNEX I National Red List - nesting population (NT)	
Fish. Mollusc a	and Crustacea	1						1 1			1	
CHORDATA/ ACTINOPTERYGII	Acipenser ruthenus	Sterlet sturgeon	Ø00					W				Criterion 8: most significant spawning ground in the central and upper Danube area for this species.
CHORDATA/ ACTINOPTERYGII	Carassius carassius	Crucian	ØOO					LC			National Red List - VU	Criterion 8: most significant spawning ground in the central and upper Danube area for this species.
CHORDATA/ ACTINOPTERYGII	Cyprinus carpio	Leather carp; Leather carp	ØOO					W				Criterion 8: most significant spawning ground in the central and upper Danube area for this species.
CHORDATA/ ACTINOPTERYGII	Gymnocephalus schraetser	Striped ersh	ØOO					LC			Habitat Directive 92/43/EEC ANNEX II, ANNEX V National Red List - CR	Criterion 8: most significant spawning ground in the central and upper Danube area for this species.
CHORDATA/ ACTINOPTERYGII	Leuciscus aspius	Schied; Schied; Schied						LC				Criterion 8: most significant spawning ground in the central and upper Danube area for this species.

Phylum	Scientific name	Common name	Species qualifies under criterion 2 4 6 9	с Э 3	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/ ACTINOPTERYGII	Misgurnus fossilis	Mud Ioach	eoo					LC			Habitat Directive 92/43/EEC ANNEX II National Red List - VU	Criterion 8: most significant spawning ground in the central and upper Danube area for this species.
CHORDATA/ ACTINOPTERYGII	Rutilus pigus	Danube Roach	ØOOC					LC			Habitat Directive 92/43/EEC ANNEX II	Criterion 8: most significant spawning ground in the central and upper Danube area for this species.
CHORDATA/ ACTINOPTERYGII	Zingel streber	Danube streber	ØOOC					LC			National Red List - VU	Criterion 8: most significant spawning ground in the central and upper Danube area for this species.
CHORDATA/ ACTINOPTERYGII	Zingel zingel	Zingel; Zingel	ØOOC					LC			Habitat Directive 92/43/EEC ANNEX V National Red List - VU	Criterion 8: most significant spawning ground in the central and upper Danube area for this species.
Others	1	1				11	1	1 1				
CHORDATA/ AMPHIBIA	Bombina bombina	Fire-bellied Toad	200					LC			Bern Convention apendix II Habitat Directive 92/43/EEC ANNEX II, ANNEX IV	Criterion 4: The site is an important place for spawning of the species.
CHORDATA/ REPTILIA	Emys orbicularis	European Pond Turtle	ØOOC					NT			Bern Convention apendix II Habitat Directive 92/43/EEC ANNEX II, ANNEX IV	
CHORDATA/ MAMMALIA	Felis silvestris	Wildcat	ØOOC	J				LC			Bern Convention apendix II Habitat Directive 92/43/EEC ANNEX IV	
CHORDATA/ AMPHIBIA	Hyla arborea	Tree frog	ØOOC	J				LC			Bern Convention apendix II Habitat Directive 92/43/EEC ANNEX IV	
ARTHROPODA/ INSECTA	Leucorrhinia pectoralis	Yellow-spotted Whiteface	ØOOC					LC			Bern convention apendix II Habitat Directive 92/43/EEC ANNEX II, ANNEX IV National Red List - EN	
CHORDATA/ MAMMALIA	Lutra lutra	European Otter	eoo					NT			Bern convention apendix II Habitat Directive 92/43/EEC ANNEX II, ANNEX IV National Red List - DD	
ARTHROPODA/ INSECTA	Lycaena dispar	Large copper	eoo	J				NT			Bern convention apendix II Habitat Directive 92/43/EEC ANNEX II, ANNEX IV	
ARTHROPODA/ INSECTA	Ophiogomphus cecilia	Green gomphid	eoo					LC			Bern convention apendix II Habitat Directive 92/43/EEC ANNEX II, ANNEX IV National Red List - VU	

1) Percentage of the total biogeographic population at the site

Platalea leucorodia, Eurasian Spoonbill, additional information for the criterion 6: C & SE Europe/Mediterranean & Tropical Africa

