

Ramsar Information Sheet

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CroatiaVransko Lake



Designation date 2 February 2013
Site number 2109
Coordinates 43°53'45"N 15°34'49"E
Area 5 748,00 ha

https://rsis.ramsar.org/ris/2109 Created by RSIS V.1.6 on - 18 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

Vransko Lake is the largest natural lake in Croatia, situated in a shallow karst bed and separated from the Adriatic Sea by a narrow karst ridge. Significant seasonal variations in water level and changes in salinity due to intrusion of sea water through permeable karst, create conditions for the development of very specific habitats. The shallowest northwest part of the Ramsar site area is characterized by reedbeds, floodplain and seasonally flooded arable land; the hills lining the eastern coast are covered by typical Mediterranean macchia and garrigue, while the lower western coast gives a more rocky appearance. Vransko Lake marsh is a remaining of what used to be a much larger Vrana swamp, drained by melioration canals in the 18th century. Still, it represents one of only two significant wetlands in the Mediterranean part of Croatia. This is a nesting, wintering and resting area for many threatened waterbirds.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

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

From year 2008

To year 2018

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

Vransko Lake

Unofficial name (optional) Vransko jezero

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

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

<4 file(s) uploaded>

Former maps 0

Boundaries description

The boundary is identical to existing protected area (nature park).

b) What is the nearest town or population centre?	Biograd na Moru

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 \odot
- 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): 5748

Area, in hectares (ha) as calculated from GIS boundaries 5764.71

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Mediterranean

Other biogeographic regionalisation scheme

EU biogeographic regionalization, in accordance with the Habitat Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora). Reference: European Comission (2011): Map of EU biogeographic regions EU 27+1, Doc.Hab. 11-05/04

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

Other reason

Vransko Jezero Lake is a permanent water body, brackish natural lake, the only one in the coastal part of Croatia, and one of only two larger wetlands in this region (the other being the Neretva Delta). The karst coastline that dominates in Croatia is very poor in wetland habitats, and Vransko Jezero Lake represents the largest natural lake in Croatia, enriched by permanent and seasonal brackish marsh areas, including seasonally flooded grazed meadows and pastures. Compared to the Neretva Delta, open-water species are far more numerous at Vransko Jezero Lake.

- ☑ Criterion 2 : Rare species and threatened ecological communities
- ☑ Criterion 3 : Biological diversity

Vransko Lake is a "hotspot" for biological diversity in the area, with 261 recorded bird species. It hosts the last heron colony in the Mediterranean region of Croatia and is the only stable nesting site in Croatia for the population of the Pygmy Cormorant (Microcarbo pygmeus). Several endemic species of reptiles and amphibians are found: Dalmatian Algyroides (Algyroides nigropunctatus) and Balkan Whip Snake (Hierophis gemonensis) are endemics of the Eastern Adriatic coast, while the Sharp Snouted Lizard (Dalmatolacerta oxycephala) and the subspecies of the Yellow-bellied Toad (Bombina variegata kolombatovici) are Dalmatian endemics, all contributing to the biological diversity of the Mediterranean biogeographic region. The Adriatic endemic fish Knipowitschia panizzae is listed in the Anex II of the Habitat Directive, while the European eel (Anguilla anguilla) is protected by the Barcelona convention (Annex III of the SPAMI Protocol - species whose exploitation is regulated), by the CITES Convention and the EU wildlife trade legislation (ban on import in EU and export from EU). Vransko Lake wetland area also supports habitat types that are rare in the Mediterranean and recognized as NATURA2000 habitats. The most significant are: Hard oligo-mesotrophic waters with benthic vegetation of Chara spp., Mediterranean temporary ponds. Eastern sub-mediterranean dry grasslands (Scorzoneratalia villosae). Mediterranean tall humid grasslands of the Molinio-Holoschoenion and Sub-Mediterranean grasslands of the Molinio-Hordeion secalini (the latter was included in the NATURA2000 habitats list in 2011 according to the proposal of Croatia).

Justification

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

☑ Criterion 5: >20,000 waterbirds

Overall waterbird numbers 24700

Start year 2016

Source of data: monitoring of wintering population of waterbirds

☑ Criterion 6 : >1% waterbird population

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
Hydrocotyle vulgaris	Marsh Pennywort	 ✓			LC		HR Red List - CR	
Neotinea tridentata	Three-toothed Orchid	2					HR Red List - VU	Dry grasslands and garrigue support growth of the endangered Three-toothed Orchid
Orchis quadripunctata	Four-spotted Orchid				LC		HR Red List - VU	
Ranunculus ophioglossifolius	Badgeworth Buttercup	 ✓			LC		HR Red List - EN	
Scilla litardierei	Ametist Meadow Squill	2					Dinaric endemic species, listed in the Anex II and IV of the Habitat Directive.	
Trifolium resupinatum	Shaftal Clover; Reversed Clover; Persian Clover	V					HR Red List - VU	

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

3.3 - Anima	ıı species wr	nose presend	ce relates	s to the in	terna	tionai impor	cance or	the	site			
Phylum	Scientific name	Common name	Species qualifies under criterion	Species contributes under criterion	Pop. Size	Period of pop. Est.			CITES Appendix	CMS Appendix I	Other Status	Justification
Birds												
CHORDATA/ AVES	Acrocephalus melanopogon	Moustached Warbler	220C					LC			HR_RED LIST 2010: CR Breeding population, Annex I Birds Directive	Criterion 4: Wintering
CHORDATA/ AVES	Acrocephalus paludicola	Aquatic Warbler	2 000]			W		1	HR_RED LIST 2010: CR Passing population, Annex I Birds Directive	
CHORDATA/ AVES	Actitis hypoleucos	Common Sandpiper	2 000]			LC			HR_RED LIST 2010: VU Breeding population, EU27_RED LIST 2015: NT	
CHORDATA/ AVES	Alcedo atthis	Common Kingfisher	2 000					LC			HR_RED LIST 2010: NT Breeding population EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: VU Annex I Birds Directive	
CHORDATA/ AVES	Alectoris graeca	Rock Partridge	2 000					NT			HR_RED LIST 2010: NT Breeding population, EUROPE_RED LIST 2015: NT EU27_RED LIST 2015: VU Annex I Birds Directive	
CHORDATA/ AVES	Anas acuta	Northern Pintail	2 200					LC			HR_RED LIST 2010: RE Breeding population, EU27_RED LIST 2015: VU	Criterion 4: ocassionaly wintering
CHORDATA/ AVES	Anas penelope	Eurasian Wigeon	220C					LC			EU27_RED LIST 2015: VU	Criterion 4: wintering
CHORDATA/ AVES	Anas querquedula	Garganey	2 000]			LC			HR_RED LIST 2010: NT Breeding population, EU27_RED LIST 2015: VU	
CHORDATA/ AVES	Anas strepera	Gadwall						LC			HR_RED LIST 2010: EN Breeding population	wintering
CHORDATA/ AVES	Anthus campestris	Tawny Pipit	2 000					LC			Annex I Birds Directive	
CHORDATA/ AVES	Anthus pratensis	Meadow Pipit	2 000					NT			EUROPE_RED LIST 2015: NT EU27_RED LIST 2015: VU	
CHORDATA/ AVES	Aquila chrysaetos	Golden Eagle	2 000					LC			HR_RED LIST 2010: CR Breeding population, Annex I Birds Directive	