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

<no data available>

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

# 4.1 - Ecological character

The site holds a range of habitats from pristine natural to highly developed by humans. Located within the floodplain of the Danube and Drava rivers, the site could be divided into two distinctive areas: 1) recent floodplain that extends from the river Danube to the dikes on the both sides of the river - still under influence of regular annual floods, from 1-15 km wide, this is the most important part of the site concerning its wetland functions and values and makes the core zone of the designated site. The area supports a mosaic of plant communities that are distributed according to their tolerance to fluctuating water levels. From submerged plant communities, sedges, cattails, and reed beds to Salix, Populus and Quercus forests, together with numerous channels, oxbows and Lake Kopacko jezero, the area represents a mosaic of intact alluvial floodplain habitats. 2) former floodplain that extends from the dikes east and west right to the geological borders of the floodplain - the area forms a buffer zone around the core area. Affected by human influence through drainage scheme that was carried out in the 19th and 20th century the hydrology and natural features of the area were modified, while the western parts were converted to arable land or reclaimed for construction. In some parts, stands of exotic American poplars and other non-native trees have been planted for timber exploitation, but it is planned to be removed. Artificial fishponds for the extensive commercial fish production were built, and animal farms were established.

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

In	land	l wet	land	s
	Mot	land	the	00

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 >> Mt Permanent rivers/ streams/ creeks		2		Representative
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		4		Rare
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		1		Representative
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		1		Representative
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		1		Representative

#### Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
1: Aquaculture ponds	Ribnjaci Podunavlje	3		Representative

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Riparian mixed forests of Quercus robur, Ulmus laevis and Ulmus minor, Fraxinus excelsior or Fraxinus angustifolia, along the great rivers (Ulmenion minoris)	2492

Position in range / endemism / other

protected in Croatia

# 4.3 - Biological components

#### 4.3.1 - Plant species

Other noteworthy plant species					
Scientific name	Common name				
Cephalanthera damasonium	orchid				

Cepharannera damasonium	
Fraxinus angustifolia	
Quercus robur	
Umus laevis	
Umus minor	

#### Invasive alien plant species

Scientific name	Common name	Impacts	Changes at RIS update
Acer negundo		Actually (minor impacts)	No change
Ambrosia artemisiifolia		Actually (minor impacts)	No change
Amorpha fruticosa	Indigobush Amorpha;Bastard Indigo;False Indigo	Actually (minor impacts)	No change
Asclepias syriaca		Actually (minor impacts)	No change
Populus canadensis		Actually (minor impacts)	No change
Robinia pseudoacacia	False Acacia;Black Locust	Actually (minor impacts)	No change
Solidago gigantea		Actually (minor impacts)	No change

#### Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/MAMMALIA	Canis aureus	Golden Jackal				
CHORDATA/MAMMALIA	Castor fiber	Eurasian Beaver				
ARTHROPODAINSECTA	Gomphus pulchellus					
ARTHROPODAINSECTA	Papilio machaon	Common Yellow Swallowtail;Swallowtail;Old World Swallowtail;Artemisia Swallowtail				legally protected by Croatian legislation

# 4.4 - Physical components

#### 4.4.1 - Climate

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

The area has a typical continental climate with wide annual fluctuations of air temperatures and precipitation distribution, as well as four distinctive seasons. The average annual air temperature is 10,5°C (with max in July – up to 39 °C, and min in January – up to -29 °C) with increasing trend of 0,15 °C/100 years. Average annual precipitation is 687 mm with decreasing trend of 62 mm/100 years; minimum during wintertime; primary peak during May-June, secondary during October-November. North and northwest winds are dominant (source: Elektroprojekt 2003).

## 4.4.2 - Geomorphic setting

a) Mnimum elevation above sea level (in metres) 76
a) Maximum elevation above sea level (in metres) 86
Entire river basin
Upper part of river basin
Middle 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.

It is situated in the central section of the Danube river course, at the confluence with one of its five major tributaries – Drava. With a length of 2,780 km (without its source rivers), the Danube is – after the Volga – the second longest river in Europe. Its catchment comprises 817,000 km2 and covers the difference in altitude of 678 meters. The "upper" Danube streches from source at Donaueschlingen (confluence of Brigach and Breg rivers) up to the Raba near Gyor (Hungary), the "middle" Danube includes the Pannonian plain up to the Iron Gate (Carpathian mountains), and the "lower" Danube ends at the Danube delta. It transports an average of 6,500 m3 of water per second into the Black Sea.

## 4.4.3 - Soil

#### Mineral 🗵

(Update) Changes at RIS update No change Increase O Decrease O Unknown O

No available information

Are soil types subject to change as a result of changing hydrological Yes O No (a) conditions (e.g., increased salinity or acidification)?

# Please provide further information on the soil (optional)

In the area fluviosoils, gley, hypogley, amphigley, gittya and hydromeliorated soil types prevail (source: Elektroprojekt 2003).

# 4.4.4 - Water regime

r reseries.	Changes at RIS update
Usually permanent water present	
Usuallyseasonal, ephemeral or intermittent water present	

Presence?	Predominant water source	Changes at RIS update
Water inputs from surface water		No change

#### Water destination

#### RIS for Site no. 583, Nature Park Kopacki rit, Croatia

	Presence?	Changes at RIS update	
To downstream catchment		No change	
Feeds groundwater		No change	
	Stability of water regime		
	Presence?	Changes at RIS update	
	Water levels fluctuating	Na ahanna	

(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 Drava rises in the Alps and flows through Italy, Austria, Slovenia, Hungary and Croatia at the time of snow melting; its flood waters reach the Danube before the Danube itself floods. The Drava waters, together with the Aljmas hill, act as a block when the Danube in turn floods (usually from March to May), with the result that the Danube overflows its banks towards the north and west of the confluence, flooding for a month the whole area. Water starts to enter the floodplain when the Danube's water level at Apatin (Serbia) gauging station reaches 300 cm. During the year the water level fluctuates 5-7 m in average, while the maximum-recorded fluctuations are 9,40 m (Source: Croatian waters). Measured water levels and flows show decreasing trends, for intermediate levels around 1 cm/year and around 5 m3/sec, respectively.

#### 4.4.5 - Sediment regime

Significant accretion or deposition of sediments occurs on the site  $\blacksquare$ 

(Update) Changes at RIS update No change 
 Increase 
 O Decrease 
 O Unknown 
 O

Sediment regime unknown

Please provide further information on sediment (optional)

The main hydrological values of the Kopacki rit wetlands are related to flow regulation and flood control, bio-chemical/physical purification of waters, groundwater recharge, as well as sedimentation and nutrient retention capacity.

4.4.6 - Water pH

4.4.7 - Water salinity

Fresh (<0.5 g/l)

Unknown 🗵

(Update) Changes at RIS update No change Increase O Decrease O Unknown O

Unknown 🗖

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

Unknown 🛛

#### Please provide further information on dissolved or suspended nutrients (optional):

Water quality within the recent floodplain depends on the Danube river's water quality (in average II category) while in the drainage system in the former floodplain areas water quality is affected with point and non-point sources of pollution (animal farms, settlements, run-off pollution from arable land) and decrease to III to IV category (source: Elektroprojekt 2003).

#### 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 O

site itself:

Surrounding area has greater urbanisation or development 
Surrounding area has higher human population density

Surrounding area has more intensive agricultural use 🗹

Surrounding area has significantly different land cover or habitat types  $\Box$ 

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

Intensive hunting; intensive forestry, incl. plantation of alochtonous tree species in the past times; intensive husbandry (pig, cattle and poultry farms); intensive and extensive agriculutre; water management and meliorations for agricultural purposes; significant growth of tourist activities.