Phylum	Scientific name	Common name	q	unc	fies ler rion	cor	pecies stribute under iterior	Pop Size	Period of pop. I	% occurre		CITES Appendix I	CMS Appendix I	Other Status Justification
CHORDATA/ AVES	Aquila clanga	Greater Spotted Eagle	V								W		2	HR_RED LIST 2010: CR Wintering population, EUROPE_RED LIST 2015: EN EU27_RED LIST 2015: CR Annex I Birds Directive
CHORDATA/ AVES	Ardea alba	Great Egret	V	Ø.							LC			HR_RED LIST 2010: EN Breeding population, Annex I Birds Directive Criterion 4: occasional breeding
CHORDATA/ AVES	Ardea purpurea	Purple Heron	V	/							LC			HR_RED LIST 2010: EN Breeding population, Annex I Birds Directive Vransko lake is the only stable nesting site in Mediterranean Croatia for the population of the Purple Heron
CHORDATA/ AVES	Ardeola ralloides	Squacco Heron	V								LC			HR_RED LIST 2010: EN Breeding population Annex I Birds Directive
CHORDATA/ AVES	Arenaria interpres	Ruddy Turnstone	1								LC			EU27_RED LIST 2015: EN
CHORDATA/ AVES	Asio flammeus	Short-eared Owl	V								LC			Annex I Birds Directive
CHORDATA/ AVES	Aythya ferina	Common Pocharo	d 📝	V							W			EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: VU Criterion 4: wintering
CHORDATA/ AVES	Aythya marila	Greater Scaup	1	1							LC			EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: VU Criterion 4: wintering
CHORDATA/ AVES	Aythya nyroca	Ferruginous Duck	(/	V)							NT		V	HR_RED LIST 2010: NT Breeding population Annex I Birds Directive Criterion 4: wintering
CHORDATA/ AVES	Botaurus stellaris	Eurasian Bittern	V	Ø.							LC			HR_RED LIST 2010: EN Breeding population Annex I Birds Directive Criterion 4: Ocassionally breeding, wintering
CHORDATA/ AVES	Bubo bubo	Eurasian Eagle- Owl	V								LC			HR_RED LIST 2010: NT Breeding population Annex I Birds Directive
CHORDATA/ AVES	Burhinus oedicnemus	Eurasian Stone- curlew	V								LC			HR_RED LIST 2010: EN Breeding population Annex I Birds Directive
CHORDATA/ AVES	Calandrella brachydactyla	Greater Short-toed Lark	d 📝								LC			HR_RED LIST 2010: VU Breeding population Annex I Birds Directive
CHORDATA/ AVES	Calidris alpina	Dunlin	V								LC			HR_RED LIST 2010: EN Wintering population
CHORDATA/ AVES	Calidris ferruginea	Curlew Sandpiper	r 📝								NT			EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: VU
CHORDATA/ AVES	Charadrius alexandrinus	Kentish Plover	V								LC			HR_RED LIST 2010: CR Breeding population Annex I Birds Directive
CHORDATA/ AVES	Chlidonias hybrida	Whiskered Tern	V								LC			HR_RED LIST 2010: NT Breeding population Annex I Birds Directive
CHORDATA/ AVES	Circaetus gallicus	Short-toed Snake Eagle	V								LC			HR_RED LIST 2010: EN breeding population Annex I Birds Directive
CHORDATA/ AVES	Circus aeruginosus	Western Marsh Harrier	V	V							LC			HR_RED LIST 2010: EN breeding population Annex I Birds Directive Criterion 4: Ocassionally breeding, wintering
CHORDATA/ AVES	Circus cyaneus	Northern Harrier	V	V							LC			EUROPE_RED LIST 2015: NT Annex I Birds Directive Criterion 4: Wintering

Phylum	Scientific name	Common name	qı Cı	pecie ualific unde riteric 4 6	es r on	cont ur crit	ecies ributes nder erion	Size	Period of pop. Est.	% occurrence 1)		CITES Appendix I	CMS Appendix I	x Other Status Justification
CHORDATA/ AVES	Circus pygargus	Montagu's Harrier	. ☑(LC			HR_RED LIST 2010: EN breeding population Annex I Birds Directive
CHORDATA/ AVES	Columba oenas	Stock Dove	1	V							LC			HR_RED LIST 2010: VU Breeding population Criterion 4: Ocassionally wintering
CHORDATA/ AVES	Coracias garrulus	European Roller	2 (LC		✓	HR_RED LIST 2010: CR Breeding population Annex I Birds Directive
CHORDATA/ AVES	Crex crex	Corn Crake	2 (LC			HR_RED LIST 2010: W Breeding population Annex I Birds Directive
CHORDATA/ AVES	Egretta garzetta	Little Egret	2	2							LC			HR_RED LIST 2010: W Breeding population Annex I Birds Directive Criterion 4:Ocassionaly breeding; wintering
CHORDATA/ AVES	Falco biarmicus	Lanner Falcon	2 (LC			HR_RED LIST 2010: CR EUROPE_RED LIST 2015: EN EU27_RED LIST 2015: VU Annex I Birds Directive
CHORDATA/ AVES	Falco columbarius	Merlin	1								LC			HR_RED LIST 2010: W Wintering population Annex I Birds Directive
CHORDATA/ AVES	Falco naumanni	Lesser Kestrel	V								LC		 ✓	HR_RED LIST 2010: CR breeding population Annex I Birds Directive
CHORDATA/ AVES	Falco peregrinus	Peregrine Falcon	Ø(LC	V		HR_RED LIST 2010: W breeding population Annex I Birds Directive
CHORDATA/ AVES	Falco vespertinus	Red-footed Falcor	n 📝 (NT		 ✓	EUROPE_RED LIST 2015: NT EU27_RED LIST 2015: VU Annex I Birds Directive
CHORDATA/ AVES	Fringilla montifringilla	Brambling	1								LC			EU27_RED LIST 2015: VU
CHORDATA/ AVES	Fulica atra	Eurasian Coot	V	V	90			67500		2.5	LC			Criterion 2: IUCN Red list Category (Europe)_2015: NT Criterio 4: The lake surface never freezes and with its plentitude of food and mild climate represents a winter refuge for this species. Criterion 5: wintering numbers between 40,000 and 195,000 birds. Criterion 6: Biogeographic region: Mediterranean-Black Sea
CHORDATA/ AVES	Gallinago gallinago	Common Snipe	V								LC			HR_RED LIST 2010: CR Breeding population
CHORDATA/ AVES	Gallinago media	Great Snipe	V								NT			EUROPE_RED LIST 2015: NT EU27_RED LIST 2015: VU Annex I Birds Directive
CHORDATA/ AVES	Glareola nordmanni	Black-winged Pratincole	V								NT			EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: CR
CHORDATA/ AVES	Glareola pratincola	Collared Pratincole	V								LC			Annex I Birds Directive
CHORDATA/ AVES	Grus grus	Common Crane	V								LC			Annex I Birds Directive
CHORDATA/ AVES	Haematopus ostralegus	Eurasian Oystercatcher	1								NT			HR_RED LIST 2010: VU Mgrating population EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: VU
CHORDATA/ AVES	Himantopus himantopus	Black-winged Stilt	₩(LC			HR_RED LIST 2010: VU Breeding population Annex I Birds Directive