## 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	
Fresh water Wetland non-food products		Drinking water for humans and/or livestock	Medium	
		Timber	Medium	

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
Erosion protection	Soil, sediment and nutrient retention	Medium
Pollution control and detoxification	Water purification/waste treatment or dilution	Medium
Hazard reduction	Flood control, flood storage	Medium

#### Cultural Services

# RIS for Site no. 583, Nature Park Kopacki rit, Croatia

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Nature observation and nature-based tourism	Medium
Recreation and tourism	Picnics, outings, touring	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
Scientific and educational	Major scientific study site	Medium
Scientific and educational	Long-term monitoring site	Medium

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

The main hydrological values of the Kopacki rit wetlands are related to flow regulation and flood control, bio-chemical/physical purification of waters, ground water recharge, as well as sedimentation and nutrient retention capacity. Concerning production functions the Kopacki rit wetlands serve for timber, game and fish production, drinking water supply (ground water) and supply of water for irrigation and aquaculture (surface waters). Main carrying functions are related to shipping and navigation, as well as leisure and tourist activities.

## 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 welland wise use, demonstrating the application of traditional knowledge and methods of management and D use that maintain the ecological character of the welland

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

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 character of the wetland

<no data available>

# 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			
National/Federal government	V	V			

# Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	×	×

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

# within the Ramsar site:

98% state owned land used by few major companies – Croatian forests (Hrvatske šume) – 70% of the area; Crotian waters (Hrvatske vode) – 6% of the area; agricultural combine Belje (recently privatised) – 6% of the area; less than 2% private, 14ha in the core area of the Park is owned by Public Enterprise "Kopački rit Nature Park" who is managing the area.

# in the surrounding area:

Mixture of state owned and private land; privatization of agricultural land, including abandoned fields covered with reed, is recently increasing.

# 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:	Public institution Nature Park Kopački rit
Provide the name and title of the person or people with responsibility for the wetland:	Director: Damir Opačić, dipl.ing
Postal address:	Mali Sakadaš 1, 31327 Kopačevo, Bilje- Croatia Tel : +385 31 285 370 Web : www.pp-kopacki-rit.hr
E-mail address:	uprava@pp-kopacki-rit.hr

# 5.2 - Ecological character threats and responses (Management)

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

Water regulation						
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Drainage	Medium impact	Medium impact		No change	×	No change

Biological resource use						
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Logging and wood harvesting	Medium impact	Medium impact	×	No change	×.	No change
Fishing and harvesting aquatic resources	Medium impact	Medium impact	×	No change		No change
Hunting and collecting terrestrial animals	Medium impact	Medium impact	V	No change	V	No change

# Natural system modifications

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	8	No change

# Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Problematic native species	Medium impact	Medium impact	×	No change		No change
Invasive non-native/ alien species	Medium impact	High impact	×	increase	×	increase

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Industrial and military effluents	Medium impact	Medium impact	×	No change		No change
Agricultural and forestry effluents	Medium impact	Medium impact	×	No change	V	No change

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

see additional material for further information.

## 5.2.2 - Legal conservation status

#### Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000	Kopački rit	http://natura2000.dzzp.hr/report publish/reportproxy.aspx?paramSI TECODE=HR2000394	whole
EU Natura 2000	Podunavlje i donje Podravlje	http://natura2000.dzzp.hr/report publish/reportproxy.aspx?paramSI TECODE=HR1000016	whole
Other international designation	IBAPodunavlje and Lower Podravlje	http://datazone.birdlife.org/sit e/factsheet/24014	whole
Other international designation	TBR Mura-Drava-Danube	http://www.unesco.org/new/en/nat ural- sciences/environment/ecolog ical- sciences/biosphere-reserves /europe- north-america/croatiahun gary/mura- drava-danube/	whole

#### National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Nature Park	Kopacki rit		whole

## 5.2.3 - IUCN protected areas categories (2008)

la Strict Nature Reserve

- Ib Wilderness Area: protected area managed mainly for wilderness protection
  - II 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
- VProtected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
- VI 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	Proposed	

#### Other:

The site is a part of NATURA 2000 ecological network and a part of TBR Mura-Drava-Danube designated by UNESCO MAB programme. A management plan is in effect in period 2011 - 2020.

# 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 ()

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:

Financed by the World Bank, the new Visitor centre was built close to the border and entrance to Nature Park, near Kopacevo village in 2004. It includes education facility where information booklets could be obtained and educational activities performed. The Management Office established a education trail near the Visitor centre in 2005 and new similar trails are planned for 2006. Over 10,000 school children and other students are using this facility every year and taking part in the environmental education organised and performed by the Management Office. The Management Office started with the editing books that cover animal groups in the area (birds and amphibians are published, reptiles are in preparation), as well as developed its web page (www.kopacki-rit.com) that received World award for educational web page in 2005.