Phylum	Scientific name	Common name	qua ur crit	ecies alifies nder erion	С	Speciontrik und criter	utes er ion	Pop. Size Period of pop. Est	% occurrence		CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Hydroprogne caspia	Caspian Tern	V							LC			HR_RED LIST 2010: EN Mgrating population EU27_RED LIST 2015: NT Annex I Birds Directive	
CHORDATA/ AVES	lxobrychus minutus	Little Bittern	J							LC			Annex I Birds Directive	100-150 pairs of the Little Bittern (Ixobrychus minutus) breed in reed beds.
CHORDATA/ AVES	Lanius collurio	Red-backed Shrike	V							LC			Annex I Birds Directive	
CHORDATA/ AVES	Lanius excubitor	Great Grey Shrike; Northern Shrike	V							LC			EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: VU	
CHORDATA/ AVES	Lanius minor	Lesser Grey Shrike								LC			Annex I Birds Directive	
CHORDATA/ AVES	Limosa limosa	Black-tailed Godwit	V							NT			HR_RED LIST 2010: NT migrating population EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: EN	
CHORDATA/ AVES	Locustella fluviatilis	River Warbler	V							LC			EU27_RED LIST 2015: VU	
CHORDATA/ AVES	Luscinia svecica	Bluethroat	V							LC			HR_RED LIST 2010: EN Breeding population Annex I Birds Directive	
CHORDATA/ AVES	Lymnocryptes minimus	Jack Snipe								LC			HR_RED LIST 2010: VU	
CHORDATA/ AVES	Melanitta fusca	White-winged Scoter; Velvet Scoter	2							VU			EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: VU	
CHORDATA/ AVES	Melanocorypha calandra	Calandra Lark	V							LC			HR_RED LIST 2010: VU Breeding population EU27_RED LIST 2015: VU Annex I Birds Directive	
CHORDATA/ AVES	Mergus merganser	Common Merganser	2							LC			HR_RED LIST 2010: CR Breeding population	
CHORDATA/ AVES	Mergus serrator	Red-breasted Merganser	V							LC			EUROPE_RED LIST 2015: NT EU27_RED LIST 2015: VU	
CHORDATA/ AVES	Microcarbo pygmeus	Pygmy Cormorant	V V							LC			HR_RED LIST 2010: CR breeding population Annex I Birds Directive	Criterion 3: the only stable nesting site in Croatia for the population of the Pygmy Cormorant Criterion 4: This reedbed is the last breeding site for the Pygmy Cormorant
CHORDATA/ AVES	Milvus migrans	Black Kite	V							LC			HR_RED LIST 2010: EN breeding population Annex I Birds Directive	
CHORDATA/ AVES	Milvus milvus	Red Kite	V							NT			HR_RED LIST 2010: RE HR RED LIST: breeding population Annex I Birds Directive EUROPE_RED LIST 2015: NT EU27_RED LIST 2015: NT	
CHORDATA/ AVES	Netta rufina	Red-crested Pochard	2							LC			HR_RED LIST 2010: VU Breeding population	
CHORDATA/ AVES	Numenius arquata	Eurasian Curlew	V							NT			HR_RED LIST 2010: VU, EN migrating population vulnerable, wintering population endangered; EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: VU	
CHORDATA/ AVES	Numenius phaeopus	Whimbrel	2							LC			HR_RED LIST 2010: W migrating population	
CHORDATA/ AVES	Nycticorax nycticorax	Black-crowned Night-Heron; Black-crowned Night Heron	V							LC			HR_RED LIST 2010: NT Breeding population Annex I Birds Directive	

Phylum	Scientific name	Common name		qual un crite	erion	co	Specie ntribu under riterio	tes Si	% occurrence 1)		CITES Appendix . I	CMS Appendix I	Other Status Justification
CHORDATA/ AVES	Pandion haliaetus	Western Osprey, Osprey	V							LC			HR_RED LIST 2010: RE & NT breeding & migrating population Annex I Birds Directive
CHORDATA/ AVES	Panurus biarmicus	Bearded Reedling	g 📝	1						LC			HR_RED LIST 2010: EN Breeding population Criterion 4: Wintering
CHORDATA/ AVES	Pelecanus crispus	Dalmatian Pelical	n 📝							NT	/	/	HR_RED LIST 2010: RE Criterion 2: breeding population regionally extinct Annex I Birds Directive
CHORDATA/ AVES	Philomachus pugnax	Ruff	V							LC			EU27_RED LIST 2015: EN Annex I Birds Directive
CHORDATA/ AVES	Platalea leucorodia	Eurasian Spoonbill	V							LC			HR_RED LIST 2010: EN Breeding population Annex I Birds Directive
CHORDATA/ AVES	Plegadis falcinellus	Glossylbis	V							LC			HR_RED LIST 2010: EN Mgrating population Annex I Birds Directive
CHORDATA/ AVES	Pluvialis apricaria	European Golden Plover; European Golden-Plover	n ✓							LC			HR_RED LIST 2010: Wintering population Annex I Birds Directive
CHORDATA/ AVES	Pluvialis squatarola	Grey Plover; Black bellied Plover	<- 📝							LC			HR_RED LIST 2010: EN & NT Wintering population EN, migrating population NT
CHORDATA/ AVES	Porzana parva	Little Crake	V	V						LC			HR_RED LIST 2010: EN Breeding population Annex I Birds Directive Criterion 4: breeding population
CHORDATA/ AVES	Porzana porzana	Spotted Crake	V	V						LC			HR_RED LIST 2010: EN Breeding population Annex I Birds Directive Criterion 4: breeding population
CHORDATA/ AVES	Porzana pusilla	Baillon's Crake	V	1						LC			HR_RED LIST 2010: CR breeding population, EU27_RED LIST 2015: NT Annex I Birds Directive Criterion 4: The site supports this species in their sensitive nesting period
CHORDATA/ AVES	Recurvirostra avosetta	Pied Avocet	V							LC			Annex I Birds Directive
CHORDATA/ AVES	Riparia riparia	Sand Martin	V							LC			HR_RED LIST 2010: VU Breeding population
CHORDATA/ AVES	Scolopax rusticola	Eurasian Woodcock	V							LC			HR_RED LIST 2010: CR Breeding population
CHORDATA/ AVES	Sterna hirundo	Common Tern	V										HR_RED LIST 2010: NT Breeding population Annex I Birds Directive
CHORDATA/ AVES	Sternula albifrons	Little Tern	V							LC			HR_RED LIST 2010: EN Breeding population Annex I Birds Directive
CHORDATA/ AVES	Streptopelia turtur	European Turtle Dove; European Turtle-Dove	V							W			EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: NT
CHORDATA/ AVES	Sylvia nisoria	Barred Warbler	V							LC			Annex I Birds Directive
CHORDATA/ AVES	Thalasseus sandvicensis	Sandwich Tern	V							LC			HR_RED LIST 2010: NT Wintering population Annex I Birds Directive
CHORDATA/ AVES	Tringa glareola	Wood Sandpiper	V							LC			Annex I Birds Directive

Phylum	Scientific name	Common name	qua ui crit	ecies alifies nder terion	Speci contribution unde criteri	r on	op. ze Period of pop. Est.	% occurrence 1)		CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Tringa stagnatilis	Marsh Sandpiper	2						LC		HR_RED LIST 2010: NT Mgrating population EU27_RED LIST 2015: EN	
CHORDATA/ AVES	Tringa totanus	Common Redshank	2						LC		HR_RED LIST 2010: CR Breeding population EU27_RED LIST 2015: VU	
CHORDATA/ AVES	Turdus iliacus	Redwing	/						NT		EUROPE_RED LIST 2015: NT EU27_RED LIST 2015: VU	
CHORDATA/ AVES	Turdus pilaris	Fieldfare	2						LC		EU27_RED LIST 2015: VU	
CHORDATA/ AVES	Vanellus vanellus	Northern Lapwing	V						NT		EUROPE_RED LIST 2015: VU EU27_RED LIST 2015: VU	
Fish, Mollusc a	and Crustacea											
CHORDATA/ ACTINOPTERYGII	Anguilla anguilla	Sing eel	V	90	2 🗆 G	72			CR		Barcelona convention (Annex III of the SPAM Protocol, EU wildlife trade legislation (ban on import in EU and export from EU), CITES Convention ZZP HR: strictly protected IUCN status EUROPE: CR	Criterion 2: strictly protected by Croatian law only in Vransko lake and Krka Criterion 3: eels inhabit Vransko lake, Krka river and Neretva in Croatia. Criterion 7: freshwater ecosystems are as important as marine ecosystems for life-history stages of eels. Criterion 4 i 8: eels feed in the brackish water of the lake until they reach reproductive stage.
MOLLUSCA/ GASTROPODA	Anisus vorticulus		V								EUROPE_RED LIST: NT Annex 2 & 4 Habitat Directive	
CHORDATA/ ACTINOPTERYGII	Knipowitschia panizzae	Adriatic dwarf goby			900				LC		Annex II of the Habitat Directive ZZP HR: strictly protected	Knipowitschia panizzae is an endemic fish species of the Adriatic Basin.
CHORDATA/ ACTINOPTERYGII	Salaria fluviatilis	Freshwater blenny, Freshwater blenny							LC		HR_RED LIST: W	Endemic fish species of the Mediterranean Basin.
Others												
CHORDATA/ REPTILIA	Algyroides nigropunctatus	Dalmatian Algyroides	/						LC		Annex 4 of Habitat Directive	Criterion 3: endemics of the Eastern Adriatic coast Criterion 2: Annex 4 HD
CHORDATA/ REPTILIA	Archaeolacerta bedriagae bedriagae	Sharp Snouted Lizard			900							Criterion 3: Dalmatian endemics, contributing to the biological diversity of the Mediterranean biogeographic region.
CHORDATA/ AMPHIBIA	Bombina variegata		V						LC		Annex 2 & 4 of Habitat Directive	
ARTHROPODA/ INSECTA	Ceriagrion tenellum		V						LC		HR_RED LIST: VU	
CHORDATA/ REPTILIA	Elaphe quatuorlineata		V C						NT		HR Red list 2015: NT; European Red list: NT, Annex 2 & 4 of Habitat Directive	
CHORDATA/ REPTILIA	Emys orbicularis	European Pond Turtle	V						NT		HR Red list: NT; European Red list: NT, Annex 2 & 4 of Habitat Directive	
ARTHROPODA/ INSECTA	Hemianax ephippiger		V						LC		HR_RED LIST: VU	
CHORDATA/ REPTILIA	Hierophis gemonensis	Balkan Whip Snake			000				LC			Criterion 3: endemics of the Eastern Adriatic coast
CHORDATA/ AMPHIBIA	Hyla arborea		V						LC		Annex 4 of Habitat Directive	
CHORDATA/ MAMMALIA	Hypsugo savii	Savi's Pipistrelle	2						LC		Annex4 of Habitat Directive	