# 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Yes, there is a plan

#### Further information

Since the 1999 the Park's Management office is the leading force in the developing of the area, as well as promotion of sustainable use of natural resources. Funded through the Dutch PIN-MATRA programme, a wetland restoration project has been carried out during 2003-2005 period in the co-operation with The Hungarian National Park "Danube-Drava" and European Centre for Nature Conservation (ECNC) from The Netherlands/Hungary. The purpose of the project was the removal of man-made barriers on the natural channels in the Nature Park in order to restore the natural water flow and support flooding processes. In order to prevent vegetation succession and thus degradation of Podunavlje fishponds after the cessation of fish production, the Management office organised the re-filling the ponds with the water. Funded by the World Bank/GEF/and through national sources extensive restorations of main infrastructure took place in the area. The new Visitor centre has been built at the entrance of the Park, as well as restoration of Bio-ecological station has been done at Tikves castle complex. During 2006 a Space planning document has been adopted by Croatian parliament (Official gazette no. 24/2006) that would certainly aid the further protection and maintaining of the area.

#### 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented
Animal species (please specify)	Implemented

Financed by the World Bank, the Bio-ecological station has been installed in the Tikves complex. Hosting laboratories, conference rooms, a library and accommodation capacity, the Station is dedicated to facilitate research and monitoring of the area.

The Management Office is carrying our limited monitoring, including populations of flagship species as White-tailed Eagle Haliaeetus albicilla, Black and White Storks Ciconia nigra and C. ciconia, colonial water birds etc. The Management Office also carries out regular mid-winter waterfowl counts. Several international colour-ringing schemes (White-tailed Eagles, Black and White Storks and Eurasian Spoonbills Platalea leucorodia) are carried out in the area.

Numbers of other research projects (covering hydrobiology, zoological surveys etc.) funded by the Ministry of Science are carried out in the area by the scientists from Osijek and Zagreb universities.

# 6 - Additional material

# 6.1 - Additional reports and documents

# 6.1.1 - Bibliographical references

1. Mihaljević, M. (Ed.) 1999. Kopački rit - pregled istraživanja i bibliografija /Kopacki rit - review of research and bibliography/; Zavod za znanstveni rad Osijek, Hrvatska akademija znanosti i umjetnosti, Zagreb-Osijek.

2. Prostorni plan Parka prirode Kopački rit /Nature Park Kopački rit Space Plan/ (2006) Ministry of Environmental Protection and Space Planning, Zagreb.

3. Prijedlog Plana upravljanja Parkom prirode Kopački rit / Nature Park Kopački rit Management Plan – draft/ (2003) Elektroprojekt, Zagreb. 4. www.kopacki-rit.com - contains full set of scientific references on the site

5. Mikuska, J. T. Mikuska & M. Romulić (2002) Vodič kroz biološku raznolikost Kopačkog rita. Knjiga 1 – Ptice /Guide to the Kopacki rit biodiversity. Book 1 – Birds/; Matica Hrvatska Osijek.

6. Mikuska, J. T. Mikuska, Mikuska A. & M. Romulić (2004) Vodič kroz biološku raznolikost Kopačkog rita. Knjiga 2 – Vodozemci /Guide to the Kopacki rit biodiversity. Book 2 -

Amphibia/; Filozofski fakultet, Osijek.

## 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 <no file available>

iv. relevant Article 3.2 reports

v. site management plan

vi. other published literature

<1 file(s) uploaded>

# 6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

16-11-2013)





Kopački rit ( PP Kopački rit 12-03-2008

Kopački rit ( PP Kopački rit

27-03-2017 )



Kopački rit ( PP Kopački rit. 16-06-2008

Kopački rit ( PP Kopački rit,

07-02-2017)



Kopački rit (PP Kopački rit, 23-01-2017)

# 6.1.4 - Designation letter and related data

**Designation** letter

<1 file(s) uploaded>

Date of Designation 1992-11-02

22-09-2014)