Phylum	Scientific name	Common name	q	und rite	fies ler rion	cor	pecie ntribut under riterio 5 7	es n Po	pp. Period of pop. Est.	% occurrence 1)		CITES Appendix /	CMS Appendix I	Other Status	Justification
CHORDATA/ REPTILIA	Lacerta trilineata		Ø.								LC			Annex4 Habitat Directive	
ARTHROPODA/ INSECTA	Lestes virens		V)								LC			HR_RED LIST: VU	
ARTHROPODA/ INSECTA	Lindenia tetraphylla	Bladetail	V								LC			HR Red list: EN; European Red list: VU, Annex 2 & 4 of the Habitat Directive	
CHORDATA/ MAMMALIA	Miniopterus schreibersii	Schreibers's Long-fingered Bat	/								NT			HR_RED LIST 2006: EN; European Red list: NT Annex 2 & 4 of Habitat Directive	
CHORDATA/ MAMMALIA	Myotis bechsteinii	Bechstein's Myotis	s 📝 (NT			HR_RED LIST 2006: VU IUCN status RED LIST EUROPE: VU Annex 2 & 4 of the Habitat Directive	
CHORDATA/ MAMMALIA	Myotis blythii	lesser mouse- eared bat; Lesser Mouse-eared Myotis									LC			European Red list: NT, Annex 2 & 4 of the Habitat Directive	
CHORDATA/ MAMMALIA	Myotis capaccinii	long-fingered bat; Long-fingered Myotis	¥.								VU			HR_RED LIST 2006: EN; European Red list: VU, Annex 2 & 4 of Habitat Directive	
CHORDATA/ MAMMALIA	Myotis emarginatus	Geoffroy's bat; Geoffroy's Myotis	Ø.								LC			HR_RED LIST 2006: NT Annex 2 & 4 of the Habitat Directive	
CHORDATA/ MAMMALIA	Myotis myotis	mouse-eared bat; Mouse-eared Myotis	1								LC			HR_RED LIST 2006: NT; European Red list: LC, Annex 2 & 4 of the Habitat Directive	
CHORDATA/ MAMMALIA	Myotis nattereri	Natterer's bat; Natterer's Myotis	V)								LC			Annex 4 of Habitat Directive	
CHORDATA/ REPTILIA	Natrix tessellata		4								LC			Annex 4 of Habitat Directive	
CHORDATA/ MAMMALIA	Pipistrellus kuhlii	Kuhl's Pipistrelle	9								LC			Annex 4 of Habitat Directive	
CHORDATA/ MAMMALIA	Pipistrellus nathusii	Nathusius's Pipistrelle	Ø.								LC			Annex 4 of Habitat Directive	
CHORDATA/ REPTILIA	Platyceps najadum		Ø.								LC			HR_RED LIST: NT Annex 4 Habitat Directive	
CHORDATA/ MAMMALIA	Plecotus kolombatovici	Kolombatovic's Long-eared Bat	/								LC			IUCN status RED LIST EUROPE: NT Annex 4 of the Habitat Directive	
CHORDATA/ AMPHIBIA	Pseudepidalea viridis		V											Annex 4 of Habitat Directive	
CHORDATA/ AMPHIBIA	Rana dalmatina		V)								LC			Annex 4 of Habitat Directive	
CHORDATA/ MAMMALIA	Rhinolophus blasii	Blasius's Horseshoe Bat	1								LC			HR_RED LIST 2006: VU IUCN status RED LIST EUROPE: VU Annex 2 & 4 of the Habitat Directive	
CHORDATA/ MAMMALIA	Rhinolophus euryale	Mediterranean Horseshoe Bat	/								NT			HR_RED LIST 2006: VU; European Red list: VU, Annex 2 & 4 of Habitat Directive	
CHORDATA/ MAMMALIA	Rhinolophus ferrumequinum	greater horseshoo bat	2								LC			HR Red list: NT; European Red list: NT, Annex 2 & 4 of Habitat Directive	
CHORDATA/ MAMMALIA	Rhinolophus hipposideros	lesser horseshoe bat									LC			HR Red list: NT; European Red list: NT, Annex 2 & 4 of Habitat Directive	

Phylum	Scientific name	Common name	qua ur crit	ecies alifies nder terion	cor	pecies ntributes under riterion 5 7 8	Size	Period of pop. Est.		CMS Appendix I	Other Status	Justification
ARTHROPODA/ INSECTA	Selysiothemis nigra		V)		LC		HR_RED LIST: EN	
CHORDATA/ REPTILIA	Telescopus fallax		V]		LC		HR Red list 2015: NT; Annex 4 of Habitat Directive	
CHORDATA/ REPTILIA	Testudo hermanni		V]		NT		HR Red list: NT; European Red list: NT, Annex 2 & 4 of Habitat Directive	
CHORDATA/ REPTILIA	Vipera ammodytes		V]		LC		Annex4 of Habitat Directive	
CHORDATA/ REPTILIA	Zamenis Iongissimus		Ø]		LC		Annex4 Habitat Directive	
CHORDATA/ REPTILIA	Zamenis situla		V)		LC		HR Red list 2015: NT; Annex 2 & 4 of Habitat Directive	

¹⁾ Percentage of the total biogeographic population at the site

Many bird species inhabiting the area are threatened at the national or international level. 5 vulnerable and 16 near threatened species at global level have been registered for the site (IUCN, 2018), 8 of them being regularly occurring. 3 species are critically endangered, 4 species are endangered and 25 are vulnerable at the EU27 level, while 2 species are endangered on EUROPEAN level and 13 are vulnerable (BirdLife International, 2015), 77 birds are listed in Annex I of the Bird Directive, 61 species in Annex II, At the national scale, the populations of 14 bird species registered for Vransko jezero are critically endangered, 22 are endangered and 18 are vulnerable (Tutiš et al., 2010). Out of plant species 2 are critically endangered, 6 endangered and 9 are vulnerable at the national scale. One is listed in Annex II and IV of Habitat Directive. There is also 2 endangered and 3 vulnerable species of dragonflies (Odonata) on the national level and 1 listed in Habitat Directive (Annex II and IV), as well as 2 critically endangered, 2 endangered and 2 vulnerable species of ground beetles (Carabidae) at the national scale. Out of cave invertebrates, one is critically endangered and one vulnerable on the national level. One mollusc species is listed in Habitat Directive (Annex II and IV), as well as 1 fish species. One fish species is endangered and 1 vulnerable at the national scale, while 1 is critically endangered and 1 vulnerable at the European and global level. 4 amphibian species are listed in the Habitat Directive (all in Annex IV and only 1 of them in Annex II) as well as 11 reptile species (all in Annex IV but only 4 of them in Annex II). Populations of bats using the area consist of 2 endangered and 3 vulnerable species at the national scale, 4 vulnerable at the European level and one vulnerable at the global level, amongst 21 listed in the Habitat Directive (all in Annex IV but only 11 of them in Annex II). Complete list of species registered for Vransko Jezero Lake with threat status is presented in the taxonomic list. Species listed under Criterion 3 which are not yet included in the Catalogue of Life: Bombina variegata kolombatovici. Yellow-bellied Toad. Dalmatian endemics, contributing to the biological diversity of the Mediterranean biogeographic region.

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

Vransko Lake is positioned at the transition from the Mediterranean climate zone, with the Fraxino orni - Quercetum ilicis vegetation community, to the Sub-Mediterranean climate zone, with the Querco - Carpinetum orientalis vegetation community. This position, in combination with hydrological and land use factors, allows development of diferent habitats in a relatively small area. Wet habitats are more or less clearly distinguished from dry habitats. The open water habitat, which accounts for the largest part of the lake, is not very rich in diversity of macrophytes, but there is a well developed and ecologically valuable community of stoneworts (Characeae), with a periodical (especially during high salinity periods) dominance of Sago Pondweed (Potamogeton pectinatus), followed by few other Potamogeton species and Spiny Naiad (Najas marina.) Along the mildly sloped northeast and northwest coast of the lake, and especially in the area of Ornithological Reserve, vast reed beds dominated by Common Reed (Phragmites australis) and Triangular Club-rush (Scirpus triqueter) present an exceptional habitat for birds, vital for sustenance of the colony of herons as well as of Pygmy Cormorant (Phalacrocorax pygmeus) breeding colony. Periods with low water level are suitable for emergence of the muddy shores and pebbly beaches on the border of the reedbeds, the main feeding habitat for migrating waders. Behind the reedbeds in the Reserve lies the flooding zone, which in combination with sporadical grazing activities allows development of the rare Mediterranean wet grassland vegetation (Molinio-Holoschoenion and Molinio-Hordeion secalini). The southwest coast of the lake is mostly covered by arable land, a small patch of the Aleppo Pine (Pinus halepensis) forest and Modrave area covered by traditional olive groves surrounded with stony walls. Habitat patches of calcareous rocks with chasmophytic vegetation (including the endemic Littoral Corydalis (Corydalis acaulis) and intermittent pools are habitats small in size but not negligible in the context of diversity. The northern coast of the lake is lined with hills. Only a small part of it is managed by grazing, supporting the dry Mediterranean and Sub-Mediterranean grasslands. The rest of the hills are characterized by thermophilic vegetation (due to southern exposure and steep slopes), mainly covered in Mediterranean macchia and garrigue (with species Rock Rose (Cistus creticus). Cave habitats are scarce in the Park's area, only 2 smaller caves inside its borders exist, but there is proposed NATURA2000 cave in the Park's immediate vicinity, its bat population regularly using the lake as a feeding ground.

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

ivarine or coastal wetlands				
Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Zk(a): Karst and other subterranean hydrological systems		3	2003	Unique

In	land	wot	land	le

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 >> N: Seasonal/ intermittent/ irregular rivers/ streams/ creeks		4		Representative
Saline, brackish or alkaline water > Lakes >> Q: Permanent saline/ brackish/ alkaline lakes		1	3002	Representative
Saline, brackish or alkaline water > Marshes & pools >> Sp: Permanent saline/ brackish/ alkaline marshes/ pools		3	883	Unique
Saline, brackish or alkaline water > Marshes & pools >> Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools		4		
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		4		
Fresh water > Flowing water >> Y: Permanent Freshwater springs; oases		4		

Human-made wetlands	fuman-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
4: Seasonally flooded agricultural land				
9: Canals and drainage channels or ditches				

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant spec

out of flotoword by plant opcore		
Scientific name	Common name	Position in range / endemism / other
Iris pallida illyrica	Illyrian Iris	protected at the national level, grows on drained, dry grounds in the area of Dalmatia and northwest Balkans

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	Athene noctua	Little Owl				near threatened in Croatia
CHORDATA/AVES	Aythya fuligula	Tufted Duck				near threatened in Croatia
ARTHROPODA/INSECTA	Calopteryx splendens balcanica					strictly protected by the national law
CHORDATA/AVES	Charadrius dubius	Little Ringed Plover				near threatened in Croatia
CHORDATA/AVES	Charadrius hiaticula	Common Ringed Plover				near threatened in Croatia
CHORDATAREPTILIA	Dalmatolacerta oxycephala					strictly protected by the national law, Dalmation endemic
CHORDATA/AVES	Falco subbuteo	Eurasian Hobby				near threatened in Croatia
ARTHROPODA/INSECTA	Glaucopsyche alexis	Green-Underside Blue				near threatened in Croatia
CHORDATA/AVES	Larus ridibundus					near threatened in Croatia
ARTHROPODAINSECTA	Papilio machaon	Common Yellow Swallowtail;Swallowtail;Old World Swallowtail;Artemisia Swallowtail				protected by the national law
CHORDATA/AVES	Phalacrocorax carbo	Great Cormorant				near threatened on the national level
CHORDATA/AVES	Phylloscopus trochilus	Willow Warbler				near threatened in Croatia
CHORDATA/REPTILIA	Pseudopus apodus					strictly protected by the national law
ARTHROPODA/INSECTA	Psyllipsocus ramburii					endemic species.
CHORDATA/AVES	Regulus regulus	Goldcrest				near threatened on EU27 IUCN list
CHORDATA/ACTINOPTERYGII	Scardinius dergle					endemic of the Adriatic Basin; NT on the GLOBAL, EU and national level
CHORDATA/AVES	Tringa ochropus	Green Sandpiper				near threatened in Croatia
CHORDATAVAES	Tyto alba	Barn Owl				near threatened in Croatia

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude	Csa: Mediterranean (Mild
climate with mild winters	with dry, hot summer)

Because of small water depth, water temperature varies greatly: from 25.2 °C in July to 2.9 °C in February. Rarely, due to polar air masses breakthrough, surface water and shore freezes. Canals' deltas and spring areas never freeze, because the spring waters temperature varies from 9.2 °C to 17 °C.

According to Thornthwait classification climate is humid to subhumid, and according to Köppen warm, moderate climate of the Mediterranean coast, with at least three times more rainfall in the most humid winter month than in the driest summer month. This type of climate is also called "olive climate" and it is characterized with evergreen vegetation of Quercus ilex. The climate generally corresponds to the climate of the whole catchment area.

4.4.2 - Geomorphic setting

a) Mnimum elevation above sea level (in metres) -3
a) Maximum elevation above sea level (in metres) 303
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 \square
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.

Catchment waters are mainly rainfall, water from springs (Biba, Kakma, Subiba, Begovača, Škorobić and Pećina) and underground water that forms springs in the very lake (Živača, Prizidina, Procip).

4.4.3 - Soil

Mneral 🗷

(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 conditions (e.g., increased salinity or addification)?

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water	
present	

Source of water that maintains character of the site

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

Water destination

Presence?	Changes at RIS update
Marine	No change

Stability of water regime

Presence?	Changes at RIS update	
Water levels largely stable	No change	

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

Catchment waters are mainly rainfall, water from springs (Biba, Kakma, Subiba, Begovača, Škorobić and Pećina) and underground water that forms springs in the very lake (Živača, Prizidina, Procip). Surface water is brought to the lake through numerous streams and creeks, the biggest ones being Kotarka canal that collects water from main melioration channels (Borelovica, Lemešac, Vrbica and Jablanac), and Lateral channel that collects surface water from the northern part of Vransko polje. Natural streams collect water from the northern part of the catchment (Škorobić stream which enters into the Lateral canal) and from Kulsko-Korlatsko polje, Nadinsko blato and Polačko polje (Kličevica stream).

4.4.5 - Sediment regime

Significant accretion or deposition of sediments occurs on the site $\ensuremath{ arnothing }$

(Update) Changes at RIS update No change

● Increase

O Decrease

O Unknown

O

Sediment regime unknown \square

Please provide further information on sediment (optional):

Small depth makes the lake well enlightened and productive, which accelerates the eutrophication and sedimentation processes. The lake is polymictic due to strong winds, and no stratification occurs. Lake water quality is now between oligotrophic and mesotrophic, with a light eutrophication occurring, due to lake's production, introduced cyprinid species influence, and excess input of nutrients due to agricultural land fertilization.

4.4.6 - Water pH

Akaline (pH>7.4) ☑

 $^{\text{(Update)}}$ Changes at RIS update No change oldot Increase O Decrease O Unknown O

Unknown

Please provide further information on pH (optional):

Water pH is normally between 7.5 and 8.5, making the water slightly alkaline. Water hardness is moderate, with CaCO3 values between 140-215 mg/L. High electrical conductibility and high chloride concentration is due to intrusion of the sea into the lake, and varies seasonally and spatially. Oxygen concentrations vary according to season (6-10 mg/L), and lower values are related to warmer season. From inorganic factors, only phosphates can reach values higher than expected, due to sporadic inflow of waste water.

4.4.7 - Water salinity

Fresh (<0.5 g/l)

(Update) Changes at RIS update No change

● Increase

O Decrease

O Unknown

O

Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ☑

(Update) Changes at RIS update No change

● Increase

O Decrease

O Unknown

O

Unknown \square

Please provide further information on salinity (optional):

The salt water protrudes through permeable karst areas northwest of the lake, and makes lake water constantly brackish, with salinity of 0,16-0,86 ‰. During strong southern winds in summer and autumn when lake level is low, the sea level rises above the lake level and salt water comes into the lake through Prosika canal and permeable karst ridge next to the canal. Long-term period of no rainfall can raise the salinity up to 8‰.

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic 🗹

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

Unknown

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

Small depth makes the lake well enlightened and productive, which accelerates the eutrophication and sedimentation processes. The lake is polymictic due to strong winds, and no stratification occurs. Lake water quality is now between oligotrophic and mesotrophic, with a light eutrophication occurring, due to lake's production, introduced cyprinid species influence, and excess input of nutrients due to agricultural land fertilization.

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

Surrounding area has higher human population density \square

Surrounding area has more intensive agricultural use $\ensuremath{ \ensuremath{ \varnothing} }$

Surrounding area has significantly different land cover or habitat types

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

The land in the catchment area is mostly used for intensive agriculture on medium-size plots. As the land is not very fertile due to salinization, it is not cultivated regularly, which is in favor of maintaining good water quality of the lake. There are several springs in the catchment used for water supply, and also springs and canals used for irrigation of the land.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Fresh water	Water for irrigated agriculture	Medium
Wetland non-food products	Livestock fodder	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance	
Pollution control and detoxification	Water purification/waste treatment or dilution	Medium	
Hazard reduction	Flood control, flood storage	Medium	

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance	
Recreation and tourism	Recreational hunting and fishing	High	
Recreation and tourism	Nature observation and nature-based tourism Medium		
Recreation and tourism	Water sports and activities	Medium	
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium	
Scientific and educational	Educational activities and opportunities		
Scientific and educational	Long-term monitoring 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

Other ecosystem service(s) not included above:

Vransko Lake is the biggest reservoir of fresh water in this region of Croatia. In 1970-ties there have been plans for building accumulation of fresh water in Vransko Jezero Lake and its usage for water supply, but the idea was abandoned due to problem of salinization. Springs from Vransko jezero's catchment (Kakma, Biba, Škorobić, Turanjsko jezero, Kutijin stan) are, however, regularly exploited for water supply, and Begovača seasonally. Springs Tinj, Mali Stabanj, Veliki Stabanj, Pećina are used for irrigation of arable land. During rainy season Vransko jezero's marsh prevents high waters from destroying the dikes and intruding the fields outside of the flood zone. The reedbeds are excellent in purifying waters that enter the lake through melioration canals, carrying fertilizers that could enhance lake eutrophication.

See additional material for further information

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

character of the wetland

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
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

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	>	>
Local authority, municipality, (sub)district, etc.		V

Private ownership

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

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

within the Ramsar site:

Most of the site is owned by the state, particularly state agencies for natural resources management: the water, together with the reedbeds, is managed by the state enterprises "Croatian Waters", and the karst areas with macchia and pine forests are managed by the "Croatian Forests". Around 10 ha of olive groves are privately owned mostly by inhabitants of Murter island, agricultural land in the Reserve and on the southwest corner of the Park are owned by inhabitants of Pakoštane municipality. Most of the flooded meadows and marsh area are owned by the state.

in the surrounding area:

Combination of state (mostly "Croatian Forests") or municipality owned, with smaller privately owned particles (mostly for agriculture). Drained fields of Jasen (natural part of flood zone) in the catchment are owned by a single private owner.

5.1.2 - Management authority

agency or organization responsible for	Public Institution Vransko jezero Nature Park
managing the site:	
Dec. (de 4) - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
Provide the name and title of the person or	Head manager Danijel Katičin, Head of the Expert Service Maja Ćuže Denona
people with responsibility for the wetland:	Trodd manager Barrijer Radon, Fload of the Expert Cornec Maja Cazo Borlona
	Kralja Petra Svačića 2
	HR-23 210 Biograd na Moru
Postal address:	THE 20 2 TO Bloggad The World
	web: www.pp-vransko-jezero.hr

E-mail address:	info@pp-vransko-jezero.hr
= 111dii dddi 0001	mio@pp varioko jozofo.m

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
Water abstraction	Medium impact	Medium impact		No change	✓	No change
Canalisation and river regulation	Medium impact	Medium impact		No change	2	No change

Biological resource use

Diological rocoal co acc	orogical rootation aco						
Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes	
Hunting and collecting terrestrial animals	Medium impact	Medium impact	2	No change		No change	
Logging and wood harvesting			2				
Fishing and harvesting aquatic resources	Medium impact	Medium impact	2	No change		No change	

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Fire and fire suppression	Medium impact	Medium impact	✓	No change	✓	No change
Unspecified/others	Medium impact	Medium impact		No change	2	No change

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Household sewage, urban waste water			2			
Agricultural and forestry effluents	Medium impact	Medium impact	2	No change	2	No change
Garbage and solid waste	Medium impact	Medium impact	2	No change		No change
Unspecified			✓		✓	

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified	Medium impact	Medium impact	✓	No change	₽	No change

Please describe any other threats (optional):

within the Ramsar site:

Past threats to Vransko Lake site (referring to the period before the establishment of the protected area, and in the first few years after) include frequent reed burning, illegal fishing with nets and other non- recreational tools, illegal hunting on protected birds, penetration inside reed beds and making paths, legal hunting of waterfowl, illegal garbage deposition and non-existence of facilities for waste water treatment. All these threats caused disturbance to the birds and/or habitat deterioration. Most of these threats are eliminated or at least diminished since the lake has been protected as a Nature Park. Some illegal burning of reed occurs, but with a decreasing trend due to education of local community about the benefits of nature protection. Constant surveillance is organized to prevent illegal fishing and penetration of poachers inside the Park. Hunting of birds is no longer an issue. Waste water and illegal garbage disposal are still problems but the municipalities have plans for solving them in coming years. The pollution from these sources is therefore expected to decrease.

in the surrounding area:

Interventions in the past in the catchment area affected significantly the ecological character of the Ramsar site. The first human interventions were construction of the Prosika canal and other melioration canals starting in the 18th century, which resulted in drainage of a large part of the wetland northeast of the lake. Out of 570 ha of former Vrana Swamp as much as 410 ha has been meliorated, while only 160 ha remained in the natural flooding regime.

Out of 31 karst springs in the catchment, 5 are used for public water supply, 7 for irrigation of agricultural fields, and 4 are used locally (for water supply or individual field irrigation). In addition to this, illegal landfills have been made in the agricultural fields, from which the land owners pump the water out. The total annual pumping estimates amount 1.9x106 m3 for water supply and about 1.0x106 m3 for melioration.

These anthropogenic influences are worsened by the climatic change factor. Recent trends in rise of the sea level for 0.13 mm/year (detected for the period since 1969), combined with the regional decrease in rainfall and increase in water uptake, cause salinization of Vransko Jezero Lake and subsequent change in habitats.

Potential risk lies in the County's plans for advanced irrigation in the catchment area.

5.2.2 - Legal conservation status

Regional (international) legal designations

regional (international) regal designations			
Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000	SiteCode: HR5000025 i HR1000025: Vransko		partly
	iezero i Jasen		

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Ecological Network			partly
Nature Park	Vransko Lake		whole
Special Ornitological Reserve			partly

Non-statutory designations

on-statutory designations			
Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Vransko Lake		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
Il Natural Monument: protected area managed mainly for conservation

- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
- V Protected Landscape/Seascape: protected area managed mainly for Iandscape/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

Logar protoctor		
Measures	Status	
Legal protection	Proposed	

Human Activities

Measures	Status
Fisheries management/regulation	Implemented
Harvest controls/poaching enforcement	Implemented
Livestock management/exclusion (excluding fisheries)	Implemented

Other

Building in the Vransko Jezero Lake area is limited and regulated through the Vransko jezero Nature Park Spatial Plan (2012). Hunting and fishing are forbidden in the Ornithological Reserve. Commercial fishing is forbidden in the entire area. Hunting of all bird species is forbidden in the entire area. Cattle grazing and ecological agriculture are encouraged by the Nature Park programs.

The area is divided in three zones: strictly protected zone (7.4 % of the total site area) where no entry is allowed except for surveillance and research, active management zone which comprises the most (91.8%) of the site and requires active protection efforts and the usage zone (0.78 %) which encompasses the tourist infrastructure and inhabited areas.

The entire Vransko jezero site together with Jasen are listed as NATURA 2000 (as Site of Community Importance and Special Protected Area).

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:

In the park's area there are two visitors' centers: Prosika harbor with the info point, souvenir shop, refreshment point, observation hide, educational trail on fishing and traditional usage of the area and a berth facility for fishermen; and Kamenjak sightseeing point with the info point, souvenir shop, refreshment point and a botanic educational trail. A third visitors' centre is planned at Crkvine locality, to be consisted of a large observation hide designed to accept groups of visitors. In the usage zone on the border of the Ornithological Reserve there is an ornithological educational trail for individual visitors, equipped with two hides. School visits are accepted at Prosika harbor, which is suited for educational programs. Several information booklets are available, including tourist map, educational brochures on natural values of the Ramsar site, and a detailed guide of the Park's ornithofauna.

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Please select a value

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Plant community	Implemented
Animal community	Implemented
Water regime monitoring	Implemented
Birds	Implemented

The natural values of the Vransko Lake site have been well documented: flora and fauna inventoried, cadaster of cultural and historical heritage available, map of habitats on the scale 1:5,000 ready. Current research is focused mainly on hydrology and geohydrology of the lake and its catchment, as well as on influence of hydrological cycles on ecological processes and trophic state of the lake. Some research on the impact of human activities (agriculture) on water and sediment of the lake is also being conducted. Annual monitoring activities include monitoring of water quality, ornithofauna (wintering and breeding), bird ringing camp (monitoring of migratory ornithofauna), macrophytes (including the algae Characeae), several endangered habitats (Mediterranean wet grasslands and meadows listed in NATURA 2000) and bat fauna. Additional three-annual monitorings include fish, amphibians and reptiles, dragonflies, phytoplankton, zooplankton and benthos of the lake. Every autumn a comprehensive bird ringing camp is organized in order to monitor the role of Vransko Lake in bird migrations. The Ornithological Station with an observation hide is built in the Ornithological Reserve exactly for this purpose.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

See additional material 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)

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

<no file available>

v. site management plan

<1 file(s) uploaded>

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:



Vransko Lake (x, 09-10-2010)



Vransko Lake (x, 09-10-



Vransko Lake (x, 09-10-



Vransko Lake (x, 09-10-



Vransko Lake (x, 09-10-



Vransko Lake (x, 09-10-



Vransko Lake, viewpoint Kamenjak (x, 29-04-2016



Vransko Lake, Omithological reserve, educational trail (Pubic institution Vransko Lake Nature Park, 13-05-2016)



Vransko Lake, Omithological Reserve (Public Institution Vransko Lake Nature Park, 21-12-2008)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 2013-02-02